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HTTP Routing Table 1167
Website  Food labeling services for the USDA community
Author  Gig Graham
Organization  Ontomatica
Date  28 April 2015

•  Index of Glossary Terms

### USDA Proposal Resources

- USDA ARS Nutrient Database for Standard Reference (SR)
- USDA ARS NDL Composition of Foods
- USDA ARS NDL Yield & Retention
- USDA ARS NDL Ground Beef Calculator
- USDA ARS Food & Nutrient Database for Dietary Studies (FNDDS)
- USDA ARS & US EPA FNDDS Food Commodity Intake Database (FCID)
- USDA ARS Germplasm Resources Information Network (GRIN)
- USDA ARS GrainGenes
- USDA National Institute of Food & Agriculture (NIFA) IR-4 Specialty Crops
- USDA ARS FCMDL Metabolite Profiling and Chemical Fingerprinting Methods
- USDA ARS FCMDL Methods for Identification and Authentication of Botanical Supplements
- USDA ARS FCMDL Determination of Glucosinolates in Brassica
- USDA ARS FCMDL Flavonoid Content of Selected Dietary Supplements and Foods
- USDA ARS National Agricultural Library Thesaurus (NALT)
- US NIH National Cancer Institute (NCI) thesaurus
- US NIH National Center for Biotechnology Information (NCBI) PubChem
- National Center for Biomedical Ontology (NCBO)
1.1 Prologue

I keep six honest serving-men (they taught me all I knew);
Their names are What and Why and When
and How and Where and Who.


These six questions are tools to gain knowledge.
In science, two important questions are “How” and “Why” things are related.
Discovery processes investigate relationships among things.
Ontologies are systematic tools for recording knowledge and documenting relationships among things.
Ontomatica integrates knowledge and informatics for foods, agricultural commodities, agrochemicals and pharmaceuticals to present important relationships among them.

1.2 Words and Formats used in Proposal

1.2.1 Words Used in Proposal

Words for specifying data

**Data** An item of factual information derived from measurement or research.

**Data Element** Field or column in a data-set or data-base that stores Data.

**Data Dictionary** Specifies information about a Data Element. Information includes field name, field description, data type and constraint for Data Element.

**Data Model** Representation of how to aggregate and interrelate Data defined by a Data Dictionary.

**Entity-Relationship Model** Representation of how to aggregate and inter-relate information. An entity is a Thing capable of an independent existence and is uniquely identified. Entities are nouns. Examples: a food commodity,
Words for specifying information

Context Discourse that surrounds a language unit and helps to determine its interpretation. For the USDA project, the Context of the language unit is Food. In other words, the Domain-of-Context is Food.

Vocabulary A listing or grouping of words that are common to a Domain-of-Context.

Controlled Vocabulary Authorized words that have been preselected for a Domain-of-Context. Contrasts with natural language vocabularies, where there is no restriction on the vocabulary.

Term Word in a Controlled Vocabulary that references a Description. Term is described in a Thesaurus.

Taxonomy Categorization of Things (entities). Categorization is based on discrete sets. Taxonomy may have multiple forms, such as lists and hierarchies.

Metadata Same as a word in a Taxonomy.

Thesaurus Provides information about a Term in a Controlled Vocabulary. Includes long name, short name or acronym, and description in form of Scope Notes and Additional Information.

Glossary Defines words associated with a project. A word in a glossary is not necessarily a Term in a Controlled Vocabulary.

Encyclopedia The services known as Wikipedia and DBpedia. Wikipedia disambiguation associates a word with a Domain-of-Context.

Words for specifying knowledge

Syntax Rules for specifying Terms to create structures like phrases, sentences, and paragraphs.

Grammar Rules for specifying a set of well-formed structures using Terms of a given Language.

Language Set of Terms specified by a Syntax and sequenced according to a Grammar. Language is used to systematically define and aggregate knowledge.

Ontology Combination of the above to express higher order activities, such as communications, translation, learning, understanding, teaching, and making decisions. More specifically, a formal way to represent entities, ideas, and events (Things). Things have Properties such as names and values. Things have Relations such as kinship and sequence of steps (ordinality) to perform a task. Things, Properties and Relations are organized by categories (Taxonomy). Knowledge - in a form that can be processed by a computer - is the categorical ordering of Things, Properties and Relations from Domain-of-Context into a Domain-of-Knowledge.

Words for specifying relations

IS-A relationship Specifies relations between abstractions (e.g. types, classes), where one class A is a subclass of another class B (and so B is a superclass of A). In other words, type A is a subtype of type B when A’s specification implies B’s specification. More specifically, the IS-A relationship is defined by:

1. Hypernymy-Hyponymy (supertype-subtype) relations between types (classes) defining a taxonomic hierarchy, where a hyponym (subtype, subclass) has a type-of (IS-A) relationship with its hypernym (supertype, superclass)
2. Holonymy-Meronymy (container-part or member) relations between types (classes) defining a possessive hierarchy.

**HAS-A relationship** Specifies part-whole relations. Meronym is the name given to a constituent part of, the substance of, or a member of something. ‘X’ is a meronym of ‘Y’ if an X is a part of a Y. A meronym may be:

1. Transitive - “Parts of parts are parts of the whole” - if A is part of B and B is part of C, then A is part of C.
2. Reflexive - “Everything is part of itself” - A is part of A.
3. Antisymmetric - “Nothing is a part of its parts” - if A is part of B and A !- B then B is not part of A.

**Domain** Set of values for a Term declared in a Relation.

**Range** Limits for the values of a Term declared in a Relation.

**Symmetric relationship** Declaration that Terms are essentially the same and are interchangeable.

**Words for implementing an Ontology**

**Ontology** (continuing to add precision to the word “Ontology” previously used above) Uses a Controlled Vocabulary to specify Things, Properties and Relations for a Domain-of-Knowledge. Defines a set of statements about a Domain-of-Knowledge. Statements in Ontomatica ontologies are implemented as Graphs.

**Faceted Classification** Enables assignment of a Term to multiple categories in a Taxonomy. Faceted search (a.k.a. faceted navigation or faceted browsing) is the user-interface of a faceted classification system. Users explore a collection of information by applying multiple filters (a.k.a. facet terms).

**Facet Tree** Hierarchy of Facets in a specific Domain-of-Knowledge.

**Thing** (continuing to add precision to the word “Thing” previously used above) An entity capable of an independent existence that can be uniquely identified.

**Subject** An observer; an entity that has a relationship with another entity that exists outside of itself (an “object”). A Subject is an observer and an Object is an entity observed.

**Object** An entity observed by a Subject.

**Item** A Thing - associated with a Domain-of-Knowledge - that is described by one or more Terms in one or more Facet Trees. Item is comparable to Data in a Data Model and to an instance of an Entity-type in an Entity-Relationship model.

**Graph** Composed of vertices {nodes} and lines {edges} that connect vertices. Ontomatica graphs are Directed Acyclic Graphs (DAG) that represent Things and causal Relations between them.

**Facet and Facet Term** (as defined during Facet Classification and revealed in a Facet Tree) Vertex {node} in a Graph. Logically, a facet is a noun. A class term (word identifying a collection of Facet Terms) is called a Facet. A type term (instances of members of a Facet) is called Facet Term. Code assigned to Facet Term (FT) is called Facet Term Code (FTC).

**Facet Map** Pairing of an Item with one or more Facet Terms in one or more Facet Trees.

**Relation** (continuing to add precision to the word “Relation” previously used above) Line {edge} expressing connection between Facets and Facet Terms in a Graph. Logically, a relation is a verb. Term that describes a Relation is a Predicate.

**Predicate and Predicate Term** Type {single} or class {hierarchy} of Relations. A class term (word identifying a collection of Predicate Terms) is called a Predicate. A type term (instances of members of a Predicate Taxonomy) is called Predicate Term. Code assigned to Predicate Term (PT) is called Predicate Term Code (PTC).

**Syntax** (continuing to add precision to the word “Syntax” previously used above, but now specific to Ontology) Web Ontology Language (OWL) that specifies the Syntax for creating structures like phrases, sentences, and paragraphs.

1.2. Words and Formats used in Proposal
Grammar (continuing to add precision to the word “Grammar” previously used above, but now specific to Ontology)

Set of statements in the logical form: subject predicate object where subject and object are
Facet Terms and predicate are Predicate Terms.

1.2.2 Format Used in Proposal

USDA requirements are formatted as follows:

:USDA #12:

- Support capture/documentation of metadata for food composition and non-composition data.

Ontology terms are formatted as follows:

- schema:sameAs (the schema.org facet term meaning that A is the same as B)
- ncit:C46090 (the NIH NCI facet term code for the facet term “Glycemic Index”)
- agrontology:isUsedToMake (the UN FAO term meaning that A is used to make B)

A word or phrase that is a link to a URL is formatted as follows: food labeling services for the USDA community

A term that is defined in the glossary is formatted as follows: application services

A bibliographic references is formatted as follows: See [WEB346] for more information about ...

Sidebar

Provides complementary detail

Discussion about a design or approach.

- point 1
- point 2
- point 3
- point 4

Illustration of a REST conversation

GET /users/ (int: user_id_) /posts/
tag

See also:

Reference to a related section of the Proposal

Tip: Advice based on experience with managing similar issues

Attention: Warning that an alternative approach may produce an ineffective result

Danger: Advice that an alternative approach will produce a poor or unintended outcome
1.3 Features - Core

Intro text goes here

1.3.1 Preview

Ontomatica has developed the most comprehensive database of the Food Stream, using terms and data that conform to U.S. government and international standards.

Database provides ability to analyze and track food from its origins, through growing and processing, to consumption.

Such thorough documentation provides information to improve food safety and determine “cause and effect” of the food we eat.

1.3.2 Deliverables

Ontomatica will deliver a complete system composed of:

- Application services for end-users
- Deposition services for food suppliers and investigators
- Data services for production applications and investigators
- Infrastructure services for executing all services under demanding on-line conditions
- Operating services for managing and controlling all services
- Development services for information curators and food compilers

Ontomatica Navigator, similar to a GPS navigator, enables a user to select categories-of-interest. Each selection presents more specific categories. Categories are implemented as application services that manipulate label classes. Ontomatica has developed a library of label classes. USDA will identify the label classes required for label project. Ontomatica then will package USDA-identified classes to operate in label project applications. Label classes are composed of facets, predicates and data. Ontomatica Navigator loads label classes and items that are members of label classes.

Navigator presents information in two views:

- Listing page where items that are members of label classes are displayed
- Landing page where all properties of a single item are displayed

Ontomatica deposition services:

- Accept data from food suppliers and investigators
- Validate data deposits
- Add value to deposits
- Update data services

Two options are available to deposit data:

- Message deposit is an electronic submissions from GS1
- Web deposit is an on-line interface for food suppliers and investigators

Ontomatica application, deposition and data services will support two data groups:

- USDA select data that meets the requirements for managing GS1 data
Figure 1.1: Scope of Food Stream Information in Ontomatica systems
• **USDA prime** data that meets and exceeds USDA food **composition** and **non-composition** information requirements.

Ontomatica deposition services will automate current USDA NDL/FSRG practices used to produce current USDA databases.

Ontomatica **data services** manage data deposits. Data services have two components:

- Data for application services that is stored in *MySQL*
- Data for food suppliers and investigators that is available through *REST* services

All services execute on **infrastructure services**. The major components of infrastructure services are:

- *Intel Xeon servers*
- *LAMP* (Linux, Apache, MySQL and PHP - Perl - Python)
- *Operating services* that monitor primary CPU and storage and *failover* to secondary services when necessary

Curators and food compilers use Ontomatica **development services** to manage and maintain deposits. Development services also manage the process of promoting a new version of label project applications:

- from **development**
- to **quality assurance**
- to **production**

Ontomatica will provide source code for application services, deposition services, data services, and development service according to licensing terms.

See *Services, Products and Technologies* for detail.

### 1.3.3 Training and Support

Ontomatica will provide **training services** when delivering **complete system** to USDA. Training will enable USDA personnel to operate all parts of complete system.

Ontomatica will conduct two training days at USDA Beltsville facility for USDA **level 1 support** staff. As part of training, Ontomatica will turn over source code and documentation.

Ontomatica will provide **support services** during first operating year. For operating year one, beginning with **release 3**, Ontomatica will provide **level 2 support** to USDA level 1 support. Level 2 support includes following **service level agreement**:

- fix severity 1 error within 3 hours;
- fix severity 2 error within 48 hours;
- fix severity 3 error within 96 hours.

Ontomatica will provide 40 hours of telephonic advice for USDA level 1 support.

Ontomatica anticipates an upgrade to *Navigator* during first operating year. USDA is entitled to that upgrade. USDA is entitled to upgrades to *label classes* during first operating year.

Ontomatica can provide optional **maintenance services** in second and subsequent operating years.

### 1.3.4 Property Rights

Ontomatica will acquire, configure, test and optimize **infrastructure services**.

Ontomatica will transfer infrastructure ownership and related infrastructure licenses to USDA at **release 3**.
Design of and processes used by Ontomatica application services are a trade secret and protected by Copyright. Ontomatica grants USDA/ARS a perpetual, non-transferable license to use application services. License includes rights for USDA customers to use complete system. USDA may wish to require customers to acknowledge rights and warranties before using complete system.

Data deposits will be available under Creative Commons Attribution 4.0 International license (CC BY 4.0). AFDSI Vocal terms are available under Creative Commons Public Domain Dedication license (CC0 1.0). No copyright is associated with Vocal terms.

Other terms used by Ontomatica applications, such as terms defined by National Center for Biomedical Ontology, also are copyright-free and available under CC0 1.0.

### 1.3.5 Project Plan

Ontomatica will deliver a prototype label application within 60 days of contract start date.

Ontomatica will deliver complete system within 120 days of finalizing a modified specification.

Ontomatica anticipates USDA Label Project will be open-for-business on or about May 26, 2015.

**Release 0** is contract signing and start date.

**Release 1** is Prototype. Prototype will reuse and modify existing Ontomatica capabilities. For example, deposition services and REST services will not be available for Release 1.

**Release 2** is modified specification jointly developed by USDA and Ontomatica.

**Release 3** delivers complete system. Release 3 trains USDA level 1 support on use, management and implementation of complete system.

### 1.3.6 Services, Products and Technologies

The following table identifies technologies used by Ontomatica products that implement label project services.

<table>
<thead>
<tr>
<th>Label Project Services</th>
<th>Ontomatica Products</th>
<th>Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Services</td>
<td>Navigator</td>
<td>Label Classes</td>
</tr>
<tr>
<td></td>
<td>OnMessage</td>
<td>Message deposit</td>
</tr>
<tr>
<td></td>
<td>OnLine</td>
<td>Web deposit</td>
</tr>
<tr>
<td></td>
<td>OnTop</td>
<td>Label Classes</td>
</tr>
<tr>
<td></td>
<td>OnTask</td>
<td>Parser (lex ++ )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regular Expression</td>
</tr>
<tr>
<td></td>
<td>OnTask</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>USDA mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work flow</td>
</tr>
<tr>
<td>Data Services</td>
<td>OnDemand</td>
<td>MySQL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REST</td>
</tr>
<tr>
<td>Operations Services</td>
<td>OnDemand</td>
<td>CA products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See illustration</td>
</tr>
<tr>
<td>Infrastructure Services</td>
<td>OnDemand</td>
<td>Mapping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Building (make ++ )</td>
</tr>
<tr>
<td>Development Services</td>
<td>OnTarget</td>
<td>Versioning (Github )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dev &gt; QA &gt; Prod</td>
</tr>
<tr>
<td>Migration Services</td>
<td>OntoMation</td>
<td>Sphinx documentation</td>
</tr>
<tr>
<td>Support Services</td>
<td>OnPoint</td>
<td>Issue tracking (Github)</td>
</tr>
<tr>
<td>Customer Service</td>
<td>OnCall</td>
<td>telephone</td>
</tr>
</tbody>
</table>
1.3.7 Examples: Production Applications

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- Chemicals
- Commodities
- Foods
- Meals
- Metabolomics
- Reference Library
- Taxonomy
- Dietary Supplements

Chemicals

- Chemical Entities of Food Significance (ChEFS)
  - L-ascorbic acid
  - Flavonols class

Commodities

- Glucosinolates
  - Origin conditions for Brassica Vegetables, Flowerhead Brassica
- ChEFS
  - IR-4 Crop Groups and regulated chemicals that may be used to protect crops

Foods

- USDA Standard Reference (SR)
  - Vegetables (Plantains) with omega-3 fatty acids 22:6 (docosahexaenoic acid) [22:6 n-3]
- Food Data Kit Basic
  - Crop groups
- Specialty Foods
  - Extra virgin olive oil

Meals

- USDA Food and Nutrient Database for Dietary Studies (FNDDS)
  - Meal groups
  - Pizza with meat, N/S as to type of crust (52 ingredients)
Metabolomics

- Chemical Entities with Medical Applications, Therapeutic Indications and Consequences (ChEMATIC)
  - Dietary proteins
  - Ligands

Reference Library

- Based on USDA National Agricultural Library Thesaurus (NALT)
  - Total glucosinolate contents in eight broccoli cultivars, Journal of the Science of Food and Agriculture

Taxonomy

- Food taxonomy
  - USDA grade, cut, packaging and related properties
- Plants classification based on Ternary Nomenclature
  - Winter Savory

Dietary Supplements

- Classified according to US FDA SPL specifications
  - Calcium

1.3.8 Generic Verbs and Nouns

This section addresses:

:USDA #12:
  Support capture/documentation of metadata for food composition and non-composition data.

Note: The following terms are members of a class of ontology-independent-terms. These terms map to specific terms in ontologies. The summary below identifies:

- verb (a.k.a. predicate, relationship, object property)
- noun (a.k.a. thing, object) specified as X and Y. A more precise term is specified as {noun}. A precise noun, as specified by an authority, is identified on Data Integration. Many examples are listed in Glossary of Terms.
### isA Relationships

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Inverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>X includesSpecific Y</td>
<td>Y isA X</td>
</tr>
<tr>
<td>Taxon</td>
<td>X isA Taxon</td>
</tr>
<tr>
<td>Food product</td>
<td>Y isA Food product</td>
</tr>
<tr>
<td>Food product</td>
<td>X isOneOf {Food product}</td>
</tr>
<tr>
<td>X inheritsTo Y</td>
<td>Y inheritsFrom X</td>
</tr>
</tbody>
</table>

### WordNet whole-part Relationships (Holonymy/meronymy)

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Inverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>X containsSubstance Y</td>
<td>Y substanceContainedIn X</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X containsSubstance</td>
</tr>
<tr>
<td></td>
<td>{Substance, amount in total, amount in solids, label claim (yes/no)}</td>
</tr>
<tr>
<td>X hasIngredient Y</td>
<td>Y ingredientOf X</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X hasIngredient</td>
</tr>
<tr>
<td></td>
<td>{Food product, rank, total ingredient in total product, ingredient solids in product solids {purpose list}}</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>Y mayHaveIngredient</td>
</tr>
<tr>
<td></td>
<td>{Food product, rank, total ingredient in total product, ingredient solids in product solids {purpose list}}</td>
</tr>
<tr>
<td>X madeFrom Y</td>
<td>Y usedToMake X</td>
</tr>
<tr>
<td>Container</td>
<td>X usesStructuralStrengthMaterial Substance</td>
</tr>
<tr>
<td></td>
<td>Container usesCoatingMaterial Substance</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X isMadeFrom FoodProduct</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X isDerivedFrom</td>
</tr>
<tr>
<td></td>
<td>{Food source, environment, agricultural treatment, growth stage}</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X isPartOf {Anatomical part, growth stage, cut, grade}</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X isExtractedSubstance</td>
</tr>
<tr>
<td></td>
<td>{Extracted substance, extracting substance, process, temperature, duration, sequence_ID.}</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X hadRemovedSubstance</td>
</tr>
<tr>
<td></td>
<td>{Extracted substance, etc.}</td>
</tr>
<tr>
<td>X yieldsPortion Y</td>
<td>Y portionOf X</td>
</tr>
<tr>
<td>X spatiallyIncludes Y</td>
<td>Y spatiallyIncludedIn X</td>
</tr>
<tr>
<td>X hasComponent Y</td>
<td>Y componentOf X</td>
</tr>
<tr>
<td>FoodProduct</td>
<td>X containsDish FoodProduct</td>
</tr>
</tbody>
</table>
Additional Relationships

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Inverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>X causes Y</td>
<td>Y causedBy X</td>
</tr>
<tr>
<td>X instrumentFor Y</td>
<td>Y performedByInstrument X</td>
</tr>
<tr>
<td>X processFor Y</td>
<td>Y usesProcess X</td>
</tr>
<tr>
<td>X appliedTo Y</td>
<td>Y underwentProcess X</td>
</tr>
<tr>
<td>FoodProduct underwentProcess</td>
<td></td>
</tr>
<tr>
<td>{Process, equipment, temperature, duration, place/stage, sequence_ID, {purpose list} }</td>
<td></td>
</tr>
<tr>
<td>FoodProduct isForSpecialUse</td>
<td></td>
</tr>
<tr>
<td>{Use/diet, {country list} }</td>
<td></td>
</tr>
<tr>
<td>FoodProduct madeFor</td>
<td></td>
</tr>
<tr>
<td>{Consumer, {country list} }</td>
<td></td>
</tr>
<tr>
<td>FoodProduct usuallyConsumedFor</td>
<td></td>
</tr>
<tr>
<td>{Meal type, {country list} }</td>
<td></td>
</tr>
<tr>
<td>{Taxon, AnatomicalPart} usedFor</td>
<td></td>
</tr>
<tr>
<td>{purpose, priority {country list} }</td>
<td></td>
</tr>
<tr>
<td>Substance usedFor</td>
<td></td>
</tr>
<tr>
<td>{purpose, priority, food product}</td>
<td></td>
</tr>
<tr>
<td>X beneficialFor Y</td>
<td>Y benefitsFrom X</td>
</tr>
<tr>
<td>X treatmentFor Y</td>
<td>Y treatedWith X</td>
</tr>
<tr>
<td>X harmfulFor Y</td>
<td>Y harmedBy X</td>
</tr>
<tr>
<td>Substance harmfulFor</td>
<td></td>
</tr>
<tr>
<td>{harmful effect, strength, food product}</td>
<td></td>
</tr>
<tr>
<td>X growsIn Y</td>
<td></td>
</tr>
<tr>
<td>X hasPhase Y</td>
<td></td>
</tr>
<tr>
<td>FoodProduct hasState Physical state</td>
<td></td>
</tr>
<tr>
<td>X hasForm Y</td>
<td></td>
</tr>
<tr>
<td>FoodProduct hasForm Physical form</td>
<td></td>
</tr>
<tr>
<td>Container hasForm Physical form</td>
<td></td>
</tr>
<tr>
<td>FoodProduct packedIn Container</td>
<td></td>
</tr>
<tr>
<td>X hasPrice MoneyAmount</td>
<td></td>
</tr>
<tr>
<td>Substance measuredIn Unit of measurement</td>
<td></td>
</tr>
</tbody>
</table>

1.3.9 User Friendly Designs

This section addresses:

:USDA #1:

User-friendly design for rapid deposition, manipulation, and retrieval of data with capability of specific queries.

Table of Contents

- Ontomatica Navigator
- Navigator’s Underlying Data Structures
- Navigator and USDA Label Project

Ontomatica Navigator

Ontomatica’s Navigator architecture is similar to other modern navigation systems. The Volkswagen “Find a Match” application is one example.

The Volkswagen application navigates this ontology. See also: [WEB294] [WEB293] [WEB292].
Initiate search from 5 top level facets.

Refine search by selecting more precise terms.
Ontomatica’s Navigator, traversing the graphs implemented in the homeopathic application, operates in the same way as the Volkswagen navigator, but use different data.

**Navigator’s Underlying Data Structures**

Volkswagen and Ontomatica use the same underlying technology for specifying and storing data. Both specify data using ontologies and store ontology representations in the following formats:

- Web Ontology Language (OWL)
- XML/RDF
Navigator and USDA Label Project

Ontomatica Nobel Prize application illustrates application services navigating data services that manage content familiar to many. For example, here are U.S. Nobel Laureates in Chemistry.

Complete System will look and operate like the Nobel Prize applications and the Volkswagen “Find a Match” application.

In place of the Nobel Laureate’s picture will be the branded food label image registered by a supplier during the web deposit process.

All queries are represented as a Universal Resource Identifier (URI). This means that an end user, investigator and supplier can easily link to and re-use a reference to a food.

Ontomatica’s Navigator, as of 2015, is unique in the technology marketplace.

Some modern tools enable a user to compose a query by selecting two or more single-level facets. An example is NCCOR.

Only Navigator enables a user to compose queries by selecting terms from multiple hierarchies of terms.

1.3.10 Data Depository

This section addresses:

: USDA #2:
Accept composition data from outside sources, e.g., industry, academia, and government, acquire label data through optical character recognition, and support capture of metadata from all sources.

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OnLine and OnMessage Deposition

<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Deposition Workflow</td>
</tr>
<tr>
<td>• Harmonization of GS1, GTIN and Vocal Data</td>
</tr>
<tr>
<td>• Integration of GS1, GTIN and Vocal Data</td>
</tr>
</tbody>
</table>

Deposition Workflow A depositor registers information via:

1. OnLine interface, or
2. OnMessage interface.

OnTop parser interacts with ontologies to properly classify deposit.

USDA select and USDA prime data are complemented with data generated by USDA mathematics.

Ontomatica graphs (representing things or events, and causal relationships between them) are updated.

Data then is stored on MySQL and REST servers.
Figure 1.2: U.S. winners of the Nobel Prize for Chemistry
Ontomatica Deposition Workflow

1. Investigators
Food Suppliers

2. Food Suppliers
GS1 electronic message

OnLine

OnTop
Ontologies

Update
“Top-down” Deposition
“Bottom-up” Deposition

OnMessage (one way, one time)

USDA “prime” data fields

Mathematics

USDA

Ontomatica
Graphs

MySQL server

REST server
Harmonization of GS1, GTIN and Vocal Data  
Explanation; equivalence `schema:sameAs`.

<table>
<thead>
<tr>
<th>Brick attribute: Classification</th>
<th>Product Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family: Fruits; Vegetables; Nuts; Seeds</td>
<td>Fruits; Vegetables; Nuts; Seeds</td>
</tr>
<tr>
<td>Class: Fruit - Prepared; Processed</td>
<td>Fruit - Prepared; Processed</td>
</tr>
<tr>
<td>Brick: Fruit - Prepared; Processed (Perishable)</td>
<td>Fruit - Prepared; Processed (Perishable)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brick attribute: Formation</th>
<th>Physical State, Shape or Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chopped</td>
<td>Divided into pieces</td>
</tr>
<tr>
<td>Halved</td>
<td>Divided into halves</td>
</tr>
<tr>
<td>Homogenized</td>
<td>Homogenized</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brick attribute: Organic claim</th>
<th>Consumer Group, Dietary Use, Label Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic food claim or use</td>
<td>[P0023]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brick attribute: If pitted, stoned</th>
<th>Part of Plant/Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit, peel undetermined, core, pit or seed present</td>
<td>[C0163]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brick attribute: Cooking process</th>
<th>Preservation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooked</td>
<td>Sterilized by heat</td>
</tr>
<tr>
<td>Dried</td>
<td>Dehydrated or dried</td>
</tr>
<tr>
<td>Sugared</td>
<td>Preserved by adding sugar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brick attribute: Refrigeration claim</th>
<th>Preservation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can be refrigerated</td>
<td>Preserved by chilling</td>
</tr>
</tbody>
</table>

Continued on next page
Table 1.1 – continued from previous page

<table>
<thead>
<tr>
<th>Brick attribute: Type of fruit</th>
<th>Vocal facet term and facet term code</th>
</tr>
</thead>
<tbody>
<tr>
<td>[20000076] 103 possible types of fruits</td>
<td>Fruit Producing Plant</td>
</tr>
<tr>
<td>Apples</td>
<td>[B1140]</td>
</tr>
<tr>
<td>[30003020]</td>
<td>Apple</td>
</tr>
<tr>
<td></td>
<td>[B1245]</td>
</tr>
</tbody>
</table>

Integration of GS1, GTIN and Vocal Data  OnMessage enables construction of a comprehensive food record that includes bar code information (GTIN) together with GS1 data (Brick codes), Vocal terms and related data.

Comprehensive food record

An extensive but incomplete data record

Additional data to complete a single record

Unified food trace, packaging, component, nutrient, additives and agrochemical data

OnLine Top Down Deposition

Table of Contents

- Process
- Examples: Pre-Combined Items

Process  Template-driven process that classifies a food by its similarity to another food.
Templates are pre-combined items specified by ontology terms.
One ontology used by Ontomatica is Simple Knowledge Object Sharing (SKOS) [ONT52]. Example of applying SKOS:

- **Initiate conversation** by identifying an exact match `skos:exactMatch` or close match `skos:closeMatch` for *deposition*.

### Food and Data Deposition: “top down”

**Reference datasets**

- **SR2x generic data set**
  - Dataset 1
- **Supplier specific data set**
  - Dataset 2
- **Pre-combined items data set**
  - Dataset 3
- **Nutrition, pricing, availability & GTIN data set**
  - Dataset 4

**Collective access**

- Enter common name search terms (in a type ahead, drop down menu – [Ajax])
- Select best fit **name** from search results
- Show facet terms for selected **name**
- Select best fit **facet terms** from search results
- Show component values for **facet terms**
- Select best fit **components** from search results
- Show pricing and availability values for **name**
- Select best fit **values** for name

**Examples: Pre-Combined Items**

<table>
<thead>
<tr>
<th>Food Items</th>
<th>[language:FTC] (Language Facet Term Codes (FTC))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ale, Pasteurized, Bottled</td>
<td>A0195 B1230 C0102 E0123 H0232 H0246 J0135 M0210 N0040</td>
</tr>
<tr>
<td>Almond Extract, in Glass Bottle</td>
<td>A0215 B1347 C0174 E0123 H0100 H0232 M0130 N0040</td>
</tr>
<tr>
<td>Angel Food Cake, Whole</td>
<td>A0210 B1012 C0210 E0146 H0358 H0319 H0205</td>
</tr>
<tr>
<td>Apple Butter</td>
<td>A0184 B1245 C0140 E0119 H0105</td>
</tr>
<tr>
<td>Apple Juice, Bottled, Infant or Junior Food</td>
<td>A0127 B1245 C0140 E0123 M0203 N0001 P0020</td>
</tr>
<tr>
<td>Apple Juice, Unsweetened, Canned</td>
<td>A0127 B1245 C0140 E0123 J0123 M0194 P0105</td>
</tr>
<tr>
<td>Apple Sauce, Unsweetened, Canned</td>
<td>A0143 B1245 C0229 E0110 J0123 M0194 P0105</td>
</tr>
<tr>
<td>Beef and Pork Frankfurter</td>
<td>A0221 B1105 C0268 E0105 F0014 H0172 H0288 H0306</td>
</tr>
<tr>
<td>Beef Stroganoff with Noodles</td>
<td>A0220 B1079 C0208 E0134 H0191 H0242 H0166</td>
</tr>
<tr>
<td>Beef Taco with Lettuce, Tomato and Cheese</td>
<td>A0102 B1161 C0268 E0105 F0023 H0207 H0152 H0212 H0143 H0253 H0328</td>
</tr>
<tr>
<td>Blue Cheese Dressing</td>
<td>A0136 B1017 C0190 E0110 H0143 H0331 H0253</td>
</tr>
</tbody>
</table>
### Table 1.2 – continued from previous page

<table>
<thead>
<tr>
<th>Food Items</th>
<th>[langual:FTC]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boneless Chicken Breast, Raw</td>
<td>A0273 B1457 C0267 E0150 F0003 Z0004</td>
</tr>
<tr>
<td>Broccoli Spears, Quick Frozen</td>
<td>A0152 B1443 C0144 E0150 J0132</td>
</tr>
<tr>
<td>Cauliflower in Cheddar Cheese Sauce</td>
<td>A0152 B1094 C0237 E0150 H0143 H0184 H0328 H0253 K0033</td>
</tr>
<tr>
<td>Cheeseburger, McDonald’s</td>
<td>A0218 B1161 C0268 E0105 F0023 H0207 H0319 H0212 H0256 H0107 H0253 H0194</td>
</tr>
<tr>
<td>Chicken Noodle Soup, Canned</td>
<td>A0243 B1457 C0170 E0149 F0014 H0319 H0212 H0171 J0123 M0194</td>
</tr>
<tr>
<td>Chicken, Roaster, Whole, Grilled</td>
<td>A0273 B1457 C0120 E0150 F0014 G0006 Z0054</td>
</tr>
<tr>
<td>Chili Con Carne</td>
<td>A0172 B1161 C0268 E0134 H0212</td>
</tr>
<tr>
<td>Chocolate Chip Cookie</td>
<td>A0203 B1312 C0208 E0140 H0158 H0231 H0119 H0253</td>
</tr>
<tr>
<td>Chocolate Ice Cream, Haagen-Dazs</td>
<td>A0227 B1201 C0195 E0139 F0018 H0158 H0178 H0184 H0185 H0231 H0206 J0136</td>
</tr>
<tr>
<td>Chocolate Syrup</td>
<td>A0272 B1012 C0108 E0139 H0231 H0119 H0253 H0368</td>
</tr>
<tr>
<td>Coconut Milk</td>
<td>A0260 B1536 C0214 E0123</td>
</tr>
<tr>
<td>Coffee Bean, Roasted</td>
<td>A0268 B1305 C0132 E0150 F0014 G0003 H0391</td>
</tr>
<tr>
<td>Cooked Ham, Canned, Not Smoked</td>
<td>A0279 B1136 C0268 E0146 F0014 H0253 M0204 Z0024</td>
</tr>
<tr>
<td>Corned Beef Hash</td>
<td>A0212 B1161 C0268 E0134 H0212 H0253 H0227</td>
</tr>
<tr>
<td>Cottage Cheese, 4% Milkfat, Creamed</td>
<td>A0185 B201 C0245 E0134 H0101</td>
</tr>
<tr>
<td>Cranberry Juice Cocktail, in Plastic Bottle</td>
<td>A0130 B1508 C0140 E0123 H0136 M0184 N0036</td>
</tr>
<tr>
<td>Cream Cheese</td>
<td>A0185 B2101 C0245 E0119 F0018 H0101 J0135</td>
</tr>
<tr>
<td>Cream Of Asparagus Soup, (Campbell’s)</td>
<td>A0180 B1415 C0186 E0134 H0319 H0263 H0296 H0279 H0260 H0369 H0388 H0153</td>
</tr>
<tr>
<td>Cream-Style Corn, Golden, (Del Monte)</td>
<td>A0152 B1595 C0133 E0110 F0014 H0279 H0158 J0123 M0151 N0030 Z0112</td>
</tr>
<tr>
<td>Dill Pickle, Packed in Brine</td>
<td>A0271 B1404 C0140 E0150 H0190 H0200 H0123 K0022</td>
</tr>
<tr>
<td>Durum Milk</td>
<td>A0149 B1079 C0208 E0106</td>
</tr>
<tr>
<td>Enriched Corn Meal</td>
<td>A0149 B1379 C0155 E0117 H0194 H0309 H0310 H0311 H0181</td>
</tr>
<tr>
<td>Garlic Powder</td>
<td>A0113 B2133 C0240 E0106 H0138 J0116</td>
</tr>
<tr>
<td>Graham Cracker Pie Crust</td>
<td>A0140 B1312 C0208 E0153 H0158 H0221 H0319</td>
</tr>
<tr>
<td>Grape Jelly</td>
<td>A0209 B1329 C0140 E0119 H0136 H0200 H0145</td>
</tr>
<tr>
<td>Hard Salami, Whole</td>
<td>A0221 B1105 C0268 E0146 H0119 H0138</td>
</tr>
<tr>
<td>Hot Dog, Lower Salt</td>
<td>A0221 B1134 C0268 E0105 F0014 H0288 H0306 H0172 K0027 M0186 N0036 P0024 P0039</td>
</tr>
<tr>
<td>Hydrolyzed Whey Protein Concentrate</td>
<td>A0129 B1201 C0236 E0139 H0277</td>
</tr>
<tr>
<td>Infant Formula, Milk-Based</td>
<td>A0274 B1201 C0235 E0123 H0157 H0159 H0163 H0221 H0194 P0020</td>
</tr>
<tr>
<td>Lowfat Chocolate Milk</td>
<td>A0148 B1201 C0235 E0123 H0158 H0231 H0119 H0253 H0247 J0135 P0024 P0042 P0053 P0069 P0080 P0088 P0100</td>
</tr>
<tr>
<td>Lowfat Cottage Cheese</td>
<td>A0185 B1201 C0245 E0134 H0101 H0325 P0024 P0039</td>
</tr>
<tr>
<td>Macaroni and Cheese</td>
<td>A0220 B1079 C0208 E0134 H0143 H0328 H0221 H0184 K0003</td>
</tr>
<tr>
<td>Maple Syrup</td>
<td>A0118 B1167 C0271 E0139</td>
</tr>
<tr>
<td>Mashed Potato Flakes, Instant</td>
<td>A0152 B1218 C0240 E0100 H0138 H0169 J0140</td>
</tr>
<tr>
<td>Mayonnaise</td>
<td>A0292 B1017 C0190 E0119 H0185 H0200 H0306 J0149</td>
</tr>
<tr>
<td>Minute Rice</td>
<td>A0125 B1322 C0208 E0150 F0014 H0169 H0309 H0311 H0181 H0194 H0138 J0141</td>
</tr>
<tr>
<td>Mozzarella Cheese</td>
<td>A0185 B1201 C0245 E0151 H0107</td>
</tr>
<tr>
<td>Peanut Butter, Smooth</td>
<td>A0260 B1337 C0132 E0119 H0174 H0263 K0003</td>
</tr>
<tr>
<td>Pineapple Chunks, Packed in Pineapple Juice</td>
<td>A0143 B1484 C0229 E0115 K0039</td>
</tr>
<tr>
<td>Pizza with Sausage</td>
<td>A0100 B1312 C0208 E0140 H0143 H0191 H0212</td>
</tr>
<tr>
<td>Potato Chip, Salted, in Laminate Bag</td>
<td>A0228 B1218 C0240 E0145 H0221 H0173 M0144</td>
</tr>
<tr>
<td>Raisin, Sundried</td>
<td>A0143 B1329 C0137 E0150 H0138 J0141</td>
</tr>
<tr>
<td>Refried Beans</td>
<td>A0152 B1368 C0133 E0134 H0221</td>
</tr>
<tr>
<td>Ripe Olive, Packed in Brine, Canned</td>
<td>A0152 B1299 C0139 E0150 K0018 Z0052</td>
</tr>
<tr>
<td>Sauerkrut, Canned</td>
<td>A0271 B1406 C0151 E0100 F0014 H0101 H0367 J0123 K0017 M0194</td>
</tr>
<tr>
<td>Shrimp and Pork Egg Roll</td>
<td>A0103 B1282 C0101 E0105 H0207 H0212 H0319 H0153 H0191</td>
</tr>
<tr>
<td>Shrimp Salad</td>
<td>A0208 B1237 C0173 E0134 H0221 H0200 H0306 H0186</td>
</tr>
<tr>
<td>Skim Milk</td>
<td>A0148 B1201 C0235 E0123 H0248 H0194 H0316 J0135</td>
</tr>
<tr>
<td>Soda Water, Unflavored</td>
<td>A0241 B1217 C0005 E0123 H0109 P0024 P0102</td>
</tr>
<tr>
<td>Sour Dough Bread, Loaf</td>
<td>A0178 B1312 C0208 E0146 H0256</td>
</tr>
<tr>
<td>Soy Protein Concentrate</td>
<td>A0129 B1452 C0236 E0100</td>
</tr>
</tbody>
</table>

### 1.3. Features - Core
Table 1.2 – continued from previous page

<table>
<thead>
<tr>
<th>Food Items</th>
<th>(LanguaL Facet Term Codes (FTC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaghetti Sauce</td>
<td>A0152 B1276 C0140 E0121 H0151</td>
</tr>
<tr>
<td>Tabasco Pepper Sauce</td>
<td>A0263 B2636 C0167 E0123 H0123 H0151 H0200</td>
</tr>
<tr>
<td>Tamale</td>
<td>A0102 B1379 C0155 E0105 H0207 M0206 N0049</td>
</tr>
<tr>
<td>Tomato Soup, Condensed, Canned</td>
<td>A0180 B1276 C0140 E0119 H0114 M0204</td>
</tr>
<tr>
<td>Tomato-Based Barbecue Sauce</td>
<td>A0263 B1276 C0140 E0121 H0136 H0151</td>
</tr>
<tr>
<td>Tonic Water</td>
<td>A0241 B1217 C0005 E0123 H0105 H0109 H0117</td>
</tr>
<tr>
<td>Tuna, Chunk Light, Solid Pack, in Vegetable Oil</td>
<td>A0267 B1269 C0268 E0125 F0014 H0263 J0123 K0021 M0151 N0023 Z0057</td>
</tr>
<tr>
<td>Turkey Salami, Whole</td>
<td>A0131 B1236 C0268 E0146 H0307 H0306 Z0002</td>
</tr>
<tr>
<td>Vanilla Extract</td>
<td>A0215 B1324 C0133 E0123 H0100 H0232</td>
</tr>
<tr>
<td>Vegetable Stock</td>
<td>A0243 B1579 C0170 E0123</td>
</tr>
<tr>
<td>Vodka</td>
<td>A0120 B1324 C0133 E0123 H0232 H0270</td>
</tr>
<tr>
<td>Wheat Germ</td>
<td>A0149 B1312 C0182 E0100</td>
</tr>
<tr>
<td>Whipping Cream, Pressurized</td>
<td>A0148 B1201 C0154 E0123 J0135 K0015 M0151</td>
</tr>
<tr>
<td>White Bread, Loaf</td>
<td>A0178 B1312 C0208 E0146 H0256</td>
</tr>
<tr>
<td>Whitefish Filet, Smoked</td>
<td>A0267 B2687 C0125 E0152 H0118</td>
</tr>
<tr>
<td>Whole Durum Flour</td>
<td>A0149 B1079 C0133 E0106</td>
</tr>
<tr>
<td>Whole Milk, Ultra-pasteurized</td>
<td>A0148 B1201 C0235 E0123 J0148</td>
</tr>
<tr>
<td>Whole Tomatoes, Packed in Tomato Juice</td>
<td>A0152 B1276 C0140 E0150 K0016</td>
</tr>
<tr>
<td>Whole Wheat Flour</td>
<td>A0149 B1312 C0133 E0106</td>
</tr>
<tr>
<td>Whole Wheat Pita Bread</td>
<td>A0178 B1312 C0133 E0140 H0256</td>
</tr>
<tr>
<td>Yogurt</td>
<td>A0101 B1201 C0235 E0119 H0101</td>
</tr>
<tr>
<td>Water, Distilled</td>
<td>A0112 B1217 C0005 E0123 H0270</td>
</tr>
<tr>
<td>Whole Wheat Bread, Loaf</td>
<td>A0178 B1312 C0133 E0146 H0256</td>
</tr>
</tbody>
</table>

OnLine Bottom Up Deposition

Table of Contents
- Process
- Concept
- Vocal Terms

Process  Ontology driven process that classifies a food according to precise ontology terms.
- Initiate conversation by traversing a graph and selecting appropriate terms.
- Use a broad term when there is insufficient information to use a more narrow, precise term.

Conversation  has three stages:
- identify unique terms [source; part of source; origin of source]  
- identify combinations of terms that are jointWith and disjointWith
- identify data associated with ontology terms.

Concept

Vocal Terms  terms to support bottom-up
Food and Data Deposition: “bottom up”

Facet A: Select the GS1 GPC code closest in meaning to the supplier’s food
Facets B, C and R: select proper values

Stage 1
Some guidance possible

Stage 2
For combinations, some selections imply exclusions

Stage 3

Less guidance and more supplier generated descriptors

Facet E (single selection, simple hierarchy)
Facet F (single selection, simple hierarchy)
Facet G (multiple selections, poly-hierarchy)
Facet H (multiple selections, poly-hierarchy)
Facet J (multiple selections, simple hierarchies)
Facet K (multiple selections, simple hierarchies)
Facet M (multiple selections, simple hierarchies)
Facet N (multiple selections, simple hierarchies)
Facet P (multiple selections, simple hierarchies)
Facet Z (multiple selections, simple hierarchies)

Product specific: volume, nutrients, unit price, availability, etc
1.3.11 Nutrition Mathematics

This section addresses:

:USDA #3:
Develop capability for checking the quality of incoming data based on general database principles and specific ARS analytics.

:USDA #5:
Allow incorporation of ARS analytics for expanding the database.

Attention: This section applies to USDA prime data, not to USDA select data. For explanation of USDA prime and USDA select data, see Deposition Workflow

OnTask - Ontomatica workflow engine

Examples of USDA mathematics processed by OnTask deposition workflow:

- Validate: sum of proximates is less than or equal to 100.
- Validate: sum of carbohydrate fractions is less than or equal to total carbohydrates.
- Validate: sum of individual fatty acids is less than or equal to total fat.
- Validate: sum of individual carotenoids times the appropriate factors is less than or equal to vitamin A value.
- Validate: each food has refuse value.
- Validate: each food has at least one household measure.
- Compute: value of missing value for FNDDS nutrient component.
- Compute: retention values based on cooking method.
- Email: food record to depositor for review.

Sample workflow

Return to top

1.3.12 REST Services and Reports

This section addresses:

:USDA #6:
Permit export of composition and analytical data and conversion of composition data to an application development format.

:USDA #10:
Permit assembly of ad hoc databases to suit individual needs.

:USDA #11:
Permit export of ad hoc data.
Table of Contents

- General Structure of REST API
  - Query Parameters: Input Specification
  - Query Parameters: Operation Specification
  - Query Parameters: Output Specification
  - Request: Food property tables
    * Return food property table
    * Variation: Return Nutrient Fact Panel <NFP_type>
    * Variation: Return dates
    * Variation: Return Cross References <xrefs>
- Quality Control using Provenance Ontology and REST

Label project data will be available to investigators via REST (Representational State Transfer) services. REST is a simple stateless architecture that runs over HTTP. REST service reads a designated Web page that contains an XML file in RDF format. XML/RDF file describes and includes label project data. Data is returned to investigator in JSON-LD format.

REpresentational State Transfer (REST) Services

General Structure of REST API

Structure of a USDA REST conversation:

GET /input specification/operation specification/output specification/operation_options

Structure of the USDA REST API is:

http://usda.ars.gov/rest/<input specification>/<operation specification>/[<output specification>]/[<operation_options>]

Example: “retrieve food description using food identifier [USDA_fid] and item number 2244”

http://usda.ars.gov/rest/food/USDA_fid/2244/JSON
Query Parameters: Input Specification  
Input portion of URL tells service which records to use as subject of query.

This is further subdivided into two or more locations in URL “path” as follows:

- query parameter title input specification
- query parameter domain values may include food, compound, Nutrient Fact Panel (NFP) values and other inputs

For example:

```
<input_specification> = <domain>/<namespace>/<identifiers>
```

```
  1  2  3  4
  1 <domain> = food | compound | NFP_values | other inputs

  2.1  2.2  2.3  2.4
  2.1 food domain <namespace> = USDA_fid | sourceid/<source name> | sourceall/<source name> | name | _to_be_specified_

  2.2 compound domain <namespace> = PC_cid | name | inchikey | <xref>

  2.n.1

  2.3 NFP_values domain <namespace> = NFP_id | type/<NFP type> | sourceall/<source name> | activity | _to_be_specified_

  2.n.1 <source_name> = any valid Branded Food depositor name

  2.n.2 <xref> = xref / {RegistryID | RN | NCBI_ProteinGI | NCBI_TaxonomyID }

  2.n.3 <NFP_type> = all | panel | summary | _to_be_specified_

  2.4 <other_inputs_to_be_specified_> = sources / [substance, assay] | conformers

  3 <identifiers> = comma-separated list of positive integers (e.g. PC_cid, USDA_fid, NFP_id) or identifier strings
```

Query Parameters: Operation Specification  
Operation part of URL tells service what to do with input records - such as to retrieve whole record or specific properties of a food.

Construction of this part of “path” will depend on Operation Specification. If no operation is specified, default is to retrieve entire record.

Available operations dependent on Input Specification. For example, certain operations are applicable only to foods, compounds and not NFP_values.

For example:

```
  1.n.1

  1.1 food domain <operation_specification> = record | <food_property> | synonyms | PC_cids | NFP_values

  1.n.1 <food_property> = property / [comma-separated list of property tags]

  1.n.2 <xrefs> = xrefs / [comma-separated list of xrefs tags]

  1.3 NFP domain <operation_specification> = record | NFP_ids | USDA_fids | PC_cids | description | summary
```

Query Parameters: Output Specification  
Final portion of URL tells service what output format is desired.
Output format also can be specified in HTTP Accept field of request header.

For example:

<output:specification> = JSON | CSV | TXT

**Request: Food property tables**

GET /input specification

Request properties for a food (USDA_fid) or compound (PC_cid).

http://usda.ars.gov/rest/food/USDA_fid/3114/property/JSON

<table>
<thead>
<tr>
<th>Property</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>to_be_specified</td>
<td>to_be_specified</td>
</tr>
<tr>
<td>to_be_specified</td>
<td>to_be_specified</td>
</tr>
</tbody>
</table>

**Variation: Return Nutrient Fact Panel <NFP_type>**

<table>
<thead>
<tr>
<th>Options</th>
<th>Allowed Values</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFP_type</td>
<td>all, primary, secondary</td>
<td>Type of NFP to return given, USDA_fid or NFP_id</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposition</td>
<td>when an USDA_fid or NFP_id first appeared</td>
</tr>
<tr>
<td>Modification</td>
<td>when an USDA_fid or NFP_id was last modified</td>
</tr>
<tr>
<td>Hold</td>
<td>when an USDA_fid or NFP_id will be released</td>
</tr>
<tr>
<td>Creation</td>
<td>when a USDA_fid or NFP_id first appeared</td>
</tr>
<tr>
<td>Deprecation</td>
<td>when a USDA_fid or NFP_id is no longer active</td>
</tr>
</tbody>
</table>

**Variation: Return dates**

<table>
<thead>
<tr>
<th>Cross Reference</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegistryID</td>
<td>external registry identifier</td>
</tr>
<tr>
<td>PubMedID</td>
<td>NCBI PubMed identifier</td>
</tr>
<tr>
<td>DBURL</td>
<td>external database home page URL</td>
</tr>
<tr>
<td>TaxonomyID</td>
<td>NCBI taxonomy identifier</td>
</tr>
<tr>
<td>SourceName</td>
<td>external depositor name</td>
</tr>
<tr>
<td>SourceCategory</td>
<td>depositor category(ies)</td>
</tr>
</tbody>
</table>

**Variation: Return Cross References <xrefs>**

**Quality Control using Provenance Ontology and REST**

Several conversation types will be supported.

For example, Ontomatica imports the Provenance Ontology [prov].

The following illustrates a curator using [prov]:

- Alanna wishes to verify that a new data set correctly addresses previous error.
- David then generates a new dataset [ex:dataset2] that implements correction activity [ex:correct1].
- Alanna confirms [prov:Plan] and executes a diff (difference) to contrast [ex:dataset2] with [ex:dataset1].
Curator uses a REST conversation to implement the example above.

See also:

Model sites that implement REST

- ChemAxon concepts
- ChemAxon application programming interface (APIs)

1.3.13 International Data and Methods

This section addresses:

Ontomatica defined objective:

Attention: This section applies to USDA prime data, not to USDA select data. For explanation of USDA prime and USDA select data, see Deposition Workflow

Ontomatica proposes, as part of label project, to implement complete system for two national authorities - USA and GBR (UK).

Ontomatica will identify countries.

Then, for a specific country and for a specific food, Ontomatica will illustrate the distribution of energy (kilocal, kilojoule) as defined by the national authority.

For example:

<table>
<thead>
<tr>
<th>Country</th>
<th>ISO 3</th>
<th>UN FAO</th>
<th>DBpedia</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>GBR</td>
<td>826</td>
<td>dbpedia:United_Kingdom</td>
</tr>
<tr>
<td>United States</td>
<td>USA</td>
<td>840</td>
<td>dbpedia:United_States</td>
</tr>
</tbody>
</table>

Energy illustration is generated using UN FAO INFOODS and authority values.

Note below: USDA and GBR use different analytical methods when reporting values.

Methods

EC carbohydrates  \[ CHOPL = (SUGAR \ [ncit:C38046]) + (SUGOH \ [ncit:C38046]) \]

GBR carbohydrates \[ CHOAVLM = (MNSAC \ [ncit:C38046]) + (DISAC \ [ncit:C38046]) + (DEXTN \ [ncit:C38046]) \]

USA carbohydrates \[ (food: whole wheat) \]

GBR fiber \[ FIBTS = (GLUCNB \ [ncit:C38046]) + (CELLU \ [ncit:C38046]) + (HEMCEL \ [ncit:C38046]) + (INULN \ [ncit:C38046]) \]

USA fiber \[ FIBTG \ [aoac:978.10] = (FIBSOL \ [ncit:C38046]) + (FIBINS \ [ncit:C38046]) + (NSP \ [ncit:C38046]) \]

Legend

- ALL CAPS = INFOODS_identifier.
- Method format = [method-ontology-prefix : ontology-identifier].
- ncit = NIH NCI thesaurus.
- ncit:C38046 = Unspecified.
- XPROT = protein conversion factor.
- XPROT value = 5.83 for the food: whole wheat.
• XPROT is a floating point number [xsd:float].

1.3.14 Information Harmonization

This section addresses:

: USDA #4:
  Allow incorporation ARS ontology for ingredients nomenclature with access to external databases.

: USDA #8:
  Provide links to other nutrition-related databases.

Table of Contents

• Ontomatica Coverage
• Authorities
• Example: Fish
• Example: Variety of Frequently Used Terms

Ontomatica Coverage

Ontomatica harmonizes terms defined by the authorities below.

Our methods create relationships between terms by using one or more of the following predicates:
schema:sameAs skos:exactMatch skos:closeMatch skos:relatedMatch

Harmonization enables a depositor to use the authority’s term, rather than an equivalent USDA term. Harmonization is essential for implementing USDA prime.

Authorities

<table>
<thead>
<tr>
<th>Domain</th>
<th>Harmonized Terms from Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio-chemistry</td>
<td>USDA ARS chemicals</td>
</tr>
<tr>
<td></td>
<td>UN FAO INFOODS chemicals</td>
</tr>
<tr>
<td></td>
<td>US NIH PubChem chemicals</td>
</tr>
<tr>
<td></td>
<td>ChEBI chemicals</td>
</tr>
<tr>
<td></td>
<td>USDA NALT chemicals</td>
</tr>
<tr>
<td></td>
<td>USDA ARS GrainGenes (for wheat ontology)</td>
</tr>
<tr>
<td></td>
<td>UN FAO AgroVoc chemicals</td>
</tr>
<tr>
<td></td>
<td>Protein Data Bank (PDB) chemicals</td>
</tr>
<tr>
<td></td>
<td>Bio-chemical references in US Code of Federal Regulation</td>
</tr>
<tr>
<td></td>
<td>US NIH NCI Applied Research chemicals</td>
</tr>
<tr>
<td></td>
<td>US NIH NCI thesaurus chemicals</td>
</tr>
<tr>
<td></td>
<td>ChEMBL bioactive compounds</td>
</tr>
<tr>
<td></td>
<td>UniProt bioactive compounds</td>
</tr>
<tr>
<td></td>
<td>PDB bioactive compounds</td>
</tr>
<tr>
<td></td>
<td>US NIH NCBI Structure bioactive compounds</td>
</tr>
<tr>
<td></td>
<td>US NIH NCBI Taxon for bacteria and virus</td>
</tr>
</tbody>
</table>

Continued on next page
<table>
<thead>
<tr>
<th>Domain</th>
<th>Harmonized Terms from Authorities</th>
</tr>
</thead>
</table>
| Agricultural commodities       | US FDA Unique Ingredient Identifiers (UNII)  
Enzyme Commission (EC) identifiers  
DBpedia terms  
Chemical Abstract Society (CAS) identifiers  
IR-4 commodities  
UN FAO AgroVoc commodities  
UN FAO CODEX crop groups  
UN FAO CODEX livestock groups  
UN FAO fish commodities  
USDA NALT commodities  
US EPA Food Commodity Intake Data (FCID)  
Agriculture commodity references in US Code of Federal Regulation  
DBpedia terms  
USDA ARS Food Patterns Equivalents Data (FPED) identities  
US NIH NCI Applied Research identities  
Food identities in US Code of Federal Regulation  
UN FAO food groups  
UN INFOODS tags for CODEX methods  
AOAC international methods  
Methods associated with specific analytical devices and equipment |
| Food and meals                  |                                                                                                                                                                                                                                    |
| Analytical methods             |                                                                                                                                                                                                                                    |

**Example: Fish**

<table>
<thead>
<tr>
<th>Aquatic term</th>
<th>UN FAO term code</th>
<th>EUNIS term code</th>
<th>DBpedia term code</th>
<th>AgroVoc term code</th>
<th>NALT term code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common octopus</td>
<td>cl_species:OCC</td>
<td>eunis:60605</td>
<td>dbpedia:Common_Octopus</td>
<td>agrovoc:c_5307</td>
<td>nalt:55627</td>
</tr>
<tr>
<td>Angler</td>
<td>cl_species:MON</td>
<td>eunis:124874</td>
<td>dbpedia:Lophius_piscatorius</td>
<td>agrovoc:c_46042</td>
<td>nalt:201339</td>
</tr>
<tr>
<td>Red mullet</td>
<td>cl_species:MUT</td>
<td>eunis:124879</td>
<td>dbpedia:Mullus_barbatus</td>
<td>agrovoc:c_43349</td>
<td>nalt:43361</td>
</tr>
<tr>
<td>Great Atlantic scallop</td>
<td>cl_species:SCE</td>
<td>eunis:60712</td>
<td>dbpedia:Pecten_maximus</td>
<td>agrovoc:c_31159</td>
<td>nalt:57135</td>
</tr>
<tr>
<td>Red swamp crawfish</td>
<td>cl_species:RCW</td>
<td>eunis:258990</td>
<td>dbpedia:Procambarus_clarkii</td>
<td>agrovoc:c_46824</td>
<td>nalt:50664</td>
</tr>
<tr>
<td>Swordfish</td>
<td>cl_species:SWO</td>
<td>eunis:124899</td>
<td>dbpedia:Swordfish</td>
<td>agrovoc:c_7559</td>
<td>nalt:65299</td>
</tr>
<tr>
<td>Crested flounder</td>
<td>cl_species:LFG</td>
<td>eunis:124899</td>
<td>dbpedia:Crested_flounder</td>
<td>agrovoc:c_45572</td>
<td>nalt:40297</td>
</tr>
<tr>
<td>Giant grouper</td>
<td>cl_species:EEN</td>
<td>eunis:124899</td>
<td>dbpedia:Giant_grouper</td>
<td>agrovoc:c_42341</td>
<td>nalt:40299</td>
</tr>
<tr>
<td>Largemouth black bass</td>
<td>cl_species:MPS</td>
<td>eunis:10072</td>
<td>dbpedia:Largemouth_bass</td>
<td>agrovoc:c_37035</td>
<td>nalt:52789</td>
</tr>
<tr>
<td>Pandalid shrimps</td>
<td>cl_species:PDZ</td>
<td>eunis:124939</td>
<td>dbpedia:Pandalidae</td>
<td>agrovoc:c_46467</td>
<td>nalt:31889</td>
</tr>
<tr>
<td>Penaeid shrimps</td>
<td>cl_species:PEZ</td>
<td>eunis:124939</td>
<td>dbpedia:Penaeidae</td>
<td>agrovoc:c_46269</td>
<td>nalt:31890</td>
</tr>
</tbody>
</table>

1.3. Features - Core
Example: Variety of Frequently Used Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>UN FAO term code</th>
<th>NALT term code</th>
<th>DBpedia term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brassica</td>
<td>agrovoc:c_1060</td>
<td>nalt:19293</td>
<td>dbpedia:Brassica</td>
</tr>
<tr>
<td>Flavonoids</td>
<td>agrovoc:c_2964</td>
<td>nalt:10004</td>
<td>dbpedia:Flavonoid</td>
</tr>
<tr>
<td>food composition</td>
<td>agrovoc:c_10961</td>
<td>nalt:10481</td>
<td>dbpedia:Food_composition_data</td>
</tr>
<tr>
<td>Bioavailability</td>
<td>agrovoc:c_32390</td>
<td>nalt:10477</td>
<td>dbpedia:Bioavailability</td>
</tr>
<tr>
<td>Nutritive value</td>
<td>agrovoc:c_5278</td>
<td>nalt:10486</td>
<td>dbpedia:Dietary_Reference_Values</td>
</tr>
<tr>
<td>Age</td>
<td>agrovoc:c_186</td>
<td>nalt:110</td>
<td>dbpedia:Ageing</td>
</tr>
<tr>
<td>Apples</td>
<td>agrovoc:c_541</td>
<td>nalt:11308</td>
<td>dbpedia:Apple</td>
</tr>
<tr>
<td>Processed foods</td>
<td>agrovoc:c_28228</td>
<td>nalt:15553</td>
<td>dbpedia:Processed_food</td>
</tr>
<tr>
<td>Carbonated beverages</td>
<td>agrovoc:c_28261</td>
<td>nalt:16986</td>
<td>dbpedia:Soft_drink</td>
</tr>
<tr>
<td>Fish products</td>
<td>agrovoc:c_2930</td>
<td>nalt:9444</td>
<td>dbpedia:Fish_products</td>
</tr>
<tr>
<td>Milk protein</td>
<td>agrovoc:c_4831</td>
<td>nalt:9453</td>
<td>dbpedia:Milk#Physical_and_chemical_structure</td>
</tr>
</tbody>
</table>

1.3.15 Data Integration

This section addresses:

: USDA #4: Allow incorporation ARS ontology for ingredients nomenclature with access to external databases.

: USDA #3: Provide links to other nutrition-related databases.

Ontomatica Coverage

Ontomatica integrates data from projects sponsored by the following authorities.

Integration enables Ontomatica to automate the specification of a food description using authority terms familiar to a depositor.

An authority can easily verify that components of a food description accurately represent their data.

Ontomatica has developed web services that keep integrated data fresh and accurate.

Authorities

<table>
<thead>
<tr>
<th>Authority</th>
<th>Project</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>US NIH</td>
<td>PubChem</td>
<td>Chemicals</td>
</tr>
<tr>
<td></td>
<td>NCI thesaurus</td>
<td>Food related terms</td>
</tr>
<tr>
<td></td>
<td>NCBI Taxon</td>
<td>Living organisms</td>
</tr>
<tr>
<td></td>
<td>NCBI Structure</td>
<td>Proteins</td>
</tr>
<tr>
<td></td>
<td>NCBI Genes</td>
<td>Human genome</td>
</tr>
<tr>
<td></td>
<td>NCI Applied Research</td>
<td>Diet components</td>
</tr>
<tr>
<td></td>
<td>What We Eat in America</td>
<td>Meal groups</td>
</tr>
<tr>
<td></td>
<td>What We Eat in America</td>
<td>Food groups</td>
</tr>
<tr>
<td></td>
<td>IR-4</td>
<td>Crop groups</td>
</tr>
<tr>
<td>US CDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USDA ARS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continued on next page
Table 1.4 – continued from previous page

<table>
<thead>
<tr>
<th>Authority</th>
<th>Project</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>USDA AMS</td>
<td>IR-4</td>
<td>Crop groups</td>
</tr>
<tr>
<td></td>
<td>Organic specifications</td>
<td>Label claims</td>
</tr>
<tr>
<td></td>
<td>Quality &amp; grades</td>
<td>Label claims</td>
</tr>
<tr>
<td>USDA FSIS</td>
<td>Species</td>
<td>Label claims</td>
</tr>
<tr>
<td></td>
<td>Parts of species</td>
<td>Label claims</td>
</tr>
<tr>
<td></td>
<td>Quality &amp; Grades; parts of species</td>
<td>Label claims</td>
</tr>
<tr>
<td></td>
<td>Hazard analysis critical control points</td>
<td>HACCP label claims</td>
</tr>
<tr>
<td>US FDA</td>
<td>Food labeling</td>
<td>Label data &amp; label claims</td>
</tr>
<tr>
<td></td>
<td>Substance Registration System</td>
<td>UNII</td>
</tr>
<tr>
<td></td>
<td>US CFR &amp; ChemIDplus</td>
<td>CAS identifiers &amp; UNII</td>
</tr>
<tr>
<td>US EPA</td>
<td>Food Commodity Intake Data</td>
<td>FCID identity</td>
</tr>
<tr>
<td></td>
<td>IR-4</td>
<td>Crop groups</td>
</tr>
<tr>
<td>US DOC</td>
<td>North America Industrial Classification</td>
<td>NAICS codes</td>
</tr>
<tr>
<td>US ITC</td>
<td>Harmonized Tariff &amp; Trade</td>
<td>Tariff codes</td>
</tr>
<tr>
<td>European Union</td>
<td>Food &amp; environment regulations</td>
<td>EU legislation codes</td>
</tr>
<tr>
<td>UN FAO</td>
<td>CODEX crops</td>
<td>Identity of commodities</td>
</tr>
<tr>
<td></td>
<td>INFOODS</td>
<td>Identity of chemicals &amp; methods</td>
</tr>
<tr>
<td></td>
<td>AgroVoc</td>
<td>Identity of chemicals &amp; commodities</td>
</tr>
<tr>
<td></td>
<td>Agrontology</td>
<td>Relationships among food-related items</td>
</tr>
<tr>
<td></td>
<td>CODEX</td>
<td>Identity of food additives</td>
</tr>
<tr>
<td>ChEBI</td>
<td>chemicals</td>
<td>Identity</td>
</tr>
<tr>
<td>ChEMBL</td>
<td>bioactive components</td>
<td>Identity</td>
</tr>
<tr>
<td>UniProt</td>
<td>bioactive components</td>
<td>Identity</td>
</tr>
<tr>
<td>KEGG</td>
<td>chemicals</td>
<td>Identity</td>
</tr>
<tr>
<td></td>
<td>bioactive components</td>
<td>Identity</td>
</tr>
</tbody>
</table>

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1.3.16 USDA Stakeholder Requirements

This section addresses:

:Ontomatica defined objective:

**Attention:** This section applies to *USDA prime data*, not to *USDA select data*. For explanation of USDA prime and USDA select data, see Deposition Workflow

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- ASA24 Data Specifications and Requirements
  - Ontomatica Coverage - ASA24 Requirements
- National Food and Nutrient Analysis Program (NFNAP)
  - Ontomatica Coverage - NFNAP Requirements

1.3. Features - Core 35
ASA24 Data Specifications and Requirements

Ontomatica label classes integrate data requirements for US NIH National Cancer Institute (NCI) Automated Self-administered 24-hour Recall (ASA24), including coverage of all specifications below.

Ontomatica Coverage - ASA24 Requirements  For the term “Glycemic load”, Ontomatica imports the NCI thesaurus identifier `ncit:C46090` (facet term code for the facet term “Glycemic Index”).

The following ASA terms will need to be defined: low high non-term other-term lean and discretionary

- Gram weight
- Energy
- Total fat
- Carbohydrate
- Protein
- Alcohol
- Cholesterol
- Total saturated fatty acids
- Total monounsaturated fatty acids
- Total polyunsaturated fatty acids
- Dietary fiber
- Retinol
- Vitamin E as alpha-tocopherol
- Vitamin K
- Vitamin C
- Thiamin (Vitamin B1)
- Riboflavin (Vitamin B2)
- Niacin
- Vitamin B6
- Total folate
- Vitamin B12
- Calcium
- Phosphorus
- Magnesium
- Iron
- Zinc
- Copper
- Selenium
- Sodium
- Potassium
- SFA 4:0 (Butanoic)
- SFA 6:0 (Hexanoic)
- SFA 8:0 (Octanoic)
- SFA 10:0 (Decanoic)
- SFA 12:0 (Dodecanoic)
- SFA 14:0 (Tetradecanoic)
- SFA 16:0 (Hexadecanoic)
- SFA 18:0 (Octadecanoic)
- MFA 16:1 (Hexadecenoic)
- MFA 18:1 (Octadecenoic)
- MFA 20:1 (Eicosenoic)
- MFA 22:1 (Docosenoic)
- PFA 18:2 (Octadecadienoic)
• PFA 18:3 (Octadecatrienoic)
• PFA 18:4 (Octadecatetraenoic)
• PFA 20:4 (Eicosatetraenoic)
• PFA 20:5 (Eicosapentaenoic)
• PFA 22:5 (Docosapentaenoic)
• PFA 22:6 (Docosahexaenoic)
• Caffeine
• Beta-carotene
• Alpha-carotene
• Beta-cryptoxanthin
• Lutein + zeaxanthin
• Lycopene
• Folate, dietary folate equivalents
• Food folate
• Folic acid
• Vitamin A, retinol activity equivalents
• Total sugars
• Total number of grain ounce equivalents
• Number of whole grain ounce equivalents
• Number of non-whole grain ounce equivalents
• Total number of vegetable cup equivalents, exclude legumes
• Number of dark-green vegetable cup equivalents
• Number of orange vegetable cup equivalents
• Number of white potato cup equivalents
• Number of other starchy vegetable cup equivalents
• Number of tomato cup equivalents
• Number of other vegetable cup equivalents
• Total number of fruit cup equivalents
• Number of citrus, melon, berry cup equivalents
• Number of other fruit cup equivalents
• Total number of milk group (milk, yogurt and cheese) cup equivalents
• Number of milk cup equivalents
• Number of yogurt cup equivalents
• Number of cheese cup equivalents
• Oz cooked lean meat from meat, poultry, fish
• Oz cooked lean meat from beef, pork, veal, lamb, and game
• Oz cooked lean meat from organ meats
• Oz cooked lean meat from franks, sausages, luncheon meats
• Oz cooked lean meat from chicken, poultry, and other poultry
• Oz cooked lean meat from fish, other seafood high in omega-3
• Oz cooked lean meat from fish, other seafood low in omega-3
• Oz equivalents of lean meat from eggs
• Oz equivalents of lean meat from soy product
• Oz equivalents of lean meat from nuts and seeds
• Number of cooked dry beans and peas cup equivalents
• Grams of discretionary oil
• Grams of discretionary solid fat
• Teaspoon equivalents of added sugars
• Total drinks of alcohol
• Total protein
• Animal protein
• Vegetable protein
• Fructose
• Galactose
• Glucose
• Lactose
• Maltose
• Sucrose
• Starch
• Total dietary fiber
• Soluble dietary fiber
• Insoluble dietary fiber
• Total vitamin A activity (IU)
• Beta-carotene equivalents
• Vitamin D (calciferol)
• Total alpha-tocopherol equivalents
• Beta-tocopherol
• Gamma-tocopherol
• Delta-tocopherol
• Pantothenic acid
• SFA 17:0 (margaric acid)
• SFA 20:0 (arachidic acid)
• SFA 22:0 (behenic acid)
• MUFA 14:1 (myristoleic acid)
• Tryptophan
• Threonine
• Isoleucine
• Leucine
• Lysine
• Methionine
• Cystine
• Phenylalanine
• Tyrosine
• Valine
• Arginine
• Histidine
• Alanine
• Aspartic acid
• Glutamic acid
• Glycine
• Proline
• Serine
• Aspartame
• Saccharin
• Phytic acid
• Oxalic acid
• 3-Methylhistidine
• Sucrose polyester
• Ash
• Water
• Total vitamin A activity (Retinol Equivalents)
• Trans 18:1 (trans-octadecenoic acid [elaidic acid])
• Trans 18:2 (trans-octadecadienoic acid [linolelaidic acid]; incl. c-t, t-c, t-t)
• Trans 16:1 (trans-hexadecenoic acid)
• Total trans fatty acids
• Niacin equivalents
• Omega-3 fatty acids
• Manganese
• Vitamin E (IU)
• Natural alpha-tocopherol (RRR-alpha-tocopherol or d-alpha-tocopherol)
• Synthetic alpha-tocopherol (all rac-alpha-tocopherol or dl-alpha-tocopherol)
• Daidzein
• Genistein
• Glycitein
• Coumestrol
• Biochanin A
• Formononetin
• Acesulfame potassium
• Sucralose
• Available carbohydrate
• Glycemic load (glucose reference)
• Glycemic load (bread reference)
• Choline
• Betaine
• Erythritol
• Inositol
• Lactitol
• Maltitol
• Mannitol
• Pinitol
• Sorbitol
• Xylitol
• Nitrogen

National Food and Nutrient Analysis Program (NFNAP)

The goals of NFNAP are to improve the quantity and quality of data in the USDA National Nutrient Databank (NDB). NFNAP has produced annual updates of NDB for Standard Reference and a number of Special Interest Databases: isoflavones, choline, proanthocyanidins, fluoride, and flavonoids.

NFNAP is guided by five principle:
1. Identify and rank foods and nutrients for analysis
2. Evaluate existing data for foods and nutrients
3. Develop strategies for sampling
4. Process and analyze foods
5. Review and disseminate results

Ontomatica Coverage - NFNAP Requirements  Ontomatica proposal enables #1, #2 and #4, and specifically with respect to Special Interest Database requirements.

Return to top

1.3.17 Infrastructure and Reporting

This section addresses:

: USDA #7:  Allow real-time processing of queries from users.
:USDA #13:

Support growth from current 3 GB of table space to as much as 2 TB and further possible future expansion.

:USDA #14:

Allow for tracking of the use of the database (e.g., frequency of record/field selection for viewing or export).

Table of Contents

- Infrastructure
- Reporting
- Service Provider

Infrastructure

Infrastructure is designed for high performance and automated *fail-over* if a core component (e.g. memory, storage) fails.
OnDemand real-time infrastructure

Infrastructure also presents comprehensive utilization data. For example:

- Record all Navigator queries
  - by IP address
  - by date
Sample document documentation, release

- by query

- Record all REST transactions
  - by IP address
  - by date
  - by transaction

Example from access to Nobel Prize application.

- ID: 7396
- date: 2014-11-15 02:00:02
- IP address: 72.167.253.87
- query terms: (see example below, beginning “select name from gender where parent= ...”)

```sql
7394 0.25 secs /cgi-bin/flamenco.cgi/_Nobel_Prize_Winners_-_14-01-16_/Flamenco
7395 2014-11-15 02:00:02 /cgi-bin/flamenco.cgi/_Nobel_Prize_Winners_-_14-01-16_/Flamenco
select count(*) from items
preload
username, apss

log
insert into log (interface, userid, taskid, event, detail, sort, count, ipaddr, indx, facet, item, prevurl, offset, query, groupby) values ('Flamenco', 0, 0, 'opening', '', '', 854, '72.167.253.87', NULL, '', '', NULL, 0, '', '')
opening
None
select child.id, count(*) as count, child.name as name from gender as child, item_gender as map where child.parent = 0 and map.id = child.id group by child.id having count > 0 order by name limit 0,13
select name from gender where parent=1
select name from gender where parent=2
select child.id, count(*) as count, child.name as name from country as child, item_country as map where child.parent = 0 and map.id = child.id group by child.id having count > 0 order by name limit 0,13
select name from country where parent=1
select name from country where parent=2
select name from country where parent=3
select name from country where parent=4
select name from country where parent=5
select name from country where parent=6
select name from country where parent=7
select name from country where parent=8
select name from country where parent=9
select name from country where parent=10
select name from country where parent=11
select name from country where parent=12
select name from country where parent=13
select name from country where parent=14
select name from country where parent=15
select name from country where parent=16
select name from country where parent=17
select name from country where parent=18
select name from country where parent=19
select name from country where parent=20
select name from country where parent=21
select name from country where parent=22
select name from country where parent=23
select name from country where parent=24
select name from country where parent=25
select name from country where parent=26
select name from country where parent=27
select name from country where parent=28
select name from country where parent=29
select name from country where parent=30
select name from country where parent=31
select name from country where parent=32
select name from country where parent=33
select name from country where parent=34
select name from country where parent=35
select name from country where parent=36
select name from country where parent=37
select name from country where parent=38
select name from country where parent=39
select name from country where parent=40
select name from country where parent=41
select name from country where parent=42
select name from country where parent=43
select name from country where parent=44
select name from country where parent=45
select name from country where parent=46
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select name from country where parent=65
select name from country where parent=66
select name from country where parent=67
select name from country where parent=68
select name from country where parent=69
select name from country where parent=70
select name from country where parent=71
select name from country where parent=72
select name from country where parent=73
select name from country where parent=74
select name from country where parent=75
select name from country where parent=76
select name from country where parent=77
```
Service Provider

Ontomatica plans to use Cybercon as the hosting service provider.

Return to top

1.3.18 Deployment Services

This section addresses:

:Ontomatica defined objective:

Table of Contents

- OnTarget
- OnTop
- Versioning
- make++
- OntoLogics
- Future Features

OnTarget

*OntoMation* manages the promotion of application content: - from *development* (1) - to *quality assurance* (5) - to *production* (6 and 7).
OnTarget Deployment Services

**User**
- Navigator
- MySQL
- REST Services

**Investigator** *
- Investigator:
  - Analyst
  - Scientist
  - Depositor
  - Researcher

**USDA Curator platform**
1. Navigator_development
2. **OnTop**
   - Taxonomy → Terms
   - Relations → Map
3. Version control
4. “make”
5. Navigator_QA
6. Navigator_production
7. REST_production
   - JSON

**OntoLogics**
- Ontology Development
  - OWL 2
  - Classes
  - Object properties
  - Data properties
  - Expressions
  - Axioms
  - RDF

- Rules (SWRL)
- Jena Fuseki TDB

**Future Features**
8. OpenFDA
   - Adverse events – allergies
   - Other services
   - SPARQL
   - Reasoning

---

**OnTop**
Description (2)

**Versioning**
Description about GitHub (3)

**make++**
Description (4)
#!/usr/bin/env python

# This script processes the entries in nobel.txt to produce the files
# needed to create a Navigator instance.

attrnames = [line.split('t')[0] for line in open('attrs.tsv')]
facets = [line.split('t')[0] for line in open('facets.tsv')]
facets = dict([(name, []) for name in facetnames])
maps = dict([(name, []) for name in facetnames])
items, nameitems = {}, {}
texts = {}

# First, collect all the facet values and items.

fields, categories, text = {}, [], ''
for line in open('nobel.txt'):
    if line.strip():
        name, values = line.split(': ', 1)
        values = values.strip()
        if name == 'year':
            values += ', ' + values[:3] + '0s' # group years by decade
        if name in facetnames:
            chunks = values.split('')
            for i in range(1, len(chunks)):
                chunks[i] = chunks[i].split(''), 1)[-1]
            values = ''.join(chunks)
            for value in values.split('; '):
                text += ' ' + value.replace(',', ' ')
                path = [segment.strip() for segment in value.split(', ')]
                path.reverse()
                path = tuple(path)
                if name == 'affiliation' and len(path) == 1:
                    continue
                if path not in facets[name]:
                    facets[name].append(path)
                    categories.append((name, path))
                elif name in attrnames:
                    text += ' ' + values
                    fields[name] = values
        if fields['name'] in nameitems:
            item = nameitems[fields['name']]
            items[item].update(fields)
            texts[item] += text
        else:
            item = len(items) + 1
            items[item] = fields, text
            nameitems[fields['name']] = item
            for name, path in categories:
                maps[name].append((item, path))
        fields, categories, text = {}, [], ''

# Then write the facet tables, generating ids as we go.

for name in facetnames:
    facets[name].sort()
    pathids = {}
    file = open('%s_terms.tsv' % name, 'w')
lastid = 0
for path in facets[name]:
    for i in range(1, len(path) + 1):
        subpath = path[:i]
        if subpath not in pathids:
            pathids[subpath] = lastid = lastid + 1
            file.write('%d	%s
' % (lastid, '	'.join(subpath)))
    file.close()
file = open('%s_map.tsv' % name, 'w')
for item, path in maps[name]:
    file.write('%d	%s
' % (item, pathids[path]))
    file.close()

# Write the table of items.
file = open('items.tsv', 'w')
itemids = items.keys()
itemids.sort()
for item in itemids:
    fields = []
    for name in attrnames:
        fields.append(items[item].get(name, ''))
    file.write('%d	%s
' % (item, '	'.join(fields)))
file.close()

# Finally, write the text associated with each item.
file = open('text.tsv', 'w')
for item in itemids:
    file.write('%d	%s
' % (item, ' '.join(texts[item].split())))
file.close()

OntoLogics

Ontomatica’s OntoLogics services are not part of Proposal.

Future Features

Presented here

Return to top

1.3.19 Non-composition Data

This section addresses:

:USDA #9:
    Support input and storage of various non-composition data types (metabolomic profiles; DNA barcodes; taxonomic information; and chromatographic and spectral profiles).

Attention: This section applies to USDA prime data, not to USDA select data. For explanation of USDA prime and USDA select data, see Deposition Workflow
Chromatographic and Spectral Profiles

Ontomatica deposition service integrates the following terms for use by investigators when depositing chromatographic and spectral profiles.

The Physico-chemical methods and properties ontology (FIX) has been parsed and each term below is referenceable. The HUPO Proteomics Mass Spectrometry ontology (MS) has not been parse. Instead, Ontomatica uses the Essepuntato Live OWL Documentation Service (LODE) to display the MS ontology. Be patient while the LODE service parses the MS ontology OWL file. Once displayed, each facet term code below is searchable.

Ontomatica deposition service will enable investigators to deposit data like this data from USDA:

- Fingerprint data for Glucoraphanin from Brassica oleracea, genotype Legacy
- Note that spectral data is presented for five different methods of analysis.

In the table below a Section is upper case bold and a Topic is upper case italic. The spectral term is lower case and associated with its facet term code.

<table>
<thead>
<tr>
<th>Spectral Profile Information</th>
<th>Ontology Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit Accession</td>
<td>EDAM:data_2091</td>
</tr>
<tr>
<td>Deposit Title</td>
<td>dc:title</td>
</tr>
<tr>
<td>Analysis Date</td>
<td>Time</td>
</tr>
<tr>
<td>Deposit Creation, Last Modification Date</td>
<td>Time</td>
</tr>
<tr>
<td>Authors and Affiliations of Deposit</td>
<td>vCard</td>
</tr>
<tr>
<td>Creative Commons License of Re-use of Deposit</td>
<td>Creative Commons</td>
</tr>
<tr>
<td>Copyright of Deposit</td>
<td>Creative Commons</td>
</tr>
<tr>
<td>Reference to Spectral Data</td>
<td>CHEMINF_000302</td>
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</tbody>
</table>

<table>
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<tr>
<th>Chemical Compound Information</th>
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</thead>
<tbody>
<tr>
<td>Name of Chemical Compound Analyzed</td>
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<tr>
<td>Category of Chemical Compound</td>
<td>ChEFS</td>
</tr>
<tr>
<td>Molecular Formula of Chemical Compound</td>
<td>CHEMINF_000037</td>
</tr>
<tr>
<td>Monoisotopic Mass of Chemical Compound</td>
<td>CHEMINF_000218</td>
</tr>
<tr>
<td>SMILES String</td>
<td>CHEMINF_000020</td>
</tr>
<tr>
<td>IUPAC International Chemical Identifier (InChIKey)</td>
<td>CHEMINF_000059</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biological Sample Information</th>
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</thead>
<tbody>
<tr>
<td>Identity of Biological Species</td>
<td>EDAM:data_1875</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Method of Analysis Information</th>
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</thead>
<tbody>
<tr>
<td>Instrument model</td>
<td>MS_1000031</td>
</tr>
<tr>
<td>Ion analyzer type</td>
<td></td>
</tr>
<tr>
<td>chromatography by separation mechanism</td>
<td>FIX_0000610</td>
</tr>
<tr>
<td>capillary electrophoresis</td>
<td>FIX_0000836</td>
</tr>
<tr>
<td>gas chromatography</td>
<td>FIX_000098</td>
</tr>
<tr>
<td>liquid chromatography</td>
<td>FIX_0000608</td>
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<tr>
<td>Ionization methods</td>
<td>MS_1000008</td>
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</table>

Continued on next page
Table 1.5 – continued from previous page

<table>
<thead>
<tr>
<th>Spectral Profile Information</th>
<th>Ontology Term</th>
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</thead>
<tbody>
<tr>
<td>atmospheric pressure ionization mass spectrometry</td>
<td>FIX_0000908</td>
</tr>
<tr>
<td>atmospheric pressure photoionization mass spectrometry</td>
<td>FIX_0000907</td>
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<tr>
<td>electron ionization mass spectrometry</td>
<td>FIX_0000089</td>
</tr>
<tr>
<td>electrospray ionization mass spectrometry</td>
<td>FIX_0000079</td>
</tr>
<tr>
<td>fast atom bombardment mass spectrometry</td>
<td>FIX_0000086</td>
</tr>
<tr>
<td>matrix-assisted laser desorption/ionization mass spectrometry</td>
<td>FIX_0000081</td>
</tr>
<tr>
<td>APCI</td>
<td>MS_1000070</td>
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<tr>
<td>APPI</td>
<td>MS_1000382</td>
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<td>EI</td>
<td>MS_1000389</td>
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<td>ESI</td>
<td>MS_1000073</td>
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<tr>
<td>B</td>
<td>MS_1000080</td>
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<tr>
<td>IT</td>
<td>MS_1000264</td>
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<td>Q</td>
<td>MS_1000081</td>
</tr>
<tr>
<td>TOF</td>
<td>MS_1000084</td>
</tr>
</tbody>
</table>

**Fourier transformation**

Fourier transform-ion cyclotron resonance mass spectrometry | FIX_0000083 |

**Ion trap analyzer**

ion trap mass spectrometry | FIX_0000917 |

**Data Type**

MSn spectrum | MS_1000580 |

precursor ion spectrum | MS_1000341 |

**Polarity of Ion Detection**

positive thermal ionization mass spectrometry | FIX_0000914 |

positive thermal ionization mass spectrometry | MS_1000030 |

negative thermal ionization mass spectrometry | FIX_0000915 |

negative thermal ionization mass spectrometry | MS_1000129 |

**Ion mode**

Ion mode | MS_1000465 |

**Collision Energy for Dissociation**

collision energy | MS_1000045 |

**Name of Collision Gas**

collision gas | ChEFS |

**Flow Rate of Desolvation Gas**

ion desolvation | MS_1000390 |

flow rate array | MS_1000820 |

**Temperature of Desolvation Gas**

temperature array | MS_1000822 |

**Matrix Used in MALDI**

MALDI matrix application | MS_1000832 |

**Name of Reagent Gas**

Name of reagent gas | ChEFS |

**Retention Time on Chromatography**

Retention time | MS_1000016 |

**Mass Spectral Data Description**

m/z of Base Peak | MS_1000210 |

base peak | MS_1000210 |

**Molecular Formula of Derivative**

Molecular formula of derivative | PubChem |

**Mass of Derivative**

Mass of derivative | PubChem |

**Type of Focused Ion**

Type of focused ion | see footnote

---

1 Type of Focused Ion. Available types are:

Table 1.5 – continued from previous page

<table>
<thead>
<tr>
<th>Spectral Profile Information</th>
<th>Ontology Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>m/z of Precursor Ion in MSn spectrum</em></td>
<td>MS_1000781</td>
</tr>
<tr>
<td>msPrefix precursor recalculation</td>
<td>MS_1000504</td>
</tr>
<tr>
<td>precursor <em>m/z</em></td>
<td></td>
</tr>
<tr>
<td><em>Type of Precursor Ion in MSn</em></td>
<td></td>
</tr>
<tr>
<td>Precursor type</td>
<td>MS_1000792</td>
</tr>
<tr>
<td>Precursor type</td>
<td>see footnote 2</td>
</tr>
</tbody>
</table>

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**Mass Spectral Peaks Information**

*Data Processing Method of Peak Detection*

<table>
<thead>
<tr>
<th>Data processing</th>
<th>MS_1000543</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Peak Detection</em></td>
<td></td>
</tr>
<tr>
<td>selected ion detection</td>
<td>MS_1000091</td>
</tr>
<tr>
<td>peak picking</td>
<td>MS_1000035</td>
</tr>
</tbody>
</table>

*Total Number of Peaks*

| number of matched peaks | MS_1001121 |

---

**Footnotes**

**Metabolomic Profiles**

From Wikipedia:

Metabolomics is the scientific study of chemical processes involving metabolites. Specifically, metabolomics is the “systematic study of the unique chemical fingerprints that specific cellular processes leave behind”, the study of their small-molecule metabolite profiles. The metabolome represents the collection of all metabolites in a biological cell, tissue, organ or organism, which are the end products of cellular processes. mRNA gene expression data and proteomic analyses reveal the set of gene products being produced in the cell, data that represents one aspect of cellular function. Conversely, metabolic profiling can give an instantaneous snapshot of the physiology of that cell. One of the challenges of systems biology and functional genomics is to integrate proteomic, transcriptomic, and metabolomic information to provide a better understanding of cellular biology.

**Ontomatica Coverage**  
ChEMATIC discussion here

**Taxonomic Information**

Replay taxonomic data in several production databases.

*Return to top*

**1.4 Features - Core with Detail**

Intro text here.

H-C6H10O5]-

2 Precursor type. Available types are:

1.4.1 Chemicals

Intro text here

Nutrients

Intro text goes here

Nutrients from ChEFS and ChEMATIC

<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lipid Classes and Lipid Types</td>
</tr>
<tr>
<td>• Protein Classes and Protein Types</td>
</tr>
<tr>
<td>• Carbohydrate Classes and Carbohydrate Types</td>
</tr>
<tr>
<td>• Vitamin Classes and Vitamin Types</td>
</tr>
<tr>
<td>• Phytochemical Classes and Phytochemical Types</td>
</tr>
<tr>
<td>• Ligand Classes and Ligand Types</td>
</tr>
</tbody>
</table>

Lipid Classes and Lipid Types

ChEFS 86 chemicals and their relationships with 8 Facets and 200+ Facet Terms.

ChEFS: lipids class
ChEMATIC 8,597 substances and their relationships with many Facets and many Facet Terms.

ChEMATIC: lipids class
**Protein Classes and Protein Types**

ChEMATIC 65,761 amino acids, peptides, and proteins and their relationships with many Facets and Facet Terms.

ChEMATIC: proteins
ChEMATIC 186 dietary proteins and their relationships with many Facets and Facet Terms.

ChEMATIC: dietary proteins

1.4. Features - Core with Detail
Carbohydrate Classes and Carbohydrate Types

ChEFS 31 carbohydrate components and their relationships with many Facets and Facet Terms.

ChEFS: carbohydrate classes
ChEFS  D-glucose class and relationship with 3 Facets.

ChEFS: D-glucose class
ChEMATIC: Glucose class

ChEMATIC: glucose class
Vitamin Classes and Vitamin Types

ChEFS L-ascorbic acid and relationship with 4 Facets.

ChEFS: L-ascorbic acid
ChEMATIC: ascorbic acid class

119 ascorbic acids and their relationships with many Facets and Facet Terms.

ChEMATIC: ascorbic acid class
ChEFS  Vitamin D class and relationship with 5 Facets.

1.4. Features - Core with Detail

These terms define your current search. Click the 'X' to remove a term.

DOB: CARBOHYDRATES (MESH:D002241) > Sugar Acids (MESH:D013400) > Ascorbic Acid (MESH:D013400)

<table>
<thead>
<tr>
<th>Item</th>
<th>Formula</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C6H12O6</td>
<td>D-glucose</td>
</tr>
<tr>
<td>2</td>
<td>C6H12O6</td>
<td>D-fructose</td>
</tr>
<tr>
<td>3</td>
<td>C6H12O6</td>
<td>D-mannose</td>
</tr>
<tr>
<td>4</td>
<td>C6H12O6</td>
<td>D-ribose</td>
</tr>
<tr>
<td>5</td>
<td>C6H12O6</td>
<td>D-xylose</td>
</tr>
</tbody>
</table>

5 Facets relationship with Vitamin D:

<table>
<thead>
<tr>
<th>Facet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facet 1</td>
<td>Calcium metabolism</td>
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<tr>
<td>Facet 2</td>
<td>Cholesterol metabolism</td>
</tr>
<tr>
<td>Facet 3</td>
<td>Immune response</td>
</tr>
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<td>Facet 4</td>
<td>Fatty acid metabolism</td>
</tr>
<tr>
<td>Facet 5</td>
<td>Glucose metabolism</td>
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5 Facets relationship with Vitamin K:

<table>
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<td>Bone metabolism</td>
</tr>
<tr>
<td>Facet 2</td>
<td>Blood coagulation</td>
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<td>Immune response</td>
</tr>
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5 Facets relationship with Vitamin D and Vitamin K:

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<tbody>
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<td>Calcium metabolism and bone metabolism</td>
</tr>
<tr>
<td>Facet 2</td>
<td>Cholesterol metabolism and blood coagulation</td>
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<tr>
<td>Facet 3</td>
<td>Immune response</td>
</tr>
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<td>Glucose metabolism</td>
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5 Facets relationship with Vitamin D and Vitamin K and other vitamins:

<table>
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<th>Description</th>
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</thead>
<tbody>
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</tr>
<tr>
<td>Facet 2</td>
<td>Cholesterol metabolism and blood coagulation</td>
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<tr>
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<td>Immune response</td>
</tr>
<tr>
<td>Facet 4</td>
<td>Fatty acid metabolism</td>
</tr>
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<td>Facet 5</td>
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5 Facets relationship with Vitamin D and Vitamin K and other vitamins and nutrients:

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<td>Cholesterol metabolism and blood coagulation</td>
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<td>Fatty acid metabolism</td>
</tr>
<tr>
<td>Facet 5</td>
<td>Glucose metabolism</td>
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</table>

5 Facets relationship with Vitamin D and Vitamin K and other vitamins, nutrients, and lifestyle factors:

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<th>Description</th>
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</thead>
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<td>Calcium metabolism and bone metabolism</td>
</tr>
<tr>
<td>Facet 2</td>
<td>Cholesterol metabolism and blood coagulation</td>
</tr>
<tr>
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<td>Immune response</td>
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<tr>
<td>Facet 4</td>
<td>Fatty acid metabolism</td>
</tr>
<tr>
<td>Facet 5</td>
<td>Glucose metabolism</td>
</tr>
</tbody>
</table>

5 Facets relationship with Vitamin D and Vitamin K and other vitamins, nutrients, lifestyle factors, and environmental factors:

<table>
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<th>Description</th>
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</thead>
<tbody>
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<td>Facet 2</td>
<td>Cholesterol metabolism and blood coagulation</td>
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<tr>
<td>Facet 4</td>
<td>Fatty acid metabolism</td>
</tr>
<tr>
<td>Facet 5</td>
<td>Glucose metabolism</td>
</tr>
</tbody>
</table>

5 Facets relationship with Vitamin D and Vitamin K and other vitamins, nutrients, lifestyle factors, environmental factors, and genetic factors:

<table>
<thead>
<tr>
<th>Facet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Calcium metabolism and bone metabolism</td>
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<tr>
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<td>Cholesterol metabolism and blood coagulation</td>
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</tr>
<tr>
<td>Facet 4</td>
<td>Fatty acid metabolism</td>
</tr>
<tr>
<td>Facet 5</td>
<td>Glucose metabolism</td>
</tr>
</tbody>
</table>
ChEMATIC: 328 vitamin D compounds and their relationships with many Facets and Facet Terms.

ChEMATIC: vitamin D class
ChEMATIC 58 vitamin A compounds and their relationships with many Facets and Facet Terms.
Phytochemical Classes and Phytochemical Types

ChEFS: flavonols class
ChEFS: flavanones class
ChEFS: flavan-3-ols class
ChEFS: anthocyanidins class
ChEFS: isoflavones class
ChEFS: proanthocyanidins class

Ligand Classes and Ligand Types

ChEFS 33 chemicals and their relationships with 5 Facets and 100+ Facet Terms.

ChEFS: ligands
ChEMATIC 247 chemicals from different categories and their relationships with several Facets and Facet Terms.

ChEMATIC: ligands
Nutrient Taxonomy

Intro text goes here

Carbohydrates

Part 1

Part 2

Lipids

Part 1

Part 2

Part 3

1.4. Features - Core with Detail
Carbohydrates, part 1

Figure 1.3: This is the caption for the figure
Carbohydrates, part 2

Figure 1.4: This is the caption for the figure
Lipids, part 1

Figure 1.5: This is the caption for the figure
Lipids, part 2 – fatty acids, monounsaturated acids

Figure 1.6: This is the caption for the figure
Lipids, part 3 - fatty acids, polyunsaturated acids

Figure 1.7: This is the caption for the figure
Lipids, part 4 - fatty acids, saturated fatty acids

Figure 1.8: This is the caption for the figure
Part 4

Lipids, part 5

Figure 1.9: This is the caption for the figure

Part 5

Nitrogen

Nitrogen, part 1

Figure 1.10: This is the caption for the figure

Part 1

Nitrogen, part 2

Figure 1.11: This is the caption for the figure

Part 2

Organic Acids  Intro text goes here

Plant Components

Taxonomy

Specific entries from ChEFS and ChEMATIC  ChEFS: flavonols class
ChEFS: flavanones class
ChEFS: flavan-3-ols class
ChEFS: anthocyanidins class
ChEFS: isoflavones class
ChEFS: proanthocyanidins class
ChEFS: flavonols class
ChEFS: quercetin
ChEFS: kaempferol
ChEFS: myricetin
ChEFS: isorhamnetin
Organic acids

Figure 1.12: This is the caption for the figure
Plant components, part 2

ChEFS: flavones class
ChEFS: luteolin
ChEFS: apigenin
ChEFS: flavanones class
ChEFS: hesperetin
ChEFS: naringenin
ChEFS: eriodictyol
ChEFS: flavan-3-ols class
ChEFS: (+)-catechin
ChEFS: (+)-gallocatechin
ChEFS: (-)-epicatechin
ChEFS: (-)-epigallocatechin 3-gallate
ChEFS: theaflavin
ChEFS: theaflavin 3-gallate
ChEFS: theaflavin 3’-gallate
ChEFS: theaflavin 3,3’ digallate
ChEFS: thearubigins
ChEFS: anthocyanidins class
ChEFS: cyanidin
ChEFS: delphinidin
ChEFS: malvidin
ChEFS: pelargonidin
ChEFS: peonidin
ChEFS: petunidin
ChEFS: isoflavones class
ChEFS: proanthocyanidins class
ChEFS: proanthocyanidin A2
ChEFS: ephedrine
ChEMATIC: oxalic acid
USDA: oxalic acid content of selected vegetables

Minerals  Intro text goes here

Vitamins

Part 1

Part 2

UN FAO INFOODS tags and USDA nutrient codes
Intro text here

Harmonization Table

Food Additives
Intro text goes here

Food Additives from ChEFS and ChEMATIC

ChEMATIC  ChEMATIC: food additive classes
Dietary Data Reference  Dietary Data Reference: additives in food
Minerals

Figure 1.13: This is the caption for the figure

Vitamins, part 1

Figure 1.14: This is the caption for the figure
Vitamins, part 2

Figure 1.15: This is the caption for the figure
Food Additives Taxonomy

Intro text goes here

Food Additives Taxonomy Overview and Legend

Multi-Purpose Additives

Part 1
1.4. Features - Core with Detail
Part 2

Acids

Acidity Regulators

Part 1

Antibiotics

Anti-Caking Agents

Part 1

Anti-Foaming Agents

Antioxidants

Part 1

Bleach

Carriers
1.4. Features - Core with Detail
1.4. Features - Core with Detail
1.4. Features - Core with Detail
Color Retention Agents

Emulsifiers

Part 1

Part 2

Part 3

Part 4

Part 5

Firming Agents

Flavor Enhancers

Part 1

Part 2

Flavor Solvents

Foam Stabilizers

Foaming Agents

Food Coloring

Part 1

Part 2

Part 3

Part 4

Part 5

Gelling Agents
1.4. Features - Core with Detail
1.4. Features - Core with Detail
1.4. Features - Core with Detail
1.4. Features - Core with Detail

111
Glazing Agents

Humectants

Improving Agents

Packaging Gas

Preservatives

Part 1

Part 2

Part 3

Propellants

Raising Agents

Resolving Agents

Seasoning

Sequestrant

Stabilizers

1.4. Features - Core with Detail
1.4. Features - Core with Detail

Glazing Agent

Waxes (900-909)

- Beeswax, white and yellow
  - 21 CFR 161.1975
  - S09510
  - H5435
- Carnauba wax
  - 21 CFR 161.1976
  - S09590
  - H5461
- Castor oil
  - 21 CFR 161.1978
  - S09590
  - H5486
- Shellac
  - S09570
  - H3001
- Petroleum wax
  - S09510
- Microcrystalline wax
  - S00920
- Crystalline wax
  - S09590
- Rice bran wax
  - S09960

Synthetic Glazes (910-919)

- Wax esters
  - S09590
- Methyl esters of fatty acids
  - S09570
- Montan wax
  - S09710
  - H5894
- Lanolin, sheep wool grease
  - S09570
- Oxidized polyethylene wax
  - S09730
  - H5902
- Esters of colophony
  - S09740
1.4. Features - Core with Detail
1.4. Features - Core with Detail
1.4. Features - Core with Detail
Part 1

Sweeteners

Part 1

Part 2

Thickening Agents

Part 1

Part 2
Food Odor and Organoleptic Chemicals

Organoleptic Chemicals from ChEFS

ChEFS: isoacetovanillone
ChEFS: acetoin
ChEFS: allyl isothiocyanate

Organoleptic Classes and Organoleptic Types

ChEFS integrates organoleptic compounds that have the following odor properties.

<table>
<thead>
<tr>
<th>Odor Class</th>
<th>Odor</th>
<th>Organoleptic Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Class</td>
<td>tallow</td>
<td>6-decenal</td>
</tr>
<tr>
<td>Aromatic Class</td>
<td>vanilla</td>
<td>acetovanillone</td>
</tr>
<tr>
<td>Aromatic Class</td>
<td>cocoa</td>
<td>butyl methylbutyrate</td>
</tr>
<tr>
<td>Aromatic Class</td>
<td>anise</td>
<td>estragole</td>
</tr>
<tr>
<td>Berry Class</td>
<td>grape</td>
<td>ethyl decanoate</td>
</tr>
<tr>
<td>Berry Class</td>
<td>black currant</td>
<td>mercapto methyl pentanone</td>
</tr>
<tr>
<td>Citrus Class</td>
<td>orange</td>
<td>limonene</td>
</tr>
<tr>
<td>Citrus Class</td>
<td>coriander</td>
<td>linalyl formate</td>
</tr>
<tr>
<td>Citrus Class</td>
<td>lavender</td>
<td>linalyl valerate</td>
</tr>
<tr>
<td>Dairy Class</td>
<td>butter</td>
<td>2,3-pentadione</td>
</tr>
<tr>
<td>Dairy Class</td>
<td>cream</td>
<td>acetoïn</td>
</tr>
<tr>
<td>Dairy Class</td>
<td>cheese</td>
<td>octanoic acid</td>
</tr>
<tr>
<td>Edible oil Class</td>
<td>fried</td>
<td>2,4-heptadial</td>
</tr>
<tr>
<td>Edible oil Class</td>
<td>wine</td>
<td>butanol</td>
</tr>
<tr>
<td>Fermented Class</td>
<td>onion</td>
<td>dimethyl disulfide</td>
</tr>
<tr>
<td>Fermented Class</td>
<td>yeast</td>
<td>ethyl valerate</td>
</tr>
<tr>
<td>Fermented Class</td>
<td>bitter</td>
<td>isobutanol</td>
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<td>Fishy Class</td>
<td>fish</td>
<td>(E,Z)-3,6-nonadien-1-ol</td>
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<tr>
<td>Floral Class</td>
<td>lily</td>
<td>lauric aldehyde</td>
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<td>Floral Class</td>
<td>jasmine</td>
<td>methyl dihydroepi Jasmonate</td>
</tr>
<tr>
<td>Floral Class</td>
<td>hawthorne</td>
<td>phenylethanalan</td>
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<tr>
<td>Grain Class</td>
<td>bread</td>
<td>2-acetlypyrrrole</td>
</tr>
<tr>
<td>Grain Class</td>
<td>bitter almond</td>
<td>4-acetyltoluene</td>
</tr>
<tr>
<td>Herbs Class</td>
<td>balsamic</td>
<td>p-coumaric acid</td>
</tr>
<tr>
<td>Herbs Class</td>
<td>leaf</td>
<td>isopulegyl acetate</td>
</tr>
<tr>
<td>Maillard Class</td>
<td>roast</td>
<td>4-Carbethoxy butyro lactone</td>
</tr>
<tr>
<td>Maillard Class</td>
<td>biscuit</td>
<td>4-heptenal</td>
</tr>
<tr>
<td>Maillard Class</td>
<td>popcorn</td>
<td>acetylpyridine</td>
</tr>
<tr>
<td>Mineral Class</td>
<td>paper</td>
<td>2-nonenal</td>
</tr>
<tr>
<td>Mineral Class</td>
<td>garlic</td>
<td>allyl isothiocyanate, allyspol</td>
</tr>
<tr>
<td>Mineral Class</td>
<td>camphor</td>
<td>camphene hydrate</td>
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<tr>
<td>Pome Class</td>
<td>watermelon</td>
<td>2,4-nonadienial</td>
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<tr>
<td>Pome Class</td>
<td>apple</td>
<td>2-hexenal</td>
</tr>
<tr>
<td>Pome Class</td>
<td>pear</td>
<td>butyl acetate</td>
</tr>
<tr>
<td>Processed meat Class</td>
<td>cooked meat</td>
<td>12-methyltridecanal</td>
</tr>
<tr>
<td>Processed meat Class</td>
<td>roasted meat</td>
<td>3-(acetylthio)-2-methylfuran</td>
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Continued on next page
Table 1.6 – continued from previous page

<table>
<thead>
<tr>
<th>Odor Class</th>
<th>Odor</th>
<th>Organoleptic Chemical</th>
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</thead>
<tbody>
<tr>
<td>Processed meat</td>
<td>smoke</td>
<td>Furfurylmethyl disulphide</td>
</tr>
<tr>
<td>Raw meat</td>
<td>thiamin</td>
<td>1-(methylthio) ethanethiol</td>
</tr>
<tr>
<td>Seed spices Class</td>
<td>horseradish</td>
<td>4-pentenyl isothiocyanate</td>
</tr>
<tr>
<td>Seed spices Class</td>
<td>pepper</td>
<td>asaricin</td>
</tr>
<tr>
<td>Seed spices Class</td>
<td>basil</td>
<td>DL-carvone</td>
</tr>
<tr>
<td>Stone Class</td>
<td>fat</td>
<td>gamma-decalactone</td>
</tr>
<tr>
<td>Stone Class</td>
<td>apricot</td>
<td>gamma-undecalactone</td>
</tr>
<tr>
<td>Stone Class</td>
<td>plum</td>
<td>benzyl butanoate</td>
</tr>
<tr>
<td>Sweet spices Class</td>
<td>clove</td>
<td>4-ethylguaiaconol</td>
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<tr>
<td>Sweet spices Class</td>
<td>licorice</td>
<td>dehydro-ar-ionene</td>
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<tr>
<td>Sweet spices Class</td>
<td>ether</td>
<td>ethyl tetradecanoate</td>
</tr>
<tr>
<td>Tropical Class</td>
<td>grapefruit</td>
<td>(+)-nootkatone</td>
</tr>
<tr>
<td>Tropical Class</td>
<td>pineapple</td>
<td>ethyl acetate</td>
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<tr>
<td>Tropical Class</td>
<td>banana</td>
<td>hexenyl acetate</td>
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<tr>
<td>Vegetable Class</td>
<td>mushroom</td>
<td>(E)-2-pent-1-ol</td>
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<td>seaweed</td>
<td>2,4-decadienal</td>
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<tr>
<td>Vegetable Class</td>
<td>potato</td>
<td>2,5-dimethyl-3-ethylpyrazine</td>
</tr>
<tr>
<td>Vegetable Class</td>
<td>broccoli</td>
<td>5-(methylthio)-valeronitrile</td>
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</table>

Volatile Compounds in Food

ChEFS integrates the VCF classes with the specified number of items.

<table>
<thead>
<tr>
<th>Volatile Compounds in Food Classes</th>
<th>Number of VCF Items</th>
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</thead>
<tbody>
<tr>
<td>(Ep)oxides, pyrans, coumarins</td>
<td>304</td>
</tr>
<tr>
<td>Acetals</td>
<td>117</td>
</tr>
<tr>
<td>Acids</td>
<td>438</td>
</tr>
<tr>
<td>Alcohols</td>
<td>815</td>
</tr>
<tr>
<td>Anhydrides and phthalides</td>
<td>42</td>
</tr>
<tr>
<td>Bases</td>
<td>673</td>
</tr>
<tr>
<td>Carboxyls, aldehydes</td>
<td>427</td>
</tr>
<tr>
<td>Carboxyls, ketones</td>
<td>728</td>
</tr>
<tr>
<td>Esters</td>
<td>1520</td>
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<tr>
<td>Ethers</td>
<td>98</td>
</tr>
<tr>
<td>Furfans</td>
<td>364</td>
</tr>
<tr>
<td>Halogens</td>
<td>112</td>
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<tr>
<td>Hydrocarbons</td>
<td>979</td>
</tr>
<tr>
<td>Lactones</td>
<td>131</td>
</tr>
<tr>
<td>Nitriles and amides</td>
<td>112</td>
</tr>
<tr>
<td>Oxazol(in)es</td>
<td>90</td>
</tr>
<tr>
<td>Phenols</td>
<td>259</td>
</tr>
<tr>
<td>Sulfur compounds</td>
<td>777</td>
</tr>
</tbody>
</table>

Enzymes in Food

Table of Contents
Enzyme Classes and Enzyme Types

ChEFS Lyase (EC 4). 743 items and their relationships with many Facets and Facet Terms.

ChEMATIC 22,802 items and their relationships with many Facets and Facet Terms.
Enzymes Added to Foods  Ontomatica integrates information about enzyme names, Enzyme Commission classification, origin of enzyme and food to which enzyme is added.

<table>
<thead>
<tr>
<th>Enzyme</th>
<th>EC no.</th>
<th>Source</th>
<th>Food supplier use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal enzymes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catalase</td>
<td>1.11.1.6</td>
<td>Liver</td>
<td>Food; milk, cheese, egg, beverages, salads</td>
</tr>
<tr>
<td>Lipase</td>
<td>3.1.1.3</td>
<td>Pancreas</td>
<td>Food; cheese, fats and oil</td>
</tr>
</tbody>
</table>

3 triacylglycerol lipase
<table>
<thead>
<tr>
<th>Enzyme</th>
<th>EC no.</th>
<th>Source</th>
<th>Food supplier use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rennet</td>
<td>3.4.23.4</td>
<td>Abomasum</td>
<td>Cheese</td>
</tr>
<tr>
<td>Plant enzymes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actinidin</td>
<td>3.4.22.14</td>
<td>Kiwi fruit</td>
<td>Food</td>
</tr>
<tr>
<td>a-Amylase</td>
<td>3.2.1.1</td>
<td>Malted barley</td>
<td>Brewing</td>
</tr>
<tr>
<td>b-Amylase</td>
<td>3.2.1.2</td>
<td>Malted barley</td>
<td>Brewing</td>
</tr>
<tr>
<td>Bromelain</td>
<td>3.4.22.4</td>
<td>Pineapple latex</td>
<td>Brewing</td>
</tr>
<tr>
<td>b-Glucanase</td>
<td>3.2.1.6</td>
<td>Malted barley</td>
<td>Brewing</td>
</tr>
<tr>
<td>Ficin</td>
<td>3.4.22.3</td>
<td>Fig latex</td>
<td>Food</td>
</tr>
<tr>
<td>Lipoxygenase</td>
<td>1.13.11.12</td>
<td>Soybeans</td>
<td>Food</td>
</tr>
<tr>
<td>Papain</td>
<td>3.4.22.2</td>
<td>Pawpaw latex</td>
<td>Meat</td>
</tr>
<tr>
<td>Bacterial enzymes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a-Amylase</td>
<td>3.2.1.1</td>
<td>Bacillus</td>
<td>Starch, Fats and oils, Cheese, Beverages, Bakery</td>
</tr>
<tr>
<td>b-Amylase</td>
<td>3.2.1.2</td>
<td>Bacillus</td>
<td>Starch, Beverages</td>
</tr>
<tr>
<td>Endo-b-glucanase</td>
<td>3.2.1.6</td>
<td>Bacillus</td>
<td>Beverages</td>
</tr>
<tr>
<td>Glucosesomerase</td>
<td>5.3.1.5</td>
<td>Bacillus</td>
<td>Fructose syrup, Cereal/Starch, Fruit/Vegetables, Beverages, Sugar/Honey</td>
</tr>
<tr>
<td>Hemicellulase</td>
<td>3.2.1.78</td>
<td>Bacillus</td>
<td>Cocoa, Chocolate, Coffee and Tea</td>
</tr>
<tr>
<td>Protease</td>
<td>3.4.21.14</td>
<td>Bacillus</td>
<td>Meat, Fish, Soups and Broths</td>
</tr>
<tr>
<td>Pullulanase</td>
<td>3.2.1.41</td>
<td>Klebsiella</td>
<td>Starch, Sugar and Honey, Beverages</td>
</tr>
<tr>
<td>Fungal enzymes</td>
<td></td>
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<tr>
<td>a-Amylase</td>
<td>3.2.1.1</td>
<td>Aspergillus</td>
<td>Bakery, Cereal &amp; Starch, Fruit &amp; Vegetable, Beverages, Sugar &amp; Honey</td>
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<tr>
<td>Tannase</td>
<td>3.1.1.20</td>
<td>Aspergillus</td>
<td>Beverages</td>
</tr>
<tr>
<td>Glucoamylase</td>
<td>3.2.1.3</td>
<td>Aspergillus</td>
<td>Starch, Fruit/Vegetable, Beverage, Sugar/Honey, Confectionery, Bakery, Dietetic foods</td>
</tr>
<tr>
<td>Catalase</td>
<td>1.11.1.6</td>
<td>Aspergillus</td>
<td>Waste, Fruit and Vegetables, beverages, dietary foods</td>
</tr>
<tr>
<td>Cellulase</td>
<td>3.2.1.4</td>
<td>Trichoderma</td>
<td>Food, milk, cheese, eggs, salads, beverages</td>
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<tr>
<td>Dextranase</td>
<td>3.2.1.11</td>
<td>Penicillium</td>
<td>Food, Sugar and Honey</td>
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<tr>
<td>Glucoseoxidase</td>
<td>1.1.3.4</td>
<td>Aspergillus</td>
<td>Food, egg, beverages, salads</td>
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<tr>
<td>Lactase</td>
<td>3.2.1.23</td>
<td>Aspergillus</td>
<td>Dairy, milk, cheese, edible ice, dietary foods</td>
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<tr>
<td>Lipase</td>
<td>3.1.1.3</td>
<td>Rhizopus</td>
<td>Food, cheese, fats and oils</td>
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<td>Rennet</td>
<td>3.4.23.6</td>
<td>Mucormiehei</td>
<td>Cheese</td>
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<td>Pectinase</td>
<td>3.2.1.15</td>
<td>Aspergillus</td>
<td>Drinks, fats and oils, Fruit and Vegetables, fish</td>
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<td>Pectinylase</td>
<td>4.2.2.10</td>
<td>Aspergillus</td>
<td>Drinks</td>
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<td>Protease</td>
<td>3.4.23.6</td>
<td>Aspergillus</td>
<td>Baking</td>
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<td>Raffinase</td>
<td>3.2.1.22</td>
<td>Mortierella</td>
<td>Food, beverages</td>
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<td>Yeast enzymes</td>
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<tr>
<td>Invertase</td>
<td>3.2.1.26</td>
<td>Saccharomyces</td>
<td>Confectionery</td>
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<td>Lactase</td>
<td>3.2.1.23</td>
<td>Kluyveromyces</td>
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<td>Candida</td>
<td>Food, cheese, fats and oils</td>
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<tr>
<td>Raffinase</td>
<td>3.2.1.22</td>
<td>Saccharomyces</td>
<td>Food, Sugar and Honey</td>
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4 chymosin
5 Endo-1,3(4)-b-glucanase
6 xylose isomerase
7 subtilisin
8 a-dextrin endo-1,6-a-glucosidase
9 glucan 1,4-a-glucosidase
10 b-galactosidase
11 microbial aspartic proteinase
12 polygalacturonase
13 a-galactosidase
14 b-fructofuranosidase
Bioactive Chemicals

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- Hydrolase Activity
- Lyase Activity
- Transferase Activity
Hydrolase Activity

1.4. Features - Core with Detail
Lyase Activity
## 1.4. Features - Core with Detail

### Transferase Activity

<table>
<thead>
<tr>
<th>Transferases (EC:2.3) (206)</th>
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<tr>
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<tr>
<td>HPMWUIWDSFAN-L-JYAOZCNZ-SN</td>
</tr>
<tr>
<td>LIMQNMNGKFOE-UHFFFAOYSAS-N</td>
</tr>
<tr>
<td>NQUCNMLDFQGVEO-UHFFFAOYSA-N</td>
</tr>
<tr>
<td>1-O-β-D-Gal(1-3)-β-D-Glucose</td>
</tr>
<tr>
<td>sulfite</td>
</tr>
<tr>
<td>norepinephrine</td>
</tr>
<tr>
<td>CWPDZJLUNN-KHETVQOQNL</td>
</tr>
<tr>
<td>t1DF3-acetamido3,5-di-O-acetyl-alpha-L-galactopyranose</td>
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<tr>
<td>all 293 items</td>
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</table>

<table>
<thead>
<tr>
<th>Glycosyltransferases (EC:2.4) (334)</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>DOVCULNATZUMK-NYVRGGSDA-N</td>
</tr>
<tr>
<td>KERTHHPFSIQ-L-WOOPCEPKA-SK</td>
</tr>
<tr>
<td>NPKGSDRZQWPSW-VPCPRFLA-R</td>
</tr>
<tr>
<td>alpha-D-Gal-(1-3)-L-Rha</td>
</tr>
</tbody>
</table>
| beta-D-Glc-(1-2)-alpha-D-Man-(1-3)-beta-D-Glc-(1-4)-alpha-D-Glc-(1-4)-diphospho-inositol-polyisoprenyl-
  umbelliferyl |
| all 334 items |

<table>
<thead>
<tr>
<th>Transferring aldehyde or ketonic groups (EC:2.2.1)</th>
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</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>ROWKJLWODGPAT-UHFFOAOSA-N</td>
</tr>
<tr>
<td>ROKLJZQOOGPTFL-UHFFFAOYSA-N</td>
</tr>
<tr>
<td>RNNWDE6GFJLBK-LUHFFFAOYSA-N</td>
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<tr>
<td>2-acetamidobenzaldehyde</td>
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<tr>
<td>all 25 items</td>
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<table>
<thead>
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<th>Glycosyltransferases (EC:2.4) (334)</th>
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<tbody>
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<td></td>
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<tr>
<td>QYDFAVLQGNN-WGCHKKSL</td>
</tr>
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</table>
| 1-deoxy-D-alpha-heptose-7-
  phosphate |
| all 334 items |

<table>
<thead>
<tr>
<th>Transferring aldehyde or ketonic groups (EC:2.2.1)</th>
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</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>DFCPOFHL-PULL-UHFFOAOSA-N</td>
</tr>
<tr>
<td>ZDDYQPMWUO-ZPACQYSA-N</td>
</tr>
<tr>
<td>QXNPWICNQK-UCHFFFAOYSA-N</td>
</tr>
</tbody>
</table>
| 3-(pyrazol-5-yl)-L-alanine-zeatin-
  borate |
| sulfite |
| all 334 items |

<table>
<thead>
<tr>
<th>Transferring metallo- or tungsten-containing groups (EC:2.16)</th>
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<tbody>
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<td>UDMCBOGFFHJCHK-OKSVQOYSA-N</td>
</tr>
<tr>
<td>QPRLCGNYRKK-UHFFFAOYSA-N</td>
</tr>
<tr>
<td>HEJAAJGQAR-GJROQ-LUHDFQJUQ</td>
</tr>
<tr>
<td>AMP(2-)</td>
</tr>
<tr>
<td>hydrogen</td>
</tr>
<tr>
<td>MoO2-molybdate-acceptor(2-)</td>
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<tr>
<td>all 171 items</td>
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</table>

<table>
<thead>
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<th>Transferring nitrosoester groups (EC:2.6)</th>
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<tr>
<td>QAMZLWLYHRF-WHERCIGSA-N</td>
</tr>
<tr>
<td>LWQVWQUPQTL-SIDVTSWSA-N</td>
</tr>
<tr>
<td>YMEMGUKDQEG-UHFFFAOYSA-N</td>
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<tr>
<td>all 5 items</td>
</tr>
</tbody>
</table>
1.4.2 Commodities

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Food Commodity Classification

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- UN FAO CODEX
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- USDA

UN FAO CODEX

GS1
US Code of Federal Regulations (US CFR)

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- Crops Taxonomy
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Under construction

Crops Taxonomy

1.4. Features - Core with Detail
Protective Chemicals

Livestock

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- Meat Groups
- Mammals Taxonomy
- Cuts of Meat
- Poultry
Meat Groups
### Mammals Taxonomy

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategories</th>
<th>Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOOD PRODUCT STANDARDS — INTERNATIONAL</strong></td>
<td>Classification of Food and Feed Commodities (Codex Alimentarius)</td>
<td>Caloric Food Commodities of Animal Origin (CCPR) &gt; Primary Mammalian Products (CCPR) &gt; 030 Meat (from Mammals other than Marine Mammals) (MM) (CCPR)</td>
</tr>
<tr>
<td><strong>SOURCES OF FOOD</strong></td>
<td>Animal Used As Food Source &gt; Meat Animal (Mammal) &gt; Cattle &gt; Beef Cows</td>
<td></td>
</tr>
<tr>
<td><strong>PLANT CULTIVARS AND ANIMAL BREEDS</strong></td>
<td>Meat Animal As Food Source &gt; Animal According to Family &gt; Animadicta &gt; Bovidae &gt; Bovus &gt; Bos taurus</td>
<td>Aberdeen Angus (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Belgian Blue (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>British White (1)</td>
</tr>
<tr>
<td><strong>MEAT Cuts — USA</strong></td>
<td></td>
<td>English Longhorn (1)</td>
</tr>
<tr>
<td><strong>MEAT Cuts — INTERNATIONAL</strong></td>
<td></td>
<td>Randall (1)</td>
</tr>
<tr>
<td><strong>FOOD PROCESSING PRACTICES — USA</strong></td>
<td></td>
<td>Red Poll (1)</td>
</tr>
<tr>
<td><strong>GROWING PRACTICES — AGRICULTURAL</strong></td>
<td></td>
<td>Shetland (1)</td>
</tr>
<tr>
<td><strong>GENETIC CHARACTERISTICS OF FOOD</strong></td>
<td></td>
<td>Wagyu (1)</td>
</tr>
<tr>
<td><strong>TYPES OF FOOD PREPARATION ESTABLISHMENTS</strong></td>
<td></td>
<td>White Park (1)</td>
</tr>
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</table>

---

These terms define your current search. Click the [ ] to remove a term.
Cuts of Meat

1.4. Features - Core with Detail
Under construction

Poultry

Fish

Intro text here; fishing zones

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• Fish Taxonomy
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Fish Taxonomy

Fish and Fisheries  
Acadian Redfish from Gulf of Maine and Georges Bank
Alaska Plaice from Bering Sea and Aleutian Islands
Alaska Pollock from Aleutian Islands
Alaska Pollock from E Bering Sea
Alaska Pollock from Gulf of Alaska

1.4. Features - Core with Detail
Albacore from North Pacific
Albacore from South Pacific
American Angler from Northern Stock
American Angler from Southern Stock
American Cupped Oyster from NW Gulf of Mexico
American Sea Scallop from US Atlantic
American Yellow Perch from Lake Erie
Arrow-Tooth Flounder from Bering Sea and Aleutian Islands
Arrow-Tooth Flounder from Gulf of Alaska
Arrow-Tooth Flounder from US West Coast
Atlantic Bay Scallop from New England
Atlantic Cod from Georges Bank
Atlantic Cod from Gulf of Maine
Atlantic Deep-Sea Red Crab from Atlantic
Atlantic Halibut from Gulf of Maine and Georges Bank
Atlantic Mackerel from NW Atlantic
Atlantic Menhaden from NW Atlantic
Atlantic Spanish Mackerel from Western Atlantic
Atlantic Surfclam from NW Atlantic
Atlantic White Hake from Gulf of Maine and Georges Bank
Bigeye Tuna from Atlantic
Bigeye Tuna from Western and Central Pacific
Black Grouper from Gulf of Mexico
Black Seabass from Northern Stock
Blue Crab from Chesapeake Bay
Blue Crab from Eastern Gulf of Mexico
Blue Crab from Gulf of Mexico
Blue Marlin from Pacific
Bluefish from US Atlantic
Calico Scallop from US South Atlantic
Caribbean Spiny Lobster from Western Central Atlantic
Chilipepper Rockfish from US West Coast
Chinook Salmon from East Pacific: Alaska
Chinook Salmon from East Pacific: Annette Islands Reserve Alaska
Chinook Salmon from East Pacific: Arctic-Yukon-Kuskokwim Alaska
Chinook Salmon from East Pacific: Bristol Bay Alaska
Chinook Salmon from East Pacific: California-Oregon-Washington
Chinook Salmon from East Pacific: Cook Inlet Alaska
Chinook Salmon from East Pacific: Copper River Alaska
Chinook Salmon from East Pacific: Southeast Alaska
Chum Salmon from East Pacific: Alaska
Chum Salmon from East Pacific: Alaska Peninsula, Aleutian Islands and Chignik
Chum Salmon from East Pacific: Annette Islands Reserve Alaska
Chum Salmon from East Pacific: Arctic-Yukon-Kuskokwim Alaska
Chum Salmon from East Pacific: Bristol Bay Alaska
Chum Salmon from East Pacific: Cook Inlet Alaska
Chum Salmon from East Pacific: Kodiak
Chum Salmon from East Pacific: Prince William Sound Alaska
Chum Salmon from East Pacific: Southeast Alaska
Cobia from US South Atlantic and Gulf of Mexico
Coho Salmon from East Pacific: Alaska
Coho Salmon from East Pacific: Annette Islands Reserve Alaska
Coho Salmon from East Pacific: Arctic-Yukon-Kuskokwim Alaska
Coho Salmon from East Pacific: Bristol Bay Alaska
Coho Salmon from East Pacific: California-Oregon-Washington
Coho Salmon from East Pacific: Cook Inlet Alaska
Coho Salmon from East Pacific: Copper-Bering Alaska
Coho Salmon from East Pacific: Prince William Sound Alaska
Coho Salmon from East Pacific: Southeast Alaska
Coho Salmon from East Pacific: Westward Alaska
Dover Sole from US Pacific Coast
Dungeness Crab from Alaska
Dungeness Crab from Coastal Pacific
English Sole from NE Pacific
Flathead Sole from Bering Sea and Aleutian Islands
Flathead Sole from Gulf of Alaska
Florida Pompano from Atlantic Coast of Florida
Florida Pompano from Gulf of Mexico Coast of Florida
Gag Grouper from Gulf of Mexico
Golden King Crab from Aleutian Islands
Golden King Crab from Pribilof Islands
Greater Amberjack from Atlantic
Greenland Halibut from E Bering Sea
Grey Snapper from Gulf of Mexico
Gulf Menhaden from Gulf of Mexico
Haddock from Georges Bank
Haddock from Gulf of Maine
Jonah Crab from Stock Units Undefined
Kamchatka Flounder from Bering Sea and Aleutian Islands
King Mackerel from Gulf of Mexico
King Mackerel from US South Atlantic
Lake Trout from Lake Huron
Lake Whitefish from Lake Erie
Longfin Squid from NW Atlantic
Longnose Skate from US West Coast
Longspine Thornyhead from US West Coast
Mahi-Mahi from Atlantic
Mahi-Mahi from Western and Central Pacific
Mutton Snapper from US South Atlantic and Gulf of Mexico
North Pacific Hake from West Coast USA and Canada
Northern Brown Shrimp from Gulf of Mexico
Northern Brown Shrimp from NW Atlantic
Northern Pink Shrimp from Gulf of Mexico
Northern Pink Shrimp from NW Atlantic
Northern Quahog from Stock Units Undefined
Northern Red Snapper from Gulf of Mexico
Northern Rock Sole from Gulf of Alaska
Northern White Shrimp from Gulf of Mexico
Northern White Shrimp from NW Atlantic
Ocean Quahog from Gulf of Maine
Ocean Shrimp from Oregon
Opalescent Inshore Squid from Stock Units Undefined
Pacific Cod from Bering Sea and Aleutian Islands
Pacific Cod from Gulf of Alaska
Pacific Halibut from Alaska
Pacific Halibut from Northeast Pacific
Pacific Halibut from US North Pacific
Pacific Ocean Perch from Bering Sea and Aleutian Islands
Pacific Ocean Perch from Gulf of Alaska
Petrale Sole from Northeast Pacific
Picked Dogfish from US Atlantic
Pink Salmon from East Pacific: Alaska
Pink Salmon from East Pacific: Annette Islands Reserve Alaska
Pink Salmon from East Pacific: Cook Inlet Alaska
Pink Salmon from East Pacific: Norton Sound Alaska
Pink Salmon from East Pacific: Prince William Sound Alaska
Pink Salmon from East Pacific: Southeast Alaska
Pink Salmon from East Pacific: Westward Alaska
Queen Crab from Alaska
Red Grouper from Gulf of Mexico and NW Atlantic
Red King Crab from Bristol Bay
Rex Sole from Gulf of Alaska
Sablefish from US West Coast
Saithe from Gulf of Maine and Georges Bank
Sand Gaper from Stock Units Undefined
Sandbar Shark from Gulf of Mexico and NW Atlantic
Scup from US Atlantic
Sheepshead from Gulf of Mexico
Shortfin Mako from Gulf of Mexico
Shortspine Thornyhead from US West Coast
Silver Hake from US Atlantic Coast Northern
Skipjack Tuna from Western and Central Pacific
Snowy Grouper from Gulf of Mexico
Sockeye Salmon from East Pacific: Alaska
Sockeye Salmon from East Pacific: Annette Islands Reserve Alaska
Sockeye Salmon from East Pacific: Bristol Bay Alaska
Sockeye Salmon from East Pacific: Cook Inlet Alaska
Sockeye Salmon from East Pacific: Copper-Bering Alaska
Sockeye Salmon from East Pacific: Kuskokwim Alaska
Sockeye Salmon from East Pacific: Prince William Sound Alaska
Sockeye Salmon from East Pacific: Southeast Alaska
Sockeye Salmon from East Pacific: Westward Alaska
South American Pilchard from Northern
Southern Flounder from Western Central Atlantic
Southern Rock Sole from Gulf of Alaska
Spanish Mackerel from Gulf of Mexico
Spot Croaker from US Atlantic
Spotted Weakfish from Ne Florida
Spotted Weakfish from North Carolina and Virginia
Spotted Weakfish from SE Florida
Spotted Weakfish from US Georgia
Starry Flounder from Northern Stock
Starry Flounder from Southern Stock
Swordfish from North Atlantic
Swordfish from Northwest Pacific
Vermilion Snapper from Gulf of Mexico
Wahoo from Gulf of Mexico
Wahoo from Pacific
Walleye from Lake Erie Western and Central
Whelk from Stock Units Undefined
Winter Flounder from Southern New England/Mid Atlantic
Winter Skate from NE Atlantic
Yellowfin Sole from Bering Sea and Aleutian Islands
Yellowfin Sole from Gulf of Alaska
Yellowfin Tuna from Atlantic
Yellowfin Tuna from Western and Central Pacific
Yellowtail Flounder from Southern New England/Mid Atlantic
Yellowtail Snapper from Atlantic US Coast
Yellowtail Snapper from Gulf of Mexico

1.4.3 Foods

Intro text here

USDA Standard Reference (SR)

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Table of Contents

- Baby food
- Two All Beef Patties, Special Sauce ...
- Omega 3 Fatty Acids from Vegetables
Baby food
<table>
<thead>
<tr>
<th>Measurement</th>
<th>Units</th>
<th>Value</th>
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<tr>
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<td>Grams</td>
<td>100</td>
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<tr>
<td>N1201</td>
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<td></td>
</tr>
<tr>
<td>Protein (263)</td>
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<td>12.17</td>
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<tr>
<td>Total lipid (fat)</td>
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<td>g</td>
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<tr>
<td>Carbohydrate</td>
<td>(263)</td>
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<td>Ash (207)</td>
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<tr>
<td>Energy</td>
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<tr>
<td>Starch (298)</td>
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<td>Sucrose (210)</td>
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<td>Glucosyl+ (211)</td>
<td>g</td>
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<td>Fructose (212)</td>
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<td>Lactose (213)</td>
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<td>Maltose (214)</td>
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<td>Water (256)</td>
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<td>Energy (268)</td>
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<td>Ribof, total dietary (291)</td>
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<td>Calcium, Ca (301)</td>
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<td>Iron, Fe (302)</td>
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<td>Magnesium, Mg (304)</td>
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<td>Phosphorus, P (305)</td>
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<td>Potassium, K (306)</td>
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<td>Zinc, Zn (309)</td>
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<td>Copper, Cu (312)</td>
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<td>Manganese, Mn (315)</td>
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<td>Selenium, Se (211)</td>
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<td>Vitamin E (alpha-tocopherol) (323)</td>
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<td>Thiamin, (B1)</td>
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<td>Riboflavin, (B2)</td>
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</tr>
<tr>
<td>Niacin (B3)</td>
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<td>Folate, (B9)</td>
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<td>Folate K (B11)</td>
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</tbody>
</table>

Two All Beef Patties, Special Sauce ...

1.4. Features - Core with Detail
Omega 3 Fatty Acids from Vegetables

Dietary Data Reference

Intro text here

Table of Contents

- Food Additives
- Ice Cream
- Corn Flakes
- Potato Chips
### Food Additives

**Table of Additives**

<table>
<thead>
<tr>
<th>Substance</th>
<th>UCB 2048 - NOS 16932</th>
<th>UCB 1389 - NOS 16926</th>
<th>UCB 1938</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid</td>
<td>Syrup, maple</td>
<td>Potato chip</td>
<td>Mayonnaise dressing, no cholesterol</td>
</tr>
<tr>
<td>Acid</td>
<td>UCB 1444 - NOS 14146</td>
<td>UCB 0700 - NOS 14181</td>
<td></td>
</tr>
<tr>
<td>Acid</td>
<td>Cola, carbonated</td>
<td>Chocolate syrup, prepared with whole milk</td>
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</tbody>
</table>

**Acidity Regulator**

- UCB 2048 - NOS 16935
- UCB 1899 - NOS 16939
- UCB 1938

<table>
<thead>
<tr>
<th>Substance</th>
<th>UCB 1317 - NOS 04094</th>
<th>UCB 0494 - NOS 14146</th>
<th>UCB 0700 - NOS 14181</th>
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</thead>
<tbody>
<tr>
<td>Acid</td>
<td>Syrup, maple</td>
<td>Potato chip</td>
<td>Mayonnaise dressing, no cholesterol</td>
</tr>
<tr>
<td>Acid</td>
<td>UCB 1317 - NOS 04094</td>
<td>UCB 0494 - NOS 14146</td>
<td>Chocolate syrup, prepared with whole milk</td>
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**Anti-Caking Agent**

- UCB 0957 - NOS 16720
- UCB 2725

<table>
<thead>
<tr>
<th>Substance</th>
<th>UCB 0957 - NOS 16720</th>
<th>UCB 2725</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid</td>
<td>Doughnut, cake-type, plain, sugar or glaze</td>
<td></td>
</tr>
<tr>
<td>Acid</td>
<td>Cottonseed oil</td>
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</table>

**Anti-foaming Agent**

- UCB 2725

<table>
<thead>
<tr>
<th>Substance</th>
<th>UCB 2725</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid</td>
<td>Cottonseed oil</td>
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</table>

**Antioxidant**

- UCB 1938
- UCB 1445
- UCB 1317 - NOS 04554

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<tr>
<th>Substance</th>
<th>UCB 1938</th>
<th>UCB 1445</th>
<th>UCB 1317 - NOS 04554</th>
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</thead>
<tbody>
<tr>
<td>Acid</td>
<td>Mayonnaise dressing, no cholesterol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acid</td>
<td>Salad dressing, mayonnaise type, with fat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acid</td>
<td>Margarine, fortified</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**1.4. Features - Core with Detail**
Ice Cream
Corn Flakes
Potato Chips
Specialty Foods

Extra Virgin Olive Oil

Probiotics and Virus

Probiotics

Probiotic currently is used to name ingested microorganisms associated with beneficial effects to humans and animals. Ontomatica identifies two microorganism classes: archaee and bacteria.

For example, bacteria secrete proteases to hydrolyze (digest) peptide bonds in proteins: to break proteins into their constituent monomers (amino acids). Lactic acid bacteria are gram-positive, lactic acid producing firmicutes used in...
food fermentation. Examples are dairy products like yogurt. Protease activity contributes to flavor in food products.

Ontomatica identifies lactic acid bacteria (lactobacillales).

Ontomatica manages food products where the treatment is fermentation:

- lactic acid fermented foods
- lactic acid other agent fermented foods
- proteolytic fermented foods

Similarly, Ontomatica identifies protease inhibitors, their relationships with human disorders, and their relationships with human genes (72 are identified in example). Interactions with human genes are further classified by activity: Affects, Decreases and Increases Activity.

**Virus**

Bacteriophage is a virus that infects and replicates within a bacterium. Phages are distributed in human intestines, a bacterial host. Some viruses are beneficial - infecting bacteria that causes disorders. Some viruses are harmful - infecting probiotic bacteria.

Ontomatica identifies bacteriophages.

Ontomatica identifies specific bacteria, such as bacteroides, infected by bacteriophages.

**1.4.4 Meals**

Intro text here

**Food Patterns**

Intro text

**USDA FNDDS Food Patterns**

<table>
<thead>
<tr>
<th>Food Pattern Class</th>
<th>Food Pattern Type</th>
<th>Term</th>
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<tbody>
<tr>
<td>Beverages</td>
<td>Total beverages</td>
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<tr>
<td>Beverages</td>
<td>Total alcoholic beverages</td>
<td>Bev_1</td>
</tr>
<tr>
<td>Beverages</td>
<td>Total nonalcoholic beverages</td>
<td>Bev_2</td>
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<tr>
<td>Beverages</td>
<td>Wine</td>
<td>Bev_11</td>
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<tr>
<td>Beverages</td>
<td>Beer and ale</td>
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<td>Beverages</td>
<td>Coffee</td>
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<td>Beverages</td>
<td>Tea</td>
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<td>Beverages</td>
<td>Total fruit juice drinks and fruit flavored drinks</td>
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<td>Regular fruit juice drinks and fruit flavored drinks</td>
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<td>Beverages</td>
<td>Low-calorie fruit juice drinks and fruit flavored drinks</td>
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<td>Total carbonated soft drinks</td>
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<td>Regular carbonated soft drinks</td>
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<td>Low-calorie carbonated soft drinks</td>
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<tr>
<td>Beverages</td>
<td>Total fats and oils</td>
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Continued on next page
Table 1.8 – continued from previous page

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<thead>
<tr>
<th>Food Pattern Class</th>
<th>Food Pattern Type</th>
<th>Term</th>
</tr>
</thead>
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<tr>
<td>Eggs; Legumes; Nuts and Seeds; Fats and Oils; Sugars and Sweets</td>
<td>Table fats</td>
<td>Fat_1</td>
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<td>Eggs; Legumes; Nuts and Seeds; Fats and Oils; Sugars and Sweets</td>
<td>Salad dressings</td>
<td>Fat_2</td>
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<td>Legumes</td>
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<td>Eggs; Legumes; Nuts and Seeds; Fats and Oils; Sugars and Sweets</td>
<td>Nuts and Seeds</td>
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<td>Eggs; Legumes; Nuts and Seeds; Fats and Oils; Sugars and Sweets</td>
<td>Total sugars and sweets</td>
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<tr>
<td>Eggs; Legumes; Nuts and Seeds; Fats and Oils; Sugars and Sweets</td>
<td>Sugars</td>
<td>Sugar_2</td>
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<td>Candy</td>
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<td>Fruits</td>
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<td>Fruits</td>
<td>Total citrus fruits and juices</td>
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<tr>
<td>Fruits</td>
<td>Dried fruit</td>
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<tr>
<td>Fruits</td>
<td>Total other fruits, mixtures, juices</td>
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<td>Fruits</td>
<td>Citrus juices</td>
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<td>Apples</td>
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<td>Bananas</td>
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<td>Other fruits and mixtures, mainly fruit</td>
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<tr>
<td>Fruits</td>
<td>Non-citrus juices and nectars</td>
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<td>Grain Products</td>
<td>Total Grain</td>
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<td>Grain Products</td>
<td>Yeast breads and rolls</td>
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<td>Total cereals, rice, and pasta</td>
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<tr>
<td>Grain Products</td>
<td>Quick breads, pancakes, French toast</td>
<td>Grain_4</td>
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<tr>
<td>Grain Products</td>
<td>Cakes, cookies, pastries, pies</td>
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<tr>
<td>Grain Products</td>
<td>Crackers, popcorn, pretzels, corn chips</td>
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<tr>
<td>Grain Products</td>
<td>Mixtures mainly grain</td>
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<tr>
<td>Grain Products</td>
<td>Ready-to-eat cereals</td>
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</tr>
<tr>
<td>Grain Products</td>
<td>Rice</td>
<td>Grain_9</td>
</tr>
<tr>
<td>Grain Products</td>
<td>Pasta</td>
<td>Grain_10</td>
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<td>Total meat, poultry, and fish</td>
<td>Meat_1</td>
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<tr>
<td>Meat, Poultry, and Fish</td>
<td>Beef</td>
<td>Meat_2</td>
</tr>
<tr>
<td>Meat, Poultry, and Fish</td>
<td>Pork</td>
<td>Meat_3</td>
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<tr>
<td>Meat, Poultry, and Fish</td>
<td>Lamb, veal, game</td>
<td>Meat_4</td>
</tr>
<tr>
<td>Meat, Poultry, and Fish</td>
<td>Organ meats</td>
<td>Meat_5</td>
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<tr>
<td>Meat, Poultry, and Fish</td>
<td>Frankfurters, sausage, luncheon meats</td>
<td>Meat_6</td>
</tr>
<tr>
<td>Meat, Poultry, and Fish</td>
<td>Total poultry</td>
<td>Meat_7</td>
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<tr>
<td>Meat, Poultry, and Fish</td>
<td>Fish and shellfish</td>
<td>Meat_8</td>
</tr>
<tr>
<td>Meat, Poultry, and Fish</td>
<td>Mixtures mainly meat, poultry, fish</td>
<td>Meat_9</td>
</tr>
<tr>
<td>Meat, Poultry, and Fish</td>
<td>Chicken</td>
<td>Meat_10</td>
</tr>
<tr>
<td>Milk and Milk Products</td>
<td>Total milk and milk products</td>
<td>Milk_1</td>
</tr>
<tr>
<td>Milk and Milk Products</td>
<td>Total milk, milk drinks, yogurt</td>
<td>Milk_2</td>
</tr>
<tr>
<td>Milk and Milk Products</td>
<td>Yogurt</td>
<td>Milk_3</td>
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<tr>
<td>Milk and Milk Products</td>
<td>Milk desserts</td>
<td>Milk_4</td>
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<td>Milk and Milk Products</td>
<td>Cheese</td>
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<td>Whole milk</td>
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<td>Milk and Milk Products</td>
<td>Low fat milk</td>
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<td>Milk and Milk Products</td>
<td>Skim milk</td>
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<td>Vegetables</td>
<td>Total vegetables</td>
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<td>White potatoes</td>
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<td>Vegetables</td>
<td>Dark green vegetables</td>
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<tr>
<td>Vegetables</td>
<td>Deep yellow vegetables</td>
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### Table 1.8 – continued from previous page

<table>
<thead>
<tr>
<th>Food Pattern Class</th>
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<th>Term</th>
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<tbody>
<tr>
<td>Vegetables</td>
<td>Tomatoes</td>
<td>Veg_4</td>
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<tr>
<td>Vegetables</td>
<td>Lettuce, lettuce-based salads</td>
<td>Veg_5</td>
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<td>Vegetables</td>
<td>Green beans</td>
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<tr>
<td>Vegetables</td>
<td>Corn, green peas, lima beans</td>
<td>Veg_7</td>
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<tr>
<td>Vegetables</td>
<td>Other vegetables</td>
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<tr>
<td>Vegetables</td>
<td>Fried potatoes</td>
<td>Veg_11</td>
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#### Meals Group

Intro text here

#### USDA FNDDS Meals Group

**Under construction**

#### Meals by Crop Group

Intro text here

#### Crop Groups

**Under construction**

#### Meals by Livestock Group

Intro text here
Mammals

Meals by Food Patterns

Intro text here
USDA FNDDS Food Patterns

Under construction

Meals by Meal Group

Intro text here.
Meals by Formulation

Intro text here.
Formulation

Under construction

Pizza
Intro text here

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- Pizza with 52 ingredients
- Pizza ingredients ranked by EPA FCID code
- Pizza ingredient - basil
- Pizza ingredients by crop group
- Pizza ingredients by food pattern
Pizza with 52 ingredients
Pizza ingredients ranked by EPA FCID code

<table>
<thead>
<tr>
<th>Food #58106710</th>
<th>FCID rank by percent</th>
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</thead>
<tbody>
<tr>
<td>Wheat, flour</td>
<td>1 FCID: 15004000</td>
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<tr>
<td>Tomato puree</td>
<td>2 FCID: 08013760</td>
</tr>
<tr>
<td>Tomato</td>
<td>3 FCID: 08003760</td>
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</tbody>
</table>

Pizza ingredient - basil
### Pizza ingredients by crop group

<table>
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<tr>
<th>Class</th>
<th>Group</th>
<th>Sub-group</th>
<th>Type</th>
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<tbody>
<tr>
<td>Mammals, Poultry &amp; Fish</td>
<td>Group 30. Mammals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31. Beef</td>
<td></td>
<td>Beef, fat [3100047000] (Crop Group 31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Beef, meat byproducts [3100046000] (Crop Group 31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Beef, meat [3100044000] (Crop Group 31)</td>
</tr>
<tr>
<td></td>
<td>33. Pork</td>
<td></td>
<td>Pork, fat [3400294000] (Crop Group 34)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Pork, meat byproducts [2500202000] (Crop Group 34)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Pork, meat [3400290000] (Crop Group 34)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Pork, skin [3400291000] (Crop Group 34)</td>
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<td></td>
<td>36. Milk</td>
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<td>Milk, fat [3600022000] (Crop Group 36)</td>
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<td>Milk, nonfat solids [36000223000] (Crop Group 36)</td>
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<td>Milk, water [36000224000] (Crop Group 36)</td>
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<tr>
<td></td>
<td>Group 21. Mushrooms and other edible fungi</td>
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<td></td>
<td>Group 21A. Mushrooms</td>
<td></td>
<td>Mushroom [2100228000] (Crop Group 21)</td>
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<td></td>
<td>Group 01. Root and Tuber Vegetables</td>
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<tr>
<td></td>
<td>1A. Root vegetables subgroup</td>
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<td>Beef, sugar [0101052000] (Crop Group 1A)</td>
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<tr>
<td></td>
<td>1C. Tuberous and corn vegetables subgroup</td>
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<td>Potato, flour [0103286000] (Crop Group 1C)</td>
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<td></td>
<td>1D. Tuberous and corn vegetables (except potato) subgroup</td>
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<td>Cassava [0103082000] (Crop Group 1CD)</td>
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<td></td>
<td>Group 03. Bulb Vegetables</td>
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<tr>
<td></td>
<td>3A. Onion, bulb, subgroup</td>
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<td>Garlic, bulb [0301165000] (Crop Group 3A)</td>
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<td>Onion, bulb [0301237000] (Crop Group 3A)</td>
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<td>Onion, bulb, dried [0301238000] (Crop Group 3A)</td>
</tr>
<tr>
<td>Food Groups</td>
<td>Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------</td>
<td></td>
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<tr>
<td>Beverages</td>
<td>Water, indirect, all sources [9502000000] (Crop Group 85)</td>
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<td></td>
<td>Eggs [Egg_0]</td>
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<td>Egg, white [7000146000] (Crop Group 70)</td>
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<td></td>
<td>S sugars [Sugar_1]</td>
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<td>Honey [9500186000] (Crop Group 0)</td>
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<td>Sugarcane, sugar [9500382000] (Crop Group 0)</td>
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<td>Nuts and Seeds [Nuts seed_0]</td>
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<tr>
<td></td>
<td>Cottonseed, oil [2001128000] (Crop Group 20)</td>
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<tr>
<td></td>
<td>Peanut, oil [9500265000] (Crop Group 0)</td>
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<td>Rapeseed, oil [2001319000] (Crop Group 20)</td>
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<td>Safflower, oil [2002330000] (Crop Group 20)</td>
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<td>Sesame, oil [2001337000] (Crop Group 20)</td>
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<td>Sunflower, oil [2002298000] (Crop Group 20)</td>
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<tr>
<td>Grains</td>
<td>Wheat, flour [1500402000] (Crop Group 15)</td>
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<td>Rice, flour [1500325000] (Crop Group 15)</td>
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</tr>
<tr>
<td></td>
<td>Mammals, Poultry &amp; Fish</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beef [Meat_1]</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Beef, fat [3100047000] (Crop Group 31)</td>
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<tr>
<td></td>
<td>Beef, meat byproducts [3100046000] (Crop Group 31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beef, meat [3100044000] (Crop Group 31)</td>
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### Other Related AOAC Methods

#### 1.4.6 Nutrition Mathematics

Intro text here

**Introduction: Nutrition Mathematics**

Intro text here

**Table of Contents**

- Part 1
- Part 2
- Serialization

**Part 1**  The UN FAO INFOODS tag for the calculation “amino acids, total essential” is AAE8. There are eight basic essential amino acids. AAE8 is represented as follows:

\[
AAE8 = \sum_{i=1}^{8} (essential - amino - acids)
\]  

(1.1) Which reduces to:

\[
AAE8 = [\text{isoleucine}] + [\text{leucine}] + [\text{lysine}] + [\text{methionine}] + [\text{phenylalanine}] + [\text{threonine}] + [\text{tryptophan}] + [\text{valine}]
\]  

(1.2)
Introducing semantic syntax in the form of a CURIE where the authority is “infoods” and the Universal Resource Identifier is the unique INFOODS “tag”:

\[ [\text{infoods} : \text{AAE8}] = [\text{infoods} : \text{ILE}] + [\text{infoods} : \text{LEU}] + [\text{infoods} : \text{LYS}] + [\text{infoods} : \text{MET}] + [\text{infoods} : \text{PHE}] + [\text{infoods} : \text{THR}] + [\text{infoods} : \text{VAL}] \] (1.10)

Now replace the operator symbol “+” with its equivalent semantic operator \[\text{[ncit:C64911]}\].

\[ [\text{infoods} : \text{AAE8}] = [\text{infoods} : \text{ILE}] [\text{ncit} : \text{C64911}] [\text{infoods} : \text{LEU}] [\text{ncit} : \text{C64911}] [\text{infoods} : \text{LYS}] [\text{ncit} : \text{C64911}] [\text{infoods} : \text{MET}] [\text{ncit} : \text{C64911}] [\text{infoods} : \text{PHE}] [\text{ncit} : \text{C64911}] [\text{infoods} : \text{THR}] [\text{ncit} : \text{C64911}] [\text{infoods} : \text{VAL}] \] (1.18)

“grams per 100 grams per edible portion” \[\text{[vocal:v62177]}\]:

\[ [\text{infoods} : \text{AAE8}]_{g_{100g_{EP}}} = \] (1.26)

\[ \frac{([\text{infoods} : \text{ILE}][\text{vocal} : \text{v62177}])}{([\text{infoods} : \text{LEU}][\text{vocal} : \text{v62178}])} \frac{([\text{infoods} : \text{LYS}][\text{vocal} : \text{v62179}])}{([\text{infoods} : \text{MET}][\text{vocal} : \text{v62179}])} \frac{([\text{infoods} : \text{PHE}][\text{vocal} : \text{v62179}])}{([\text{infoods} : \text{THR}][\text{vocal} : \text{v62179}])} \frac{([\text{infoods} : \text{VAL}][\text{vocal} : \text{v62179}])}{([\text{infoods} : \text{VAL}][\text{vocal} : \text{v62179}])} \]

Each amino acid in a sample will have a <value> in the form of a floating point number \[\text{[xsd:float]}\]:

\[ [\text{infoods} : \text{AAE8}]_{\text{[vocal:v62177]} : \text{[xsd:float]}} = \] (1.35)

\[ \frac{([\text{infoods} : \text{ILE}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.36))}{([\text{infoods} : \text{LEU}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.37))} \frac{([\text{infoods} : \text{LYS}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.38))}{([\text{infoods} : \text{MET}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.39))} \frac{([\text{infoods} : \text{PHE}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.40))}{([\text{infoods} : \text{THR}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.41))} \frac{([\text{infoods} : \text{VAL}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.42))}{([\text{infoods} : \text{VAL}][\text{vocal} : \text{v62177}][\text{xsd : float}] < \text{val} (1.43))} \]

\textbf{Part 2} A semantic record will have the following syntax:
The operator symbol “=” is replaced with its equivalent semantic operator [ncit:C54125]. A complete semantic record will have the following syntax:

[infoods:AAE8] [vocal:v62177] [ncit:C54125] [infoods:ILE] [vocal:v62177] [xsd:float] <value>
[ncit:C64911] [infoods:LEU] [vocal:v62177] [xsd:float] <value> [ncit:C64911] [infoods:MET]
[vocal:v62177] [xsd:float] <value> [ncit:C64911] [infoods:PHE] [vocal:v62177]
[xsd:float] <value> [ncit:C64911] [infoods:THR] [vocal:v62177] [xsd:float] <value>
[ncit:C64911] [infoods:TRP] [vocal:v62177] [xsd:float] <value> [ncit:C64911]
[infoods:VAL] [vocal:v62177] [xsd:float] <value>

The structure above is in a format that can be sent “over the wire” (e.g. HTTP or FTP). The structure is serialized.

**Serialization** Serialization is the process of taking an object instance (e.g. the food item and its related data) and converting it to a format that can be transported across a network or persisted to storage (such as a file or database). The serialized format contains the object’s state information. De-serialization is the process of using the serialized state to reconstruct the object from the serialized state to its original state.

Ontomatica uses OWL to define objects and logic, and the JSON-LD format to serialize data structure. De-serialized JSON-LD structures are restored to their OWL format.

The next step is to associate the <value> for amino acids with the method of analysis (analytical method) used by the investigator when analyzing the food sample.

**Guidelines for Converting Units, Denominators and Expressions**

Intro text here

**Table of Contents**

- Background
- Objectives
- Changing denominators and units
- Conversions

**Background** The source of this text is [3332].

Conversion of food data is done in the areas of nutrition (i.e. food composition and dietary assessment) and food safety (exposure assessment), and when reporting analytical data, including their publication in scientific articles.

Food composition data are expressed in a variety of ways, depending on national conventions, practices of various institutions and journals requirements. However, to aggregate or compare data from diverse sources, it is often necessary to convert them.
A common source of error in the use of compositional data is their conversions from one unit, denominator or expression to another. We use comprehensive guidelines developed by FAO/INFOODS.

**Objectives**

With the goal to increase the quality of compositional data, the guidelines have the following objectives:

- to provide a comprehensive list of possible conversions;
- to standardize component conversions regarding units (e.g. g, mg, or µg), denominators (e.g. per 100 g edible portion) and expressions used in food composition, dietary assessment and exposure assessment;
- to promote the publication, e.g. in scientific journals, of all necessary data to be able to convert them into edible portion on fresh weight bases. For example, to provide water, fat or protein content if data are expressed per dry weight, % of total fatty or amino acid, respectively;
- to motivate researchers and compilers to always accompany their compositional data with explicit units, denominators and expressions to ensure their correct use;
- to motivate users to pay more attention to units, denominators and expressions of compositional data; and
- to make users aware of some unusual conversions (e.g. the use of the Sheppard factors for converting fatty acid methyl ester into fatty acids)

**Changing denominators and units**

In general, for food composition purposes it is recommended to use a metric unit (g, mg or µg). As food is typically consumed on the fresh weight basis and only the edible portion is eaten, food composition data are usually reported as ‘per 100 g edible portion on fresh weight basis (EP)’. On the other hand, scientific articles often report data as ‘per 100 g dry matter (DM)’ which is useful for scientific purposes to easily compare food contents in a standardized way without the influence of the changing water content. However, in order to be useful for food composition purposes, the water content is needed so that the values can be converted to EP.

Some denominators should be avoided, for example ‘individual amino acid (AA) as g per 100 g’ because it is not obvious if they refer to, for example, ‘per 100 g edible portion’ or ‘per 100 g protein’ or to ‘per 100 g dry matter’. To avoid ambiguity, it is therefore recommended to always provide a precise description of the denominator. Examples are:

- per 100 g edible portion on fresh weight basis (preferred expression in food composition)
- per 100 g dry matter of edible food
- per g total protein of edible portion on fresh weight basis
- per g total protein of edible portion on dry matter basis
- per g total lipid of edible portion on dry matter basis
- per g total lipid of edible food on fresh weight basis
- per 100 g total food (edible and inedible parts of the food) on fresh weight basis
- per 100 g total food (edible and inedible parts of the food) on dry matter basis
- per g total lipid of total food (edible and inedible food) on fresh weight basis

In food safety ‘per kg food’ is the preferred expression in compositional data, sometimes without specifically indicating if total food or edible portion is meant, or if it is on fresh or dry matter basis.

If data are not expressed as ‘per 100 g edible portion on fresh weight basis (EP)’, additional data should be provided so that values can be calculated as ‘per 100 g EP’:

- An edible coefficient needs to be reported if data are expressed as ‘per total food’.
- Water (or dry matter) content in 100 g EP needs to be reported if data are expressed as ‘per % or g dry matter of the edible portion’.
• Lipid content in 100 g fresh food needs to be reported if data are expressed as ‘per % or g fat/total lipid of the edible portion’, or as ‘per total fatty acids (FA) of the edible portion’.

• Protein content in 100 g fresh food needs to be reported if data are expressed as ‘per % or g protein of the edible portion’.

• Density needs to be reported if data are expressed per volume, e.g. as ‘per 100 ml’ or ‘per L’.

The use of some units should be avoided such as ppm (parts per million), ppb (parts per billion), % and International Units (IU); it is better to use true metric units where the unit and the denominator are well defined such as mg/kg or µg/g (while well defining the denominators - see above).

In the following tables, formulas and examples are given of how to convert different units and denominators to each other. If appropriate, INFOODS tagnames are used for component identification (see INFOODS).

Conversions

Changing denominators (with same units) where no additional data are needed Elements to create proper matrix units:

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<td>×</td>
</tr>
<tr>
<td>Operator</td>
<td>=</td>
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</table>

Example illustrated in text:

122 mg per kg ÷ 10 = 12.2 mg per 100 g EP

Example illustrated in semantic markup:

Nutrition Mathematics Taxonomy

Intro text here

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• Taxonomy

Taxonomy Mathematics methods taxonomy
Simple Summation

Intro text here

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• Example
• Legend
• Values

Under construction

Example

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### Values

#### Factored Summation

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Example

Calculation by Difference
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Example

Calculation by Imputation
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Example

Consumer and Regulatory Reports

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- Example

Under construction

Example  For a food, energy by component
For a food, protein by component
For a meal, energy by component
For a meal, protein by component

1.4.7 Data Repository

Intro text here

Repository Structure

Intro text here

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Repository Design  Data structure syntax is RDF.
Publications and Slide are stored in Reference Library.
Metadata, Results and Data are represented as Graphs and stored in appropriate Graph database.
Work-flow processes are defined in Taverna; work-flow meta data is associated with appropriate Graph application.

Repository Information Model  Discussion about Minimum Information Model ontology

Repository References
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- Scope: Reference Library
- Example: Standard of Identity
- Example: Food microbiology and foodborne infections

Scope: Reference Library  Reference Library: home
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  - economics (1)
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  - social sciences (5)

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  - Bacillariophyta (1)
  - Chlorophyta (1)
  - Chrysophyta (1)
  - Cryptophyta (1)
  - Euglenophyta (1)
  - Haptophyta (1)
  - Phaeophyta (1)
  - Pterophyta (1)
  - Rhodophyta (1)
  - Rhodophyta (1)

- **TAXA - ANIMALIA**
  - Arthropoda (1)
  - Cnidaria (1)
  - Crustacea (1)
  - Echinodermata (1)
  - Mollusca (1)

- **TAXA - ARCHAEA, CYANOBACTERIA AND BACTERIA**
  - Bacteria (6)
  - Chloroflexi (1)
  - Chlamydiae (1)
  - Deinococci (1)
  - Deinococci (1)
  - Firmicutes (1)
  - Gammagama (1)
  - Halobacteria (1)
  - Halobacteria (1)
  - Halobacteria (1)
  - Halobacteria (1)

- **TAXA - FUNGI, YEASTS, MOLDS AND MILDEWS**
  - Ascomycota (1)
  - Basidiomycota (1)
  - Glomeromycota (1)

- **TAXA - PLANTAE**
  - Magnoliophyta (1)

- **TAXA - VIRUSES AND VIROIDS**
  - Acarvirales (1)
  - DNA and RNA reverse transcribing viruses (1)
  - DNA viruses (1)
  - Planctomycetes (1)
  - Microsporidia (1)
  - Retroviridae (1)
  - Unassigned viruses (1)

- **TIME PERIODS**
  - Month (115)
Example: Standard of Identity

Standard of identity - onion

Example: Food microbiology and foodborne infections

Food microbiology, foodborne infections and insects

Repository Data - Glucosinolates

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Articles with research data  Articles with research data about glucosinolates

Glucosinolate research data - plant growing conditions  Growing conditions - Flowerhead Brassicas

Glucosinolate research data - amino acids in plant genotype  Amino acids - genotype Baccus

Depository Data - Glycemic Load

Intro text here

Research, Data and Workflow

Reference workflow for USDA Mathematics

1.4.8 Technology

Intro text here

Web Ontology Language (OWL)

An overview of OWL [WEB360] [TEK12] is depicted in this summary illustration.

Simple Knowledge Object Sharing (SKOS)

The SKOS graph is depicted in this OWL-generated illustration.
An example of applying SKOS [ONT52] [TEK11] to identifying milk is depicted in this illustration:
An example of applying SKOS to identifying animals is depicted in this illustration:

Provenance Ontology (PROV)

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• Graph - Provenance Ontology
• Summary Illustration - Provenance Ontology
• Detailed Illustration - Provenance Ontology
• Illustration - Provenance Plan
• Illustration - Provenance Roles
• Illustration - Provenance Time
1.4. Features - Core with Detail

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Graph - Provenance Ontology  The PROV graph is depicted in this OWL-generated illustration. The PROV class hierarchy is depicted in this illustration.

Summary Illustration - Provenance Ontology  An overview of PROV [ONT43] is depicted in this illustration:

Detailed Illustration - Provenance Ontology

Illustration - Provenance Plan

Illustration - Provenance Roles

Illustration - Provenance Time

Source Code Management (SCM)

An overview of source code management using Git is depicted in this illustration.

Representational State Transfer (REST)

The following illustrates the retrieval of blog posts by a specific user and identified by a specific tag. The general structure is:

GET /users/ (int: user_id_) /posts/
tag Example request:

    GET /users/123/posts/web HTTP/1.1
    Host: example.com
    Accept: application/json, text/javascript

Example response:

    HTTP/1.1 200 OK
    Vary: Accept
    Content-Type: text/javascript

    [
        {
            "post_id": 12345,
            "author_id": 123,
Query Parameters

- **sort** – one of hit, created-at
- **offset** – offset number. default is 0
- **limit** – limit number. default is 30

Request Headers

- **Accept** – the response content type depends on Accept header
- **Authorization** – optional OAuth token to authenticate

Response Headers

- **Content-Type** – this depends on Accept header of request

Status Codes

- **200 OK** – no error
- **404 Not Found** – there’s no user

Directed Acyclic Graph (DAG)

See examples of the following directed acyclic graphs

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1.4. Features - Core with Detail
Graph - Tryptophan

Graph - Omega-3 Fatty Acid

Graph - Pizza
  • Pizza in DAG format [WEB165] generated from Manchester Pizza OWL file
  • Individual pizza products [WEB117] in factored format

Graph - Physico-Chemical Methods and Properties (FIX)
  • FIX class hierarchy [ONT45] is generated from FIX OWL file.

Graph - UN FAO Agrontology Ontology
  • Agrontology in DAG format [ONT3] is generated from Agrontology OWL file.

Search
Intro text here

User Interface

Sample Searches
list from long proposal

Ontomatica Technology Platform
Ontomatica’s technology platform is presented here:
  • Technologies for Semantic Applications

1.5 Features - FDA Labeling Specifications
Intro text goes here
1.5. Features - FDA Labeling Specifications
1.5.1 FDA Food Labeling Specifications

The following food labeling regulations are specified by the authority FDA that is part of [schema:partOf] the jurisdiction USA.

Ontomatica Coverage

Section below reference US FDA food labeling specifications.

Ontomatica label classes integrate all information specified by referenced sections.

FDA Food Labeling Guide

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Name of Food
Net Quantity of Contents Statements
Ingredient Lists
Colors
Food Allergen Labeling
Nutrition Labeling
General
Nutrient Declaration
Products with Separately Packaged Ingredients/Assortments of Foods
Serving Size
Exemptions/Special Labeling Provisions
Claims
Nutrient Content Claims
Health Claims
Qualified Health Claims
Structure/Function Claims
Appendix F: Calculate the Percent Daily Value (DV) for the Appropriate Nutrients
Appendix G: Daily Values for Infants, Children Less Than 4 Years of Age, and Pregnant and Lactating Women

1.5.2 FDA Food Allergen Specifications

Attention: This section applies to USDA prime data, not to USDA select data. For explanation of USDA prime and USDA select data, see Deposition Workflow
Ontomatica Coverage

Ontomatica label classes integrate allergen data as specified by FDA, including coverage of all specifications below.

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- FDA Specifications for Food Allergen Labeling
- Reviews of Food Ingredients and Finished Foods
- Potential Milk Protein Indicators
  - Notes:
- Potential Egg Protein Indicators
  - Notes:
- Potential Fish Protein Indicators
  - Notes:
- Potential Crustacea Shellfish Protein Indicators
  - Notes:
- Potential Tree Nut Protein Indicators
  - Notes:
- Peanut Protein Indicators
  - Notes:
- Potential Wheat Protein Indicators
  - Notes:
- Potential Soybean Protein Indicators
  - Notes:

FDA Specifications for Food Allergen Labeling

Under the Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA), food labels are required to state clearly whether the food is or contains any ingredient that is a “major food allergen.” The law defines a major food allergen to mean any one of the following eight foods/food groups or an ingredient that contains their proteins:

- milk,
- egg,
- fish (e.g., bass, flounder, or cod),
- Crustacean shellfish (e.g., crab, lobster, or shrimp),
- tree nuts (e.g., almonds, walnuts, or pecans),
- peanuts,
- wheat, and
- soybeans.

FALCPA excludes from the definition of a major food allergen:

- raw agricultural commodities (e.g., fresh fruits and vegetables),
- highly refined oils made from one of the eight foods/food groups defined as a major food allergen,
- ingredients made from such oils, and
- any ingredient that is exempt under a petition or notification process specified in FALCPA.
FALCPA requires that food source names of any major food allergen used to make a food be stated either: (1) within the product’s ingredient list (e.g. “Ingredients: ...peanut butter...casein (milk)...wheat flour ...”) or (2) in a separate “Contains” statement (e.g., “Contains peanuts, milk and wheat”) immediately following or adjacent to the ingredient list. When multiple ingredients (e.g., casein and whey) contain protein derived from the same major food allergen (e.g., milk), that allergen’s food source name can be declared just once within the ingredient list in accordance with FALCPA labeling requirements. However, when a FALCPA “Contains” statement appears on a food label, it must identify the food source names of all major food allergens contained in the ingredients.

For the purpose of complying with FALCPA labeling requirements, question and answer (Q&A) of FDA’s guidance document, which is updated periodically to add new questions, explains that the food source name for a species of fish or Crustacean shellfish is its “market name” provided in the FDA resource The Seafood List. Q&A provides a table of additional examples of types of tree nuts that are frequently used to make foods. The tree nuts’ common or usual names are their food source names for FALCPA labeling purposes. Q&A also explain that either the plural or singular terms for peanuts, types of tree nuts, and soybeans and that the synonyms soy and soya for soybeans are acceptable for declaring the food source names of the major food allergens on food labels.

Reviews of Food Ingredients and Finished Foods

This document identifies examples of food ingredients and finished foods that either are or may contain one or more major food allergens. It is not intended to serve as an all-inclusive list. Stated in parentheses after the names of some ingredients/foods are their synonyms and/or a description of what they are or their common uses. Any common synonyms for the terms listed below are also identified using bolded text immediately following those terms in parentheses. Also stated in the parentheses are descriptions of the terms, other related information, and when applicable, reference to the notes section following each allergen subheading.

Some ingredients and finished foods always contain a major food allergen due to their basic nature or when they either have a standard of identity or are otherwise defined or described by Federal law or regulation that confirms the presence of a major food allergen. When ingredients used to make another ingredient or finished food can vary, it may be necessary to review the ingredient specification sheets to determine if the product contains a major food allergen. In other cases, when an ingredient or finished food is derived from the food source of a major food allergen but there is uncertainty about the presence of any protein residue from that allergen, it may be necessary to analyze the food ingredient or the finished food.

Potential Milk Protein Indicators

anhydrous butter oil  (anhydrous butter oil; made by the removal of practically all of the moisture and nonfat solids from butter)

anhydrous milkfat (anhydrous milk fat; made by removal of practically all of the moisture and nonfat solids from pasteurized cream)

bearnaise sauce (commonly made with egg yolks and butter)

butter (defined by law; contains up to 20% water and milk solids; milk solids contain milk protein)

butterfat (butter fat, milkfat, milk fat; fat particles in milk that can be separated out to make cream and butter)

buttermilk (sweet cream buttermilk is the by-product of churning cream into butter; cultured buttermilk is generally sold in retail stores that contains a bacterial culture, e.g., Streptococcus lactis)

butterscotch candy (confection commonly made with butter)

Caesar salad or dressing (commonly made with anchovies, egg, Parmesan cheese, and Worcestershire sauce that can contain wheat and soy)

canned tuna (standardized food - section 161.190; can be made with milk protein hydrolysates used as flavoring)

caramel candy (milk caramel; chewy confection commonly made with milk and butter)
casein  (a milk protein)

caseinates  (e.g., ammonium, calcium, magnesium, potassium, sodium; salt forms of casein)

cheese  (specific types are standardized foods - section 133.102-133.196; must be made with either cow’s milk or milk from other specified mammals; see notes below)

cream  (specific types are standardized foods - section 131.149-131.162, e.g., light/table/coffee, heavy/heavy whipping, light whipping, dry, sour, and acidified sour cream)

creamed sauces  (commonly made with cream, milk and/or butter)

creamed soups  (commonly made with milk, cream and/or butter)

creme brulee  (sweet baked custard dessert coated with hard caramel; similar to flan; made with eggs and commonly milk but other liquids can be substituted)

cultured milk  (standardized food - section 131.112; must be made by adding a microbial culture to certain milk protein-containing ingredients; e.g., cultured buttermilk, kefir cultured milk, acidophilus cultured milk)

curds  (semisolid portion of coagulated milk)

custard  (sweet dessert made with eggs and commonly milk but other liquids can be substituted)

dulce de leche  (caramelized sweetened condensed milk)

eggnog  (common Christmas beverage made with milk, eggs, sugar and flavoring)

enriched macaroni products with fortified protein  (standardized food - section 139.120; can be made with milk protein-containing ingredients)

flan  (creme caramel; sweet baked custard dessert coated with soft caramel; similar to creme brulee; made with eggs and commonly milk but other liquids can be substituted)

flavorings  (natural and artificial; can be derived from milk)

French vanilla products/syrup  (commonly made with cream and egg yolks and possibly hazelnuts)

frozen custard  (standardized food - section 135.110; must be made with one or more milk protein-containing ingredients and egg yolks and contain a minimum amount of nonfat milk solids; see notes below)

ghee  (made from butter derived from cow’s or water buffalo’s milk; used in Asian Indian cuisine)

half-and-half  (standardized food - see section 131.180; half milk and half cream)

hollandaise sauce  (commonly made with egg yolks and butter)

hot dogs  (can be made with milk caseinates)

hydrolyzed casein  (casein protein that has been broken down into its component peptides and/or amino acids; can be used to make hypoallergenic infant formulas, but still must declare the presence of milk; see notes below)

hydrolyzed whey  (whey protein that has been broken down into its component peptides and/or amino acids; can be used to make hypoallergenic infant formulas, but still must declare the presence of milk; see notes below)

ice cream  (standardized food - section 135.110; must be made with one or more milk-protein containing ingredients and contain a minimum amount of nonfat milk solids; see notes below)

ice milk  (frozen confection made from milk or milk-protein containing ingredients)

junket  (sweet, pudding-like dessert commonly made with milk)

lactalbumin  (milk protein derived from whey)

lactalbumin phosphate  (type of lactalbumin)

lactoferrin  (glycoprotein that can be derived from cow’s milk)
lactoglobulin (milk protein derived from whey)
lactose (milk sugar; standardized sweetener - section 168.22; usually derived from whey)
lactitol (e.g., anhydrous lactitol and lactitol monohydrate; sugar alcohol derived from lactose)
lactulose (synthetic disaccharide derived from lactose)
lyophilized probiotic cultures (produced by fermentation in whey and casein growth media; used mostly in dietary supplements)
margarine (standardized food - see section 166.110; can be made with certain milk protein-containing ingredients)
mellorine (standardized food - see section 135.130; sweet frozen dessert that must be made with certain milk protein-containing ingredients)
milk (whole milk; whole cow’s milk; standardized food - section 131.110; many but not all other types of cow’s milk also have standards - section 131.111-131.147; different forms include 1% low-fat, 2% reduced fat, non-fat/skim/skimmed, acidified, cultured, malted, chocolate-flavored, dry whole/powdered, evaporated, sweetened condensed; see notes below)
milk macaroni products, nonfat milk macaroni products, and enriched nonfat milk macaroni products (standardized foods - section 139.1120-139.122; must be made with certain milk-protein containing ingredients)
milk solids (consist of all components of milk, including its proteins, except water)
nougat (sweet confection can be made with butter)
penuche (panocha, penuchi; creamy, fudge-like candy commonly made with butter, milk or cream; chopped nuts also can be added)
pudding (sweet dessert commonly made with milk but other liquids can be substituted)
recaident (made from casein; used in some chewing gums to strengthen teeth)
rennet casein (derived from milk using the enzyme rennet; used to coagulate milk in making cheese, junket and custard)
roux (thickener made with butter and flour; used as a base for sauces)
sherbet (standardized food - section 135.140; sweet frozen dessert must be made with certain milk protein-containing ingredients)
sour cream solids (consist of all components of sour cream, including milk proteins, except water)
sour milk solids (consist of all components of sour milk, including its proteins, except water)
soy cheese (made with soymilk and commonly casein)
toffee (confection made with butter and occasionally wheat flour and/or nuts, usual almonds; e.g., English, cinder, or sponge toffee)
whey (a milk protein; all forms, e.g., sweet whey, delactosed whey, whey protein concentrate)
yogurt (specific types are standardized foods - section 131.200-131.206; must be made with certain cultured milk protein-containing ingredients)

Notes:
- Milk from the domesticated cow is the only type of milk (and its proteins) that is subject to FALCPA labeling requirements. Milk from any other mammal (e.g., goat, sheep, buffalo, etc.) is not, but it must be declared in the ingredient list by its common or usual name (e.g., goat’s milk, sheep’s milk, water buffalo’s milk) when used to make another food. All types of cow’s milk (e.g., low-fat, evaporated, sweetened condensed) contain its proteins.
• The following standardized cheeses can be made with cow’s milk and/or any combination of milk from cows, sheep or goats:
  – Caciocavallo Siciliano - section 133.111
  – Romano - section 133.183
  – Semisoft - section 133.187
  – Semisoft part skim - section 133.188
  – Soft ripened - section 133.
  – Spiced - section 133.190
  – Spiced, flavored (that conforms to standards for a natural cheese) - section 133.193
  – Part-skim Spiced - section 133.191
• The following standardized cheeses can be made from either cow’s milk or water buffalo milk, but not a combination of the two milks:
  – Mozzarella - section 133.153
  – Low-moisture Mozzarella - section 133.156
  – Part-skim Mozzarella - section 133.157
  – Scamorza - section 133.155
  – Low-moisture Scamorza - section 133.156
  – Part-skim Scamorza - section 133.157
• See regulations at section 130.10 for requirements for foods named by use of a nutrient content claim and a standardized term, e.g. 1% low-fat milk, 2% reduced cheddar cheese.
• When ice cream or frozen custard is made with goat’s milk, the product’s statement of identity must identify its goat’s milk source. See 21 CFR 135.115 for details about these standardized foods.
• The prefix “lact” in the name of a food ingredient commonly indicates a milk derivative.
• “Nondairy” is not equivalent to “milk free.” Products that are labeled as “nondairy” (e.g., coffee whiteners, whipped toppings, creamy drinks/drink mixes, and imitation cheese products) may contain casein or caseinates.
• A kosher “D” designation on a label indicates “dairy” or that the product contains “milk-derived ingredients.”
• A kosher “DE” designation on a label indicates “dairy equipment” but no actual dairy or milk-derived ingredients were used to make the product.
• The range and composition of sauces is so varied that this group of condiments can potential contain any one of the major food allergens.
• Batters used as coatings for deep-fat-fried foods commonly contain milk.

Potential Egg Protein Indicators

**albumen** (when spelled with an “e” usually means egg white or an egg white protein; used as a “fining” or clarifying agent in wines, soup stock, consume, bouillons and coffee)

**albumin** (when spelled with an “i” can mean a protein derived from egg, soy, or other sources)

**almond paste** (sweet product made with finely ground almonds; can contain egg whites)

**artificial color** (artificial color added or color added; can be derived from egg yolks)
apovitellin (component of an egg yolk lipoprotein)
avidin (egg white protein)
bearnaise sauce (made with egg yolks and butter)
Caesar salad or dressing (commonly made with anchovies, egg, Parmesan cheese, and Worcestershire sauce that can contain wheat and soy)
custard (sweet dessert made with eggs and commonly milk but other liquids can be substituted)
eggg (all forms of domestic hen eggs; many forms are standardized foods - section 160.100-160.190, e.g., whole, whites, yolks, dried, liquid, frozen; see notes below)
eggg noodles (noodle products; standardized foods - section 139.150-139.180; must contain whole eggs or egg yolks)
eggg solids (consist of all components of the egg, including its proteins, except water)
eggnoog (common Christmas beverage made with milk, eggs, sugar and flavoring)
eggg substitutes (commonly sold in liquid form in cartons; frequently contain egg whites)
flan (creme brulee or creme caramel; baked custard coated with caramel; made with eggs and commonly milk, but other liquids can be substituted)
flavors (natural and artificial; can be derived from eggs)
French vanilla products/syrup (commonly made with cream and egg yolks and possibly hazelnuts)
frozen custard (French custard ice cream or French ice cream; standardized food - section 135.110; frozen confection that must be made with one or more milk protein-containing ingredients and egg yolks)
globulin (protein that can be derived from egg, grains, legumes, seeds and other foods)
high protein drinks and other specialty drinks (can contain egg proteins)
hollandaise sauce (made with egg yolks and butter)
lecithin (mixture of phosphatides derived from egg, soybeans, or other plants; may not necessarily contain protein)
livetin (egg yolk protein)
lysozyme (egg white enzyme/protein)
macaroni products (standardized foods - section 139.110-139.140, include macaroni, spaghetti and vermicelli; egg ingredients are optional)
marshmallows and marshmallow fluff (can be made with egg whites)
marzipan (sweet confection commonly made with egg whites)
mayonnaise (standardized food - section 169.140; must contain egg)
meringue (stiffly beaten egg whites and sugar)
ovalbumin (egg white protein)
ovoglobulin (egg white protein)
ovomucin (egg white protein)
ovomucoid (egg white protein)
ovotransferrin (egg white protein)
ovovitellin (vitellin; egg yolk protein)
surimi (fish protein product commonly used to make “imitation” crab and lobster; may contain egg whites)
tartar sauce (thick white sauce commonly made with mayonnaise that contains egg)
Notes:

- The egg of the domesticated chicken is the only type of egg (and its proteins) that is subject to FALCPA labeling requirements. Eggs from other types of fowl (e.g., ducks, turkeys, ostriches, etc.) are not, but must be declared in the ingredient list by their respective common or usual names (e.g., duck egg, turkey egg, ostrich egg) when used to make another food. Both the yolks and whites of an egg contain its proteins.
- Binders, coagulants, and emulsifiers are three common functions of certain ingredients that could contain egg proteins.
- The prefix “ov” or “ovo” in the name of a food ingredient commonly indicates an egg derivative.
- Breads and other baked foods with a shiny glaze may indicate that egg whites were brushed on the surface before baking.
- Yellow-colored breads, other baked foods, and pasta may indicate that egg yolks were used as an ingredient.
- The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens.
- Batters used as coatings for deep-fat-fried foods commonly contain egg.
- Pasta is a common term which refers to the standardized foods macaroni products, where egg ingredients are optional, and noodle products, where egg ingredients are required.
- All salad dressings made with mayonnaise (a standardized food - section 169.140) contain egg.

Potential Fish Protein Indicators

**anchovy paste**  (fish-derived condiment made with ground anchovy fillets; used as a flavoring)

**anchovy sauce**  (fish-derived sauce commonly made with anchovies, butter and wheat flour)

**bouillabaisse**  (seafood stew typically made with fish and shellfish)

**caponata**  (Sicilian side dish commonly made with anchovies)

**Caesar salad or dressing**  (commonly made with anchovies, egg, Parmesan cheese, and Worcestershire sauce that can contain wheat and soy)

**caviar**  (processed and salted eggs of certain fish like sturgeon)

**fish**  (market names for different species are listed in The Seafood List; see notes below)

**fish gelatin**  (protein product commonly made from multiple/variable species of fish; used as a jelling or thickening agent)

**fish oils**  (e.g., cod liver oil; not a major food allergen if highly refined; see notes below)

**fish protein isolate**  (defined food additive - see section 172.340)

**fish sauce**  (condiment made with fermented fish)

**fish stock or broth**  (water in which fish has been cooked; used as a soup base and as a flavoring)

**flavors and extracts**  (natural and artificial can be derived from fish and shellfish)

**isinglass**  (made from air bladders of sturgeon, cod, hake and other fish; used to clarify wine and beer)

**roe**  (fish eggs)

**surimi**  (fish protein product commonly used to make “imitation” crab and lobster)

**whole fish protein concentrate**  (defined food additive; also known as fish meal or fish flour)

**Worcestershire sauce**  (commonly made with the fish anchovies or sardines)
Notes:

- The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens.
- Because FALCPA exempts highly refined oils from the definition of a major food allergen, any highly refined fish oil (e.g., one that has been refined, bleached and deodorized) is not a major food allergen. Therefore, the particular fish from which a highly refined oil is derived should not be included in any FALCPA “Contains” statement that appears on the food label. Nevertheless, in accordance with 101.4(b)(14), regardless of whether or not it is highly refined, the common or usual name of a fish oil must identify its specific food source (e.g., cod liver oil). Also, when a fish oil is used as an ingredient to make another food, it must be declared by its common or usual name in the ingredient list of that food.

### Potential Crustacea Shellfish Protein Indicators

- **barnacles** (several types are commonly eaten)
- **bouillabaisse** (seafood stew typically made with fish and shellfish)
- **coral** (red unfertilized lobster eggs)
- **crab**
- **crawfish** (crayfish, crawdads, ecrevisse)
- **flavors and extracts** (natural and artificial can be derived from fish and shellfish)
- **lobster** (langouste)
- **prawn** (langoustine, lobsterette, langostino, scampi)
- **shrimp** (crevette, scampi)
- **tomalley** (green digestive gland of a lobster)

Notes:

- All types of Crustacean shellfish subject to FALCPA labeling requirements belong to the phylum called “Arthropoda” and the subphylum called “Crustacea.”
- Molluscan shellfish, which belong to the phylum called “Mullusca” (e.g., abalone (gastropod); clams, mussels, oysters, and scallops (bivalves); and squid/octopus (cephalopods that have internal shells)), and other seafood (e.g., snails/escargot, whelk/sea snails) are not types of Crustacean shellfish that are subject to FALCPA labeling requirements.
- The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens.

### Potential Tree Nut Protein Indicators

- **acorn(s)** (used in traditional Native American cuisine)
- **almond(s), beech nut(s), Brazil nut(s), brittle** (hard sweet candy made of caramel and peanuts or tree nuts, e.g., pecans or almonds)
- **butternut(s), caponata** (Sicilian dish commonly made with pine nuts)
- **cashew(s), chestnut(s), chinquapin(s), chikki** (Asian Indian sweet made with unrefined sugar and peanuts, cashews, almonds or pistachios)
coconut(s) (edible white kernel portion is commonly sold in dried and sweetened or unsweetened form as shredded, flakes, and chips)

coconut milk (sweet, milky white liquid derived from the edible kernel or “meat” of the coconut)

dodol (Asian delicacy made with coconut milk, unrefined sugar, rice flour, and sometimes cashews)

filbert(s) (hazelnut(s))

flavors and extracts (natural and artificial can be derived from tree nuts, e.g., almond or hazelnut extract)

French vanilla products/syrup (commonly made with cream and egg yolks and possibly hazelnuts)

gianduja (mixture of chocolate and tree nut paste or ground nuts like hazelnut or almond)

ginkgo nut(s) (represents the tree nut or embryo part of the plant and not the leaves, root, bark or other non-nut parts; see notes below)

heart nut(s) (Japanese walnut(s))

hickory nut(s), cola nut(s) (cola nut(s))

macadamia nut(s) (bush nut(s))

marzipan (sweet confection commonly made with almond paste/ground almonds)

mixed nuts (standardized food - section 164.110; can sold as a mixture of tree nuts and peanuts)

nougat (sweet confection commonly made with tree nuts)

nut butters (finely ground nuts that form an oily smooth consistency; must be declared on food labels by their specific common or usual names, e.g., cashew butter)

nut-flavored coffees (e.g., hazelnut or almond, if flavored with natural extracts that contain nut proteins)

nut flours (finely ground nuts; must be declared on food labels by their specific common or usual names that identify their food sources, e.g., almond flour, chestnut flour, and hazelnut flour)

nut meals (coarsely ground nuts; must be declared on food labels by their specific common or usual names that identify their food sources, e.g., almond meal, hazelnut meal, and pecan meal)

nut meats (edible kernel of a nut; must be declared on food labels by their specific common or usual names that identify their food sources, e.g., coconut meat)

nut oils (oils extracted from nuts; must be declared on food labels by their specific common or usual names that identify their food sources; can be cold pressed and not highly refined, e.g., some almond oils, pecan oils, and walnut oils; or can be highly refined, e.g., some coconut oils and palm oils; highly refined oils are not major food allergens)

nut paste (mixture of finely ground nuts and other ingredients; can contain egg whites; must be declared on food labels by their specific common or usual names that identify their food sources, e.g., almond paste)

nut pieces (broken edible kernels of nuts; must be declared on food labels by their specific common or usual names that identify their food sources, e.g., walnut pieces)

palm nut(s), penuche (panocha, penuchi; creamy, fudge-like candy commonly made with butter, milk or cream; chopped nuts also can be added)

pecan(s) (mashuga nut(s))

pesto sauce (commonly made with pine nuts)

pili nut(s), pine nut(s) (pinon nut(s), pinyon nut(s), pignoli(s))

pistachio(s), praline (sweet confection, coating, or topping commonly made with chopped tree nuts)

sheanut(s) (shea nut(s))
**Notes:**

- Tree nuts are used in a variety of products, e.g., breads, pies/pie crusts, pastries and other baked goods, candy/candy bars, chocolate, energy bars, cereals and ice cream.
- The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens.
- Dietary supplements, like Ginkgo biloba L., that are derived from the roots, leaves, stems, bark, or other non-nut parts of the same plants that bear tree nuts are not subject to FALCPA labeling requirements.
- Because FALCPA exempts highly refined oils from the definition of a major food allergen, any highly refined tree nut oil (e.g., one that has been refined, bleached and deodorized) is not a major food allergen. Therefore, the particular tree nut from which a highly refined oil is derived should not be included in any FALCPA “Contains” statement that appears on the food label. Nevertheless, in accordance with 101.4(b)(14), regardless of whether or not it is highly refined, the common or usual name of a tree nut oil must identify its specific food source (e.g., coconut oil). Also, when a tree nut oil is used as an ingredient to make another food, it must be declared by its common or usual name in the ingredient list of that food.
- See regulations at section 101.4(b)(14) for provisions allowing the use of “and/or” labeling for vegetable oils and vegetable oil shortenings, which could be derived from tree nuts (e.g., palm nut and coconut). When such “and/or” labeling is used, the specific common or usual name of each vegetable oil that may be present must be declared within the ingredient list of the food.

**Peanut Protein Indicators**

- arachis oil (peanut oil; cold pressed peanut oil that contains any peanut protein is a major food allergen; highly refined peanut oil is not a major food allergen; see notes below)
- artificial nuts (commonly made with peanuts versus tree nuts)
- barbeque sauce (can be made with peanut butter)
- beer nuts (roasted and flavored peanuts commonly sold as a snack food)
- brittle (hard sweet made of caramel and nuts such as peanut, pecan, and almonds)
- chili (can be made with peanut butter as a thickener and for flavor)
- chikki (Asian Indian sweet made with unrefined sugar and peanuts, cashews, almonds or pistachios)
- flavors (natural and artificial; can be made from peanuts)
- marzipan (traditional Mexican version is made with ground peanuts versus ground almonds)
- mixed nuts (standardized food - section 164.110; can be sold as a mixture of tree nuts and peanuts)
- nougat (sweet confection can be made with peanuts versus tree nuts)
- peanut(s) (sometimes referred to as earthnuts, groundnuts, goobers, goober peas, jack nuts, manila nuts, monkey nuts, pindas, or pinders)
- peanut butter (made from finely ground and roasted peanuts; has an oily pasty consistency; standardized food - section 164.150)
- peanut flour (made from finely ground peanuts; has a dry powdery consistency)
peanut spreads (common or usual name for non-standardized food - section 102.23; must be made with peanut ingredients)

Notes:

- Many ethnic cuisines (e.g., African, Chinese, Indonesian, Thai, and Vietnamese) commonly use peanuts in their foods and sauces.
- The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens.
- Many types of baked goods (e.g., cookies, brownies), candies, candy bars, and chocolates contain peanuts.

Potential Wheat Protein Indicators

atta (Hindi word for whole wheat flour used to make traditional Asian Indian breads like chapatti, roti and puri)
bran (wheat bran, Miller’s bran; outer covering of a wheat kernel; commonly contains some wheat protein)
bread (most breads are made with some wheat-protein containing ingredients)
bread crumbs (bread crumbs; dried bread broken into fine pieces; commonly used as a topping for casseroles and as a coating for fried poultry, meats, seafood, and vegetables)
bulgar (bulgur, bulghur; common name for a species of wheat; see notes below)
Caesar salad or dressing (commonly made with anchovies, egg, Parmesan cheese, and Worcestershire sauce that can contain wheat and soy)
cereal extracts (can be derived from wheat; used as antioxidants in making other foods)
club wheat (common name for a species of wheat; see notes below)
cracked wheat (whole wheat berry broken into pieces)
couscous (granular semolina product made from durum wheat)
cracker meal (crackers commonly made from wheat broken into very small pieces)
durum (type of hard wheat; common name for a species of wheat; see notes below)
einkorn (farro, hulled wheat, small spelt; common name for a species of wheat; see notes below)
emmer (farro, hulled wheat; common name for a species of wheat; see notes below)
farina (standardized food; made from ground and bolted cleaned wheat free of the bran coat or free of the bran coat and germ)
flour (wheat flour, white flour, plain flour; several types of wheat-based flours are standardized foods - section 137.105-137.225; examples of standardized and non-standardized flours include all-purpose, bread, cake, cracked, durum, enriched, gluten, graham or whole wheat, high gluten, high protein, pastry, self-rising, and soft; see notes below)
flavors (natural and artificial; can be derived from wheat)
food starch - modified (modified food starch; can be derived from wheat; may not necessarily contain wheat proteins)
fu (spongy dough made from dried wheat gluten; used in Japanese cuisine)
gluten (wheat gluten; wheat protein complex found in all species of wheat)
graham crackers (made from graham flour, which is a type of whole wheat flour; common component of pie crusts)
hydrolyzed wheat protein (wheat protein that has been broken down into its component peptides and/or amino acids)
sample_doc Documentation, Release

kamut (common name for a species of wheat; see notes below)

macaroni products (standardized foods - section 139.110-139.140; include spaghetti and vermicelli; must be made with certain wheat protein-containing ingredients)

malted milk (powdered food product can be made from a mixture of malted barley, wheat flour, and whole milk)

matzah (matzoh, matza, matzo; thin, brittle, unleavened bread commonly made from wheat; traditional Jewish food)

matzah meal (matzoh meal, matza meal, matzo meal; ground matzah; see “matzah” above)

noodle products (egg noodles; standardized foods - section 139.150-139.180; must contain whole eggs or egg yolks)

orzo (rice-shaped pasta made from wheat, but orzo also means “barley” in Italian)

pollard (wheat shorts; by-product of wheat milling process high in protein)

roux (thickener made with butter and flour; used as a base for sauces)

seitan (wheat protein product used widely in vegetarian foods)

semolina (made by grinding and bolting cleaned durum wheat to specified fineness; standardized food - section 137.320)

soy sauce (shoyu sauce; commonly made with wheat; widely used in Asian cuisine)

spelt (dinkel, farro, hulled wheat; common name for a species of wheat; see notes below)

surimi (fish protein product commonly used to make “imitation” crab and lobster may contain wheat starch that contains some wheat protein)

tabouli (tabbouleh; Middle Eastern dish made using bulgar or durum wheat)

tamari (dark Japanese soy sauce commonly made with wheat)

toffee (confection commonly made with butter and occasionally with wheat flour and/or nuts, e.g., English, cinder, or sponge toffee)

tortilla (traditional Mexican unleavened, flat bread made from wheat or corn)

triticale (a crossbred hybrid of wheat and rye; see notes below)

vital gluten (dried gluten that has retained its elastic properties)

wheat (includes all wheat species; see notes below)

wheat and soy noodle products (standardized foods - section 138.180; must be made with certain wheat protein-containing and soy protein-containing ingredients)

wheat germ (inner embryo of a wheat kernel; rich in wheat protein and fat)

wheat starch (typically contains some residual wheat protein)

whole green wheat berries (called “greunken” in Europe and “frik” or “freeka” in the Middle East; unrippened whole kernels of wheat)

whole wheat (indicates that all parts of the wheat kernel were used)

whole wheat berries (whole kernels of wheat)

Worcestershire sauce (commonly contains soy sauce made with wheat)

Notes:

- FALCPA labeling requirements apply to all grains that belong to the plant genus called Triticum, the crossbred hybrid of wheat and rye called “triticale,” and ingredients that contain proteins of any of these grains.
• The term “flour” alone (unqualified) should only be used as a synonym for “wheat flour.” If “flour” is stated in an ingredient list without the parenthetical declaration of wheat afterwards, either the term “wheat” must appear elsewhere within the ingredient list for another allergenic ingredient or in a separate “Contains” statement.

• The term “starch” alone (unqualified) should only be used as a synonym for “cornstarch.” With the exception of “food starch - modified” (or modified food starch), when listed as an ingredient on food labels, all other types of starches must identify their respective sources (e.g., wheat starch, potato starch, and tapioca starch).

• “Glutinous flour” is a term used to refer to a flour made from glutinous rice and not wheat.

• Pasta is a common term which refers to the standardized foods macaroni products and noodle products that must be made with wheat protein-containing ingredients.

• The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens. Wheat flour is commonly used as a thickener for many sauces as well as gravies, soups and stews.

• Batters used as coatings for deep-fat-fried foods commonly contain wheat flour or bread crumbs.

Potential Soybean Protein Indicators

Caesar salad or dressing (commonly made with anchovies, egg, Parmesan cheese, and Worcestershire sauce that can contain wheat and soy)

canned tuna (standardized food - section 161.190; can contain vegetable broth made with soybeans)
edamame (preparation of immature green soybeans usually in the pod)

flavors (natural or artificial; can be made from soybeans)

flan (baked custard coated with caramel; made with eggs and commonly milk, soy milk can be substituted)

hydrolyzed soy protein (soy protein broken down into protein fragments and amino acids)

imitation bacon bits (commonly made with soy protein-containing ingredients)

kecap (Indonesian sweet soy sauce made from black soybeans)

lecithin (commonly derived from soybeans, but can be derived egg)

miso (soybean paste; common flavoring in Japanese cuisine)

natto (traditional Japanese food made from fermented soybeans)

okara (residue left after liquid is drained off when making tofu; contains soy protein)

soy albumin (type of water-soluble soy protein)

soy-based beverages and drinks (commonly called soy milk or soymilk; contain soy proteins)

soy cheese (made with soymilk and commonly casein)

soy flour (made from finely ground soybeans)

soy grits (soybeans which have been toasted and cracked into small pieces)

soy nuts (roasted whole soybeans; resemble miniature dry-roasted peanuts)

soy protein concentrate (made from defatted soybeans; contains both soy proteins and soy carbohydrates)

soy protein isolate (made from defatted soybeans; contains soy proteins and no soy carbohydrates)

soy sauce (shoyu sauce; made from fermented soybeans)

soy sprouts (sprouts of germinated soybeans)
soybean(s)  (soya bean(s))

soybean granules  (made from defatted soy flour; used to make vegetarian foods)

soybean oil  (typically is highly refined; only a soybean oil that is not highly refined that contain any soybean protein is a major food allergen; see notes below)

starter bacterial cultures  (starter cultures; such cultures can be grown on starter culture media that is made with hydrolyzed soy proteins and that is used in making cheeses; see notes below)

starter culture media  (starter media; such media can be made with hydrolyzed soy proteins and is used in making cheeses; see notes below)

tamari  (dark, thick Japanese soy sauce)

tempeh  (tempe; soybean cake containing soy protein commonly used to made vegetarian foods)

teriyaki sauce  (commonly made with soy sauce or tamari; used in Japanese cuisine)

textured soy protein  (commonly used to made vegetarian foods)

tofu  (Soybean curd; contains soybean proteins)

vegetable broth or stock  (can be made with soybeans)

Worcesthshire sauce  (commonly contains soy sauce)

wheat and soy noodle products  (standardized foods - section 139.180; must be made with certain wheat protein-containing and soy protein-containing ingredients)

yuba  (thin skin that forms on surface of soy milk when making tofu rich in soy protein)

Notes:

• See regulations at section 101.4(b)(14) for provisions allowing the use of “and/or” labeling for vegetable oils and vegetable oil shortenings, which could be derived from soybeans. When such “and/or” labeling is used, the specific common or usual name of each vegetable oil that may be present must be declared within the ingredient list of the food.

• The range and composition of sauces is so varied that this group of condiments can potentially contain any one of the major food allergens. Also, soy sauce and tamari are commonly used as ingredients to make many other sauces.

• Japanese, Chinese and many Southeast Asian cuisines commonly use soy sauce, tofu, and other soy protein-containing ingredients.

• Vegetarian foods are commonly made with soy protein-containing ingredients.

1.5.3 FDA Food Label Claims Specifications

Attention:  This section applies to USDA prime data, not to USDA select data. For explanation of USDA prime and USDA select data, see Deposition Workflow

Ontomatica Coverage

Ontomatica label classes  integrate food label claims as specified by FDA, including coverage of all specifications below.
### FDA Specifications for Food Label Claims

<table>
<thead>
<tr>
<th>Claim class</th>
<th>Label claim</th>
<th>Claim determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium content</td>
<td>Salt free</td>
<td>Less than 5 milligrams sodium per serving.</td>
</tr>
<tr>
<td></td>
<td>Sodium free</td>
<td>Less than 5 milligrams sodium per serving.</td>
</tr>
<tr>
<td></td>
<td>No Salt added</td>
<td>No salt added during processing; does not necessarily mean sodium free.</td>
</tr>
<tr>
<td></td>
<td>Very Low Sodium</td>
<td>35 milligrams or less sodium per serving.</td>
</tr>
<tr>
<td></td>
<td>Low Sodium</td>
<td>140 milligrams or less per serving.</td>
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<tr>
<td></td>
<td>Light in Sodium</td>
<td>50% less sodium (as compared with a standard serving size of the traditional food), restricted to foods with more than 40 calories per serving or more than 3 grams of fat per serving.</td>
</tr>
<tr>
<td></td>
<td>Less Sodium or Reduced Sodium</td>
<td>At least 25% less sodium (as compared with a standard serving size of the traditional food).</td>
</tr>
<tr>
<td></td>
<td>Fat Free</td>
<td>Less than 0.5 g of fat or saturated fat per serving.</td>
</tr>
<tr>
<td></td>
<td>Saturated fat free</td>
<td>Less than 0.5 g of saturated fat and less than 0.5 g of trans fatty fat.</td>
</tr>
<tr>
<td></td>
<td>Low fat</td>
<td>3 g or less of total fat.</td>
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<tr>
<td></td>
<td>Low saturated fat</td>
<td>1 g or less of saturated fat.</td>
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<td></td>
<td>Reduced fat or less fat</td>
<td>At least 25 percent less fat than the regular version.</td>
</tr>
<tr>
<td></td>
<td>Cholesterol free</td>
<td>Less than 2 mg per serving.</td>
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<tr>
<td></td>
<td>Low cholesterol</td>
<td>20 mg or less.</td>
</tr>
<tr>
<td></td>
<td>Reduced cholesterol</td>
<td>At least 25 percent less cholesterol than the regular version or less cholesterol.</td>
</tr>
<tr>
<td></td>
<td>Sugar free</td>
<td>Less than 0.5 grams of sugar per serving.</td>
</tr>
<tr>
<td></td>
<td>Reduced sugar</td>
<td>At least 25 percent less sugar than the regular version.</td>
</tr>
<tr>
<td></td>
<td>High fiber</td>
<td>5 g or more of fiber per serving.</td>
</tr>
<tr>
<td></td>
<td>Good source of fiber</td>
<td>2.5 g or 4.9 g of fiber per serving.</td>
</tr>
<tr>
<td>Calorie content</td>
<td>Calorie free</td>
<td>Less than 5 calories per serving.</td>
</tr>
<tr>
<td></td>
<td>Low calorie</td>
<td>40 calories or less per serving.</td>
</tr>
</tbody>
</table>

### 1.6 Features - Future

Ontomatica anticipates that USDA, in the future, will want to use the following technologies. Ontomatica’s platform uses these technologies and will make them available to USDA at the appropriate time.
1.6.1 Linked Data

Linked Data is a method of publishing structured data so that it can be interlinked and become more useful. It builds upon standard Web technologies such as HTTP, RDF and URIs. Rather than using them to serve web pages for human readers, Linked Data extends them to share information in a way that can be read automatically by computers. Linking enables data from different sources to be connected and queried. Tim Berners-Lee, director of the World Wide Web Consortium, coined the term in a design note discussing issues around the Semantic Web project. For more information see: [WEB325] [WEB346] [WEB323] [WEB347].

Read more on this page designed for USDA:

- Linked Data

1.6.2 SPARQL

SPARQL Protocol and RDF Query Language (SPARQL) retrieves and manipulates data stored in Resource Description Framework (RDF) format. Like a database query language, SPARQL provides analytic operations such as JOIN, SORT, and AGGREGATE. Schema information (the ontology) is external to the RDF format to allow different datasets to be joined in an unambiguous manner. For more information see: [TEK5] [WEB343].

See SPARQL examples on this page:

- SPARQL examples

1.6.3 Reasoning and Reasoners

Reasoning software programs (Reasoners) infer logical consequences from set of facts. Logical consequence (a.k.a. entailment) is the relationship between statements that hold true when one logically “follows from” another. A valid logical argument is one where conclusions follow from its premises, and its conclusions are consequences of its premises. Ontomatica uses Reasoners to verify that an electronic food label is consistent with a food labeling ontology and that ingredients in a food label are consistent with food identity (as asserted by the electronic food label). For more information see: [WEB342].

Read more on this page designed for USDA:

- Reasoning

To illustrate reasoning, Ontomatica uses a well-known logic puzzle - the Zebra Puzzle (a.k.a. the Einstein Puzzle). The puzzle makes 15 assertions (statements about a certain premise that are accepted as true). Two questions are posed for which answers can be deduced from the assertions. To learn the answer, Ontomatica implemented Zebra Puzzle in an ontology editor (Stanford University’s Protege) using the HermiT reasoner. The answer is shown on the page above. For more information see: [WEB338] [WEB362] [WEB14] [WEB231] [WEB179] [WEB180].

1.7 Glossary

2,4,5-T  
NALT 1343
UN AgroVoc c_8545

2,4-D  
NALT 1353
UN AgroVoc c_8543
Dbpedia 2,4-D
Library of Congress sh85037669

1.7. Glossary 223
<table>
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<tr>
<th>Term</th>
<th>NALT</th>
<th>UN AgroVoc c</th>
<th>Description</th>
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<td>2,4-dinitrophenol</td>
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<td>8544</td>
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<tr>
<td>Abamectin</td>
<td>1576</td>
<td>33507</td>
<td></td>
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<tr>
<td>Abandoned land</td>
<td>1579</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Abdomen</td>
<td>1606</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Abdominal cavity</td>
<td>1609</td>
<td>34979</td>
<td>The portion of the body that lies between the thorax and the pelvis. Source: NCI thesaurus link</td>
</tr>
<tr>
<td>Abdominal fat</td>
<td>1611</td>
<td>33269</td>
<td>Body fat located in the abdominal region. (source: NALT)</td>
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<td>Abelmoschus</td>
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<td>37381</td>
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Abies mariesii  NALT 1662
    UN AgroVoc c_26321
Abies nordmanniana  NALT 1663
    UN AgroVoc c_16
Abies numidica  NALT 1664
    UN AgroVoc c_33272
Abies pinsapo  NALT 1666
    UN AgroVoc c_34587
Abies procera  NALT 1667
    UN AgroVoc c_17
Abies religiosa  NALT 1669
    UN AgroVoc c_26322
Abies sachalinensis  NALT 1670
    UN AgroVoc c_18
Abies sibirica  NALT 1671
    UN AgroVoc c_19
Abies veitchii  NALT 1673
    UN AgroVoc c_26323
abiotic stress  NALT 729
    UN AgroVoc c_35768
Abnormal behaviour  NALT 1750
    UN AgroVoc c_20
Abramis  NALT 1792
    UN AgroVoc c_23
Abramis brama  NALT 1794
    UN AgroVoc c_40067
Abscission  NALT 1820
    UN AgroVoc c_25
Absidia  NALT 1825
    UN AgroVoc c_26
Absorbance  NALT 1833
    UN AgroVoc c_33924

A measure of the amount of light absorbed by a solution. It is measured by a colorimeter or spectrophotometer. Absorbance values are used to plot the growth of bacteria in suspension cultures and to determine the concentration of molecules in solution. (source: NALT)
**Absorption**  NALT 1836

UN AgroVoc c_27

The taking in or incorporation of a substance. (source: NALT)

The process in which radiated energy is partially or completely retained in the matter which it traverses. Source: NCI thesaurus link

**Abutilon**  NALT 1855

UN AgroVoc c_29

**Abutilon theophrasti**  NALT 1860

UN AgroVoc c_30

**Acacia**  NALT 1875

UN AgroVoc c_32

**Acacia aneura**  NALT 1878

UN AgroVoc c_34

**Acacia aulacocarpa**  NALT 1879

UN AgroVoc c_26324

**Acacia auriculiformis**  NALT 1880

UN AgroVoc c_35

**Acacia berlandieri**  NALT 1881

UN AgroVoc c_36

**Acacia caven**  NALT 1884

UN AgroVoc c_26325

**Acacia crassicarpa**  NALT 1886

UN AgroVoc c_26327

**Acacia dealbata**  NALT 1888

UN AgroVoc c_37

**Acacia holosericea**  NALT 1892

UN AgroVoc c_26329

**Acacia koa**  NALT 1894

UN AgroVoc c_26330

**Acacia mangium**  NALT 1896

UN AgroVoc c_42

**Acacia mearnsii**  NALT 1897

UN AgroVoc c_43

**Acacia melanoxylon**  NALT 1898

UN AgroVoc c_26332
Acacia mellifera  NALT 1899
   UN AgroVoc c_44
Acacia nilotica  NALT 1900
   UN AgroVoc c_45
Acacia salicina  NALT 1904
   UN AgroVoc c_27099
Acacia saligna  NALT 1905
   UN AgroVoc c_47
Acacia senegal  NALT 1906
   UN AgroVoc c_48
Acacia seyal  NALT 1907
   UN AgroVoc c_49
Acacia tortilis  NALT 1909
   UN AgroVoc c_50
Acalitus  NALT 1950
   UN AgroVoc c_52
Acalymma  NALT 1951
   UN AgroVoc c_30023
Acanthaceae  NALT 1965
   UN AgroVoc c_15932
Acanthamoeba  NALT 1985
   UN AgroVoc c_8581
Acanthocephala  NALT 54
   UN AgroVoc c_53
Acanthocheilonema  NALT 1999
   UN AgroVoc c_37367
Acanthocheilonema viteae  NALT 2001
   UN AgroVoc c_37368
Acanthopagrus  NALT 2027
   UN AgroVoc c_36602
Acanthoscelides  NALT 2042
   UN AgroVoc c_54
Acanthoscelides obtectus  NALT 2044
   UN AgroVoc c_27100
Acarapidae  NALT 2057
   UN AgroVoc c_30925

1.7. Glossary
Acarapis  NALT 2059
    UN AgroVoc c_55
Acarapis woodi  NALT 2060
    UN AgroVoc c_30926
Acaricidal properties  NALT 2070
    UN AgroVoc c_36812
Acaricides  NALT 817
    UN AgroVoc c_56
Acaridae  NALT 2104
    UN AgroVoc c_8033
Acarology  NALT 2111
    UN AgroVoc c_8586
Acarus  NALT 2105
    UN AgroVoc c_58
Acarus siro  NALT 2121
    UN AgroVoc c_30908
Acaulospora  NALT 2123
    UN AgroVoc c_31769
Acca  NALT 2126
    UN AgroVoc c_37375
Acca sellowiana  NALT 2129
    UN AgroVoc c_37374
accident prevention  NALT 2143
    UN AgroVoc c_60
Accipitridae  NALT 2155
    UN AgroVoc c_8588
    Family including eagles, hawks and kites. (source: NALT)
Acephate  NALT 2183
    UN AgroVoc c_31235
Acer  NALT 2188
    UN AgroVoc c_63
Acer campestre  NALT 2192
    UN AgroVoc c_34588
Acer japonicum  NALT 2202
    UN AgroVoc c_65
Acer negundo  NALT 2205
  UN AgroVoc c_67
Acer palmatum  NALT 2206
  UN AgroVoc c_69
Acer pictum  NALT 2208
  UN AgroVoc c_70
Acer platanoides  NALT 2209
  UN AgroVoc c_71
Acer pseudoplatanus  NALT 2210
  UN AgroVoc c_72
Acer rubrum  NALT 2211
  UN AgroVoc c_73
Acer saccharinum  NALT 2213
  UN AgroVoc c_74
Acer saccharum  NALT 2214
  UN AgroVoc c_75
Aceria  NALT 2281
  UN AgroVoc c_77
Aceria guerreronis  NALT 2282
  UN AgroVoc c_27101
Aceria tulipae  NALT 2286
  UN AgroVoc c_27105
Acetaldehyde  NALT 2306
  UN AgroVoc c_78
  A widespread, naturally occurring, colorless and flammable liquid with a suffocating smell. Acetaldehyde is
  found in various plants, ripe fruits, vegetables, cigarette smoke, gasoline and diesel exhaust. This substance
  is widely used in the manufacture of acetic acid, perfumes, dyes and drugs, as a flavoring agent and as an
  intermediate in the metabolism of alcohol. Acute exposure to its vapors results in irritation of the eyes, skin,
  and respiratory tract. Acetaldehyde is reasonably anticipated to be a human carcinogen. (NCI05) Source: NCI
  thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
Acetates  NALT 2334
  UN AgroVoc c_79
Acetic acid  NALT 2340
UN AgroVoc c_80

A synthetic carboxylic acid with antibacterial and antifungal properties. Although its mechanism of action is not fully known, undissociated acetic acid may enhance lipid solubility allowing increased fatty acid accumulation on the cell membrane or in other cell wall structures. Acetic acid, as a weak acid, can inhibit carbohydrate metabolism resulting in subsequent death of the organism. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

acetic acid bacteria  NALT 2345
UN AgroVoc c_27441

Acetoacetic acid  NALT 2368
UN AgroVoc c_82

Acetobacter  NALT 2357
UN AgroVoc c_23883

Acetobacteraceae  NALT 2375
UN AgroVoc c_331505

A taxonomic family of bacterium in the phylum Proteobacteria that oxidize ethanol during aerobic fermentation to yield acetic acid. Source: NCI thesaurus link

Acetochlor  NALT 2479
UN AgroVoc c_36668

Acetoin  NALT 2494
UN AgroVoc c_23985

Acetone  NALT 2500
UN AgroVoc c_83

A colorless, volatile, flammable organic solvent. Acetone occurs naturally in plants, trees, forest fires, vehicle exhaust and as a breakdown product of animal fat metabolism. This agent may be normally present in very small quantities in urine and blood; larger amounts may be found in the urine and blood of diabetics. Acetone is toxic in high doses. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Acetylation  NALT 2516
UN AgroVoc c_33927
Acetylation involves the covalent linkage of an acetyl group into an organic molecule. Source: NCI thesaurus link

**Acetylcholine**  NALT 2518
  UN AgroVoc c_84

**Acetylcholinesterase**  NALT 2523
  UN AgroVoc c_85

**Acetylene**  NALT 2530
  UN AgroVoc c_15883

**Achatina**  NALT 2542
  UN AgroVoc c_27107

**Achatina fulica**  NALT 2544
  UN AgroVoc c_27108

**Acheta**  NALT 2549
  UN AgroVoc c_86
  Library of Congress sh97004376

**Acheta domesticus**  NALT 2551
  UN AgroVoc c_31934

**Achillea**  NALT 2558
  UN AgroVoc c_24582

**Achillea millefolium**  NALT 2563
  UN AgroVoc c_24583

**Achlya**  NALT 2582
  UN AgroVoc c_31833

**Acholeplasma**  NALT 2602
  UN AgroVoc c_8598

**acid deposition**  NALT 2712
  UN AgroVoc c_34981

**Acid phosphatase**  NALT 2726
  UN AgroVoc c_88

**Acid soils**  NALT 2732
  UN AgroVoc c_89
  Soil with a pH less than 7.0. (source: NALT)

**Acidity**  NALT 2740
  UN AgroVoc c_8601

**Acidophilus milk**  NALT 2859
  UN AgroVoc c_8602
Acidosis  NALT 2754
    UN AgroVoc c_91
    A pathologic condition of acid accumulation or depletion of base in the body. The two main types are respiratory acidosis and metabolic acidosis, due to metabolic acid build up. (source: NALT)
    An abnormally high acidity (excess hydrogen-ion concentration) of the blood and other body tissues. Source: NCI thesaurus link

Acids  NALT 9
    UN AgroVoc c_92

Acidulants  NALT 196
    UN AgroVoc c_93
    An additive added to a product to increase the acidity of the product. Acidulants are often added to food products to increase tartness. (source: NALT)

Acifluorfen  NALT 2888
    UN AgroVoc c_31237

Acinetobacter  NALT 2900
    UN AgroVoc c_94
    A genus of bacteria within the phylum Proteobacteria consisting of strictly aerobic nonfermentative gram-negative bacilli. Source: NCI thesaurus link

Acinetobacter calcoaceticus  NALT 2903
    UN AgroVoc c_37057
    A species of aerobic, Gram negative, rod and cocci shaped bacteria assigned to the phylum Proteobacteria. This bacteria is nonmotile and oxidase negative. A. calcoaceticus is thought to be a commensal organism of the skin and throat but may become pathogenic in patients with underlying conditions, usually causing respiratory infection. Source: NCI thesaurus link

Acinonyx  NALT 2931
    UN AgroVoc c_8603
    Library of Congress sh93004136

Acinonyx jubatus  NALT 2933
    UN AgroVoc c_331480

Acipenser  NALT 2940
    UN AgroVoc c_95
    Dbpedia Acipenser

Acipenser transmontanus  NALT 2942
    UN AgroVoc c_38973

Acipenseridae  NALT 2941
    UN AgroVoc c_38964

Acipenseriformes  NALT 2944
    UN AgroVoc c_96
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Acrolepiopsis  NALT 3107
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Acrolepiopsis assectella  NALT 3108
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Acromyrmex  NALT 3110
UN AgroVoc c_105
Acromyrmex octospinosus  NALT 3112
UN AgroVoc c_29889
Acrosome  NALT 3134
UN AgroVoc c_26753
Acrosternum  NALT 3143
UN AgroVoc c_30685
Acrosternum hilare  NALT 3145
UN AgroVoc c_30686
Acrotylus  NALT 3155
UN AgroVoc c_32308
Acrylamide  NALT 3164
UN AgroVoc c_28214

A colorless, odorless, crystalline amide that polymerizes rapidly and can form as a byproduct during the heating of starch-rich foods to high temperatures. Acrylamide is used in the production of polymers mainly in the water treatment industry, pulp and paper industry and textile treatment industry and is used as a laboratory reagent. The polymer is nontoxic, but exposure to the monomer can cause central and peripheral nervous system damage resulting in hallucinations, drowsiness and numbness in the hands and legs. Acrylamide is reasonably anticipated to be a human carcinogen. (NCI05) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Actin  NALT 3179
UN AgroVoc c_34984

Filamentous proteins that are the main constituent of the thin filaments of muscle fibers. The filaments (known also as filamentous or F-actin) can be dissociated into their globular subunits; each subunit is composed of a single polypeptide 375 amino acids long. This is known as globular or G-actin. In conjunction with myosins, actin is responsible for the contraction and relaxation of muscle. (source: NALT)

A globular subunit of microfilaments, highly conserved Actin is one of the most abundant proteins in eukaryotic cells. Monomeric actin, a slow ATPase composed of a 375 amino acid polypeptide chain, interacts with one molecule of ATP or ADP and contains high affinity and low affinity binding sites for divalent cations. Actin can quickly assemble into long microfilament polymers. In conjunction with myosin, actin is responsible for the contraction and relaxation of muscle. Source: NCI thesaurus link
Actinides  NALT 3194
UN AgroVoc c_106

Actinidia  NALT 3210
UN AgroVoc c_107
Dbpedia Actinidia

Actinidia chinensis  NALT 3213
UN AgroVoc c_108

Actinidia delicosa  NALT 3214
UN AgroVoc c_27109

Actinidiaceae  NALT 3211
UN AgroVoc c_109

Actinobacillus  NALT 3223
UN AgroVoc c_110
A genus of anaerobic, Gram negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Pasteurellaceae. Source: NCI thesaurus link

Actinobacillus pleuropneumoniae  NALT 3234
UN AgroVoc c_27110
A species of facultatively anaerobic, Gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This bacteria is nonmotile, beta hemolytic and urease and porphyrin positive. Some serotypes of A. pleuropneumoniae cause respiratory disease in pigs. Source: NCI thesaurus link

Actinomyces  NALT 3410
UN AgroVoc c_111
A genus of bacteria within the phylum Actinobacteria consisting of gram-positive bacilli that can be anaerobic or facultatively anaerobic. Source: NCI thesaurus link

Actinomycetales  NALT 527
UN AgroVoc c_112

Activated carbon  NALT 3911
UN AgroVoc c_15934

Activated sludge  NALT 3914
UN AgroVoc c_8611
Sludge that has been aerated and treated with microorganisms in order to accelerate microbial activity and the oxidation (decomposition) of organic compounds. (source: NALT)

Acuaria  NALT 3940
UN AgroVoc c_113

Acuariidae  NALT 3941
UN AgroVoc c_30969

Aculops  NALT 3950
UN AgroVoc c_114

1.7. Glossary
Aculops lycopersici  NALT 3951
   UN AgroVoc c_30931
Aculus  NALT 3954
   UN AgroVoc c_115
Aculus schlechtendali  NALT 3955
   UN AgroVoc c_26335
acupuncture  NALT 3957
   UN AgroVoc c_16160
   The practice of piercing specific points on the body with very thin sterile needles in order to relieve pain or
   induce regional anesthesia. Source: NCI thesaurus link
Acute course  NALT 3960
   UN AgroVoc c_29247
   Short and relatively severe progression of disease. (source: NALT)
Acute toxicity  NALT 3966
   UN AgroVoc c_34781
   Immediate or short-term adverse reaction of an organism to a single exposure to a chemical substance. (source:
   NALT)
Acylation  NALT 2517
   UN AgroVoc c_28220
Acylglycerols  NALT 3986
   UN AgroVoc c_3297
Acyltransferases  NALT 1513
   UN AgroVoc c_8613
Acrystosiphon  NALT 4012
   UN AgroVoc c_116
Acrystosiphon kondoi  NALT 4014
   UN AgroVoc c_24590
Acrystosiphon pisum  NALT 4015
   UN AgroVoc c_24591
Adalia  NALT 4030
   UN AgroVoc c_30046
Adalia bipunctata  NALT 4032
   UN AgroVoc c_30047
Adansonia  NALT 4037
   UN AgroVoc c_35519
   Dbpedia Adansonia
Adansonia digitata  NALT 4039
    UN AgroVoc c_331478

Adaptation  NALT 2165
    UN AgroVoc c_117

Additives  NALT 197
    UN AgroVoc c_118
    Substances added to a product, usually in small quantities, in order to alter its characteristics or quality. (source: NALT)

Adelges  NALT 4071
    UN AgroVoc c_8616

Adelgidae  NALT 4073
    UN AgroVoc c_119

Adelphocoris  NALT 4088
    UN AgroVoc c_30669

Adelphocoris lineolatus  NALT 4090
    UN AgroVoc c_30670

Adenanthera  NALT 4096
    UN AgroVoc c_16215

Adenine  NALT 4103
    UN AgroVoc c_120
    A purine base and a fundamental unit of adenine nucleotides. (MeSH) Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link

Adeno-associated virus  NALT 4119
    UN AgroVoc c_8618

Adenoma  NALT 703
    UN AgroVoc c_121
    A neoplasm arising from the epithelium. It may be encapsulated or non-encapsulated but non-invasive. The neoplastic epithelial cells may or may not display cellular atypia or dysplasia. In the gastrointestinal tract, when dysplasia becomes severe it is sometimes called carcinoma in situ. Representative examples are pituitary gland adenoma, follicular adenoma of the thyroid gland, and adenomas (or adenomatous polyps) of the gastrointestinal tract. Source: NCI thesaurus link

Adenosine  NALT 4142
    UN AgroVoc c_122
A nucleoside that is composed of adenine and d-ribose. Adenosine or adenosine derivatives play many important biological roles in addition to being components of DNA and RNA. Adenosine itself is a neurotransmitter. (MeSH) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

Adenoviridae NALT 4174

UN AgroVoc c_127

Adenylate cyclase NALT 4180

UN AgroVoc c_29483

Library of Congress sh2002000839

Adenylyl cyclases are membrane-associated enzymes of the lyase class that are expressed in most human tissues. These enzymes catalyze the formation of cyclic AMP and pyrophosphate from ATP and are regulated by a family of G protein-coupled receptors, protein kinases, and calcium. Adenylyl cyclase is encoded by the ADCY9 gene and widely distributed. It is stimulated by beta-adrenergic receptor activation but is insensitive to forskolin, calcium, and somatostatin. It may play a fundamental role in situations where fine interplay between intracellular Ca(2+) and cAMP determines the cellular function. It also may be a physiologically relevant docking site for calcineurin. Source: NCI thesaurus link

Adhatoda NALT 1969

UN AgroVoc c_27112

Adhesives NALT 198

UN AgroVoc c_128

A substance capable of holding materials together by surface attachment. It is a general term and includes cements, mucilage, and paste, as well as glue. (source: NALT)

Adiantum NALT 4206

UN AgroVoc c_35659

Adipokinetic hormones NALT 4223

UN AgroVoc c_33448

Peptide hormones produced by some insect species stimulating the release of acylglycerols from the fat body which are used as an energy source by the flight muscles. There are several types of peptides with adipokinetic activity. These peptides are composed of 8-10 amino acids. (source: NALT)

Adipose tissue NALT 4220

UN AgroVoc c_129

A specialized form of connective tissue consisting primarily of adipocytes (fat cells), surrounded by a meshwork of collagen fibers. Source: NCI thesaurus link

Adjuvants NALT 199

UN AgroVoc c_16381

An ingredient that improves the properties of a drug, vaccine or pesticide formulation. (source: NALT)
1.7. Glossary

- **Adonis**  NALT 4321
  UN AgroVoc c_16217
- **Adonis vernalis**  NALT 4322
  UN AgroVoc c_16218
- **Adoretus**  NALT 4327
  UN AgroVoc c_132
- **Adoxaceae**  NALT 4330
  UN AgroVoc c_26279
  Dbpedia Adoxaceae
- **Adoxophyes**  NALT 4333
  UN AgroVoc c_133
- **Adoxophyes orana**  NALT 4334
  UN AgroVoc c_30356
- **Adrenal cortex**  NALT 4339
  UN AgroVoc c_10121
  The outer layer of the adrenal gland. It secretes mineralocorticoids, androgens, and glucocorticoids. (MeSH)
  Source: NCI thesaurus link
- **Adrenal cortex hormones**  NALT 1320
  UN AgroVoc c_134
- **Adrenal gland diseases**  NALT 4349
  UN AgroVoc c_8625
- **Adrenal glands**  NALT 4343
  UN AgroVoc c_135
- **Adrenaline**  NALT 4355
  UN AgroVoc c_8626
- **Adsorbents**  NALT 200
  UN AgroVoc c_25300
  A substance which has the property of attaching or accumulating another substance on its surface. (source: NALT)
- **Adsorption**  NALT 4377
  UN AgroVoc c_137
  The taking up of one substance onto the surface of another. (source: NALT)
- **Adventitious roots**  NALT 4424
  UN AgroVoc c_24812
- **Aechmea**  NALT 4441
  UN AgroVoc c_144
Aeciospores  NALT 4444
    UN AgroVoc c_35119
Aedes    NALT 4447
    UN AgroVoc c_146
Aedes aegypti  NALT 4449
    UN AgroVoc c_30482
Aedes albopictus  NALT 4451
    UN AgroVoc c_30483
Aedes atropalpus  NALT 4452
    UN AgroVoc c_30484
Aedes canadensis  NALT 4453
    UN AgroVoc c_30485
Aedes cantator  NALT 4455
    UN AgroVoc c_30486
Aedes dorsalis  NALT 4459
    UN AgroVoc c_30487
Aedes hendersoni  NALT 4461
    UN AgroVoc c_30488
Aedes melanimon  NALT 4462
    UN AgroVoc c_30489
Aedes nigromaculis  NALT 4463
    UN AgroVoc c_30490
Aedes polynesiensis  NALT 4465
    UN AgroVoc c_30491
Aedes pseudoscottellaris  NALT 4466
    UN AgroVoc c_30492
Aedes scottellaris  NALT 4468
    UN AgroVoc c_30493
Aedes sierrensis  NALT 4469
    UN AgroVoc c_30494
Aedes sollicitans  NALT 4471
    UN AgroVoc c_30495
Aedes taeniorhynchus  NALT 4474
    UN AgroVoc c_30496
Aedes togoi  NALT 4475
    UN AgroVoc c_30498
Aedes triseriatus  NALT 4476
    UN AgroVoc c_30499
Aedes trivittatus  NALT 4477
    UN AgroVoc c_30500
Aedes vexans  NALT 4478
    UN AgroVoc c_30501
Aegilops  NALT 4503
    UN AgroVoc c_148
Aegilops crassa  NALT 4508
    UN AgroVoc c_33582
Aegilops cylindrica  NALT 4509
    UN AgroVoc c_33583
Aegilops longissima  NALT 4513
    UN AgroVoc c_33921
Aegilops speltoides  NALT 4519
    UN AgroVoc c_33584
Aegilops umbellulata  NALT 4522
    UN AgroVoc c_33586
Aegilops ventricosa  NALT 4525
    UN AgroVoc c_33588
Aegle  NALT 4547
    UN AgroVoc c_149
Aegle marmelos  NALT 4548
    UN AgroVoc c_150
Aegyptianella  NALT 4556
    UN AgroVoc c_8633
Aelia  NALT 4559
    UN AgroVoc c_151
Aelurostrongylus  NALT 4568
    UN AgroVoc c_30976
Aeneolamia  NALT 4570
    UN AgroVoc c_152
Aeolothripidae  NALT 4579
    UN AgroVoc c_30389
Aequoreidae  NALT 4589
    UN AgroVoc c_49211

1.7. Glossary
aerial parts  NALT 4607
UN AgroVoc c_32353

Aerobiosis  NALT 4629
UN AgroVoc c_23988
Life or metabolic reactions occurring in an environment containing oxygen. (source: NALT)

Aerococcus  NALT 4637
UN AgroVoc c_8636
A genus of aerobic, Gram positive, cocci shaped bacterium assigned to the phylum Firmicutes and the family Aerococcaceae. Source: NCI thesaurus link

Aeromonas  NALT 4665
UN AgroVoc c_157
A genus of Gram negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Aeromonadaceae. Source: NCI thesaurus link

Aeromonas hydrophila  NALT 4675
UN AgroVoc c_26336
A species of aerobic or anaerobic, Gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This bacteria is motile by polar flagella, oxidase positive, produces Aerolysin Cytotoxic Enterotoxin, hydrolyzes esculin and is beta hemolytic. A. hydrophila is found in freshwater and marine environments and is pathogenic to fish, amphibians, and mammals. Source: NCI thesaurus link

Aeromonas salmonicida  NALT 4681
UN AgroVoc c_26337
A species of facultatively anaerobic, Gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This bacteria is non motile, capable of both aerobic and anaerobic respiration, ferments glucose and is generally oxidase positive. A. salmonicida is found in freshwater and marine environments and causes furunculosis in fish and bald sea urchin disease. Source: NCI thesaurus link

Aeschynomene  NALT 4725
UN AgroVoc c_159
Dbpedia Aeschynomene

Aesculus  NALT 4732
UN AgroVoc c_160

Aesculus hippocastanum  NALT 4737
UN AgroVoc c_37109

Aflatoxicosis  NALT 4800
UN AgroVoc c_36214

Aflatoxins  NALT 4802
UN AgroVoc c_8638

Aframomum  NALT 4820
UN AgroVoc c_32911
Aframomum melegueta  NALT 4822
UN AgroVoc c_164

African horse sickness  NALT 4871
UN AgroVoc c_34202

An insect-borne reovirus infection of horses, mules and donkeys in Africa and the Middle East; characterized by pulmonary edema, cardiac involvement, and edema of the head and neck. (source: NALT)

African horse sickness virus  NALT 4877
UN AgroVoc c_8644

A species of Orbivirus that causes disease in horses, mules, and donkeys and can also infect other animals such as dogs, cattle, sheep, goats and humans. The virus is transmitted by blood-sucking (hematophagous) insects - usually biting midges of the genus Culicoides. (source: NALT)

African swine fever  NALT 4894
UN AgroVoc c_26754

A sometimes fatal Asfivirus infection of pigs, characterized by fever, cough, diarrhea, hemorrhagic lymph nodes, and edema of the gallbladder. It is transmitted between domestic swine by direct contact, ingestion of infected meat, or fomites, or mechanically by biting flies or soft ticks (genus Ornithodoros). (source: NALT)

African swine fever virus  NALT 4900
UN AgroVoc c_8649

A sometimes fatal Asfivirus infection of pigs, characterized by fever, cough, diarrhea, hemorrhagic lymph nodes, and edema of the gallbladder. It is transmitted between domestic swine by direct contact, ingestion of infected meat, or fomites, or mechanically by biting flies or soft ticks (genus Ornithodoros). (source: NALT)

African trypanosomiasis  NALT 4893
UN AgroVoc c_35903

A parasitic disorder caused by protozoa of the Trypanosoma brucei species. It is transmitted by flies and is endemic in various regions of Sub-Saharan Africa. Signs and symptoms include fever, joint pain, headache, and significant swelling of the lymph nodes. If left untreated, the parasitic infection causes anemia, heart, kidney, and endocrine failure, and neurologic damage. Subsequently patients develop confusion, disruption of the sleep cycle, and mental deterioration. The infection may lead to coma and death. Source: NCI thesaurus link

Afzelia  NALT 4932
UN AgroVoc c_170

Afzelia africana  NALT 4886
UN AgroVoc c_33589

Agama  NALT 4949
UN AgroVoc c_36382

Agamidae  NALT 4950
UN AgroVoc c_32561

Agapanthus  NALT 4882
UN AgroVoc c_171
Dbpedia Agapanthus

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Agar  NALT 4972
  UN AgroVoc c_172
Agaricales  NALT 4978
  UN AgroVoc c_31637
Agaricus  NALT 4980
  UN AgroVoc c_173
Agaricus bisporus  NALT 5008
  UN AgroVoc c_33590
Agave  NALT 5043
  UN AgroVoc c_176
Agave angustifolia  NALT 5056
  UN AgroVoc c_178
Agave cantala  NALT 5057
  UN AgroVoc c_180
Agave fourcroydes  NALT 5059
  UN AgroVoc c_181
Agave sisalana  NALT 5060
  UN AgroVoc c_184
Agave tequilana  NALT 5061
  UN AgroVoc c_185
Age  NALT 110
  UN AgroVoc c_186
  How long something has existed; elapsed time since birth. Source: NCI thesaurus link
Age structure  NALT 5076
  UN AgroVoc c_28630
Ageratum  NALT 5120
  UN AgroVoc c_33277
Ageratum conyzoides  NALT 5121
  UN AgroVoc c_33279
Agglutination tests  NALT 5133
  UN AgroVoc c_188
Agglutinins  NALT 5137
  UN AgroVoc c_189
Aglaia  NALT 5184
  UN AgroVoc c_26338
Aglonema  NALT 5190  
  UN AgroVoc c_29196  
  Dbpedia Aglanema

Agonists  NALT 202  
  UN AgroVoc c_33932

Agoutis  NALT 5239  
  UN AgroVoc c_25291

Agraulis  NALT 5245  
  UN AgroVoc c_23884

Agricultural resources  NALT 5467  
  UN AgroVoc c_28001

Agricultural soils  NALT 5472  
  UN AgroVoc c_33934

Agricultural wastes  NALT 5496  
  UN AgroVoc c_8683

Agrilus  NALT 5511  
  UN AgroVoc c_30011

Agrimonia  NALT 5518  
  UN AgroVoc c_26339

Agriotes  NALT 5519  
  UN AgroVoc c_204

Agrobacterium  NALT 5531  
  UN AgroVoc c_206
  Small motile rod bacteria that can reduce nitrates and cause galls on plant stems. Source: NCI thesaurus link

Agrobacterium tumefaciens  NALT 5537  
  UN AgroVoc c_27444
  A species of Gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This bacteria is motile by flagella and mediates the horizontal gene transfer of its Ti plasmid to infect plants. A. tumefaciens is commonly found in soil and around the root surfaces of plants and is the causative agent of crown gall disease. Source: NCI thesaurus link

Agrochemicals  NALT 203  
  UN AgroVoc c_24430

Agroclimatology  NALT 5504  
  UN AgroVoc c_17010

Agrocybe  NALT 4981  
  UN AgroVoc c_32049

1.7. Glossary
The design, development and management of sustainable agroecosystems based on the application of ecological principles while considering existing social, cultural, and economic factors of farming communities. (source: NALT)

A system where communities of plants, microbes and animals inhabiting farmed land, pastures, grasslands or rangelands, interact with each other and their physical environment. (source: NALT)

The science of crop production and soil management. (source: NALT)
Agrotis  NALT 5763
    UN AgroVoc c_221

Agrotis epsilon  NALT 5765
    UN AgroVoc c_30244

Agrotis segetum  NALT 5767
    UN AgroVoc c_30245

Ailanthus  NALT 5799
    UN AgroVoc c_32050
    Dbpedia Ailanthus

Ailuropoda  NALT 5814
    UN AgroVoc c_16194
    Dbpedia Ailuropoda

Aiolopus  NALT 3019
    UN AgroVoc c_32309

Air  NALT 5822
    UN AgroVoc c_224
    A mixture of gases making up the earth’s atmosphere, consisting mainly of nitrogen, oxygen, argon, and carbon dioxide. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using CAS number link

Air flow  NALT 4650
    UN AgroVoc c_32808
    For the flow and circulation of air in buildings, equipment, etc.; for circulation of gases in the atmosphere, USE atmospheric circulation. (source: NALT)

air pollution  NALT 5843
    UN AgroVoc c_228

Air sacs  NALT 5852
    UN AgroVoc c_229

Air temperature  NALT 5859
    UN AgroVoc c_230

Aizoaceae  NALT 5885
    UN AgroVoc c_234
    Dbpedia Aizoaceae

Ajellomyces  NALT 5906
    UN AgroVoc c_31788

Ajuga  NALT 5914
    UN AgroVoc c_26341
Alanine  NALT 5948

A small non-essential amino acid in humans, Alanine is one of the most widely used for protein construction and is involved in the metabolism of tryptophan and vitamin pyridoxine. Alanine is an important source of energy for muscles and central nervous system, strengthens the immune system, helps in the metabolism of sugars and organic acids, and displays a cholesterol-reducing effect in animals. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Albendazole  NALT 5997

A broad-spectrum, synthetic benzimidazole-derivative anthelmintic. Albendazole interferes with the reproduction and survival of helminths by inhibiting the formation of microtubules from tubulin. This leads to an impaired uptake of glucose, a depletion of glycogen stores, and results in the worm’s death. Albendazole is used in the treatment of dog and pork tapeworm-causing diseases, including hydatid disease and neurocysticercosis. Albendazole may also be used to treat a variety of other roundworm infections. (NCI05) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Albizia julibrissin  NALT 6005

Albugo  NALT 6025
**Albugo candida** NALT 6027

UN AgroVoc c_37083

**Albumins** NALT 6031

UN AgroVoc c_247

**Alcaligenes** NALT 6036

UN AgroVoc c_32051

A genus of Gram-negative, aerobic, rod-shaped bacteria in the family Alcaligenaceae. Source: [NCI thesaurus link](#)

**Alcaligenes faecalis** NALT 6044

UN AgroVoc c_35440

A species of obligately aerobic, Gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This bacteria is motile, oxidase positive, catalase positive, does not reduce nitrates and degrades urea. A. faecalis is found in soil, water, and fecal matter and is an opportunistic pathogen in humans. Source: [NCI thesaurus link](#)

Reference: [FDA UNII link](#)
Reference the [NIH NCBI link](#)

**Alces** NALT 6087

UN AgroVoc c_8707

**Alcohol dehydrogenase** NALT 6113

UN AgroVoc c_27445

Members of this enzyme family metabolize a wide variety of substrates, including ethanol, retinol, other aliphatic alcohols, hydroxysteroids, and lipid peroxidation products. Source: [NCI thesaurus link](#)

**alcohol oxidoreductases** NALT 912

UN AgroVoc c_27839

**Alcoholic beverages** NALT 6109

UN AgroVoc c_248

**Alcoholic fermentation** NALT 6137

UN AgroVoc c_27518

**Alcohols** NALT 1222

UN AgroVoc c_249

**Aldehydes** NALT 2307

UN AgroVoc c_250

**Aldicarb** NALT 6194

UN AgroVoc c_31240

**Aldoses** NALT 988

UN AgroVoc c_32026

**Aldosterone** NALT 6224

UN AgroVoc c_8712
A hormone secreted by the adrenal cortex that regulates electrolyte and water balance by increasing the renal retention of sodium and the excretion of potassium. (MeSH) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Aldrin**  NALT 6230
  UN AgroVoc c_31394

**Alectoris**  NALT 6232
  UN AgroVoc c_29352

**Alectra**  NALT 6241
  UN AgroVoc c_32310

**Alectra vogelii**  NALT 6242
  UN AgroVoc c_32311

**Aleochara**  NALT 6245
  UN AgroVoc c_30166

**Aleochara bilineata**  NALT 6247
  UN AgroVoc c_30167

**Aleurites**  NALT 6251
  UN AgroVoc c_252
  Dbpedia Aleurites

**Aleurites moluccana**  NALT 6252
  UN AgroVoc c_254

**Aleurocanthus**  NALT 6257
  UN AgroVoc c_256

**Aleurocanthus woglumi**  NALT 6259
  UN AgroVoc c_30753

**Aleurodicus**  NALT 6261
  UN AgroVoc c_30754

**Aleurone cells**  NALT 6264
  UN AgroVoc c_33938

**Aleurone layer**  NALT 6265
  UN AgroVoc c_33935

**Aleurothrixus**  NALT 6267
  UN AgroVoc c_27113
Aleurothrixus floccosus  NALT 6268

UN AgroVoc c_27114

Aleyrodes  NALT 6284

UN AgroVoc c_257

Aleyrodidae  NALT 6258

UN AgroVoc c_8381

Aleyrodoidea  NALT 6289

UN AgroVoc c_30752

Algae  NALT 22

UN AgroVoc c_258

Includes taxonomic classification of Algae; For common types SEE algae and seaweeds. (source: NALT)

Chlorophyll-containing, mainly aquatic eukaryotic organisms lacking true stems and roots and leaves. Source: NCI thesaurus link

Algicides  NALT 819

UN AgroVoc c_260

Pesticides that control algae in lakes, canals, swimming pools, water tanks, and other sites. (source: NALT)

Alginates  NALT 6362

UN AgroVoc c_261

Algology  NALT 163

UN AgroVoc c_262

Alismataceae  NALT 6391

UN AgroVoc c_26305

Alismatales  NALT 6393

UN AgroVoc c_330108

Alkali metals  NALT 6400

UN AgroVoc c_264

Alkali reserve  NALT 6408

UN AgroVoc c_8720

Alkaline earth metals  NALT 6418

UN AgroVoc c_266

Alkaline phosphatase  NALT 6425

UN AgroVoc c_267

An enzyme that catalyses the cleavage of inorganic phosphate non-specifically from a wide variety of phosphate esters and having a high (greater than 8) pH optimum. Source: NCI thesaurus link

Alkaline soils  NALT 6431

UN AgroVoc c_268

Soil with a pH of more than 7.0. (source: NALT)
Alkalinity  NALT 6434
    UN AgroVoc c_8721
Alkalization  NALT 6437
    UN AgroVoc c_35355

A process in which the hydrogen ion concentration of a solution is decreased, resulting in an increase in alkalinity. Pharmaceuticals that have the capacity to buffer blood or urine solutes are often classified as alkaline agents. Source: NCI thesaurus link

Alkaloids  NALT 6445
    UN AgroVoc c_269
alkanes  NALT 6466
    UN AgroVoc c_37402
Alkylresorcinols  NALT 6496
    UN AgroVoc c_16518
Allamanda  NALT 6509
    UN AgroVoc c_271
    Dbpedia Allamanda
Allantoic acid  NALT 6511
    UN AgroVoc c_27447
Allantoic fluid  NALT 6512
    UN AgroVoc c_34206
Allantoin  NALT 6513
    UN AgroVoc c_27448
Allantonematidae  NALT 6517
    UN AgroVoc c_30970
alleles  NALT 6537
    UN AgroVoc c_8724

Variant forms of the same gene, occupying the same locus on homologous chromosomes, and governing the variants in production of the same gene product. (source: NALT)

Allelochemicals  NALT 6547
    UN AgroVoc c_24960

Chemical substances released by one organism exerting behavioral or physiological effects in another organism, usually adversely. (source: NALT)

Allelopathy  NALT 6549
    UN AgroVoc c_272

The influence of plants upon each other arising from the products of their metabolism. (source: NALT)

Allergens  NALT 6554
    UN AgroVoc c_273
Antigen-type substances that produce immediate hypersensitivity. (source: NALT)

**Allethrin**  NALT 6567

UN AgroVoc c_31241

**Alley cropping**  NALT 5585

UN AgroVoc c_33452

A cropping system that involves growing crops in a wide strip, typically 6 meters in width, between lines of closely planted, fast-growing trees or shrubs. These woody species are usually leguminous and are pruned frequently to provide a mulching material and nutrients to the crop in the alley. (source: NALT)

**Alligator mississippiensis**  NALT 6599

UN AgroVoc c_49107

**Alligators**  NALT 6600

UN AgroVoc c_276

Dbpedia Alligators

**Allium**  NALT 6608

UN AgroVoc c_277

**Allium ampeloprasum**  NALT 6610

UN AgroVoc c_278

**Allium caeruleum**  NALT 6611

UN AgroVoc c_280

**Allium cepa**  NALT 6612

UN AgroVoc c_281

**Allium fistulosum**  NALT 6615

UN AgroVoc c_283

**Allium neapolitanum**  NALT 6617

UN AgroVoc c_287

**Allium roseum**  NALT 6621

UN AgroVoc c_289

**Allium sativum**  NALT 6622

UN AgroVoc c_290

Garlic plants are closely related to and similar to onions and they have a similar, but stronger odor. The leaves of garlic plants are neither inflated like onion leaves nor tubular like those of bunching onions. Instead, they are flat, with a crease down the middle and are held erect in two opposite ranks. Most varieties stand about 1-2 ft (0.3-0.6 m) tall at maturity. Garlic plants produce an underground bulb that usually is divisible into 6-20 segments, called cloves. Garlic contains compounds that are antibacterial, antifungal and reduce blood clotting. Source: NCI thesaurus link

**Allium schoenoprasum**  NALT 6623

UN AgroVoc c_291
Allium tuberosum  NALT 6627
UN AgroVoc c_292

Allolobophora  NALT 6690
UN AgroVoc c_30864

Allometry  NALT 6699
UN AgroVoc c_24962

The study of the growth rate of a part of an organism in relation to the growth rate of the entire organism, and
the resulting change in proportion of various parts as the organism grows. (source: NALT)

Allomones  NALT 6701
UN AgroVoc c_32371

Allophane  NALT 6707
UN AgroVoc c_15839

Allorhogas  NALT 6726
UN AgroVoc c_27115

Alloys  NALT 561
UN AgroVoc c_295

Allozymes  NALT 6676
UN AgroVoc c_24813

An isozyme which differs from other variants of the enzyme as a result of an allelic difference. An allozyme
differs in amino acid sequence from other forms of the same enzyme and is encoded by one allele at a single
locus. (source: NALT)

Allspice  NALT 6745
UN AgroVoc c_19193

Alluvial soils  NALT 6753
UN AgroVoc c_296

Soils that have developed over time as sediments are deposited by the periodic flooding of streams or rivers.
(source: NALT)

Alluvium  NALT 6750
UN AgroVoc c_25347

Almond oil  NALT 6766
UN AgroVoc c_25462

The oil extracted from the seed fruits of Prunus amygdalus. Almond oil is typically used as a skin emollient and
for massage. Source: NCI thesaurus link
Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link
Look-up using CAS number link
Hair loss usually from the scalp. It may result in bald spots or spread to the entire scalp or the entire epidermis. It may be androgenetic or caused by chemotherapeutic agents, compulsive hair pulling, autoimmune disorders, and congenital conditions. Source: NCI thesaurus link
Alosa    NALT 6849
         UN AgroVoc c_303
Alosa pseudoharengus    NALT 6277
         UN AgroVoc c_39020
Aloysia    NALT 6855
         UN AgroVoc c_29200
Alpacas    NALT 6857
         UN AgroVoc c_304
Alpha galactosidase    NALT 6902
         UN AgroVoc c_29488
Alphavirus    NALT 6984
         UN AgroVoc c_305
        A genus of enveloped, spherical, or pleomorphic viruses with T=4 icosahedral symmetry, in the family To-
gaviridae. The genome is composed of a linear, single-strand of positive sense RNA. Alphaviruses are spread by
insect vector, able to infect vertebrares and invertebrates, and cause arthritis, encephalitis, rashes and fever in
humans. Source: NCI thesaurus link
Alphitobius    NALT 6998
         UN AgroVoc c_30171
Alphitobius diaperinus    NALT 7000
         UN AgroVoc c_30172
Alpinia    NALT 7030
         UN AgroVoc c_308
Alpinia galanga    NALT 7031
         UN AgroVoc c_309
Alpinia purpurata    NALT 7033
         UN AgroVoc c_26351
Alsophila    NALT 7044
         UN AgroVoc c_30206
Alstonia    NALT 7047
         UN AgroVoc c_312
Alstroemeria    NALT 7052
         UN AgroVoc c_313
Alternanthera    NALT 7063
         UN AgroVoc c_32054
dbpedia Alternanthera
Alternanthera philoxeroides    NALT 6605
         UN AgroVoc c_32055
Alternaria  NALT 7076
UN AgroVoc c_315
Alternaria alternata  NALT 7077
UN AgroVoc c_33593
Alternaria brassicae  NALT 7078
UN AgroVoc c_33595
Alternaria brassicicola  NALT 7079
UN AgroVoc c_33596
Alternaria dauci  NALT 7085
UN AgroVoc c_33598
Alternaria helianthi  NALT 7086
UN AgroVoc c_33282
Alternaria macrospora  NALT 7089
UN AgroVoc c_33599
Alternaria porri  NALT 7092
UN AgroVoc c_33600
Alternaria radicina  NALT 7093
UN AgroVoc c_33601
Alternaria solani  NALT 7095
UN AgroVoc c_33603
Alternative hosts  NALT 7145
UN AgroVoc c_33457
Althaea  NALT 7249
UN AgroVoc c_33283
Althaea officinalis  NALT 7250
UN AgroVoc c_33284
Altica  NALT 7254
UN AgroVoc c_30024
Altitude  NALT 7259
UN AgroVoc c_316
Alysicarpus  NALT 7299
UN AgroVoc c_319
Alysicarpus vaginalis  NALT 7300
UN AgroVoc c_321
Alyssum NALT 7302
UN AgroVoc c_16219
Library of Congress sh86005165

Amanita NALT 4982
UN AgroVoc c_31701

Amaranthaceae NALT 2692
UN AgroVoc c_323

Amaranthus NALT 7338
UN AgroVoc c_324

Amaranthus caudatus NALT 7352
UN AgroVoc c_325

Amaranthus cruentus NALT 7353
UN AgroVoc c_326

Amaranthus dubius NALT 7354
UN AgroVoc c_327

Amaranthus hypochondriacus NALT 7356
UN AgroVoc c_8751

Amaranthus spinosus NALT 7360
UN AgroVoc c_27116

Amaryllis NALT 7391
UN AgroVoc c_331
Dbpedia Amaryllis

Amblyommia NALT 7434
UN AgroVoc c_333

Amblyommia americanum NALT 7435
UN AgroVoc c_30949

Amblyommia cajennense NALT 7436
UN AgroVoc c_30950

Amblyommia hebraeum NALT 7437
UN AgroVoc c_30951

Amblyommia maculatum NALT 7439
UN AgroVoc c_30952

Amblyommia variegatum NALT 7440
UN AgroVoc c_23890

Amblyseius NALT 7460
UN AgroVoc c_8757
Amblyseius andersoni  NALT 7463
    UN AgroVoc c_37767
Amblyseius potentillae  NALT 7466
    UN AgroVoc c_24600
Ambrosia  NALT 7479
    UN AgroVoc c_8758
Amelanchier  NALT 7505
    UN AgroVoc c_32057
Amelanchier canadensis  NALT 7508
    UN AgroVoc c_32058
American foul brood  NALT 7571
    UN AgroVoc c_36483
Americium  NALT 3196
    UN AgroVoc c_24814
    A man-made radioactive element with atomic symbol Am, atomic number 95, and atomic weight 243. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link
Ametryn  NALT 7656
    UN AgroVoc c_31243
Amidase  NALT 3979
    UN AgroVoc c_8766
Amide hydrolases  NALT 7660
    UN AgroVoc c_337
Amides  NALT 2309
    UN AgroVoc c_338
Amidines  NALT 7708
    UN AgroVoc c_339
Amidostomatidae  NALT 7712
    UN AgroVoc c_30972
Amidostomum  NALT 7713
    UN AgroVoc c_340
The order of amino acids as they occur in a polypeptide chain. This is referred to as the primary structure of proteins. It is of fundamental importance in determining protein conformation. (source: NALT)
Ammonites  NALT 7921
    UN AgroVoc c_347

Ammodytidae  NALT 7922
    UN AgroVoc c_44324

Ammonia  NALT 7925
    UN AgroVoc c_349

A colorless inorganic compound of nitrogen and hydrogen with the formula NH3, usually in gaseous form with a characteristic pungent odor. Ammonia is irritating to the skin, eyes, nose, throat, and lungs. It is essential for many biological processes and has various industrial applications. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Ammonification  NALT 7941
    UN AgroVoc c_37196

Ammonium chloride  NALT 7952
    UN AgroVoc c_350

A systemic and urinary acidifying salt. Ammonium chloride helps maintain pH and exerts a mild diuretic effect. This acid forming salt also exerts an expectorant effect by irritating the mucous membranes and is used for alleviation of cough. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Ammonium compounds  NALT 7948
    UN AgroVoc c_351

Inorganic and organic compounds that contain the ion NH4+. (source: NALT)

ammonium fertilizers  NALT 7963
    UN AgroVoc c_37197

Ammonium nitrate  NALT 7956
    UN AgroVoc c_352

Ammonium nitrogen  NALT 7974
    UN AgroVoc c_37457

Ammonium phosphate  NALT 7914
    UN AgroVoc c_353
Amnion  NALT 8002
    UN AgroVoc c_8771
    The extraembryonic membrane which contains the embryo and amniotic fluid. (MeSH) Source: NCI thesaurus link

Amniotic fluid  NALT 8003
    UN AgroVoc c_34211
    The fluid within the amniotic cavity which surrounds and protects the developing embryo. It is initially produced by the amnion and then later by the lungs and kidneys. The amount at term normally varies from 500 to 2000 ml. Source: NCI thesaurus link

Amoeba  NALT 8005
    UN AgroVoc c_8772

Amoebida  NALT 1986
    UN AgroVoc c_23794

Amomum  NALT 8017
    UN AgroVoc c_36293

Amorpha  NALT 8026
    UN AgroVoc c_16222

Amorpha fruticosa  NALT 8027
    UN AgroVoc c_16223

Amorphophallus  NALT 8029
    UN AgroVoc c_355

Amorphotheca  NALT 8038
    UN AgroVoc c_31791

Ampelomyces  NALT 8050
    UN AgroVoc c_31543

Ampelomyces quisqualis  NALT 8052
    UN AgroVoc c_37768

Amphibia  NALT 36
    UN AgroVoc c_8775
    Dbpedia Amphibia
    Includes taxonomic classification of Amphibia; For common types SEE amphibians. (source: NALT)

amphibians  NALT 40
    UN AgroVoc c_359
    Includes common types of amphibians; For taxonomic classification SEE Amphibia. (source: NALT)

Amphimallon  NALT 8094
    UN AgroVoc c_360
Amphipoda  NALT 8102
UN AgroVoc c_362
Dbpedia Amphipoda

Amphorophora  NALT 8115
UN AgroVoc c_30758

Ampicillin  NALT 8122
UN AgroVoc c_8777
Semi-synthetic derivative of penicillin that functions as an orally active broad-spectrum antibiotic. (source: NALT)
A broad-spectrum, semi-synthetic, beta-lactam penicillin antibiotic with bactericidal activity. Ampicillin binds to and inactivates penicillin-binding proteins (PBP) located on the inner membrane of the bacterial cell wall. Inactivation of PBPs interferes with the cross-linkage of peptidoglycan chains necessary for bacterial cell wall strength and rigidity. This interrupts bacterial cell wall synthesis and results in the weakening of the bacterial cell wall and causes cell lysis. Ampicillin is stable against hydrolysis by a variety of beta-lactamases, therefore, can be used in wide range of gram-positive and -negative infections. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Amprolium  NALT 8130
UN AgroVoc c_8778

Amputation  NALT 8136
UN AgroVoc c_363
The surgical removal of all or part of a limb or other appendage. Source: NCI thesaurus link

Amrasca  NALT 8138
UN AgroVoc c_364

Amrasca biguttula  NALT 8140
UN AgroVoc c_30720

Amsacta  NALT 8144
UN AgroVoc c_365

Amyelois  NALT 8202
UN AgroVoc c_30302

Amyelois transitella  NALT 8205
UN AgroVoc c_30303

Amygdalin  NALT 8212
UN AgroVoc c_368
A cyanogenic glucoside isolated from almonds and seeds of other plants of the family Rosaceae. Amygdalin is converted by plant emulsin (a combination of a glucosidase and a nitrilase) or hydrochloric acid into benzaldehyde, D-glucose, and hydrocyanic acid. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Amylases  NALT 6881
UN AgroVoc c_369

Amyloidosis  NALT 8237
UN AgroVoc c_370

A group of sporadic, familial and/or inherited, degenerative, and infectious disease processes, linked by the common theme of abnormal protein folding and deposition of amyloid. As the amyloid deposits enlarge they displace normal tissue structures, causing disruption of function. Various signs and symptoms depend on the location and size of the deposits. (source: NALT)

A disorder characterized by the localized or diffuse accumulation of amyloid protein in various anatomic sites. It may be primary, due to clonal plasma cell proliferations; secondary, due to long standing infections, chronic inflammatory disorders, or malignancies; or familial. It may affect the nerves, skin, tongue, joints, heart, liver, spleen, kidneys and adrenal glands. Source: NCI thesaurus link

Amylopectin  NALT 8241
UN AgroVoc c_371

Amyloplast  NALT 8248
UN AgroVoc c_24139

Unpigmented plastids in plant cytoplasm involved in starch synthesis and storage. (source: NALT)

Amylose  NALT 8251
UN AgroVoc c_372

Anabaena  NALT 8257
UN AgroVoc c_26352

Anabaena azollae  NALT 8261
UN AgroVoc c_33286

Anabaena cylindrica  NALT 8264
UN AgroVoc c_27449

Anabantidae  NALT 8287
UN AgroVoc c_44895

Anabas testudineus  NALT 8289
UN AgroVoc c_44896

Anabasine  NALT 8290
UN AgroVoc c_15621
Anabasis  NALT 8291
   UN AgroVoc c_15622
   Library of Congress sh88022545

anabolic steroids  NALT 8293
   UN AgroVoc c_8781

Anacanthotermes  NALT 8309
   UN AgroVoc c_375

Anacardiaceae  NALT 8312
   UN AgroVoc c_376

Anacardium  NALT 8314
   UN AgroVoc c_377
   Dbpedia Anacardium

Anacardium occidentale  NALT 8332
   UN AgroVoc c_378

Anadara  NALT 8347
   UN AgroVoc c_379

Anadara granosa  NALT 8349
   UN AgroVoc c_34671

Anaerobiosis  NALT 8375
   UN AgroVoc c_23990
   The production of energy from nutrients without using oxygen. (source: NALT)

Anagrus  NALT 8433
   UN AgroVoc c_29922

Anagyrus  NALT 8436
   UN AgroVoc c_37769

Analgesics  NALT 2318
   UN AgroVoc c_383

Analytical chemistry  NALT 8466
   UN AgroVoc c_8784
   The branch of chemistry that deals with the quantitative and qualitative identification of substances. Source: NCI thesaurus link

Ananas  NALT 8507
   UN AgroVoc c_385

Ananas comosus  NALT 8508
   UN AgroVoc c_386
A genus of bacteria that is vectored by ticks, biting flies and other fomites to cause disease in canids, humans, and ruminants. (source: NALT)

**Anaplasma marginale**  NALT 8523
  UN AgroVoc c_36990

**Anaplestozis**  NALT 8532
  UN AgroVoc c_389

**Anarhichadidae**  NALT 8547
  UN AgroVoc c_44200

**Anarhichas**  NALT 8548
  UN AgroVoc c_390

**Anarsia**  NALT 8549
  UN AgroVoc c_391

**Anarsia lineatella**  NALT 8551
  UN AgroVoc c_30198

**Anas**  NALT 8553
  UN AgroVoc c_8786

**Anastatus**  NALT 8563
  UN AgroVoc c_27117

**Anastrepha**  NALT 8565
  UN AgroVoc c_392

**Anastrepha fraterculus**  NALT 8566
  UN AgroVoc c_30612

**Anastrepha ludens**  NALT 8568
  UN AgroVoc c_30613

**Anastrepha suspensa**  NALT 8573
  UN AgroVoc c_27118

**Anatidae**  NALT 8554
  UN AgroVoc c_35883
  Library of Congress sh85004827

**Ancestry**  NALT 8608
  UN AgroVoc c_394
Anchovies  NALT 8615
    UN AgroVoc c_396

Ancylostoma  NALT 8644
    UN AgroVoc c_398

Ancylostoma caninum  NALT 8646
    UN AgroVoc c_30974

Ancylostomatidae  NALT 8645
    UN AgroVoc c_30973

Andrena  NALT 8679
    UN AgroVoc c_29807

Andricus  NALT 8689
    UN AgroVoc c_405

Androecium  NALT 8696
    UN AgroVoc c_406

Androecium  NALT 8707
    UN AgroVoc c_25421

    the development of an embryo from a fertilized egg that only involves the paternal chromosomes from the male
    nucleus. (source: NALT)

Androgens  NALT 8709
    UN AgroVoc c_407

Andropogon  NALT 8727
    UN AgroVoc c_408
    Dbpedia Andropogon

Andropogon gayanus  NALT 8728
    UN AgroVoc c_409

Andropogon gerardii  NALT 8729
    UN AgroVoc c_33608

Andropogon virginicus  NALT 8731
    UN AgroVoc c_33610

Androstenedione  NALT 1322
    UN AgroVoc c_26755

    A steroid hormone synthesized by the adrenal glands and the gonads from either 17-alpha-hydroxyprogesterone
    or dehydroepiandrosterone and is a precursor of testosterone. Source: NCI thesaurus link

Anemone  NALT 8781
    UN AgroVoc c_410

Anethum  NALT 8816
    UN AgroVoc c_411
Anethum graveolens  NALT 8817
   UN AgroVoc c_26353

Aneuploids  NALT 8824
   UN AgroVoc c_32811
   The chromosomal constitution of cells which deviate from the normal by the addition or subtraction of chromosomes, chromosome pairs, or chromosome fragments. In a normally diploid cell the loss of a chromosome pair is termed nullisomy, the loss of a single chromosome is monosomy, the addition of a chromosome pair is tetrasomy, the addition of a single chromosome is trisomy. (source: NALT)

Aneurysm  NALT 8841
   UN AgroVoc c_8802
   Pathological outpouching or sac-like dilatation in the wall of any blood vessel or the heart. It indicates a thin and weakened area in the wall which may later rupture. Aneurysms are classified by location, etiology, or other characteristics. (source: NALT)
   Bulging or ballooning in an area of an artery secondary to arterial wall weakening. Source: NCI thesaurus link

Angelica  NALT 8847
   UN AgroVoc c_8803

Angelica archangelica  NALT 8850
   UN AgroVoc c_33611

Angiostrongylidae  NALT 4569
   UN AgroVoc c_30975

Angiostrongylus  NALT 8868
   UN AgroVoc c_30978

Angiostrongylus vasorum  NALT 8870
   UN AgroVoc c_30980

Angiotensin  NALT 8874
   UN AgroVoc c_36006
   Oligopeptides which are important in the regulation of blood pressure (vasoconstriction) and fluid homeostasis via the renin-angiotensin system. (source: NALT)
   Expressed in liver by human AGT Gene (Serpin Family), secreted 485-aa 53-kDa Angiotensinogen is cleaved by renin (in response to lowered blood pressure) to inactive decapetide Angiotensin I, which is cleaved by ACE to generate active octapeptide vasopressor Angiotensin II (maintains blood pressure and regulates the volume and mineral balance of body fluids). Angiotensin II is cleaved to Angiotensin III heptapeptide, an aldosterone stimulant. Source: NCI thesaurus link

Anguilla anguilla  NALT 8914
   UN AgroVoc c_41152

Anguilla japonica  NALT 8915
   UN AgroVoc c_41155

Anguillicola  NALT 8920
   UN AgroVoc c_27119
Anguillicolidae  NALT 8921  
UN AgroVoc c_30981

Anguillidae  NALT 8913  
UN AgroVoc c_41150

Anguilliformes  NALT 8923  
UN AgroVoc c_41146

Anguillospora  NALT 8927  
UN AgroVoc c_31544

Anguina  NALT 8928  
UN AgroVoc c_30983

Anguina tritici  NALT 8930  
UN AgroVoc c_30984

Anguinidae  NALT 8929  
UN AgroVoc c_30982

Aniba  NALT 8943  
UN AgroVoc c_23893

Anilides  NALT 2319  
UN AgroVoc c_8810

Animal anatomy  NALT 47  
UN AgroVoc c_31916  
Includes human anatomy. (source: NALT)

Animal breeding  NALT 9021  
UN AgroVoc c_423

Animal cuticle  NALT 9101  
UN AgroVoc c_27957

Animal diseases  NALT 324  
UN AgroVoc c_426

animal ecology  NALT 9018  
UN AgroVoc c_427

Animal feeding  NALT 4048  
UN AgroVoc c_429

animal genetic resources  NALT 9218  
UN AgroVoc c_37418

animal genetics  NALT 9039  
UN AgroVoc c_49986  
The study of genetic traits in animals. Source: NCI thesaurus link
Animal glands  NALT 9224
    UN AgroVoc c_27958

Animal health  NALT 9232
    UN AgroVoc c_431

Animal housing  NALT 5482
    UN AgroVoc c_432

animal husbandry  NALT 9054
    UN AgroVoc c_8532
    The science of breeding and caring for farm animals. Source: NCI thesaurus link

animal morphology  NALT 8589
    UN AgroVoc c_421

animal nutrition  NALT 9178
    UN AgroVoc c_27925

Animal pathology  NALT 9407
    UN AgroVoc c_8816

Animal performance  NALT 9077
    UN AgroVoc c_5698

Animal physiology  NALT 9107
    UN AgroVoc c_25187

Animal production  NALT 5449
    UN AgroVoc c_437

Animal products  NALT 44
    UN AgroVoc c_438

Animal protein  NALT 887
    UN AgroVoc c_439

Animal sciences  NALT 332
    UN AgroVoc c_441

Animal sex organs  NALT 18358
    UN AgroVoc c_31895
    The external and internal organs related to reproduction. (source: NALT)

Animal tissues  NALT 8967
    UN AgroVoc c_27963

animal welfare  NALT 9084
    UN AgroVoc c_443
    The sum or integration of an animal’s past and present states of well-being as it attempts to cope with its environment; and human values concerning the social or ethical aspects of providing that environment. (source: NALT)
Animalia  NALT 51
    UN AgroVoc c_330938
    Includes taxonomic classification of Animalia; For common types SEE animals. (source: NALT)

animals  NALT 65
    UN AgroVoc c_444
    Includes common types of animals; For taxonomic classification SEE Animalia. (source: NALT)

Anion exchange capacity  NALT 9594
    UN AgroVoc c_24966

Anions  NALT 9602
    UN AgroVoc c_16163

Anisakidae  NALT 9361
    UN AgroVoc c_30987

Anisakis  NALT 9605
    UN AgroVoc c_30988

Anise  NALT 9613
    UN AgroVoc c_8817

Anisoptera (Dipterocarpaceae)  NALT 9635
    UN AgroVoc c_445

Anisotremus  NALT 9650
    UN AgroVoc c_446

Ankylosis  NALT 9660
    UN AgroVoc c_8821
    Fixation and immobility of a joint. (source: NALT)

Annelida  NALT 55
    UN AgroVoc c_447

Annona  NALT 9673
    UN AgroVoc c_448

Annona cherimola  NALT 9674
    UN AgroVoc c_449

Annona senegalensis  NALT 9677
    UN AgroVoc c_32059

Annona squamosa  NALT 9678
    UN AgroVoc c_455

Annonaceae  NALT 9672
    UN AgroVoc c_456
    Dbpedia Annonaceae
Annual weeds  NALT 9723
  UN AgroVoc c_459
Annuals  NALT 9711
  UN AgroVoc c_28997
Anobiidae  NALT 9731
  UN AgroVoc c_29995
Anobium  NALT 9733
  UN AgroVoc c_460
Anogeissus  NALT 9747
  UN AgroVoc c_27120
  Dbpedia Anogeissus
Anolis  NALT 9751
  UN AgroVoc c_36383
Anomala  NALT 9753
  UN AgroVoc c_30125
Anomala cuprea  NALT 9754
  UN AgroVoc c_30126
Anopheles  NALT 9761
  UN AgroVoc c_462
  Dbpedia Anopheles
Anopheles albimanus  NALT 9762
  UN AgroVoc c_30502
Anopheles arabiensis  NALT 9766
  UN AgroVoc c_30503
Anopheles crucians  NALT 9769
  UN AgroVoc c_30504
Anopheles culicifacies  NALT 9770
  UN AgroVoc c_30505
Anopheles farauti  NALT 9773
  UN AgroVoc c_30506
Anopheles freeborni  NALT 9775
  UN AgroVoc c_30507
Anopheles gambiae  NALT 9777
  UN AgroVoc c_30508
Anopheles quadrimaculatus  NALT 9792
  UN AgroVoc c_30509
Anopheles stephensi  NALT 9796
  UN AgroVoc c_30510
Anoplocephala  NALT 9802
  UN AgroVoc c_31945
Anoplocephalidae  NALT 8757
  UN AgroVoc c_31944
Anoplopoma  NALT 9819
  UN AgroVoc c_463
Anoplopoma fimbria  NALT 9821
  UN AgroVoc c_45335
Anoplopomatidae  NALT 9820
  UN AgroVoc c_45333
Anoplura  NALT 9824
  UN AgroVoc c_7492
Anorexia  NALT 9835
  UN AgroVoc c_8830
  Use for the uncontrolled lack or loss of the appetite for food; for the eating disorder characterized by the
  misperception of body image USE anorexia nervosa. (source: NALT)
  Loss of appetite. Source: NCI thesaurus link
Anseriformes  NALT 85
  UN AgroVoc c_464
Antelopes  NALT 9885
  UN AgroVoc c_473
Anthelmintics  NALT 1577
  UN AgroVoc c_475
  Agents destructive to parasitic worms. They are used therapeutically in the treatment of helminthiasis in man
  and animal. (source: NALT)
Anthemis  NALT 9940
  UN AgroVoc c_476
Antheraea  NALT 9955
  UN AgroVoc c_8838
Antheraea mylitta  NALT 9957
  UN AgroVoc c_36007
Antheraea pernyi  NALT 9958
  UN AgroVoc c_30331
Antheraea polyphemus  NALT 9959
  UN AgroVoc c_30332

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antheraxanthin  NALT 9962
    UN AgroVoc c_37200

Anthers  NALT 8700
    UN AgroVoc c_478
    pollen-bearing portion of the stamen. (source: NALT)

Anthocoridae  NALT 2960
    UN AgroVoc c_30638

Anthocoris  NALT 9981
    UN AgroVoc c_24601

Anthocoris nemoralis  NALT 9998
    UN AgroVoc c_24602

Anthocoris nemorum  NALT 9999
    UN AgroVoc c_30639

Anthocyanidins  NALT 10003
    UN AgroVoc c_36688

Anthocyanins  NALT 10008
    UN AgroVoc c_8840

Anthomyiidae  NALT 10012
    UN AgroVoc c_30434

Anthonomus  NALT 10020
    UN AgroVoc c_479

Anthonomus grandis  NALT 10022
    UN AgroVoc c_30064

Anthoxanthum  NALT 10038
    UN AgroVoc c_480

Anthozoa  NALT 6162
    UN AgroVoc c_49228

Anthraquinones  NALT 10057
    UN AgroVoc c_482

Anthrenus  NALT 10062
    UN AgroVoc c_30100

Anthribidae  NALT 10073
    UN AgroVoc c_29997

Anthriscus  NALT 10076
    UN AgroVoc c_484
    Dbpedia Anthriscus
Anthriscus cerefolium  NALT 10077  
  UN AgroVoc c_485

Anthurium  NALT 10126  
  UN AgroVoc c_487
  Dbpedia Anthurium

Anthurium andraeanum  NALT 10127  
  UN AgroVoc c_24726

Anthyllis  NALT 10128  
  UN AgroVoc c_488

Anthyllis vulneraria  NALT 10129  
  UN AgroVoc c_489

Antibiosis  NALT 10179  
  UN AgroVoc c_29117
  A relationship between two organisms in which one is harmful to the other, or between an organism and an antibiotic produced by the other. (source: NALT)

Antibiotic residues  NALT 10181  
  UN AgroVoc c_36299

antibiotics  NALT 10186  
  UN AgroVoc c_492
  Chemical substances produced by microorganisms or synthetically that inhibit the growth of, or destroy, bacteria. Antibiotics are used at therapeutic levels to fight disease in humans and animals. Since the 1950s they have been used at subtherapeutic levels in animal feeds to enhance growth and prevent disease in livestock and poultry. (source: NALT)

Antibloa agents  NALT 10217  
  UN AgroVoc c_8849

antibodies  NALT 10218  
  UN AgroVoc c_493

Antibody formation  NALT 10230  
  UN AgroVoc c_8850

Anticarsia  NALT 10242  
  UN AgroVoc c_495

Anticarsia gemmatalis  NALT 10243  
  UN AgroVoc c_30246

Anticoagulants  NALT 10260  
  UN AgroVoc c_496

Antidesma  NALT 10281  
  UN AgroVoc c_499

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Dbpedia Antidesma

Antiemetics  NALT 10139
UN AgroVoc c_8853

Antifeedants  NALT 5563
UN AgroVoc c_16159

Antifungal properties  NALT 10331
UN AgroVoc c_26757

Antigastra  NALT 10333
UN AgroVoc c_33287

Antigastra catalaunalis  NALT 10334
UN AgroVoc c_33288

Antigen antibody reactions  NALT 5131
UN AgroVoc c_503

Antigens  NALT 6556
UN AgroVoc c_504

Antihypertensive agents  NALT 10384
UN AgroVoc c_8855

Antimicrobial agents  NALT 3054
UN AgroVoc c_92344

Antimicrobial properties  NALT 10142
UN AgroVoc c_26756

Antimony  NALT 10453
UN AgroVoc c_510
An element with atomic symbol Sb, atomic number 51, and atomic weight 121.76. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Antineoplastic agents  NALT 3816
UN AgroVoc c_23991

Antinutritional factors  NALT 10475
UN AgroVoc c_34999

Antioxidants  NALT 206
UN AgroVoc c_511
Antiprotozoal agents  NALT 3055
    UN AgroVoc c_512

Antipyretics  NALT 2320
    UN AgroVoc c_8859

Antirrhinum  NALT 10524
    UN AgroVoc c_513

Antiseptics  NALT 3056
    UN AgroVoc c_8860

Antitranspirants  NALT 5564
    UN AgroVoc c_15937

Antitrogus  NALT 10552
    UN AgroVoc c_33613

Antiviral agents  NALT 10422
    UN AgroVoc c_514

Antlers  NALT 10565
    UN AgroVoc c_8864

Anura  NALT 38
    UN AgroVoc c_29104

Anus  NALT 8441
    UN AgroVoc c_520
    The lower opening of the digestive tract, lying in the cleft between the buttocks, through which fecal matter is extruded. Source: NCI thesaurus link

Aonidiella  NALT 10596
    UN AgroVoc c_522

Aonidiella aurantii  NALT 10598
    UN AgroVoc c_30810

Aorta  NALT 10602
    UN AgroVoc c_33939
    The major arterial trunk that carries oxygenated blood from the left ventricle into the ascending aorta behind the heart, the aortic arch, through the thorax as the descending aorta and through the abdomen as the abdominal aorta; it bifurcates into the left and right common iliac arteries. Source: NCI thesaurus link

Apamea  NALT 10610
    UN AgroVoc c_523

Apanteles  NALT 10612
    UN AgroVoc c_27122

Apera  NALT 10649
    UN AgroVoc c_26354

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Apera interrupta   NALT 10650
    UN AgroVoc c_26355
Apera spica venti  NALT 10651
    UN AgroVoc c_26356
Aphalaridae       NALT 10656
    UN AgroVoc c_30831
Aphanomyces       NALT 10675
    UN AgroVoc c_24603
Aphanomyces astaci NALT 10676
    UN AgroVoc c_24604
Aphanomyces cochlioides NALT 10677
    UN AgroVoc c_36008
Aphanomyces euteiches NALT 10678
    UN AgroVoc c_35462
Aphelenchidae     NALT 10687
    UN AgroVoc c_30989
Aphelenchoides    NALT 10690
    UN AgroVoc c_524
Aphelenchoides besseyi NALT 10692
    UN AgroVoc c_30993
Aphelenchoides fragariae NALT 10693
    UN AgroVoc c_30994
Aphelenchoides ritzemabosi NALT 10694
    UN AgroVoc c_30995
Aphelenchoididae  NALT 10691
    UN AgroVoc c_30992
Aphelenchus       NALT 10688
    UN AgroVoc c_30990
Aphelenchus avenae NALT 10697
    UN AgroVoc c_30991
Aphelinidae       NALT 1749
    UN AgroVoc c_29801
Aphelinus         NALT 10698
    UN AgroVoc c_29802
Aphelinus mali    NALT 10708
    UN AgroVoc c_37792
Aphididae  NALT 4013
   UN AgroVoc c_525
Aphidius  NALT 10771
   UN AgroVoc c_26357
Aphidius ervi  NALT 10781
   UN AgroVoc c_26358
Aphidius matricariae  NALT 10782
   UN AgroVoc c_26359
Aphidius rhopalosiphii  NALT 10784
   UN AgroVoc c_37635
Aphidius smithi  NALT 10785
   UN AgroVoc c_26360
Aphidoidea  NALT 4083
   UN AgroVoc c_30757
Aphidoletes  NALT 10796
   UN AgroVoc c_30457
Aphidoletes aphidimyza  NALT 10798
   UN AgroVoc c_30458
Aphis craccivora  NALT 10801
   UN AgroVoc c_30760
Aphis fabae  NALT 10802
   UN AgroVoc c_30761
Aphis glycines  NALT 10803
   UN AgroVoc c_36527
Aphis gossypii  NALT 10804
   UN AgroVoc c_30762
Aphis nasturtii  NALT 10805
   UN AgroVoc c_30763
Aphis nerii  NALT 10806
   UN AgroVoc c_30764
Aphis pomi  NALT 10807
   UN AgroVoc c_34424
Aphis spiraecola  NALT 10808
   UN AgroVoc c_37350
Aphodius  NALT 10827
   UN AgroVoc c_527
Aphrophoridae  NALT 10835
    UN AgroVoc c_30713

Aphthona  NALT 10838
    UN AgroVoc c_32060
    Library of Congress sh98003106

Aphthovirus  NALT 10845
    UN AgroVoc c_3034
    A genus of the family Picornaviridae infecting mainly cloven-hoofed animals. They cause vesicular lesions and upper respiratory tract infections. Foot and mouth disease virus is the type species. (source: NALT)
    A genus of non-enveloped, spherical viruses with T=pseudo3 icosahedral capsid, in the family Picornaviridae. The genome is composed of a linear, single-strand of positive sense, naked RNA. Aphthoviruses are found in cloven-hooved animals and cause foot-and-mouth disease in humans. Source: NCI thesaurus link

Aphytis  NALT 10699
    UN AgroVoc c_29803

Aphytis melinus  NALT 10900
    UN AgroVoc c_29804

Apiales  NALT 10906
    UN AgroVoc c_330189

Apical meristems  NALT 11025
    UN AgroVoc c_528

Apidae  NALT 11039
    UN AgroVoc c_865

Apigenin  NALT 1510
    UN AgroVoc c_37203

Apiognomonia  NALT 11067
    UN AgroVoc c_31742

Apion  NALT 11071
    UN AgroVoc c_530

Apios  NALT 11076
    UN AgroVoc c_531

Apios americana  NALT 7622
    UN AgroVoc c_532

Apiosporia  NALT 11082
    UN AgroVoc c_31838

Apis  NALT 11040
    UN AgroVoc c_533
Apis cerana  NALT 11090
  UN AgroVoc c_29808

Apis dorsata  NALT 11091
  UN AgroVoc c_29809

Apis florea  NALT 11092
  UN AgroVoc c_29810

Apis mellifera  NALT 11093
  UN AgroVoc c_534

Apis mellifera adansonii  NALT 11099
  UN AgroVoc c_29811

Apis mellifera capensis  NALT 11100
  UN AgroVoc c_29812

Apis mellifera carnica  NALT 11101
  UN AgroVoc c_29813

Apis mellifera ligustica  NALT 11103
  UN AgroVoc c_34672

Apis mellifera mellifera  NALT 11104
  UN AgroVoc c_29814

Apis mellifera scutellata  NALT 4919
  UN AgroVoc c_29815

Apium  NALT 10907
  UN AgroVoc c_32813

Apium graveolens  NALT 11109
  UN AgroVoc c_535

Aplocheilidae  NALT 11142
  UN AgroVoc c_41910
  Dbpedia Aplocheilidae

Aplodinotus  NALT 11145
  UN AgroVoc c_536

Aplodinotus grunniens  NALT 11147
  UN AgroVoc c_43060

Apnea  NALT 914
  UN AgroVoc c_8876

  Transient cessation of respiration. Source: NCI thesaurus link

Apoanagyrus  NALT 11157
  UN AgroVoc c_36603

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Apoanagyrus lopezi  NALT 11160
    UN AgroVoc c_36604

Apocynaceae  NALT 2958
    UN AgroVoc c_537

Apodemus  NALT 11203
    UN AgroVoc c_8877

Apodiformes  NALT 86
    UN AgroVoc c_538

Apomixis  NALT 4955
    UN AgroVoc c_539
    Biological reproduction without fertilization, meiosis, or production of gametes, resulting in seeds that are
    genetically identical to the parent plant. (source: NALT)

Aponogetonaceae  NALT 11234
    UN AgroVoc c_26303

Apoproteins  NALT 11214
    UN AgroVoc c_36526

apoptosis  NALT 11242
    UN AgroVoc c_36634
    A form of programmed cell death that begins when a cell receives internal or external signals, then proceeds
    through a series of characteristic stages typically including rounding-up of the cell, retraction of pseudopods,
    reduction of cellular volume (pyknosis), chromatin condensation, nuclear fragmentation (karyorrhexis), and
    plasma membrane blebbing, and ends with the death of the cell. Source: NCI thesaurus link

Aporrectodea  NALT 11251
    UN AgroVoc c_33290

Aporrectodea caliginosa  NALT 6694
    UN AgroVoc c_36009

Appetite  NALT 9837
    UN AgroVoc c_540
    The natural recurring desire for food. Source: NCI thesaurus link

Apple juice  NALT 11279
    UN AgroVoc c_8893

Apples  NALT 11308
    UN AgroVoc c_541

Apramycin  NALT 10188
    UN AgroVoc c_24817
    An antibiotic complex and broad-spectrum antibiotic substance of nebramycin complex produced by Streptomyces
tenebrarius. (source: NALT)
Apricots  NALT 11370
UN AgroVoc c_545

Aquatic insects  NALT 11494
UN AgroVoc c_555

Aquatic organisms  NALT 11423
UN AgroVoc c_557

Aquatic plants  NALT 11469
UN AgroVoc c_559

Plants that grow in water either floating on the surface, growing up from the bottom of the body of water or growing under the surface of the water. (source: NALT)

Aquatic weeds  NALT 11527
UN AgroVoc c_560

Aquifers  NALT 11568
UN AgroVoc c_25560

Aquifoliaceae  NALT 11578
UN AgroVoc c_561

Aquilegia  NALT 11586
UN AgroVoc c_562
Dbpedia Aquilegia

Arabidopsis  NALT 11640
UN AgroVoc c_33291

Arabidopsis thaliana  NALT 11641
UN AgroVoc c_33292

Arabinose  NALT 6217
UN AgroVoc c_567

Arable soils  NALT 11657
UN AgroVoc c_568

Araceae  NALT 2982
UN AgroVoc c_569

Arachidonic acid  NALT 11683
UN AgroVoc c_26843

An unsaturated, essential fatty acid. It is found in animal and human fat as well as in the liver, brain, and glandular organs, and is a constituent of animal phosphatides. It is formed by the synthesis from dietary linoleic acid and is a precursor in the biosynthesis of prostaglandins, thromboxanes, and leukotrienes.(ChemID Plus)
Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link

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Rotate the 3-D representation
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Arachis  NALT 11687
          UN AgroVoc c_570
Arachis glabrata  NALT 11688
          UN AgroVoc c_571
Arachis pintoi  NALT 11690
          UN AgroVoc c_33617
Arachnida  NALT 2065
          UN AgroVoc c_573
Arachnis  NALT 11704
          UN AgroVoc c_574
Aradidae  NALT 11707
          UN AgroVoc c_30645
Aradus  NALT 11709
          UN AgroVoc c_30646
Araeacerus  NALT 10075
          UN AgroVoc c_575
Aralia  NALT 11720
          UN AgroVoc c_36015
Araliaceae  NALT 11019
          UN AgroVoc c_578
          Dbpedia Araliaceae
Aranda  NALT 11747
          UN AgroVoc c_26361
Araneae  NALT 5100
          UN AgroVoc c_7300
Araneidae  NALT 11751
          UN AgroVoc c_35394
Araucaria  NALT 11793
          UN AgroVoc c_579
          Dbpedia Araucaria
Araucaria angustifolia  NALT 11794
          UN AgroVoc c_580
Araucaria araucana  NALT 11795
    UN AgroVoc c_581
Araucaria cunninghamii  NALT 11798
    UN AgroVoc c_582
Araucaria heterophylla  NALT 11799
    UN AgroVoc c_583
Araucariaceae  NALT 5029
    UN AgroVoc c_584
Arboreta  NALT 11813
    UN AgroVoc c_586
Arboriculture  NALT 11818
    UN AgroVoc c_587
Arboviruses  NALT 4903
    UN AgroVoc c_331431
    Arthropod-borne viruses. A non-taxonomic designation for viruses that can replicate in both vertebrate hosts
    and arthropod vectors. (source: NALT)
Arbutus  NALT 11832
    UN AgroVoc c_26362
Arbutus menziesii  NALT 11833
    UN AgroVoc c_32061
Arbutus unedo  NALT 11834
    UN AgroVoc c_32062
Arceuthobium  NALT 11851
    UN AgroVoc c_589
Archips  NALT 11881
    UN AgroVoc c_590
Archips podanus  NALT 11884
    UN AgroVoc c_34425
Archytas  NALT 11894
    UN AgroVoc c_33618
Arcidae  NALT 8348
    UN AgroVoc c_47863
Arctiidae  NALT 8145
    UN AgroVoc c_30178
    Dbpedia Arctiidae
Areca  NALT 11984
       UN AgroVoc c_595
Areca catechu  NALT 11985
       UN AgroVoc c_596
Arecales  NALT 11992
       UN AgroVoc c_330576
Areca catechu  NALT 11985
       UN AgroVoc c_596
Areca catechu  NALT 11985
       UN AgroVoc c_596
Arecales  NALT 11992
       UN AgroVoc c_330576
Areca catechu  NALT 11985
       UN AgroVoc c_596
Arecales  NALT 11992
       UN AgroVoc c_330576
Arecoline  NALT 6447
       UN AgroVoc c_597
Arenaviridae  NALT 12044
       UN AgroVoc c_598
Arenga  NALT 11993
       UN AgroVoc c_599
Argania  NALT 12060
       UN AgroVoc c_32067
Argania spinosa  NALT 12062
       UN AgroVoc c_32068
Argas  NALT 12063
       UN AgroVoc c_602
Argas arboreus  NALT 12064
       UN AgroVoc c_30946
Argasidae  NALT 522
       UN AgroVoc c_8919
       Dbpedia Argasidae
Argemone  NALT 12072
       UN AgroVoc c_32312
Argemone mexicana  NALT 12073
       UN AgroVoc c_32313
Argidae  NALT 12071
       UN AgroVoc c_29827
Arginase  NALT 7702
       UN AgroVoc c_8922
Arginine  NALT 7783

UN AgroVoc c_606

The hydrochloride salt form of arginine, an essential amino acid in juvenile humans. Arginine is a complex amino acid, often found at active sites in proteins and enzymes due to its amine-containing side chain. Arginine may prevent or treat heart and circulatory diseases, combat fatigue, and stimulate the immune system. It also boosts production of nitric oxide, relaxing blood vessels, and treating angina and other cardiovascular problems. Arginine is also an important intermediate in the urea cycle and in detoxification of nitrogenous wastes. (NCI04)

Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

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Argopecten  NALT 12122

UN AgroVoc c_607

Argopecten irradians  NALT 12124

UN AgroVoc c_48015

Argopecten purpuratus  NALT 12125

UN AgroVoc c_48016

Argopecten ventricosus  NALT 12126

UN AgroVoc c_48017

Argyresthia  NALT 12137

UN AgroVoc c_608

Argyrotaenia  NALT 12145

UN AgroVoc c_610

Argyrotaenia velutinana  NALT 12146

UN AgroVoc c_30357

Arid soils  NALT 12167

UN AgroVoc c_612

Library of Congress sh87005702

Arid zones  NALT 12160

UN AgroVoc c_613

Dry climatic type with less than 10 inches of precipitation per year. (source: NALT)

Ariidae  NALT 12174

UN AgroVoc c_40577
Historically, the term “aromatic” originally referred to the smell of selected compounds that later were found to contain benzene or fused benzene rings in the structure. In a structural sense, it designates compounds that, in accordance with the theory of Huckel, have a cyclic, delocalized (4n+2) pi-electron system. This includes arenes and their substitution products (e.g., benzene, naphthalene, toluene). The term has been generalized to include aromatic heterocyclic structures, such as thiophene and pyridine, but it is more precise to call compounds of the latter type heteroaromatic. Source: NCI thesaurus link
Aronia  NALT 12315
       UN AgroVoc c_23895
Aronia melanocarpa  NALT 7516
       UN AgroVoc c_26363
Arracacia  NALT 10908
       UN AgroVoc c_623
       Dbpedia Arracacia
Arracacia xanthorrhiza  NALT 12333
       UN AgroVoc c_624
       Dbpedia Arracacia xanthorrhiza
Arrhenatherum  NALT 12338
       UN AgroVoc c_626
       Dbpedia Arrhenatherum
Arrhenatherum elatius  NALT 12339
       UN AgroVoc c_627
Arrhythmia  NALT 12348
       UN AgroVoc c_8939
       Any disturbances of the normal rhythmic beating of the heart or myocardial contraction. Cardiac arrhythmias can be classified by the abnormalities in heart rate, disorders of electrical impulse generation, or impulse conduction. (source: NALT)
       Any variation from the normal rate or rhythm (which may include the origin of the impulse and/or its subsequent propagation) in the heart. Source: NCI thesaurus link
arrowroot  NALT 12358
       UN AgroVoc c_15495
arsenates  NALT 12364
       UN AgroVoc c_36718
Arsenic  NALT 12370
       UN AgroVoc c_629
       An element with atomic symbol As, atomic number 33, and atomic weight 74.92. Source: NCI thesaurus link
       Reference: FDA UNII link
       Look-up using Google link
       Rotate the 3-D representation
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       Look-up using CAS number link
arsenites  NALT 12378
       UN AgroVoc c_37465

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Artabotrys  NALT 9687
    UN AgroVoc c_33293
Artabotrys hexapetalus  NALT 12383
    UN AgroVoc c_33620
Artemia  NALT 12386
    UN AgroVoc c_16224
Artemia franciscana  NALT 12390
    UN AgroVoc c_46169
Artemia salina  NALT 12391
    UN AgroVoc c_16225
Artemiidae  NALT 12389
    UN AgroVoc c_46166
Artemisia  NALT 12394
    UN AgroVoc c_631
Artemisia absinthium  NALT 1830
    UN AgroVoc c_632
Artemisia annua  NALT 9728
    UN AgroVoc c_37105
Artemisia dracunculus  NALT 12400
    UN AgroVoc c_633
Artemisia nova  NALT 12409
    UN AgroVoc c_35529
Artemisia tridentata  NALT 12414
    UN AgroVoc c_35528
Artemisia vulgaris  NALT 12415
    UN AgroVoc c_35530
Artemisinin  NALT 10415
    UN AgroVoc c_37205
Arteries  NALT 10603
    UN AgroVoc c_8948
The vessels carrying blood away from the heart. (source: NALT)
Arteritis  NALT 12446
    UN AgroVoc c_8950
An inflammatory process affecting an artery. Source: NCI thesaurus link
Arteriviridae  NALT 12447
    UN AgroVoc c_37926
Arterivirus  NALT 12449
UN AgroVoc c_35371

Arthritis  NALT 12458
UN AgroVoc c_8951

An inflammatory process affecting a joint. Causes include infection, autoimmune processes, degenerative processes, and trauma. Signs and symptoms may include swelling around the affected joint and pain. Source: NCI thesaurus link

Arthrobacter  NALT 12461
UN AgroVoc c_32266
Library of Congress sh86006604

A genus of obligately aerobic, Gram positive, coccobacilli shaped bacterium assigned to the phylum Actinobacteria and the family Micrococccaeae. Source: NCI thesaurus link

Arthrobotrys  NALT 12530
UN AgroVoc c_23896

Arthroderma  NALT 12534
UN AgroVoc c_31789

Arthropoda  NALT 52
UN AgroVoc c_635
Dbpedia Arthropoda

Includes taxonomic classification of Arthropoda; For common types SEE arthropods. (source: NALT)

The taxonomic phylum whose members are invertebrates with hard exoskeletons and segmented joints. Organisms in this phylum include the Arachnids, Centipedes, Crustaceans, Insects and the extinct Trilobites. Source: NCI thesaurus link

Artificial insemination  NALT 9024
UN AgroVoc c_638

The delivery of semen into the uterus of the female animal usually by injection with a syringe-like apparatus for the purpose of achieving fertilization and sexual reproduction. (source: NALT)

Introduction of sperm into the female reproductive tract by artificial means in order to achieve fertilization. Source: NCI thesaurus link

Artificial seeds  NALT 12613
UN AgroVoc c_27453

Artificial selection  NALT 12617
UN AgroVoc c_37565

Artificial sweeteners  NALT 2303
UN AgroVoc c_32381

Chemical formulations added to impart sweetness; for food products used as bulk sweeteners instead of sugar USE sugar substitutes (source: NALT)
Artiodactyla  NALT 542
    UN Agrovoc c_643
    The taxonomic order of mammals that includes even-toed ungulates such as pigs, cows, goats and sheep. Source: NCI thesaurus link

Artocarpus  NALT 12637
    UN Agrovoc c_645
    Dbpedia Artocarpus

Artocarpus altilis  NALT 12639
    UN Agrovoc c_646

Artocarpus heterophyllus  NALT 12640
    UN Agrovoc c_649

Arum  NALT 11661
    UN Agrovoc c_8967

Arundina  NALT 12686
    UN Agrovoc c_26364

Arundinaria  NALT 12687
    UN Agrovoc c_652

Arundo  NALT 12689
    UN Agrovoc c_654

Arvicolinae  NALT 12702
    UN Agrovoc c_331516

Asbestos  NALT 12728
    UN Agrovoc c_28233
    One of a number of fibrous magnesium and calcium silicate minerals processed for thermal insulation and fireproofing. Asbestos is considered to be an environmental carcinogen; chronic inhalation of fine asbestos dust causes pulmonary asbestosis and may induce lung neoplasms. Chronic ingestion of asbestos may induce gastrointestinal neoplasms. (NCI04) Source: NCI thesaurus link

Ascariasis  NALT 12733
    UN Agrovoc c_16385

Ascaridia  NALT 12735
    UN Agrovoc c_655

Ascaridia galli  NALT 12736
    UN Agrovoc c_31006

Ascarididae  NALT 9362
    UN Agrovoc c_30999

Ascaris  NALT 12734
    UN Agrovoc c_656
Ascariis lumbricoides  NALT 12745
    UN AgroVoc c_31000
    Dbpedia Ascaris lumbricoides

Ascariis suum  NALT 12746
    UN AgroVoc c_31001

Ascarops  NALT 12747
    UN AgroVoc c_657

Ascetospora  NALT 12751
    UN AgroVoc c_32346

Aschersonia  NALT 12756
    UN AgroVoc c_26365

Ascites  NALT 733
    UN AgroVoc c_8971

Accumulation or retention of free fluid within the peritoneal cavity. (source: NALT)

Accumulation of fluid in the peritoneal cavity. The fluid may be serous, hemorrhagic, or the result of tumor metastasis to the peritoneum. Source: NCI thesaurus link

Ascocytta  NALT 12801
    UN AgroVoc c_660

Ascocytta fabae  NALT 12802
    UN AgroVoc c_34507

Ascocytta pisi  NALT 12804
    UN AgroVoc c_34508

Ascocytta rabiei  NALT 12805
    UN AgroVoc c_34509

Ascogaster  NALT 12822
    UN AgroVoc c_29833

Ascorbate oxidase  NALT 12861
    UN AgroVoc c_8972

Ascorbic acid  NALT 12866
    UN AgroVoc c_661

A natural water-soluble vitamin (Vitamin C). Ascorbic acid is a potent reducing and antioxidant agent that functions in fighting bacterial infections, in detoxifying reactions, and in the formation of collagen in fibrous tissue, teeth, bones, connective tissue, skin, and capillaries. Found in citrus and other fruits, and in vegetables, vitamin C cannot be produced or stored by humans and must be obtained in the diet. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation

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**Ascosphaera**  NALT 12875  
  UN AgroVoc c_662

**Ascosphaera apis**  NALT 12876  
  UN AgroVoc c_33294

**Ascospores**  NALT 12859  
  UN AgroVoc c_35120

**Asellus**  NALT 12888  
  UN AgroVoc c_30860

**Asexual reproduction**  NALT 12897  
  UN AgroVoc c_664

**Ash content**  NALT 12905  
  UN AgroVoc c_665

**Asimina triloba**  NALT 12970  
  UN AgroVoc c_32074

**Asparagine**  NALT 7784  
  UN AgroVoc c_668

  A non-essential amino acid in humans, Asparagine is a beta-amido derivative of aspartic acid and plays an important role in the biosynthesis of glycoproteins and other proteins. A metabolic precursor to aspartate, Asparagine is a nontoxic carrier of residual ammonia to be eliminated from the body. Asparagine acts as diuretic. (NCI04) Source: NCI thesaurus link

  Reference: FDA UNII link

**Asparagus officinalis**  NALT 13004  
  UN AgroVoc c_26366

**Asparagus setaceus**  NALT 13007  
  UN AgroVoc c_26367

**Asparagus spears**  NALT 13009  
  UN AgroVoc c_17156

**Aspartame**  NALT 12620  
  UN AgroVoc c_24279

**Aspartic acid**  NALT 7785  
  UN AgroVoc c_671

  A non-essential amino acid in humans, Aspartic Acid has an overall negative charge and plays an important role in the synthesis of other amino acids and in the citric acid and urea cycles. Asparagine, arginine, lysine, methionine, isoleucine, and some nucleotides are synthesized from aspartic acid. Aspartic acid also serves as a neurotransmitter. (NCI04) Source: NCI thesaurus link

  Reference: FDA UNII link
Aspergillosis  NALT 13048
    UN AgroVoc c_35476

Aspergillus  NALT 13050
    UN AgroVoc c_672
    A genus of highly aerobic fungi in the phylum Ascomycota that grow as molds on the surface of a substrate.
    Source: NCI thesaurus link

Aspergillus awamori  NALT 13054
    UN AgroVoc c_26369

Aspergillus flavus  NALT 4809
    UN AgroVoc c_26370
    A species of mold fungus in the phylum Ascomycota that is associated with aspergillosis of the lungs.
    Source: NCI thesaurus link
    Reference: FDA UNII link
    Reference the NIH NCBI link

Aspergillus fumigatus  NALT 13061
    UN AgroVoc c_26371
    A species of mold fungus in the phylum Ascomycota with a stable haploid genome, no known sexual cycle, and
    that reproduces by forming conidiospores that are released into the environment.
    Source: NCI thesaurus link
    Reference: FDA UNII link
    Reference the NIH NCBI link

Aspergillus niger  NALT 13065
    UN AgroVoc c_26373
    A species of mold fungus in the phylum Ascomycota that is ubiquitous in the environment. They are generally
    considered asexual, although forms that reproduce sexually have been found.
    Source: NCI thesaurus link
    Reference: FDA UNII link
    Reference the NIH NCBI link

Aspergillus oryzae  NALT 13066
    UN AgroVoc c_26375

Aspergillus parasiticus  NALT 4810
    UN AgroVoc c_26376

Aspergillus terreus  NALT 13070
    UN AgroVoc c_26377
Aspergillus versicolor  NALT 13071
  UN AgroVoc c_26378
Asphondylia   NALT 13102
  UN AgroVoc c_673
asphyxia     NALT 915
  UN AgroVoc c_8988
  A pathological condition caused by lack of oxygen, manifested in impending or actual cessation of life. (source: NALT)
  A state of general hypoxia and hypercapnea, resulting in acidosis, which affects all tissues in the body. Source: NCI thesaurus link
Aspidiotus   NALT 13112
  UN AgroVoc c_674
Aspidiotus nerii  NALT 13114
  UN AgroVoc c_30811
Aspidistra   NALT 13121
  UN AgroVoc c_32075
  Dbpedia Aspidistra
Aspidosperma  NALT 11168
  UN AgroVoc c_33623
Asplenium    NALT 13135
  UN AgroVoc c_35661
  Dbpedia Asplenium
Asses        NALT 12977
  UN AgroVoc c_676
assortative mating   NALT 13190
  UN AgroVoc c_35813
Astacidae    NALT 13192
  UN AgroVoc c_46812
Astacus      NALT 13194
  UN AgroVoc c_679
Astacus astacus  NALT 13197
  UN AgroVoc c_37771
Astacus leptodactylus  NALT 13198
  UN AgroVoc c_37850
Astaxanthin  NALT 13202
  UN AgroVoc c_26897
Aster  NALT 13206
    UN AgroVoc c_8989

**Asterales**  NALT 13235
    UN AgroVoc c_330139
    Dbpedia Asterales

**Asteroidea**  NALT 13455
    UN AgroVoc c_32011

**Astrolecaniidae**  NALT 13468
    UN AgroVoc c_30802

**Astrolecanium**  NALT 13454
    UN AgroVoc c_680

**Asthma**  NALT 13478
    UN AgroVoc c_8990

    A chronic respiratory disease manifested as difficulty breathing due to the narrowing of bronchial passageways.
    Source: NCI thesaurus link

**Astigmata**  NALT 2066
    UN AgroVoc c_6807

**Astragalus**  NALT 13509
    UN AgroVoc c_681
    Dbpedia Astragalus

**Astragalus cicer**  NALT 13511
    UN AgroVoc c_37106

**Astragalus sinicus**  NALT 13517
    UN AgroVoc c_37107

**Astrebla**  NALT 13526
    UN AgroVoc c_682

**Astrocaryum**  NALT 11994
    UN AgroVoc c_683

**Asulam**  NALT 13543
    UN AgroVoc c_31255

**Atalantia**  NALT 13553
    UN AgroVoc c_33625

**Athalia**  NALT 13572
    UN AgroVoc c_685

**Athelia**  NALT 10852
    UN AgroVoc c_31716
Atheresthes  NALT 13578
  UN AgroVoc c_686

Atherigona   NALT 13580
  UN AgroVoc c_687

Atherigona soccata NALT 13583
  UN AgroVoc c_30562

Atherina    NALT 13584
  UN AgroVoc c_688

Atherinidae  NALT 13585
  UN AgroVoc c_42146

Atheriniformes NALT 13586
  UN AgroVoc c_42140

Atmosphere  NALT 13646
  UN AgroVoc c_8994

Atmospheric circulation  NALT 13651
  UN AgroVoc c_29546

For the circulation of gases in the atmosphere; for the flow and circulation of air in buildings, equipment, etc. USE air flow. (source: NALT)

atmospheric deposition  NALT 2714
  UN AgroVoc c_36094

The process by which chemical substances, such as pollutants, are transferred from the atmosphere to the earth’s surface. (source: NALT)

Atmospheric disturbances  NALT 13654
  UN AgroVoc c_691

Atmospheric pressure  NALT 13657
  UN AgroVoc c_693

Atmospheric sciences  NALT 13647
  UN AgroVoc c_694

Atomaria   NALT 13662
  UN AgroVoc c_26379

Atopy    NALT 13670
  UN AgroVoc c_696

A genetic predisposition to form IgE antibodies in response to exposure to allergens and therefore, for the development of immediate (type I) hypersensitivity and atopic conditions, such as allergic rhinitis; bronchial asthma, atopic dermatitis, and food allergy. Mutations of specific alleles on the long arm of chromosome 5 have been associated with higher levels of IL-4 and IgE and are known as IL-4 promoter polymorphisms. Source: NCI thesaurus link
Atrazine  NALT 13718
  UN AgroVoc c_31256
Atriplex  NALT 13724
  UN AgroVoc c_697
Atriplex canescens  NALT 13726
  UN AgroVoc c_24584
Atriplex confertifolia  NALT 13727
  UN AgroVoc c_24585
Atriplex hortensis  NALT 13729
  UN AgroVoc c_698
Atriplex nummularia  NALT 13731
  UN AgroVoc c_24321
Atropa  NALT 13744
  UN AgroVoc c_32815
Atropa belladonna  NALT 13746
  UN AgroVoc c_699
Atrophy  NALT 734
  UN AgroVoc c_24104
  Decrease in the size of a cell, tissue, organ, or multiple organ, associated with a variety of pathological conditions such as abnormal cellular changes, ischemia, malnutrition, or hormonal changes. (source: NALT)
  Any weakening or degeneration, especially through lack of use. Source: NCI thesaurus link
Atropine  NALT 13749
  UN AgroVoc c_700
  A synthetically-derived form of the endogenous alkaloid isolated from the plant Atropa belladonna. Atropine functions as a sympathetic, competitive antagonist of muscarinic cholinergic receptors, thereby abolishing the effects of parasympathetic stimulation. This agent may induce tachycardia, inhibit secretions, and relax smooth muscles. (NCI04) Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using CAS number link
Atta  NALT 13752
  UN AgroVoc c_701
Atta cephalotes  NALT 13753
  UN AgroVoc c_29890
Atta sexdens  NALT 13754
  UN AgroVoc c_29891
Attagenus  NALT 13760
  UN AgroVoc c_702

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Attalea  NALT 11995
    UN AgroVoc c_703
Attelabidae  NALT 13766
    UN AgroVoc c_30000
attractants  NALT 207
    UN AgroVoc c_705
Auchenorrhyncha  NALT 13799
    UN AgroVoc c_1609
Aulacaspis  NALT 13846
    UN AgroVoc c_711
Aulacophora  NALT 13852
    UN AgroVoc c_30025
Aulacorthum  NALT 10720
    UN AgroVoc c_712
Aulacorthum solani  NALT 4023
    UN AgroVoc c_30765
Aureobasidium  NALT 13907
    UN AgroVoc c_31545
Aureobasidium pullulans  NALT 13909
    UN AgroVoc c_33626
Auriculariales  NALT 13920
    UN AgroVoc c_31641
Autoantigens  NALT 10355
    UN AgroVoc c_9003
Autographa  NALT 14000
    UN AgroVoc c_721
Autographa californica  NALT 6310
    UN AgroVoc c_30247
Autographa gamma  NALT 14001
    UN AgroVoc c_30248
Autoimmune diseases  NALT 13994
    UN AgroVoc c_9005
Autoimmunity  NALT 13995
    UN AgroVoc c_32798
Autolysis NALT 14014

UN AgroVoc c_15938

The destruction of organism cells or tissues by the organism’s own enzymes or processes. Source: NCI thesaurus link

Autonomic nervous system NALT 14031

UN AgroVoc c_723

The part of the nervous system of vertebrates that controls involuntary actions of the smooth muscles and heart and glands. Source: NCI thesaurus link

Autosomes NALT 14046

UN AgroVoc c_9007

Autumn NALT 14061

UN AgroVoc c_724

The season between the autumnal equinox and the winter solstice. Source: NCI thesaurus link

Auxins NALT 11024

UN AgroVoc c_726

Avalanches NALT 14084

UN AgroVoc c_727

Avena barbata NALT 14088

UN AgroVoc c_26380

Avena fatua NALT 14091

UN AgroVoc c_730

Avena nuda NALT 14098

UN AgroVoc c_26382

Avena sativa NALT 14100

UN AgroVoc c_731

Avena sterilis NALT 9593

UN AgroVoc c_26383

Avermectins NALT 1578

UN AgroVoc c_33506

Averrhoa NALT 14131

UN AgroVoc c_732

Aves NALT 84

UN AgroVoc c_9012

Includes taxonomic classification of Aves; For common types SEE birds. (source: NALT)

Aviadenovirus NALT 4177

UN AgroVoc c_9013
Avian encephalomyelitis virus  NALT 14147

UN AgroVoc e_9014

A tentative species in the genus Hepatovirus infecting primarily young chicks, but also found in turkeys, pheasants, and guinea fowl. It causes a fatal neuronal degeneration and is transmitted by mechanical contact. (source: NALT)

Avian influenza  NALT 14152

UN AgroVoc e_331337

An Influenza A viral infection of wild birds or domestic fowl, certain strains of which cause high mortality in poultry. (source: NALT)

Avian leukosis  NALT 14164

UN AgroVoc e_737

Avian malaria  NALT 14166

UN AgroVoc e_16686

Avian paramyxovirus  NALT 14177

UN AgroVoc e_16388

Aviaries  NALT 9247

UN AgroVoc e_32382

Aviary birds  NALT 14194

UN AgroVoc e_9021

Avicennia  NALT 14203

UN AgroVoc e_739

Avicidae  NALT 820

UN AgroVoc e_741

Aviculture  NALT 9264

UN AgroVoc e_742

Avidin  NALT 14211

UN AgroVoc e_32384

A biotin-binding protein from egg albumen. (source: NALT)

Avipoxvirus  NALT 14218

UN AgroVoc e_743

Avocados  NALT 14240

UN AgroVoc e_9022

Avoparcin  NALT 10189

UN AgroVoc e_35817

Glycopeptide antibiotic from Streptomyces candidus; antibiotic growth promoter for improving growth rates and feed conversion efficiency of broiler chickens and pigs. (source: NALT)
Axonopus  NALT 14265
    UN AgroVoc c_744
Azadirachta  NALT 14284
    UN AgroVoc c_15748
Azadirachta indica  NALT 9883
    UN AgroVoc c_15749
Azadirachtin  NALT 6702
    UN AgroVoc c_15886
Azides  NALT 14304
    UN AgroVoc c_24819
Azines  NALT 14308
    UN AgroVoc c_749
Azinphos-ethyl  NALT 14312
    UN AgroVoc c_31257
Azinphos-methyl  NALT 14313
    UN AgroVoc c_31259
Azo dyes  NALT 7335
    UN AgroVoc c_28301
Azoles  NALT 14329
    UN AgroVoc c_750
Azolla  NALT 14332
    UN AgroVoc c_15757
Azolla pinnata  NALT 14339
    UN AgroVoc c_24729
Azomonas  NALT 14343
    UN AgroVoc c_9027
Azorhizobium  NALT 14355
    UN AgroVoc c_35463
Azospirillum  NALT 14363
    UN AgroVoc c_15939
Azospirillum brasilense  NALT 14365
    UN AgroVoc c_27455
Azotobacter  NALT 14379
    UN AgroVoc c_752
Azotobacter vinelandii  NALT 14384
    UN AgroVoc c_27456
Azteca  NALT 14400
        UN AgroVoc c_29892
B-lymphocytes  NALT 14410
        UN AgroVoc c_16522
Babesia  NALT 14423
        UN AgroVoc c_755
Babesia bigemina  NALT 14425
        UN AgroVoc c_31195
Babesia bovis  NALT 14426
        UN AgroVoc c_31196
Babesia caballi  NALT 14427
        UN AgroVoc c_37007
Babesia canis  NALT 14428
        UN AgroVoc c_31197
Babesia divergens  NALT 14429
        UN AgroVoc c_31198
Babesia gibsoni  NALT 14430
        UN AgroVoc c_31200
Babesia microti  NALT 14431
        UN AgroVoc c_31202
Babesia ovis  NALT 14432
        UN AgroVoc c_31203
Babesia rhodaini  NALT 14433
        UN AgroVoc c_31204
Babesiosis  NALT 14434
        UN AgroVoc c_24280

        A group of tick-borne diseases of mammals including zoonoses in humans. They are caused by protozoa of the
genius Babesia, which parasitize erythrocytes, producing hemolysis. In the U.S., the organism’s natural host is
mice and transmission is by the deer tick Ixodes scapularis. (source: NALT)

        A parasitic infection caused by Babesia. It is transmitted by ticks and infects the red blood cells. Signs and
symptoms include fever, fatigue and hemolytic anemia. Source: NCI thesaurus link

Baccharis  NALT 13237
        UN AgroVoc c_33297
Bacillariophyceae  NALT 14475
        UN AgroVoc c_32077
Bacillus anthracis  NALT 10061

UN AgroVoc c_9040

A species of aerobic or facultatively anaerobic, Gram-positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is nonmotile, spore forming, and catalase positive, hydrolyzes casein, starch and gelatin, reduces nitrate, is penicillin susceptible but cephalosporin resistant, gamma phage sensitive, has absent or delayed hemolysis and the capsule can be visualized using M’Faydean’s stain. B. anthracis is found in most soil, causes Anthrax in humans and animals, has been utilized as a biological weapon and both a veterinary and human vaccine exists. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the NIH NCBI link

Bacillus cereus  NALT 14500

UN AgroVoc c_26384

A species of aerobic or facultatively anaerobic, Gram-positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is motile, spore forming, and catalase positive, hydrolyzes casein, starch, and gelatin, and produces the toxin cereulide. B. cereus is found in soil and associated with diarrheal and emetic forms of food-borne illness as well as opportunistic infections in both humans and domestic animals. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the NIH NCBI link
Look-up using CAS number link

Bacillus circulans  NALT 14502

UN AgroVoc c_37059

Bacillus coagulans  NALT 14505

UN AgroVoc c_37060

Bacillus licheniformis  NALT 14535

UN AgroVoc c_27457

A species of facultatively anaerobic, Gram-positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is motile, spore forming, catalase positive, reduces nitrate, and hydrolyzes casein, gelatin, starch and esculin. B. licheniformis is found in soil, and is a food contaminant which pathogenic to both humans and animals. Source: NCI thesaurus link

Bacillus megaterium  NALT 14541

UN AgroVoc c_26386

A species of aerobic, Gram-positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is motile, spore forming, catalase positive, hydrolyzes casein, gelatin and starch, does not reduce nitrate, and utilizes citrate as its only carbon source. B. megaterium is found in soil and cow feces, associated with food-borne illness, pathogenic to humans and used to produce antimicrobial compounds. Source: NCI thesaurus link

Bacillus sphaericus  NALT 14569

UN AgroVoc c_26387

Bacillus stearothermophilus  NALT 14571

UN AgroVoc c_26388
**Bacillus subtilis**  NALT 14572  
UN AgroVoc c_15940  
A species of aerobic, Gram-positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is motile, spore forming, catalase and superoxide dismutase positive, indole negative, and reduces nitrate, hydrolyzes starch, and does not ferment glucose or lactose. B. subtilis is found in the soil and is used in the commercial production of enzymes and antimicrobial compounds, for testing sterilization techniques and can be used as a probiotic in healthy individuals, but can be pathogenic in those that are immunocompromised.  
Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the NIH NCBI link  
Look-up using CAS number link

**Bacillus thuringiensis**  NALT 14583  
UN AgroVoc c_761

**Bacitracin**  NALT 10424  
UN AgroVoc c_9042  
A complex of cyclic peptide antibiotics produced by the Tracy-I strain of Bacillus subtilis. The commercial preparation is a mixture of at least nine bacitracins with bacitracin A as the major constituent. It is used topically to treat open infections such as infected eczema and infected dermal ulcers. (source: NALT)  
A complex of cyclic polypeptide antibiotics, mainly bacitracin A, produced by spore-forming organisms belonging to the licheniformin group of the Bacillus subtilis with antibacterial activity. Bacitracin binds to C55-isoprenyl pyrophosphate, a biphosphate lipid transport molecule that carries the building blocks of the peptidoglycan bacterial cell wall. The binding interferes with the enzymatic dephosphorylation of the C55-isoprenyl pyrophosphate and prevents peptidoglycan synthesis, thereby inhibiting bacterial cell growth. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using CAS number link

**Back**  NALT 15056  
UN AgroVoc c_762  
The dorsal area between the base of the neck and the sacrum. Source: NCI thesaurus link

**Backcrossing**  NALT 15060  
UN AgroVoc c_763

**Backfat**  NALT 9157  
UN AgroVoc c_23992

**Bacopa**  NALT 15071  
UN AgroVoc c_331562

**Bacopa monnieri**  NALT 15073  
UN AgroVoc c_331521

**Bacteria**  NALT 2350  
UN AgroVoc c_765
Unicellular, prokaryotic organisms that reproduce by cell division and usually have cell walls; can be shaped like spheres, rods or spirals and can be found in virtually any environment. Source: NCI thesaurus link

**Bacterial antigens**  NALT 10356
UN AgroVoc c_9043

**Bacterial insecticides**  NALT 14973
UN AgroVoc c_27841

**bacterial proteins**  NALT 4197
UN AgroVoc c_24141

**Bacterial spores**  NALT 15199
UN AgroVoc c_35009

**Bacterial toxins**  NALT 15201
UN AgroVoc c_9047
Toxins or poisonous substances produced by bacteria. (source: NALT)

**Bacteriocins**  NALT 15196
UN AgroVoc c_33944
Substances elaborated by specific strains of bacteria that are lethal against other strains of the same or related species. They are protein or lipopolysaccharide-protein complexes used in taxonomy studies of bacteria. (source: NALT)

**Bacteriology**  NALT 15096
UN AgroVoc c_768
The branch of science that studies bacteria, especially in relation to medicine and agriculture. Source: NCI thesaurus link

**Bacteriophages**  NALT 15210
UN AgroVoc c_769
Viruses whose host are bacterial cells. (source: NALT)

**Bacteroidaceae**  NALT 2498
UN AgroVoc c_771
A taxonomic family of bacterium, in the phylum Bacteroidetes, which is usually found in the mucous membranes and alimentary tract of mammals. It includes the genera Bacteroides and Acetomicrobium, among others. Source: NCI thesaurus link

**Bacteroides**  NALT 15380
UN AgroVoc c_772
A genus of bacteria within the phylum Bacteroidetes consisting of gram-negative bacilli or coco-bacilli that comprise a major portion of the human normal flora, predominating in the intestinal tract. Source: NCI thesaurus link

**Bactrian camels**  NALT 15448
UN AgroVoc c_29139

**Bactris**  NALT 11996
UN AgroVoc c_3421
**Bactris gasipaes**  NALT 15455  
UN AgroVoc c_3422

**Bactrocera**  NALT 15468  
UN AgroVoc c_33628

**Bactrocera cucurbitae**  NALT 15471  
UN AgroVoc c_36020

**Bactrocera dorsalis**  NALT 15472  
UN AgroVoc c_36022

**Bactrocera latifrons**  NALT 15473  
UN AgroVoc c_37794

**Bactrocera oleae**  NALT 15474  
UN AgroVoc c_36023

**Bactrocera tryoni**  NALT 15475  
UN AgroVoc c_36024

**Baculoviridae**  NALT 15488  
UN AgroVoc c_9053

A family of double-stranded DNA viruses that replicate in lepidopteran larvae. Source: [NCI thesaurus link](#)

**Badgers**  NALT 15496  
UN AgroVoc c_774

**Bagasse**  NALT 15515  
UN AgroVoc c_776

**Bagridae**  NALT 15524  
UN AgroVoc c_40741

**Baikiaea**  NALT 15538  
UN AgroVoc c_26389

**Baikiaea plurijuga**  NALT 15539  
UN AgroVoc c_26390

**Baking**  NALT 15562  
UN AgroVoc c_786

**Balaena**  NALT 15578  
UN AgroVoc c_331194

**Balaenidae**  NALT 15579  
UN AgroVoc c_49021

Dbpedia Balaenidae

**Balaenopteridae**  NALT 15580  
UN AgroVoc c_49013
**Balanidae**  NALT 15602  
UN AgroVoc c_46186

**Balanites**  NALT 15605  
UN AgroVoc c_33298

**Balanites aegyptiaca**  NALT 15607  
UN AgroVoc c_33300

**Balanophoraceae**  NALT 15612  
UN AgroVoc c_26281

**Balantidium**  NALT 15614  
UN AgroVoc c_791

**Balanus**  NALT 15604  
UN AgroVoc c_792

**Balistes**  NALT 15630  
UN AgroVoc c_797

**Balistidae**  NALT 15631  
UN AgroVoc c_45961

**Balsaminaceae**  NALT 15666  
UN AgroVoc c_15496

**Bambermycin**  NALT 10190  
UN AgroVoc c_16114

Antibiotic complex obtained from Streptomyces bambergiensis containing mainly Moenomycins A and C. They are used as feed additives and growth promoters for poultry, swine, and cattle. (source: NALT)

**Bambusa**  NALT 12685  
UN AgroVoc c_803

**Bambusa vulgaris**  NALT 15700  
UN AgroVoc c_805

**Banana bunchy top virus**  NALT 15709  
UN AgroVoc c_32385

**Bananas**  NALT 15715  
UN AgroVoc c_806

**Bandicota**  NALT 15735  
UN AgroVoc c_33301

**Bandicota bengalensis**  NALT 15736  
UN AgroVoc c_33303

**Bangiaceae**  NALT 15742  
UN AgroVoc c_49785

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1.7. Glossary
Banisteriopsis  NALT 15756
  UN AgroVoc c_811
Banisteriopsis caapi  NALT 15758
  UN AgroVoc c_331427
Banksia  NALT 15773
  UN AgroVoc c_33306
Baphia  NALT 15789
  UN AgroVoc c_813
Barban  NALT 15805
  UN AgroVoc c_31261
Barbiturates  NALT 10275
  UN AgroVoc c_815
Barbus  NALT 15825
  UN AgroVoc c_24821
Barium  NALT 6419
  UN AgroVoc c_819
An element with atomic symbol Ba, atomic number 56, and atomic weight 137. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Bark  NALT 15839
  UN AgroVoc c_820
Barleria  NALT 1973
  UN AgroVoc c_24323
Barley  NALT 15848
  UN AgroVoc c_823
Use for barley in general; For barley as an animal feed, USE feed barley; For barley used for malting USE malting barley. (source: NALT)
Barley straw  NALT 15851
  UN AgroVoc c_15941
Barley yellow mosaic virus  NALT 15874
  UN AgroVoc c_34752
Barrows  NALT 15906
  UN AgroVoc c_32386
Male hogs that have been castrated before reaching sexual maturity. (source: NALT)

**Bartonella**  NALT 15910  
UN AgroVoc c_9090  
A genus of aerobic, Gram-negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Bartonellaceae. Source: NCI thesaurus link

**Bartonella henselae**  NALT 15922  
UN AgroVoc c_37063  
A species of aerobic, Gram-negative, rod shaped bacteria assigned to the phylum Proteobacteria. This species is non-motile, oxidase, catalase, indole, and urease negative and is nonhemolytic. B. henselae is the primary agent of cat scratch disease. Source: NCI thesaurus link

**Basal metabolism**  NALT 15961  
UN AgroVoc c_9091  
the basic essential metabolic processes required to keep the body alive, healthy and, where applicable, growing. (source: NALT)

**Basalt**  NALT 15963  
UN AgroVoc c_32387

**Basaltic soils**  NALT 15965  
UN AgroVoc c_832

**Basella**  NALT 15980  
UN AgroVoc c_833

**Basella alba**  NALT 15981  
UN AgroVoc c_834

**Basellaceae**  NALT 9854  
UN AgroVoc c_835

**Basidiobolus**  NALT 15991  
UN AgroVoc c_31775

**Basidiospores**  NALT 16011  
UN AgroVoc c_35121

**Basil**  NALT 16012  
UN AgroVoc c_9093

**Basin irrigation**  NALT 16016  
UN AgroVoc c_839  
An irrigation system in which a field or orchard is divided into basins which are filled with water. (source: NALT)

**Basophils**  NALT 16035  
UN AgroVoc c_9094

**Bathyplectes**  NALT 16074  
UN AgroVoc c_29907
Bathyplectes anurus  NALT 16075
UN AgroVoc c_29908

Bathyplectes curculionis  NALT 16076
UN AgroVoc c_29909

batters  NALT 425
UN AgroVoc c_50116

Battery cages  NALT 16091
UN AgroVoc c_843

Battery husbandry  NALT 16092
UN AgroVoc c_844

Bauhinia purpurea  NALT 16097
UN AgroVoc c_24605

Bauhinia variegata  NALT 16099
UN AgroVoc c_24606

Beaches  NALT 16124
UN AgroVoc c_850

Beak  NALT 16134
UN AgroVoc c_35010

Bean sprouts  NALT 16190
UN AgroVoc c_15889

The edible seedlings of bean plants, especially those of the mung bean. (source: NALT)

beans  NALT 16204
UN AgroVoc c_331566

Beauveria  NALT 16244
UN AgroVoc c_853

Beauveria bassiana  NALT 16245
UN AgroVoc c_32273

Bedding plants  NALT 9730
UN AgroVoc c_855

Beef  NALT 16289
UN AgroVoc c_861

Use for the meat of bovine animals; for the bovine animals raised for their meat USE beef cattle. (source: NALT)

The meat of domestic cattle. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link

**Beef cattle**  NALT 16293

UN AgroVoc c_862

Use for the bovine animals raised for their meat; for the meat of bovine animals USE beef. (source: NALT)

**Beers**  NALT 6132

UN AgroVoc c_864

A fermented, carbonated, alcoholic beverage containing one-half of 1 percent or more of alcohol by volume. Generally brewed from malt (mostly barley malt), hops (for flavoring) and water. Other cereals such as corn and rice may be used. (source: NALT)

**Beet pulp**  NALT 16343

UN AgroVoc c_27459

**Beet sugar**  NALT 16351

UN AgroVoc c_16474

**Begonia**  NALT 16433

UN AgroVoc c_15732

**Begonia hiemalis**  NALT 16436

UN AgroVoc c_32078

**Begoniaceae**  NALT 16434

UN AgroVoc c_10518

**Belonolaimidae**  NALT 16539

UN AgroVoc c_31007

**Belonolaimus**  NALT 16540

UN AgroVoc c_31008

**Belonolaimus longicaudatus**  NALT 16541

UN AgroVoc c_31009

**Bembidion**  NALT 16557

UN AgroVoc c_30013

**Bemisia**  NALT 6290

UN AgroVoc c_15943

**Bemisia argentifolii**  NALT 16559

UN AgroVoc c_36596

**Bemisia tabaci**  NALT 16560

UN AgroVoc c_30755

**Benazolin**  NALT 16567

UN AgroVoc c_31262

**Bendiocarb**  NALT 16570

UN AgroVoc c_31263
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NALT Code</th>
<th>UN AgroVoc Link</th>
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<tbody>
<tr>
<td>Beneficial organisms</td>
<td>NALT 16597</td>
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<td>Benincasa hispida</td>
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<td>Benodanil</td>
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<td>Benomyl</td>
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<td>Bensulfuron</td>
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<td>NALT 6177</td>
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<td>Benzalkonium chloride</td>
<td>NALT 7960</td>
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<td>Benzene</td>
<td>NALT 12304</td>
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</table>

**Benzaldehyde**

A color liquid aldehyde with an almond odor. Benzaldehyde is found in many foods and is widely used in the chemical industry. In the chemical industry, this agent is used in the preparation of various aniline dyes, perfumes, flavorings, and pharmaceuticals. In addition, benzaldehyde has been associated with amygdalin (laetrile), since one of amygdalins breakdown products is benzaldehyde. (NCI) Source: [NCI thesaurus link](#)

Reference: [FDA UNII link](#)

Look-up using [Google link](#)

Rotate the 3-D representation

Look-up synonyms

Look-up using [CAS number link](#)

**Benzene**

A clear, colorless, highly flammable and volatile, liquid aromatic hydrocarbon with a gasoline-like odor. Benzene is found in crude oils and as a by-product of oil-refining processes. In industry benzene is used as a solvent, as a chemical intermediate, and is used in the synthesis of numerous chemicals. Exposure to this substance causes neurological symptoms and affects the bone marrow causing aplastic anemia, excessive bleeding and damage to the immune system. Benzene is a known human carcinogen and is linked to an increased risk of developing lymphatic and hematopoietic cancers, acute myelogenous leukemia, as well as chronic lymphocytic leukemia. (NCI05) Source: [NCI thesaurus link](#)

Reference: [FDA UNII link](#)
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Benzimidazoles**  NALT 5998  
UN AgroVoc c_880

**Benzoates**  NALT 16655  
UN AgroVoc c_28255

**Benzoic acid**  NALT 16657  
UN AgroVoc c_881

**Benzopyrene**  NALT 12305  
UN AgroVoc c_28256

**Benzoylphenylureas**  NALT 7681  
UN AgroVoc c_33945

**Benzylpenicillin**  NALT 16677  
UN AgroVoc c_9231

A penicillin derivative commonly used in the form of its sodium or potassium salts in the treatment of a variety of infections. It is effective against most gram-positive bacteria and against gram-negative coccii. It has also been used as an experimental convulsant because of its actions on gamma-aminobutyric acid mediated synaptic transmission. (source: NALT)

**Berberidaceae**  NALT 16683  
UN AgroVoc c_882  
Dbpedia Berberidaceae

**Berberis**  NALT 15821  
UN AgroVoc c_9232

**Bergamot orange**  NALT 16720  
UN AgroVoc c_9233

**Bergenia**  NALT 16724  
UN AgroVoc c_26391

**Bertholletia**  NALT 16760  
UN AgroVoc c_885

**Bertholletia excelsa**  NALT 16761  
UN AgroVoc c_886

**Beryciformes**  NALT 16763  
UN AgroVoc c_42051  
Dbpedia Beryciformes
Beryllium  NALT 6420
  UN AgroVoc c_887
  AN element with atomic symbol Be, atomic number 4, and atomic weight 9.01 Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
Berytidae  NALT 16765
  UN AgroVoc c_30647
Besnoitia  NALT 16775
  UN AgroVoc c_888
Beta  NALT 16784
  UN AgroVoc c_889
Beta galactosidase  NALT 16823
  UN AgroVoc c_23993
Beta glucosidase  NALT 16832
  UN AgroVoc c_29494
Beta vulgaris  NALT 16370
  UN AgroVoc c_890
Betaine  NALT 2783
  UN AgroVoc c_26760
Betel  NALT 11987
  UN AgroVoc c_891
    A masticatory (also known as betel quid) used in India and Southeast Asia, consisting of a piece of Areca nut (sometimes inaccurately called the betel nut) rolled up with mineral lime in a leaf of Piper betle (betel leaf). It is a stimulant and astringent, with a wide range of medicinal properties. (source: NALT)
Bethylidae  NALT 16912
  UN AgroVoc c_29828
Betula  NALT 16919
  UN AgroVoc c_892
Betula alleghaniensis  NALT 16921
  UN AgroVoc c_26393
Betula maximowicziana  NALT 16925
  UN AgroVoc c_26395
Betula nana  NALT 16926
  UN AgroVoc c_26396
Betula nigra  NALT 16927  
UN AgroVoc c_26397

Betula papyrifera  NALT 16929  
UN AgroVoc c_26398

Betula pendula  NALT 16930  
UN AgroVoc c_26399

Betula platyphylla  NALT 16931  
UN AgroVoc c_26401

Betula pubescens  NALT 16933  
UN AgroVoc c_26402

Betulaceae  NALT 6771  
UN AgroVoc c_893

Beverages  NALT 409  
UN AgroVoc c_896

Bibionidae  NALT 17003  
UN AgroVoc c_30443

Bicarbonates  NALT 7951  
UN AgroVoc c_898

   Includes inorganic salts and bicarbonate ions. (source: NALT)

Bidens pilosa  NALT 13242  
UN AgroVoc c_26405

Bidyanus bidyanus  NALT 17035  
UN AgroVoc c_42506

Biennials  NALT 16260  
UN AgroVoc c_899

Bifidobacterium  NALT 17039  
UN AgroVoc c_23898

   A genus of anaerobic, Gram-positive, bifid shaped bacterium assigned to the phylum Actinobacteria and the family Bifidobacteriaceae. Source: NCI thesaurus link

bigleaf maple  NALT 2203  
UN AgroVoc c_29086

Bignoniaceae  NALT 4127  
UN AgroVoc c_900

Bile  NALT 17153  
UN AgroVoc c_902

1.7. Glossary
Fluid composed of waste products, bile acids, salts, cholesterol, and electrolytes. It is secreted by the liver parenchyma and stored in the gallbladder. Source: NCI thesaurus link

**Bile acids** NALT 17156
UN AgroVoc c_903

**Bile ducts** NALT 17169
UN AgroVoc c_904

**Bile salts** NALT 17164
UN AgroVoc c_905

**Bilirubin** NALT 17172
UN AgroVoc c_16164
A dark orange, yellow pigment that is the product of the breakdown of iron in the blood; it is conjugated in the liver and excreted in the bile. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

**Binding proteins** NALT 878
UN AgroVoc c_33946
Use for proteins which bind other substances such as ions, sugars, nucleic acids or amino acids; For binding proteins which bind to a substance and provide transport in the blood plasma or cell membrane USE transport proteins. (source: NALT)

**Bioaccumulation** NALT 17223
UN AgroVoc c_32389
The net accumulation of a substance by an organism as a result of uptake from and or all routes of exposure. (source: NALT)

**Bioavailability** NALT 10477
UN AgroVoc c_32390
The availability of a substance to be taken up and used by living biological organisms. (source: NALT)

The rate and extent to which the active ingredient or active moiety is absorbed from a drug product and becomes available at the site of action. For drug products that are not intended to be absorbed into the bloodstream, bioavailability may be assessed by measurements intended to reflect the rate and extent to which the active ingredient or active moiety becomes available at the site of action (21CFR320.1). Source: NCI thesaurus link

**Biochemical compounds** NALT 7812
UN AgroVoc c_92336

**Biochemical pathways** NALT 17280
UN AgroVoc c_909
Biochemical polymorphism  NALT 17292
UN AgroVoc c_16071
Biochemical variations found in different individuals in a species, or within an individual organism. (source: NALT)

biochemistry  NALT 17227
UN AgroVoc c_910
The study of the chemical substances and vital processes occurring in living organisms. Source: NCI thesaurus link

Bioclimatology  NALT 17304
UN AgroVoc c_9260
The effects of climate on living organisms. (source: NALT)

Biodegradability  NALT 17308
UN AgroVoc c_28259

Biodegradation  NALT 17311
UN AgroVoc c_9261

Biodiversity  NALT 5559
UN AgroVoc c_33949

Bioenergy  NALT 17247
UN AgroVoc c_16526
The term “bioenergy” means biomass used in the production of energy (electricity; liquid, solid, and gaseous fuels; and heat). (source: NALT)

Biofuels  NALT 17321
UN AgroVoc c_27465

Biogas  NALT 6479
UN AgroVoc c_9262

Biogenic amines  NALT 2519
UN AgroVoc c_32044

biogeochemical cycle  NALT 17315
UN AgroVoc c_32983
Library of Congress sh85014144

Biogeography  NALT 17385
UN AgroVoc c_915
The study of the distribution of organisms around the globe, and the factors that influence that distribution. (source: NALT)

Bioinformatics  NALT 17402
UN AgroVoc c_37958
A field of biology concerned with the development of techniques for the collection and manipulation of biological data, and the use of such data to make biological discoveries or predictions. This field encompasses all
computational methods and theories applicable to molecular biology and areas of computer-based techniques for solving biological problems including manipulation of models and datasets. (source: NALT)

Bioinformatics derives knowledge from computer analysis of biological data. These can consist of the information stored in the genetic code, but also experimental results from various sources, patient statistics, and scientific literature. Research in bioinformatics includes method development for storage, retrieval, and analysis of the data. Bioinformatics is a rapidly developing branch of biology and is highly interdisciplinary, using techniques and concepts from informatics, statistics, mathematics, chemistry, biochemistry, physics, and linguistics. It has many practical applications in different areas of biology and medicine. (M. Nilges and Jens P. Linge, Unite de Bio-informatique Structurale, Institut Pasteur, Paris) Source: NCI thesaurus link

Biology in soil NALT 17420

Biological competition NALT 359

Biological control NALT 13836

Biological control agents NALT 14974

Biological development NALT 1764

Biological resources NALT 17323

Biological rhythms NALT 115

Biomass NALT 15955

Biomphalaria NALT 17488

Biomphalaria glabrata NALT 17490

Biopesticides NALT 17220

Techniques where DNA is delivered directly into organelles at high speed using projectiles coated with nucleic acid, shot from a helium-powered gun (gene gun). (source: NALT)

The simultaneous demand by two or more organisms or species for a necessary resource in their environment (e.g., nutrients, space, water). (source: NALT)

The total amount of organic matter present in an organism, population, ecosystem or given area. (source: NALT)
Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, microorganisms, and certain minerals. (source: NALT)

**Biophysics**  NALT 17506

UN AgroVoc c_24389

Physics as applied to biological problems; an interdisciplinary science that applies theories and methods of the physical sciences to questions of biology. Source: NCI thesaurus link

**Biopolymers**  NALT 17507

UN AgroVoc c_27468

**Biopsy**  NALT 17508

UN AgroVoc c_16102

The removal of tissue specimens or fluid from the living body for microscopic examination, performed to establish a diagnosis. Source: NCI thesaurus link

**Bioremediation**  NALT 17318

UN AgroVoc c_35028

**Bioresmethrin**  NALT 17513

UN AgroVoc c_31272

**Biosafety**  NALT 17514

UN AgroVoc c_35030

**Biosteres**  NALT 17529

UN AgroVoc c_29834

**Biosynthesis**  NALT 17535

UN AgroVoc c_928

Used for the anabolic formation of chemical substances in organisms, in living cells, or by subcellular fractions. (source: NALT)

Formation of a chemical compound by enzymes, either in the organism (in vivo) or by fragments or extracts of cells (in vitro). Source: NCI thesaurus link

**Biosynthesis**  NALT 17535

UN AgroVoc c_928

Used for the anabolic formation of chemical substances in organisms, in living cells, or by subcellular fractions. (source: NALT)

Formation of a chemical compound by enzymes, either in the organism (in vivo) or by fragments or extracts of cells (in vitro). Source: NCI thesaurus link

**Biotin**  NALT 14213

UN AgroVoc c_931

Hexahydro-2-oxo-1H-thieno(3,4-d)imidazole-4-pentanoic acid. Growth factor present in minute amounts in every living cell. It occurs mainly bound to proteins or polypeptides and is abundant in liver, kidney, pancreas, yeast, and milk. The biotin content of cancerous tissue is higher than that of normal tissue. Source: NCI thesaurus link

Reference: FDA UNII link

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1.7. Glossary
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Biotite  NALT 17550
UN AgroVoc c_32393

biotopes  NALT 17551
UN AgroVoc c_932

Biotypes  NALT 17552
UN AgroVoc c_16166

Populations of organisms sharing an identical genotype. (source: NALT)

Biphenyl  NALT 12306
UN AgroVoc c_933

Bipolaris  NALT 17562
UN AgroVoc c_31546

Bird control  NALT 17592
UN AgroVoc c_934

Bird diseases  NALT 9123
UN AgroVoc c_9274

Use for diseases of birds; For diseases of chickens, turkeys and other birds raised for their meat or eggs for
human consumption USE poultry diseases. (source: NALT)

birds  NALT 106
UN AgroVoc c_935

Includes common types of birds; For birds as livestock USE poultry; For taxonomic classification SEE Aves.
(source: NALT)

Birnaviridae  NALT 15882
UN AgroVoc c_27131

Birth rate  NALT 17620
UN AgroVoc c_936

The ratio of live births in an area to the population of that area, expressed per 1000 people in the population per
year. Source: NCI thesaurus link

Birth weight  NALT 17622
UN AgroVoc c_16115

In humans, the weight of a neonate measured within one hour after birth. The factors influencing the birth
weight include but not limited to infant sex, racial and ethnic group, maternal size and health status, concurrent
diseases, parity, and nutrition, pregnancy environment and conditions, e.g. altitude of geographic area. Source:
NCI thesaurus link
Biscuits  NALT 15554
        UN AgroVoc c_16475

Bismuth  NALT 17629
        UN AgroVoc c_938
        An element with atomic symbol Bi, atomic number 83, and atomic weight 208.98. Source: NCI thesaurus link
        Reference: FDA UNII link
        Look-up using Google link
        Rotate the 3-D representation
        Look-up synonyms
        Look-up using CAS number link

Bison  NALT 7151
        UN AgroVoc c_939
        Use for the American bison; for the domesticated Asian water buffalo USE buffaloes; for the wild African
        buffalo USE Syncerus caffer. (source: NALT)

Bitertanol  NALT 17649
        UN AgroVoc c_36902

Bitter pit  NALT 11311
        UN AgroVoc c_24822
        Pits developing on apple fruits which result in a bitter tasting apple. The cause is due to a deficiency of calcium
        and/or an excess of potassium or magnesium within the apple fruit itself, and not necessarily due to soil fertility
        or whole plant nutrient status. (source: NALT)

Bivalvia  NALT 636
        UN AgroVoc c_942

Bixa  NALT 17708
        UN AgroVoc c_32846

Bixa orellana  NALT 17710
        UN AgroVoc c_943

Bixaceae  NALT 17709
        UN AgroVoc c_944

Bjerkandera  NALT 10853
        UN AgroVoc c_31717

Blaberidae  NALT 17715
        UN AgroVoc c_30411

Blaberus  NALT 17718
        UN AgroVoc c_27132

Blaberus craniifer  NALT 17724
        UN AgroVoc c_30412

1.7. Glossary
Blaberus discoidalis  NALT 17725  
UN AgroVoc c_30413

Black currants  NALT 17748  
UN AgroVoc c_945

Blackberries  NALT 17839  
UN AgroVoc c_947

Bladder  NALT 17878  
UN AgroVoc c_949

The distensible sac-like organ that functions as a reservoir of urine, collecting from the kidneys and eliminating via the urethra. Source: NCI thesaurus link

Blastocystis  NALT 8007  
UN AgroVoc c_31776

Blastomyces  NALT 17944  
UN AgroVoc c_952

Blatta  NALT 17955  
UN AgroVoc c_30422

Blatta orientalis  NALT 17957  
UN AgroVoc c_30423

Blattaria  NALT 17717  
UN AgroVoc c_1710

Blattella  NALT 17970  
UN AgroVoc c_30417

Blattella germanica  NALT 17971  
UN AgroVoc c_30418

Blattellidae  NALT 17967  
UN AgroVoc c_30416

Blattidae  NALT 17956  
UN AgroVoc c_30421

Blighia  NALT 18023  
UN AgroVoc c_955

Blighia sapida  NALT 18025  
UN AgroVoc c_956

Blight  NALT 942  
UN AgroVoc c_957

Blindness  NALT 18027  
UN AgroVoc c_958
The lack of vision. It is caused by neurological or physiological factors. Source: NCI thesaurus link

**Blissus** NALT 18034
UN AgroVoc c_30659

**Blissus insularis** NALT 18044
UN AgroVoc c_30660

**Blissus leucopterus** NALT 18045
UN AgroVoc c_30661

**Bloat** NALT 916
UN AgroVoc c_9316

A severe distension of the abdomen caused by gas; usually in ruminant animals. The problem is greatest with sudden access to lush pastures or vegetative stage alfalfa–foods that are too easily digested. (source: NALT)

**blood** NALT 18059
UN AgroVoc c_959

A liquid tissue; its major function is to transport oxygen throughout the body. It also supplies the tissues with nutrients, removes waste products, and contains various components of the immune system defending the body against infection. Several hormones also travel in the blood. Source: NCI thesaurus link

**Blood cells** NALT 18061
UN AgroVoc c_960

**Blood circulation** NALT 18089
UN AgroVoc c_961

The movement of blood to and from the heart and to the rest of the body’s organs, tissues, and cells through the network of arteries, veins, and capillaries. (NCI) Source: NCI thesaurus link

**Blood coagulation** NALT 10264
UN AgroVoc c_962

**Blood composition** NALT 18076
UN AgroVoc c_963

**Blood gases** NALT 18086
UN AgroVoc c_35029

**Blood group antigens** NALT 10357
UN AgroVoc c_9319

Sets of cell surface antigens located on blood cells. They are usually membrane glycoproteins or glycolipids that are antigenically distinguished by their carbohydrate moieties. (source: NALT)

**blood groups** NALT 18063
UN AgroVoc c_965

The genetically determined classification of blood based on the presence or absence of different antigens located on erythrocytes. (source: NALT)

**Blood lipids** NALT 18088
UN AgroVoc c_4358
Blood meal  NALT 9043
UN AgroVoc c_966
Meal produced from fresh animal blood which is high in lysine content (about 9% of the crude protein.) Use for the dried, ground animal blood that is made into meal; for the blood meals of hematophagous organisms USE hematophagy. (source: NALT)

blood pH  NALT 2753
UN AgroVoc c_33956

Blood plasma  NALT 18062
UN AgroVoc c_9320

Blood pressure  NALT 18146
UN AgroVoc c_967
The pressure of the circulating blood against the walls of the blood vessels. Source: NCI thesaurus link

Blood protein disorders  NALT 18150
UN AgroVoc c_969

Blood proteins  NALT 3963
UN AgroVoc c_970
Proteins that are present in blood serum, including serum albumin; blood coagulation factors; and many other types of proteins. (source: NALT)

Blood sampling  NALT 18122
UN AgroVoc c_26873

Blood serum  NALT 18139
UN AgroVoc c_9323

Blood veins  NALT 18176
UN AgroVoc c_33940

Blood vessels  NALT 12438
UN AgroVoc c_971

Blood volume  NALT 18066
UN AgroVoc c_972
Volume of circulating blood. It is the sum of the plasma volume and erythrocyte volume. (source: NALT)

Blueberries  NALT 18248
UN AgroVoc c_974

Bluetongue  NALT 18272
UN AgroVoc c_976
An arthropod-borne reoviral infection, chiefly of sheep but also affecting cattle and wild ruminants, characterized by a swollen blue tongue and often by inflammation of sensitive laminae of the feet and coronet. (source: NALT)
Bluetongue virus  NALT 18273
                      UN AgroVoc c_9342
                      The type species of Orbivirus causing a serious disease in sheep, especially lambs. It may also infect wild ruminants and other domestic animals. (source: NALT)
Blumea  NALT 13244
                             UN AgroVoc c_33307
Blumeria  NALT 18275
                      UN AgroVoc c_37085
Blumeriella  NALT 18278
                      UN AgroVoc c_24324
Boars  NALT 18291
                      UN AgroVoc c_977
                      An adult, uncastrated male pig, typically weighing about 500 pounds. (source: NALT)
body cavities  NALT 1610
                      UN AgroVoc c_978
body condition  NALT 116
                      UN AgroVoc c_24390
body conformation  NALT 9321
                      UN AgroVoc c_29251
body fluids  NALT 49
                      UN AgroVoc c_979
body measurements  NALT 18354
                      UN AgroVoc c_980
                      For animals; for humans USE anthropometric measurements. (source: NALT)
body regions  NALT 8590
                      UN AgroVoc c_982
body size  NALT 117
                      UN AgroVoc c_35330
                      Use for animals; for humans USE anthropometric measurements. (source: NALT)
body temperature  NALT 118
                      UN AgroVoc c_983
body water  NALT 18332
                      UN AgroVoc c_4768
body weight  NALT 119
                      UN AgroVoc c_15846
                      The measure of the weight of a person’s body in standard units, such as pound or kilogram. (NCI) Source: NCI thesaurus link
Wetlands that accumulate appreciable peat deposits. Bogs depend primarily on precipitation for their water source, and are usually acidic and rich in plant residue with a conspicuous mat of living green moss. (source: NALT)
Bonamia ostreae  NALT 18488  
UN AgroVoc c_32080

Bone diseases  NALT 18500  
UN AgroVoc c_996

Bone formation  NALT 18512  
UN AgroVoc c_997

Bone marrow  NALT 9528  
UN AgroVoc c_998  
The tissue occupying the spaces of bone. It consists of blood vessel sinuses and a network of hematopoietic cells which give rise to the red cells, white cells, and megakaryocytes. Source: NCI thesaurus link

Bone meal  NALT 18529  
UN AgroVoc c_1000  
Animal meal produced from bones that are steamed under pressure and then ground. It contains 1.5-2.5% nitrogen, 12-15% phosphorus, and 20-34% calcium. (source: NALT)

Bones  NALT 18497  
UN AgroVoc c_1001

Boning  NALT 18556  
UN AgroVoc c_1002

Bonnemaisoniaceae  NALT 13001  
UN AgroVoc c_49790

Bonsai  NALT 18571  
UN AgroVoc c_24823  
The art and practice of growing miniature trees, shrubs or landscapes in shallow trays or pots by rigorous training techniques and pruning of roots and branches. (source: NALT)

Boophilus  NALT 14441  
UN AgroVoc c_1006

Boophilus annulatus  NALT 18581  
UN AgroVoc c_27133

Boophilus decoloratus  NALT 18582  
UN AgroVoc c_27134

Boophilus microplus  NALT 18583  
UN AgroVoc c_23899

Borage  NALT 18601  
UN AgroVoc c_26910

Boraginaceae  NALT 6482  
UN AgroVoc c_1007

1.7.  Glossary
**Borago officinalis**  NALT 18597

UN  AgroVoc  c_26411

The oil extracted from the seeds of Borago officinalis. Borage oil has anti-inflammatory properties and is used in skincare preparations. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link

**Borassus**  NALT 11997

UN  AgroVoc  c_1008

**Borassus flabellifer**  NALT 18619

UN  AgroVoc  c_1010

**Borates**  NALT 18623

UN  AgroVoc  c_35036

**Borax**  NALT 18622

UN  AgroVoc  c_1011

**Border disease**  NALT 18627

UN  AgroVoc  c_16393

Congenital disorder of sheep and goats caused by Border disease virus. The disease is characterized by infertility, abortion and abnormalities in lambs. (source: NALT)

**Border irrigation**  NALT 18631

UN  AgroVoc  c_1012

An irrigation system for sloping land in which parallel levees are built and the area between (source: NALT)

**Bordetella**  NALT 6037

UN  AgroVoc  c_1013

A genus of aerobic, Gram-negative, coccobacilli shaped bacterium assigned to the phylum Proteobacteria and the family Alcaligenaceae. Source: NCI thesaurus link

**Bordetella avium**  NALT 18633

UN  AgroVoc  c_34484

A species of strictly aerobic, Gram-negative, capsulated rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile using 5 to 8 peritrichous flagella, oxidase, urease, and indole negative, does not reduce nitrate, and does not hydrolyze esculin or gelatin. B. avium is found in avian species where it causes bordetellosis, but is nonpathogenic in humans. Source: NCI thesaurus link

**Bordetella bronchiseptica**  NALT 6049

UN  AgroVoc  c_16386

A species of aerobic, Gram-negative, coccobacilli shaped bacteria assigned to the phylum Proteobacteria. This species is motile and urease positive in MIU culture media, oxidase, catalase, and citrate positive, indole negative, does not produce hydrogen sulfide and sodium citrate is its only carbon source B. bronchispetica is found in
the respiratory tract of domestic and wild animals where it is pathogenic, but rarely is found in humans. Source: NCI thesaurus link

**Boreal forests** NALT 18642
UN AgroVoc c_1014
Dbpedia Boreal forests

General term for northern coniferous forests. (source: NALT)

**Boreogadus** NALT 18653
UN AgroVoc c_1015

**Boric acid** NALT 18626
UN AgroVoc c_1016

A weakly acidic hydrate of boric oxide with mild antiseptic, antifungal, and antiviral properties. The exact mechanism of action of boric acid is unknown; generally cytotoxic to all cells. It is used in the treatment of yeast infections and cold sores. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Borna disease** NALT 18661
UN AgroVoc c_16693
Library of Congress sh2002000829

An encephalomyelitis of horses, sheep and cattle caused by Borna disease virus. (source: NALT)

**Borna disease virus** NALT 11825
UN AgroVoc c_18805
Library of Congress sh2002000824

**Boron** NALT 18678
UN AgroVoc c_1018

An element with atomic symbol B, atomic number 5, and atomic weight 11. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Borrelia** NALT 18688
UN AgroVoc c_1019

A genus of aerobic, Gram-negative, spiral shaped bacteria assigned to the phylum Spirochaetes and the family Spirochaetaceae. Source: NCI thesaurus link
**Borrelia burgdorferi**  NALT 18695
- UN AgroVoc c_33630
- A species of bacteria within the phylum Spirochaetes that is the causative agent of Lyme disease. Source: NCI thesaurus link
- Reference: FDA UNII link
- Reference the NIH NCBI link

**Bos javanicus**  NALT 15786
- UN AgroVoc c_26911

**Bostrichidae**  NALT 18768
- UN AgroVoc c_30001

**Botanical composition**  NALT 18783
- UN AgroVoc c_15945
- The percentage of plant species that comprise a plant community. (source: NALT)

**Botanical gardens**  NALT 18781
- UN AgroVoc c_1020

**Botanical insecticides**  NALT 18787
- UN AgroVoc c_1021

**Botanical pesticides**  NALT 17496
- UN AgroVoc c_27844

**Botany**  NALT 162
- UN AgroVoc c_1023
- Botany; the branch of biology that studies plants. Source: NCI thesaurus link

**Bothidae**  NALT 18798
- UN AgroVoc c_45562

**Bothrioccephalidae**  NALT 18800
- UN AgroVoc c_31948

**Bothrioccephalus**  NALT 18801
- UN AgroVoc c_1026

**Bothriochloa**  NALT 18803
- UN AgroVoc c_1024

**Bothriochloa insculpta**  NALT 18805
- UN AgroVoc c_1025

**Bothriochloa ischaemum**  NALT 18806
- UN AgroVoc c_35533

**Botryococcus**  NALT 18827
- UN AgroVoc c_27471
Botryodiplodia  NALT 18829
  UN AgroVoc c_1028
Botryodiplodia theobromae  NALT 18830
  UN AgroVoc c_36052
Botryosphaeria  NALT 18838
  UN AgroVoc c_23900
Botryosphaeria dothidea  NALT 18839
  UN AgroVoc c_37639
Botryosphaeria obtusa  NALT 18840
  UN AgroVoc c_36082
Botrytis  NALT 18848
  UN AgroVoc c_1029
Botrytis allii  NALT 18850
  UN AgroVoc c_26412
Botrytis cinerea  NALT 18851
  UN AgroVoc c_26413
Botrytis fabae  NALT 18852
  UN AgroVoc c_26414
Botrytis tulipae  NALT 18853
  UN AgroVoc c_26415
Bottomland soils  NALT 18873
  UN AgroVoc c_1033
Botulism  NALT 15156
  UN AgroVoc c_1034
A serious bacterial infection caused by botulinum toxin which is produced by Clostridium botulinum. Patients are infected usually by ingestion of contaminated food or wound contamination. It leads to muscle paralysis which may result in respiratory failure. Source: NCI thesaurus link
Bougainvillea  NALT 18878
  UN AgroVoc c_32081
Bouteloua  NALT 18797
  UN AgroVoc c_1037
Bouteloua curtipendula  NALT 18889
  UN AgroVoc c_36627
Bouteloua gracilis  NALT 13591
  UN AgroVoc c_36413
Bouvardia  NALT 18893
  UN AgroVoc c_33310

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Bovicola  NALT 18894  
UN AgroVoc c_9376

Bovicola bovis  NALT 18896  
UN AgroVoc c_30845

Bovidae  NALT 4585  
UN AgroVoc c_1038

Taxonomic family which includes domestic cattle, goats, and sheep. Source: NCI thesaurus link

Bovine adenovirus  NALT 18925  
UN AgroVoc c_16394

Bovine ephemeral fever virus  NALT 18948  
UN AgroVoc c_16395

Bovine herpesvirus  NALT 18952  
UN AgroVoc c_16396

Bovine immunodeficiency virus  NALT 18960  
UN AgroVoc c_23012

Bovine mastitis  NALT 18973  
UN AgroVoc c_9378

An infection and inflammation of the udder in cows. (source: NALT)

Bovine papillomavirus  NALT 18976  
UN AgroVoc c_16397

Bovine papillomavirus is no longer valid in the 8th Report of the International Committee on the Taxonomy of Viruses. Use for indexing only when the specific type is not known. (source: NALT)

A group of double-stranded DNA viruses that cause warts on the skin and alimentary track of cattle and other mammals. Source: NCI thesaurus link

Bovine respiratory syncytial virus  NALT 18988  
UN AgroVoc c_16398

Bovine spongiform encephalopathy  NALT 18992  
UN AgroVoc c_33558

A transmissible encephalopathy of cattle characterized by a spongiform structure of the brain tissue, and associated with abnormal prion proteins in the brain. (source: NALT)

Bovine viral diarrhoea  NALT 18975  
UN AgroVoc c_16696

Acute disease of cattle caused by the bovine viral diarrhea viruses. Often mouth ulcerations are the only sign but fever, diarrhea, drop in milk yield, and loss of appetite are also seen. Severity of clinical disease varies and is strain dependent. Outbreaks are characterized by low morbidity and high mortality. (source: NALT)

Bowstring hemp  NALT 5053  
UN AgroVoc c_9380
Brachycaudus  NALT 10721  
UN AgroVoc c_1047

Brachycaudus helichrysi  NALT 10819  
UN AgroVoc c_30766

Brachycolus  NALT 10722  
UN AgroVoc c_30768

Brachycorynella  NALT 10723  
UN AgroVoc c_34420

Brachycorynella asparagi  NALT 19072  
UN AgroVoc c_33922

Brachymeria  NALT 19083  
UN AgroVoc c_29856

Brachymeria intermedia  NALT 19085  
UN AgroVoc c_29857

Brachystegia  NALT 19120  
UN AgroVoc c_1048

Brackish water  NALT 19126  
UN AgroVoc c_1049

Bracon  NALT 19129  
UN AgroVoc c_27135

Bracon hebetor  NALT 19132  
UN AgroVoc c_29837

Bracon mellitor  NALT 19133  
UN AgroVoc c_29838

Braconidae  NALT 5032  
UN AgroVoc c_29830

Bracts  NALT 19193  
UN AgroVoc c_1052

Bradykinin  NALT 19195  
UN AgroVoc c_16663

A nonapeptide kinin and neuropeptide involved in blood pressure regulation and pain receptor stimulation.  
Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms

1.7. Glossary
Look-up using CAS number link

**Bradyrhizobium**  NALT 19200
  UN AgroVoc c_27138

**Bradyrhizobium japonicum**  NALT 19202
  UN AgroVoc c_34485

**Bradyrbia**  NALT 19212
  UN AgroVoc c_34428

**Brain**  NALT 9337
  UN AgroVoc c_1053

An organ composed of grey and white matter containing billions of neurons that is the center for intelligence and reasoning. It is protected by the bony cranium. Source: [NCI thesaurus link](#)

**Braising**  NALT 19239
  UN AgroVoc c_9391

**Brama**  NALT 19240
  UN AgroVoc c_1055

**Bramidae**  NALT 19241
  UN AgroVoc c_42845

**Bran**  NALT 15857
  UN AgroVoc c_1056

**Branch**  NALT 19254
  UN AgroVoc c_23995

**Branching**  NALT 19258
  UN AgroVoc c_1057

**Branchiomyces**  NALT 19263
  UN AgroVoc c_31834

**Branchiopoda**  NALT 12393
  UN AgroVoc c_1058

**Branchwood**  NALT 19250
  UN AgroVoc c_28041

**Brassica**  NALT 19293
  UN AgroVoc c_1060

Dbpedia Brassica
Library of Congress sh86001831

**Brassica carinata**  NALT 1872
  UN AgroVoc c_33311
Brassica napus  NALT 19319
  UN AgroVoc c_1066
Brassica nigra  NALT 17784
  UN AgroVoc c_1067
Brassica oleracea  NALT 19320
  UN AgroVoc c_1068
brassinolide  NALT 19605
  UN AgroVoc c_35038
Brassinosteroids  NALT 19606
  UN AgroVoc c_35037
Braula  NALT 16282
  UN AgroVoc c_30447
Braulidae  NALT 19611
  UN AgroVoc c_30446
Brazil nuts  NALT 16762
  UN AgroVoc c_9410
Breadmaking  NALT 15574
  UN AgroVoc c_1072
Breakfast cereals  NALT 456
  UN AgroVoc c_1073
Bream  NALT 19664
  UN AgroVoc c_1075
Breast feeding  NALT 19669
  UN AgroVoc c_9418
  Use for feeding human infants by breast; for the production of milk by humans USE human lactation (source: NALT)
  The nursing of an infant at the mother’s breast. Source: NCI thesaurus link
breeding  NALT 9023
  UN AgroVoc c_49902
  The production of animals or plants by selective pairing. Source: NCI thesaurus link
Breeding lines  NALT 19697
  UN AgroVoc c_29226
breeding methods  NALT 19692
  UN AgroVoc c_1079
Breeding seasons  NALT 9459
  UN AgroVoc c_1080

1.7. Glossary
Breeding stock  NALT 19693
   UN AgroVoc c_16206
   Plants or animals used in breeding, selected for traits desired in producing the next generation. (source: NALT)

breeding value  NALT 19694
   UN AgroVoc c_16117
   The calculated value expressing the ability of a parent to pass on superior traits to its offspring and is used for ranking breeding performance of the parent relative to the population average. (source: NALT)

Bremia  NALT 19708
   UN AgroVoc c_15946

Bremia lactucae  NALT 19709
   UN AgroVoc c_34699

Brevibacterium  NALT 19735
   UN AgroVoc c_15947
   A genus of aerobic, Gram-positive, rod shaped bacteria assigned to the phylum Actinobacteria and the family Brevibacteriaceae. Source: NCI thesaurus link

Brevibacterium linens  NALT 15304
   UN AgroVoc c_24325

Brevicoryne  NALT 10724
   UN AgroVoc c_1083

Brevicoryne brassicae  NALT 19780
   UN AgroVoc c_30769

Brevipalpus  NALT 19786
   UN AgroVoc c_8547

Brevipalpus phoenicis  NALT 19788
   UN AgroVoc c_30940

Brevoortia  NALT 19790
   UN AgroVoc c_1084

Brevoortia tyrannus  NALT 19791
   UN AgroVoc c_39065

Brewers grains  NALT 19812
   UN AgroVoc c_1085

Brewing  NALT 6139
   UN AgroVoc c_1087

Bridelia  NALT 19836
   UN AgroVoc c_32082

Broadleaved evergreen forests  NALT 19888
   UN AgroVoc c_1099
Broccoli  NALT 19485
    UN AgroVoc c_7339
Brochothrix  NALT 15030
    UN AgroVoc c_27139
Brochothrix thermosphacta  NALT 19914
    UN AgroVoc c_36257
Brodifacoum  NALT 19919
    UN AgroVoc c_31274
Broiling  NALT 19932
    UN AgroVoc c_9436
Bromacil  NALT 19933
    UN AgroVoc c_1103
Bromadiolone  NALT 19934
    UN AgroVoc c_31277
Bromates  NALT 19935
    UN AgroVoc c_33960
Bromeliaceae  NALT 4442
    UN AgroVoc c_1104
Bromides  NALT 19962
    UN AgroVoc c_1105
Bromine  NALT 19965
    UN AgroVoc c_1106
Bromofos  NALT 9913
    UN AgroVoc c_31279
Bromoviruses  NALT 19875
    UN AgroVoc c_32851
Bromoxynil  NALT 19981
    UN AgroVoc c_31280
Bromus  NALT 9612
    UN AgroVoc c_1107
Bromus inermis  NALT 19993
    UN AgroVoc c_1108
Bromus tectorum  NALT 19999
    UN AgroVoc c_24607
Bronchi  NALT 20020
    UN AgroVoc c_1110
Bronchitis  NALT 20024
UN AgroVoc c_9441
An acute or chronic inflammatory process affecting the bronchi. Source: NCI thesaurus link

Bronchopulmonary dysplasia  NALT 20026
UN AgroVoc c_37518
Chronic lung disease requiring treatment with oxygen for at least 28 days and with a spectrum of severity from mild to severe, that predominantly affects premature infants. While the radiologic pattern is typical in the closer to term patient, the pattern in the small preterm infant is very non-discrete and variable. Source: NCI thesaurus link

Brooders  NALT 9248
UN AgroVoc c_25718
A heated enclosure for raising chicks or other baby animals. (source: NALT)

Broodiness  NALT 8989
UN AgroVoc c_1112

Brosimum  NALT 20056
UN AgroVoc c_1114

Brosimum alicastrum  NALT 20057
UN AgroVoc c_1115

Broussonetia  NALT 20059
UN AgroVoc c_1116

Broussonetia papyrifera  NALT 20060
UN AgroVoc c_1117

Browsing  NALT 20122
UN AgroVoc c_1118
Feeding on sprouts, twigs, stems, vines and leaves of shrubs or trees by livestock and wildlife. (source: NALT)

Brucella  NALT 20127
UN AgroVoc c_1120
A genus of aerobic, Gram-negative, coccobacilli shaped bacteria assigned to the phylum Proteobacteria and the family Brucellaceae. Source: NCI thesaurus link

Brucella melitensis  NALT 20129
UN AgroVoc c_34487
A species of aerobic, Gram-negative, coccobacilli shaped bacteria assigned to the phylum Proteobacteria. This species is nonmotile, non-spore forming, catalase, oxidase and urease positive, reduces nitrites, does not produce hydrogen sulfide, grows in both basic fuchsin and thionate, and is negative for Tbilisi and Weybridge phage lysis. B. melitensis is found in goats and sheep and is pathogenic to these species as well as causes brucellosis in humans. Source: NCI thesaurus link

Reference: FDA UNII link

Reference the NIH NCBI link
Brucellosis  NALT 15157
UN AgroVoc c_1122
A contagious disease usually occurring in beef and dairy cattle, but also in sheep, pigs and other mammals which causes abortion. In humans the disease is known as undulant fever. (source: NALT)
A gram negative bacterial infection caused by bacteria of the genus Brucella. Humans are infected by ingesting unpasteurized milk or meat from infected animals. Signs and symptoms include fevers, sweating, weakness, headache, muscle pain, arthritis and anemia. Source: NCI thesaurus link

Bruchidae  NALT 2043
UN AgroVoc c_30003
Bruchidius  NALT 20144
UN AgroVoc c_30004
Bruchidius atrolineatus  NALT 20149
UN AgroVoc c_32083
Bruchophagus  NALT 20150
UN AgroVoc c_23902
Bruchophagus roddi  NALT 6322
UN AgroVoc c_29886
Bruchus  NALT 20145
UN AgroVoc c_1123
Bruchus pisorum  NALT 20154
UN AgroVoc c_30005
Brugia  NALT 20159
UN AgroVoc c_31086
Brugia malayi  NALT 20160
UN AgroVoc c_31087
Brugia pahangi  NALT 20161
UN AgroVoc c_31088
Bruguiera  NALT 20165
UN AgroVoc c_1124
Brush control  NALT 20192
UN AgroVoc c_15834
Brussels sprouts  NALT 19483
UN AgroVoc c_1127
Bryobia  NALT 20199
UN AgroVoc c_8548
Bryology  NALT 164
UN AgroVoc c_1128

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Bryopsidales  NALT 20226
    UN AgroVoc c_330299
Bubulcus ibis  NALT 11976
    UN AgroVoc c_36446
Bucculatrix  NALT 20242
    UN AgroVoc c_1130
Bucculatrix thurberiella  NALT 20244
    UN AgroVoc c_30236
Bucephalidae  NALT 20246
    UN AgroVoc c_31974
Buckwheat  NALT 20260
    UN AgroVoc c_9471
Bud initiation  NALT 20264
    UN AgroVoc c_15948
Buddleja  NALT 20269
    UN AgroVoc c_26422
Buds  NALT 20267
    UN AgroVoc c_1135
Buffalo meat  NALT 20299
    UN AgroVoc c_23996
Buffalo milk  NALT 20300
    UN AgroVoc c_16076
Buffering capacity  NALT 20312
    UN AgroVoc c_1138
buffers  NALT 209
    UN AgroVoc c_34931
Bulbophyllum  NALT 20335
    UN AgroVoc c_33313
Bulbs  NALT 20329
    UN AgroVoc c_1144
Bulgur  NALT 20342
    UN AgroVoc c_28267
Bulking agents  NALT 4056
    UN AgroVoc c_1146

Agents or additives added to increase the weight or volume without imparting any functionality or utility. (source: NALT)
bullock’s heart  NALT 9676
  UN AgroVoc c_9489
Bulls  NALT 16297
  UN AgroVoc c_1148
  Library of Congress sh85017968
  Male mammals that have reached sexual maturity, usually referring to domestic cattle, buffaloes and other bovines, but also to elephants, camels, moose, seals and other species. (source: NALT)

Bunostomum  NALT 8651
  UN AgroVoc c_1149
Bunyaviridae  NALT 20409
  UN AgroVoc c_1150
Bupalus  NALT 20418
  UN AgroVoc c_30207
Bupalus piniarius  NALT 20419
  UN AgroVoc c_30208
Bupleurum  NALT 10919
  UN AgroVoc c_34727
  Dbpedia Bupleurum
Buprestidae  NALT 5512
  UN AgroVoc c_30010
Buprofezin  NALT 20428
  UN AgroVoc c_36696
Buried soils  NALT 20442
  UN AgroVoc c_1154
Burkholderiaceae  NALT 20447
  UN AgroVoc c_37846
  A taxonomic family of bacterium in the phylum Proteobacteria that may cause wilt and rot in a number of plant species. Source: NCI thesaurus link

Burning  NALT 20523
  UN AgroVoc c_9499
  Use for the state of being on fire; For intentional burning as a management practice USE prescribed burning; For chemical reaction with oxygen producing heat USE combustion. (source: NALT)
Bursaphelenchus  NALT 10695
  UN AgroVoc c_24609
Bursaphelenchus mucronatus  NALT 20542
  UN AgroVoc c_33314
**Bursaphelenchus xylophilus**  NALT 20543
  UN AgroVoc c_33632

**Bursera**  NALT 20545
  UN AgroVoc c_9503

**Burseraceae**  NALT 18776
  UN AgroVoc c_1158

**Bursitis**  NALT 20553
  UN AgroVoc c_9504
  Painful inflammation of the bursa. It most often affects the hips, shoulders, and elbows. Source: NCI thesaurus link

**Busseola**  NALT 20593
  UN AgroVoc c_26424

**Busseola fusca**  NALT 4888
  UN AgroVoc c_27140

**Butanol**  NALT 6144
  UN AgroVoc c_27473

**Buthidazole**  NALT 20614
  UN AgroVoc c_31281

**Butomaceae**  NALT 6396
  UN AgroVoc c_26304

**Butralin**  NALT 20619
  UN AgroVoc c_31282

**Butter**  NALT 20620
  UN AgroVoc c_1162

**Butter oil**  NALT 9158
  UN AgroVoc c_1164
  A dairy product made from cream or butter containing at least 99.5% milk fat and 0.20% moisture. (source: NALT)

**Buttermilk**  NALT 20627
  UN AgroVoc c_9513
  Natural buttermilk is the byproduct of churning cream into butter. Cultured buttermilk is usually made from skim milk by adding a starter culture and incubating until lactic acid develops to about 0.8%. (source: NALT)

**Butylate**  NALT 20656
  UN AgroVoc c_31283

**Butyrates**  NALT 20657
  UN AgroVoc c_1167
**Butyric acid**  NALT 20659

UN AgroVoc c_1168

A saturated short-chain fatty acid with a 4-carbon backbone. Butyric acid is commonly found in esterified form in animal fats and plant oils. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

**Butyrivibrio**  NALT 20665

UN AgroVoc c_1169

**Buxaceae**  NALT 20668

UN AgroVoc c_24610

**Buxus**  NALT 20670

UN AgroVoc c_24611

**Byssochlamys**  NALT 20696

UN AgroVoc c_31784

**Byturidae**  NALT 20699

UN AgroVoc c_30012

**C3 plants**  NALT 20711

UN AgroVoc c_24827

Plants in which the CO2 is initially fixed by the Calvin cycle in photosynthesis. (source: NALT)

**C4 plants**  NALT 20717

UN AgroVoc c_24828

Plants where the initial carbon fixation occurs in the outer mesophyll cells, and the Calvin cycle occurs in the inner bundle sheath cells. (source: NALT)

**Cacoeicimorpha**  NALT 20763

UN AgroVoc c_1175

**Cacopsylla**  NALT 20765

UN AgroVoc c_34429

**Cacopsylla pyri**  NALT 20767

UN AgroVoc c_34430

**Cacopsylla pyricola**  NALT 20768

UN AgroVoc c_34432

**Cactaceae**  NALT 12178

UN AgroVoc c_1176
Cactodera  NALT 20814  
UN AgroVoc c_33315

Cadaverine  NALT 17364  
UN AgroVoc c_35043

Cadmium  NALT 20830  
UN AgroVoc c_1178  
An element with atomic symbol Cd, atomic number 48, and atomic weight 112.4. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link

Cadra  NALT 20831  
UN AgroVoc c_37370

Cadra cautella  NALT 6765  
UN AgroVoc c_24143

Caenorhabditis  NALT 20843  
UN AgroVoc c_31117

Caenorhabditis elegans  NALT 20846  
UN AgroVoc c_31118  
Dbpedia Caenorhabditis elegans  
A roundworm of the phylum Nematoda often utilized as a biological model system for research. Source: NCI thesaurus link

Caesalpinia  NALT 20849  
UN AgroVoc c_1179  
Dbpedia Caesalpinia

Caesalpinioideae  NALT 3077  
UN AgroVoc c_1180  
Caesalpinioideae holds the rank of subfamily under the family Fabaceae. (source: NALT)

Caffeic acid  NALT 20999  
UN AgroVoc c_36534

caffeine  NALT 21000  
UN AgroVoc c_1183  
A naturally occurring xanthine derivative with central nervous system (CNS) stimulating activity. Due to the structural similarity to adenosine, caffeine binds to and blocks adenosine receptors, thereby preventing the inhibitory effects of adenosine on nerve cells. This leads to stimulation of medullary, vagal, vasomotor, and respiratory centers in the brain; and the release of epinephrine. Physiologic responses can include bradycardia, tachycardia, vasoconstriction, CNS excitability, increased respiratory rate, increased blood pressure, increased
blood flow to muscles, decreased blood flow to skin and inner organs, and release of glucose by the liver. Due to the interaction between adenosine A2A and dopamine D2 receptors, caffeine can also indirectly increase the levels of dopamine in the brain. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Cages NALT 9070
  UN AgroVoc e_1184
Cairina NALT 8581
  UN AgroVoc e_35882
Cajanus NALT 13788
  UN AgroVoc e_33101
Cajanus cajan NALT 21016
  UN AgroVoc e_1185
Cakes NALT 15556
  UN AgroVoc e_1186
Caladium NALT 11662
  UN AgroVoc e_16227
Caladium bicolor NALT 21025
  UN AgroVoc e_16228
Calamagrostis NALT 21030
  UN AgroVoc e_9541
Calathea NALT 21064
  UN AgroVoc e_1191
calbindin NALT 21066
  UN AgroVoc e_34227
  One of two related proteins that are involved in the absorption of calcium in the intestine and kidney. Source: NCI thesaurus link
Calcareous soils NALT 21069
  UN AgroVoc e_1194
Calceolaria NALT 21070
  UN AgroVoc e_33316
Dbpedia Calceolaria
Calcinosis  NALT 21083
UN AgroVoc c_16399
Pathologic deposition of calcium salts in tissues. (source: NALT)

Calcite  NALT 21084
UN AgroVoc c_32396

Calcitonin  NALT 21086
UN AgroVoc c_1195
A peptide hormone that lowers calcium concentration in the blood. In humans, it is released by thyroid cells and acts to decrease the formation and absorptive activity of osteoclasts. Its role in regulating plasma calcium is much greater in children and in certain diseases than in normal adults. (source: NALT)
Encoded by human CALCA Gene (Calcitonin Family), 32-aa 3.4-kD secreted Calcitonin polypeptide hormone is cleaved from a large polyprotein precursor synthesized by thyroid parafollicular ‘C’ cells. Opposite to the effect of PTH, Calcitonin induces a rapid drop in blood calcium and phosphate level by promoting bone incorporation. (NCI) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Calcium  NALT 6421
UN AgroVoc c_1196
An element with atomic symbol Ca, atomic number 20, and atomic weight 40.08. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Calcium ammonium nitrate  NALT 7967
UN AgroVoc c_23997

Calcium binding proteins  NALT 17189
UN AgroVoc c_34226

Calcium carbonate  NALT 21098
UN AgroVoc c_1197
The carbone salt of calcium (CaCO3). Calcium carbonate is used therapeutically as a phosphate buffer in hemodialysis, as an antacid in gastric hyperacidity for temporary relief of indigestion and heartburn, and as a calcium supplement for preventing and treating osteoporosis. (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Calcium chloride  NALT 21105
UN AgroVoc c_15892
A crystalline, white substance, soluble in water, Calcium Chloride is the chloride salt of calcium, a bivalent metallic element with many crucial biological roles. Calcium is a major constituent of the skeleton but plays many roles as an intracellular and plasma ion as well. In medicine, calcium chloride is also used as a 10% solution in injection, for calcium replenishment. (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Calcium cyanamide  NALT 21106
UN AgroVoc c_1198

Calcium fertilizers  NALT 21109
UN AgroVoc c_1199

Calcium hydroxide  NALT 21115
UN AgroVoc c_1200

Calcium nitrate  NALT 21119
UN AgroVoc c_1201

Calcium oxide  NALT 21121
UN AgroVoc c_1202

Calcium phosphates  NALT 10640
UN AgroVoc c_34793

Calendula officinalis  NALT 21171
UN AgroVoc c_331483

Cales  NALT 10700
UN AgroVoc c_27141

Caliciviridae  NALT 21188
UN AgroVoc c_1205

Calliandra  NALT 21252
UN AgroVoc c_1207
Dbpedia Calliandra

Calliandra calothyrsus  NALT 21253
UN AgroVoc c_23903

Callicarpa  NALT 21258
UN AgroVoc c_330125

1.7. Glossary
Callinectes   NALT 21274
    UN AgroVoc c_1208
Callinectes sapidus   NALT 18214
    UN AgroVoc c_47167
Calliphora   NALT 6227
    UN AgroVoc c_30448
Calliphora vicina   NALT 21281
    UN AgroVoc c_30450
Calliphoridae   NALT 18200
    UN AgroVoc c_1209
Calliptamus   NALT 3021
    UN AgroVoc c_1210
Callistemon   NALT 21297
    UN AgroVoc c_1211
    Dbpedia Callistemon
Callistephus   NALT 13251
    UN AgroVoc c_26426
Callistephus chinensis   NALT 21301
    UN AgroVoc c_27143
Callitrichidae   NALT 21305
    UN AgroVoc c_331497
    Dbpedia Callitrichidae
Callorhinus   NALT 21331
    UN AgroVoc c_9548
    Library of Congress sh91002733
Callosobruchus   NALT 20146
    UN AgroVoc c_1212
Callosobruchus chinensis   NALT 20156
    UN AgroVoc c_30007
Callosobruchus maculatus   NALT 21337
    UN AgroVoc c_30008
Calluna   NALT 21340
    UN AgroVoc c_9549
Calluna vulgaris   NALT 21341
    UN AgroVoc c_26489
Calmodulin (149 aa, 17 kD) is a cell communication protein that is encoded by the human CALM1 gene and has a role in the G protein-coupled receptor protein signaling (and other signaling) pathways. Source: NCI thesaurus link

calpain NALT 21438
UN AgroVoc c_36536

A class of calcium-dependent thiol-proteases that proteolytically cleave a wide variety of cytoskeletal, membrane-associated, and regulatory proteins. There are two main isoforms of the protein, which differ in their calcium requirement for activation. These enzymes have been linked to both acute and chronic neurodegenerative processes, such as: ischemia, trauma, and Alzheimer’s disease. Source: NCI thesaurus link

Calvatia NALT 21453
UN AgroVoc c_31805

Calvatia gigantea NALT 21454
UN AgroVoc c_331398
Calves NALT 21177
  UN AgroVoc c_1219
  Young mammals that have not reached sexual maturity, usually referring to domestic cattle, buffalos and other bovines, but also to elephants, camels, moose, giraffes, whales, seals and other species. (source: NALT)

Calvin cycle NALT 17285
  UN AgroVoc c_1220
  A light-independent, biochemical reaction that uses ATP and NADPH to fix the carbon in six CO2 molecules to form one glucose molecule. (source: NALT)

Calving rate NALT 21467
  UN AgroVoc c_35215
  The number of cows that calve divided by the number of cows mated, usually pertaining to the herd and not the number of matings for an individual. (source: NALT)

Calycanthaceae NALT 21468
  UN AgroVoc c_26271

Calystegia NALT 21487
  UN AgroVoc c_32085
  Dbpedia Calystegia

Calyx NALT 21490
  UN AgroVoc c_1221

Cambaridae NALT 21502
  UN AgroVoc c_46822

Cambarus NALT 21503
  UN AgroVoc c_1223

Cambium NALT 21508
  UN AgroVoc c_1225
  A thin layer of tissue between the bark and wood that repeatedly subdivides to form new wood and bark cells. (source: NALT)

Camel meat NALT 21518
  UN AgroVoc c_23998

Camel milk NALT 21519
  UN AgroVoc c_16077

Camelidae NALT 12631
  UN AgroVoc c_16077

Camelina NALT 19566
  UN AgroVoc c_33634

Camelina sativa NALT 21523
  UN AgroVoc c_33635
Camellia  NALT 21524
UN AgroVoc c_1226

Camellia sinensis  NALT 21001
UN AgroVoc c_1227

The plant species whose leaves and leaf buds are used to produce tea. White tea, Green, oolong and black tea are all harvested from this species, but are processed to attain different levels of oxidation. Camellia sinensis is native to mainland South and Southeast Asia, but is today cultivated across the world, in tropical and subtropical regions. It is an evergreen shrub or small tree that is usually trimmed to below two metres (six feet) when cultivated for its leaves. It has a strong taproot. The flowers are yellow-white, 2.5-4 cm in diameter, with 7 to 8 petals. Source: NCI thesaurus link
Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link

Camels   NALT 15452
UN AgroVoc c_1228

Cameraria ohridella  NALT 21542
UN AgroVoc c_331349

Campanula  NALT 21552
UN AgroVoc c_9561
Dbpedia Campanula

Campanulaceae  NALT 4135
UN AgroVoc c_1231
Dbpedia Campanulaceae

Campesterol  NALT 21595
UN AgroVoc c_9563

A steroid derivative that is the simplest sterol, characterized by the hydroxyl group in position C-3 of the steroid skeleton, and saturated bonds throughout the sterol structure, with the exception of the 5-6 double bond in the B ring. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Camphor   NALT 21601
UN AgroVoc c_1234

Campoletis  NALT 8950
UN AgroVoc c_29910


Campylobacter

A genus of gram-negative, microaerophilic, spiral bacteria. They are motile, with either uni- or bi-polar flagella and are oxidase-positive. Several species of Campylobacter have been implicated in human disease. Source: NCI thesaurus link

Campylobacter coli

A species of microaerophilic, Gram-negative, curved or spiral bacilli assigned to the phylum Proteobacteria. This species is motile with a single flagellum at each pole, non-spore forming, oxidase positive, and does not hydrolyze hippurate. C. coli is commensal in pigs, associated with indigenously acquired food borne disease, and recognized as the second most common pathogen for human campylobacteriosis. Source: NCI thesaurus link

Campylobacter fetus

A species of microaerophilic, Gram-negative, curved or spiral bacilli assigned to the phylum Proteobacteria. This species is motile using a single polar flagellum, oxidase positive, catalase positive, indole negative, reduces nitrates, and does not produce hydrogen sulfide. C. fetus is an opportunistic microbe that causes bacteremia, thrombophlebitis, septicemia, and is a suspected pathogen in immunocompromised patients with gastrointestinal symptoms. In sheep and cattle this bacterium is known to cause abortions, infertility, enteritis and bovine genital campylobacteriosis. Source: NCI thesaurus link

Campylobacter hyointestinalis

Campylobacter jejuni

A species of microaerophilic, Gram-negative, curved or spiral bacilli assigned to the phylum Proteobacteria. This species is motile with a flagellum at each pole, non-spore forming, oxidase positive, and hydrolyzes hippurate. C. jejuni is the most common pathogen in the United States causing bacterial diarrhea and gastroenteritis and is also linked to Guillain Barre syndrome. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the NIH NCBI link

Canada goldenrod

Canaries

UN AgroVoc c_33423

UN AgroVoc c_24829
Canarium  NALT 20551
  UN AgroVoc c_24731

Canavalia  NALT 21752
  UN AgroVoc c_1242

Canavalia ensiformis  NALT 21754
  UN AgroVoc c_1244

Canavalia gladiata  NALT 21755
  UN AgroVoc c_1245

Canavanine  NALT 6703
  UN AgroVoc c_32401

Cancer (genus)  NALT 21775
  UN AgroVoc c_1246
  Dbpedia Cancer (genus)

Cancer irroratus  NALT 21777
  UN AgroVoc c_47104

Cancer magister  NALT 21778
  UN AgroVoc c_47105

Cancer pagurus  NALT 21779
  UN AgroVoc c_47107

Cancridae  NALT 21776
  UN AgroVoc c_47101
  Library of Congress sh88020019

Candida  NALT 21785
  UN AgroVoc c_1247
  A genus of yeasts in the phylum Ascomycota. Many species of this genus are endosymbionts of animal hosts. Source: NCI thesaurus link

Candida albicans  NALT 21786
  UN AgroVoc c_27476
  A species of diploid fungus in the phylum Ascomycota which is capable of mating but not of meiosis, and is a causal agent of opportunistic oral and genital infections in humans. Source: NCI thesaurus link
  Reference: FDA UNII link
  Reference the ITIS link
  Reference the NIH NCBI link

Candida cylindracea  NALT 21788
  UN AgroVoc c_35464

Candida guilliermondii  NALT 21789
  UN AgroVoc c_35465

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Candida kefyr  NALT 21790  
UN AgroVoc c_35469

Candida maltosa  NALT 21793  
UN AgroVoc c_35466

Candida parapsilosis  NALT 21794  
UN AgroVoc c_35467  
A species of yeast in the genus Candida. Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the ITIS link  
Reference the NIH NCBI link

Candida rugosa  NALT 21795  
UN AgroVoc c_35468  
A dimorphic yeast in the phylum Ascomycota. This species is ovoid, ellipsoidal or cylindrical shaped, and forms pseudohyphae. The lipase produced by this yeast is used commercially in biotransformation to catalyze hydrolysis reactions, especially for the production of ricinoleic acid. C. rugosa is also a human pathogen and can cause fungemia, with reduced susceptibility to the azole antifungal agents. Source: NCI thesaurus link

Candida tropicalis  NALT 21796  
UN AgroVoc c_27478  
A species of asexual diploid yeast in the genus Candida. Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the NIH NCBI link

Candida utilis  NALT 21797  
UN AgroVoc c_27479

Candidiasis  NALT 21798  
UN AgroVoc c_17300

Cane sugar  NALT 21831  
UN AgroVoc c_16477

Canidae  NALT 6839  
UN AgroVoc c_15599  
Taxonomic family which includes the domestic dog, wolves and foxes. Source: NCI thesaurus link

Canine adenovirus  NALT 21853  
UN AgroVoc c_16401

Canine distemper  NALT 21861  
UN AgroVoc c_35844

Canis  NALT 21842  
UN AgroVoc c_331214
Canis lupus  NALT 21873
   UN AgroVoc c_9576

Canna  NALT 21883
   UN AgroVoc c_1252

Canna indica  NALT 21886
   UN AgroVoc c_1254

Cannabis  NALT 21892
   UN AgroVoc c_1256

Cannabis sativa  NALT 21897
   UN AgroVoc c_1257

Cannaceae  NALT 21884
   UN AgroVoc c_1258

Canned fish  NALT 21901
   UN AgroVoc c_16479

Canned fruits  NALT 21903
   UN AgroVoc c_16480

Canned meat  NALT 21905
   UN AgroVoc c_16481

Canned vegetables  NALT 21906
   UN AgroVoc c_16483

Cannibalism  NALT 1758
   UN AgroVoc c_9580

Canopy  NALT 21922
   UN AgroVoc c_1262
   The more or less continuous layer of vegetation formed by the foliage and branches of plants. (source: NALT)

Cantharellales  NALT 15997
   UN AgroVoc c_31646

Cantharellus  NALT 21936
   UN AgroVoc c_1264

Cantharidae  NALT 21938
   UN AgroVoc c_36258

Canthaxanthin  NALT 21942
   UN AgroVoc c_26917
A chili pepper extract with analgesic properties. Capsaicin is a neuropeptide releasing agent selective for primary sensory peripheral neurons. Used topically, capsaicin aids in controlling peripheral nerve pain. This agent has been used experimentally to manipulate substance P and other tachykinins. In addition, capsaicin may be useful in controlling chemotherapy- and radiotherapy-induced mucositis. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Capsella  NALT 19567
    UN AgroVoc c_32088
    Library of Congress sh88022642
Capsella bursa pastoris  NALT 22066
    UN AgroVoc c_32089
Capsicum  NALT 22062
    UN AgroVoc c_1287
Capsicum annuum  NALT 22071
    UN AgroVoc c_1288
Capsicum baccatum  NALT 22072
    UN AgroVoc c_1289
Capsicum chinense  NALT 22074
    UN AgroVoc c_1290
Captafo  NALT 22086
    UN AgroVoc c_31286
Captan  NALT 22088
    UN AgroVoc c_31289
capture of animals  NALT 9051
    UN AgroVoc c_24105
Carabidae  NALT 5237
    UN AgroVoc c_23906
Caragana  NALT 22108
    UN AgroVoc c_24612
Carangidae  NALT 22131
    UN AgroVoc c_42688
Dbpedia Carangidae
Caranx  NALT 22132
    UN AgroVoc c_1294
Carassius  NALT 22145
    UN AgroVoc c_1295
Dbpedia Carassius
    Library of Congress sh88004562
Carassius auratus  NALT 22146
    UN AgroVoc c_35395
Caraway  NALT 22150
    UN AgroVoc c_9607
Carbachol  NALT 22152
  UN AgroVoc c_9608
  A synthetic choline ester and a positively charged quaternary ammonium compound. Carbachol is a parasympathomimetic that mimics the effect of acetylcholine on both the muscarinic and nicotinic receptors. This drug is administered ocularly to induce miosis to reduce intraocular pressure in the treatment of glaucoma. Carbachol is also used to stimulate micturition by contraction of detrusor muscle. This drug may cause hypotension, bradycardia, nausea, vomiting, bronchospasm, and abdominal cramps. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Carbadox  NALT 10425
  UN AgroVoc c_9609
  An antibacterial agent used in swine. Carbadox is a mutagen/carcinogen and has been banned in Canada, Australia, and the European Union. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Carbamates  NALT 16624
  UN AgroVoc c_1296

Carbaryl  NALT 10497
  UN AgroVoc c_31290

Carbendazim  NALT 9915
  UN AgroVoc c_31291
  A broad-spectrum benzimidazole antifungal with potential antimitotic and antineoplastic activities. Although the exact mechanism of action is unclear, carbendazim appears to binds to an unspecified site on tubulin and suppresses microtubule assembly dynamic. This results in cell cycle arrest at the G2/M phase and an induction of apoptosis. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Carbetamide  NALT 22153
  UN AgroVoc c_31295
Carbofuran  NALT 22154
  UN AgroVoc c_24391

Carbohydrate content  NALT 22199
  UN AgroVoc c_1298

Carbohydrate metabolism  NALT 22202
  UN AgroVoc c_1299
  Processes concerned with the synthesis, breakdown, and oxidation of carbohydrates in the tissues. Source: NCI thesaurus link

Carbohydrates  NALT 17263
  UN AgroVoc c_1300

carbon dioxide  NALT 17007
  UN AgroVoc c_1302
  A colorless, odorless, incombustible gas resulting from the oxidation of carbon. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Carbon monoxide  NALT 22224
  UN AgroVoc c_1303
  An odorless, tasteless, poisonous gas, CO, that results from the incomplete combustion of carbon. Inhalation causes central nervous system damage and asphyxiation. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Carbon tetrachloride  NALT 22230
  UN AgroVoc c_1304
  A clear, colorless, volatile and very stable chlorinated hydrocarbon. Carbon Tetrachloride is used as a solvent for oils and fats, as a refrigerant and as a dry-cleaning agent. Inhalation of its vapors can depress central nervous system activity and cause degeneration of the liver and kidneys. Carbon Tetrachloride is reasonably anticipated to be a human carcinogen based on evidence of carcinogenicity in experimental animals. (NCI05) Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms

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**Carbonate dehydratase**  NALT 22253
  
  UN AgroVoc c_1305

**Carbonated beverages**  NALT 16986
  
  UN AgroVoc c_28261
  
  Beverages, including water infused with gases, such as carbon dioxide. (source: NALT)

**Carbonates**  NALT 21099
  
  UN AgroVoc c_1306

**Carbonyl compounds**  NALT 6189
  
  UN AgroVoc c_28306

**Carbosulfan**  NALT 22155
  
  UN AgroVoc c_34801

**Carboxin**  NALT 22269
  
  UN AgroVoc c_31298

**Carboxylesterase**  NALT 22285
  
  UN AgroVoc c_29495
  
  A family of enzymes that hydrolyze carboxylic esters. Source: NCI thesaurus link

**Carboxylic acids**  NALT 7811
  
  UN AgroVoc c_27631

**Carboxylic ester hydrolases**  NALT 2525
  
  UN AgroVoc c_9617

**Carcass composition**  NALT 15062
  
  UN AgroVoc c_16168

**Carcass disposal**  NALT 22338
  
  UN AgroVoc c_35868

**Carcharhinidae**  NALT 22351
  
  UN AgroVoc c_38218

**Carcharhinus**  NALT 22353
  
  UN AgroVoc c_1311

**Carcinogenesis**  NALT 22355
  
  UN AgroVoc c_34229
  
  The process by which normal cells are transformed into cancer cells. (source: NALT)
  
  A pathological process in which normal cells are transformed into malignant cancer cells within a primary tumor. Source: NCI thesaurus link

**Carcinogens**  NALT 4811
  
  UN AgroVoc c_1313
Carcinoma  NALT 704
    UN AgroVoc c_1314
    A malignant tumor arising from epithelial cells. Carcinomas that arise from glandular epithelium are called adenocarcinomas, those that arise from squamous epithelium are called squamous cell carcinomas, and those that arise from transitional epithelium are called transitional cell carcinomas. Morphologically, the malignant epithelial cells may display abnormal mitotic figures, anaplasia, and necrosis. Carcinomas are graded by the degree of cellular differentiation as well, moderately, or poorly differentiated. Carcinomas invade the surrounding tissues and tend to metastasize to other anatomic sites. Lung carcinoma, skin carcinoma, breast carcinoma, colon carcinoma, and prostate carcinoma are the most frequently seen carcinomas. Source: NCI thesaurus link

Carcinus  NALT 22370
    UN AgroVoc c_1315

Carcinus maenas  NALT 22371
    UN AgroVoc c_47183

Cardiac glycosides  NALT 22388
    UN AgroVoc c_11191
    Any of several glycosides obtained chiefly from plant sources such as the foxglove, used medicinally to increase the force of contraction of heart muscle and to regulate heartbeats. (source: NALT)

Cardiac muscle  NALT 22397
    UN AgroVoc c_34056
    The muscle tissue of the heart. It is composed of striated, involuntary muscle cells connected to form the contractile pump to generate blood flow. Use for the heart as tissue; for the heart as a whole USE heart. (source: NALT)

Cardiidae  NALT 17697
    UN AgroVoc c_48374

cardiomyopathy  NALT 22413
    UN AgroVoc c_33961
    A group of diseases in which the dominant feature is the involvement of the cardiac muscle itself. (source: NALT)
    A disease of the heart muscle or myocardium proper. Cardiomyopathies may be classified as either primary or secondary, on the basis of etiology, or on the pathophysiology of the lesion: hypertrophic, dilated, or restrictive. Source: NCI thesaurus link

Cardiovascular agents  NALT 10385
    UN AgroVoc c_1316

Cardiovascular diseases  NALT 333
    UN AgroVoc c_34231

Cardiovascular system  NALT 18060
    UN AgroVoc c_1317
    Relating to the heart and the blood vessels or the circulation. Source: NCI thesaurus link

cardoons  NALT 22431
    UN AgroVoc c_9623
A pale green vegetable that resembles celery and artichoke in flavor. (source: NALT)

**Carduus**  NALT 13252
UN AgroVoc c_9624

**Carduus acanthoides**  NALT 22435
UN AgroVoc c_24733

**Carduus nutans**  NALT 22436
UN AgroVoc c_24734

**Caretta**  NALT 22461
UN AgroVoc c_1319
Library of Congress sh90005241

**Caretta caretta**  NALT 22463
UN AgroVoc c_49086

**Carex**  NALT 22465
UN AgroVoc c_32090

**Carica**  NALT 22496
UN AgroVoc c_1322

**Carica papaya**  NALT 22499
UN AgroVoc c_1323

**Caricaceae**  NALT 22497
UN AgroVoc c_1324

**Carissa**  NALT 11170
UN AgroVoc c_1327

**Carissa macrocarpa**  NALT 11979
UN AgroVoc c_26427

**Carlavirus**  NALT 18258
UN AgroVoc c_32852

**Carmovirus**  NALT 16184
UN AgroVoc c_35616

**Carnitine**  NALT 17365
UN AgroVoc c_1330

An amino acid derivative. Carnitine facilitates long-chain fatty acid entry into mitochondria, delivering substrate for oxidation and subsequent energy production. Fatty acids are utilized as an energy substrate in all tissues except the brain. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using CAS number link
Carnivora  NALT 543  
UN AgroVoc c_1331  
Dbpedia Carnivora  
A diverse taxonomic order of placental mammals that includes bears, dogs, cats, and ferrets. Carnivora are primarily meat eaters, however bears are omnivorous and herbivorous pandas may consume fish and insects. Source: NCI thesaurus link  

Carnivorous plants  NALT 22580  
UN AgroVoc c_15613  

Carnobacterium  NALT 22556  
UN AgroVoc c_36681  

Carnobacterium piscicola  NALT 22568  
UN AgroVoc c_36680  

Carotenes  NALT 6889  
UN AgroVoc c_9632  

Carotenoids  NALT 13203  
UN AgroVoc c_1333  

Carp  NALT 22614  
UN AgroVoc c_1334  
Dbpedia Carp  

Carpinus  NALT 16979  
UN AgroVoc c_1336  

Carpinus betulus  NALT 22626  
UN AgroVoc c_1337  

Carpoglyphidae  NALT 13486  
UN AgroVoc c_9637  

Carpophilus  NALT 22650  
UN AgroVoc c_1338  

Carpophilus hemipterus  NALT 22651  
UN AgroVoc c_30118  

Carposina  NALT 22664  
UN AgroVoc c_30184  

Carposinidae  NALT 22665  
UN AgroVoc c_30183  

Carpus  NALT 22667  
UN AgroVoc c_9638  

Carrageenans  NALT 22668  
UN AgroVoc c_1339
carrier state  NALT 320  
UN AgroVoc c_33459

Carrots  NALT 22692  
UN AgroVoc c_9640

carrying capacity  NALT 22697  
UN AgroVoc c_36550

The maximum population that may be sustained in an ecosystem or management unit without adverse effects to the environment. (source: NALT)

Carthamus  NALT 13255  
UN AgroVoc c_1340
Dbpedia Carthamus

Carthamus lanatus  NALT 22705  
UN AgroVoc c_24613

Carthamus tinctorius  NALT 22707  
UN AgroVoc c_1341

Cartilage  NALT 22713  
UN AgroVoc c_1342

A type of connective tissue composed of chondrocytes and an extracellular matrix, composed of collagen, elastin, and ground substance. There are three types of cartilage; namely elastic, hyaline, and fibrocartilage. Source: NCI thesaurus link

Carum  NALT 10922  
UN AgroVoc c_1346

Carum carvi  NALT 22151  
UN AgroVoc c_1347

Carvone  NALT 22729  
UN AgroVoc c_24980

Carya  NALT 22730  
UN AgroVoc c_1348

Caryedon  NALT 20147  
UN AgroVoc c_1350

Caryocar  NALT 22743  
UN AgroVoc c_1351

Caryocaraceae  NALT 22744  
UN AgroVoc c_1352

Caryophyllaceae  NALT 2041  
UN AgroVoc c_1353
Caryophyllales  NALT 5888  
   UN AgroVoc c_330132
Caryopteris  NALT 22771  
   UN AgroVoc c_32094
Caryota  NALT 12002  
   UN AgroVoc c_1354
Casein  NALT 6892  
   UN AgroVoc c_1357
Caseinates  NALT 22791  
   UN AgroVoc c_1358
Caseous lymphadenitis  NALT 15159  
   UN AgroVoc c_16702
Cash crops  NALT 22797  
   UN AgroVoc c_1359
   Library of Congress sh93006023
Casimiroa  NALT 22809  
   UN AgroVoc c_1361
Casimiroa edulis  NALT 22810  
   UN AgroVoc c_1362
Cassia  NALT 20863  
   UN AgroVoc c_1363
Cassia fistula  NALT 22832  
   UN AgroVoc c_26429
Cassida  NALT 22853  
   UN AgroVoc c_16078
Cassie flower  NALT 1890  
   UN AgroVoc c_9655
Cassipourea  NALT 22856  
   UN AgroVoc c_33317
cassowaries  NALT 7152  
   UN AgroVoc c_1369
Castanea  NALT 22863  
   UN AgroVoc c_1370
Castanea crenata  NALT 22865  
   UN AgroVoc c_26433

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Castanea dentata  NALT 7550
UN AgroVoc c_26434

Castanea mollissima  NALT 22866
UN AgroVoc c_26435

Castanea sativa  NALT 22867
UN AgroVoc c_1371

Castanopsis  NALT 22872
UN AgroVoc c_34729
Dbpedia Castanopsis

Castilla beans  NALT 29753
UN AgroVoc c_22023

Castor beans  NALT 22891
UN AgroVoc c_18705

castor oil  NALT 22893
UN AgroVoc c_25466

A vegetable oil pressed from the seeds of the castor bean, Ricinus communis. Castor oil has many industrial applications and is used medicinally as a laxative and as an excipient. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link
Look-up using CAS number link

castration  NALT 22898
UN AgroVoc c_1375

The surgical removal or other physical destruction of the testes of a male animal, e.g. using elastrator bands on male lambs or piglets. Use for surgical or other physical destruction of the testes; For male sterilization by other means USE antifertility effect AND male fertility. (source: NALT)

Casuariiformes  NALT 87
UN AgroVoc c_1376

Casuarina cunninghamiana  NALT 22909
UN AgroVoc c_36964

Casuarina equisetifolia  NALT 22910
UN AgroVoc c_23907

Casuarinaceae  NALT 6652
UN AgroVoc c_1378
Catalase  NALT 22933  
UN AgroVoc c_1380
Catalase (527 aa, ~60 kDa) is encoded by the human CAT gene. This protein plays a role in the detoxification of hydrogen peroxide. Source: NCI thesaurus link

Catalpa  NALT 17123  
UN AgroVoc c_1381

Catalysts  NALT 210  
UN AgroVoc c_27480

Catananche  NALT 13257  
UN AgroVoc c_32095

Cataract  NALT 22951  
UN AgroVoc c_16402

Partial or complete opacity on or in the lens or capsule of one or both eyes, impairing vision or causing blindness. (source: NALT)

Partial or complete opacity of the crystalline lens of one or both eyes that decreases visual acuity and eventually results in blindness. Some cataracts appear in infancy or in childhood, but most develop in older individuals. (Sternberg Diagnostic Surgical Pathology, 3rd ed.) Source: NCI thesaurus link

Catasetum  NALT 22953  
UN AgroVoc c_33318  
Dbpedia Catasetum

Catch crops  NALT 22956  
UN AgroVoc c_29684

A quick growing crop, planted and harvested between two regular crops. (source: NALT)

Catechin  NALT 22962  
UN AgroVoc c_33963

Catechol oxidase  NALT 22970  
UN AgroVoc c_29496

Catecholamines  NALT 17366  
UN AgroVoc c_1386

Catha  NALT 23032  
UN AgroVoc c_32957

Catha edulis  NALT 23033  
UN AgroVoc c_1388

Catharanthus  NALT 11171  
UN AgroVoc c_33319

Catharanthus roseus  NALT 7919  
UN AgroVoc c_33320
Cation exchange capacity
  NALT 23045
  UN AgroVoc c_24981
Cations
  NALT 23048
  UN AgroVoc c_16169
Catla
  NALT 23051
  UN AgroVoc c_34434
Catla catla
  NALT 23052
  UN AgroVoc c_34675
Catolaccus
  NALT 23055
  UN AgroVoc c_37008
Cats
  NALT 22915
  UN AgroVoc c_1390
Cattle
  NALT 16304
  UN AgroVoc c_1391
Cattleya
  NALT 23123
  UN AgroVoc c_1393
Caulerpa taxifolia
  NALT 23137
  UN AgroVoc c_49499
Caulerpaceae
  NALT 23136
  UN AgroVoc c_49491
Cauliflowers
  NALT 19477
  UN AgroVoc c_1394
Caulimoviruses
  NALT 18256
  UN AgroVoc c_32853
Cavariella
  NALT 10726
  UN AgroVoc c_1396
Caves
  NALT 23175
  UN AgroVoc c_1397
Cecidomyiidae
  NALT 10797
  UN AgroVoc c_1402
Cecidophyopsis
  NALT 23261
  UN AgroVoc c_1403
Cecidophyopsis ribis
  NALT 23260
  UN AgroVoc c_30934
Cecropia
  NALT 23265
  UN AgroVoc c_1405
Cecropia obtusifolia  NALT 23267  
UN AgroVoc c_33324

Cecum  NALT 20837  
UN AgroVoc c_9683  
A blind pouch-like commencement of the colon in the right lower quadrant of the abdomen at the end of the small intestine and the start of the large intestine. Source: NCI thesaurus link

cedarwood oil  NALT 23278  
UN AgroVoc c_1406

Cedrela  NALT 23285  
UN AgroVoc c_27146

Cedrela odorata  NALT 23286  
UN AgroVoc c_27147

Cedrus atlantica  NALT 13611  
UN AgroVoc c_26437

Cedrus deodara  NALT 23291  
UN AgroVoc c_26438

Cedrus libani  NALT 23292  
UN AgroVoc c_26439

Cefotaxime  NALT 23306  
UN AgroVoc c_36175  
A third generation semisynthetic cephalosporin antibiotic with bactericidal activity. Cefotaxime inhibits murepentaide synthesis by binding to and inactivating penicillin binding proteins thereby interfering with the final transpeptidation step required for cross-linking of peptidoglycan units which are a component of bacterial cell walls. This results in a reduction of cell wall stability and causes cell lysis. Source: NCI thesaurus link

Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms

Ceftiofur  NALT 10426  
UN AgroVoc c_36176  
A semisynthetic, beta-lactamase-stable, broad-spectrum, third-generation cephalosporin with antibacterial activity. Ceftiofur binds to and inactivates penicillin-binding proteins (PBPs) located on the inner membrane of the bacterial cell wall. PBPs are enzymes involved in the terminal stages of assembling the bacterial cell wall and in reshaping the cell wall during growth and division. Inactivation of PBPs interferes with the cross-linkage of peptidoglycan chains necessary for bacterial cell wall strength and rigidity. This results in the weakening of the bacterial cell wall and causes cell lysis. Source: NCI thesaurus link

Reference: FDA UNII link  
Look-up using Google link
Cell cycle

The complex series of phenomena, occurring between the end of one cell division and the end of the next, by which cellular material is divided between daughter cells. The cell cycle is an ordered set of events, culminating in cell growth and division into two daughter cells. The stages of cell cycle includes G1-S-G2-M. The G1 stage stands for “GAP 1”. The S stage stands for “Synthesis”. This is the stage when DNA replication occurs. The G2 stage stands for “GAP 2”. The M stage stands for “mitosis”, and is when nuclear (chromosomes separate) and cytoplasmic (cytokinesis) division occur. Source: NCI thesaurus link

Cell death

The termination of the cell’s ability to carry out vital functions such as metabolism, growth, reproduction, responsiveness, and adaptability. Source: NCI thesaurus link

Cell differentiation

Progressive restriction of the developmental potential and increasing specialization of function which takes place during the development of the embryo and leads to the formation of specialized cells, tissues, and organs. Source: NCI thesaurus link

Cell division

Cell Division involves the production of separate daughter cells from a precursor cell by division of the nucleus (mitosis) in eukaryotes and division of the cytoplasm (cytokinesis). Source: NCI thesaurus link

Cell mediated immunity

NCI thesaurus link
Manifestations of the immune response which are mediated by antigen-sensitized T-lymphocytes via lymphokines or direct cytotoxicity. This takes place in the absence of circulating antibody or where antibody plays a subordinate role. (source: NALT)

**cell membranes**  NALT 9529  
UN AgroVoc c_9693  
Use for membranes of the cell in general; for the outermost cellular membrane of cells USE plasma membrane. (source: NALT)

**cell physiology**  NALT 23356  
UN AgroVoc c_29151  
Characteristics and physiological processes of cells from cell division to cell death. Source: NCI thesaurus link

**Cell respiration**  NALT 23423  
UN AgroVoc c_6527  
A two-stage process in which molecules are oxidized to produce energy. In the first stage, glucose is converted to pyruvic acid via the glycolytic pathway. Subsequently, pyruvic acid is metabolized to ultimately yield carbon dioxide and water. Source: NCI thesaurus link

**cell structure**  NALT 23358  
UN AgroVoc c_1414  
The components of the cell and how they are arranged. Source: NCI thesaurus link

**cell walls**  NALT 23435  
UN AgroVoc c_1415

**Cellbiose**  NALT 23452  
UN AgroVoc c_1417  
A disaccharide consisting of two glucose units in beta (1-4) glycosidic linkage. Obtained from the partial hydrolysis of cellulose. (source: NALT)

**cells**  NALT 2895  
UN AgroVoc c_1418

**Cellulitis**  NALT 23496  
UN AgroVoc c_9697  
Inflammation of the dermis and subcutaneous, most often caused by a bacterial infection. Symptoms include erythema, edema, and pain to the affected area. Source: NCI thesaurus link

**Cellulolytic microorganisms**  NALT 23497  
UN AgroVoc c_35924

**Cellulomonas**  NALT 23499  
UN AgroVoc c_35446  
A genus of facultatively aerobic, Gram-positive, bacilli assigned to the phylum Actinobacteria and the family Cellulomonadaceae. Source: NCI thesaurus link

**Cellulose**  NALT 23457  
UN AgroVoc c_1423
The carbohydrate that is the principal constituent of wood and forms the framework of the wood cells. (source: NALT)

**Cellulose acetate**  NALT 2337  
UN AgroVoc c_1420

**Celosia**  NALT 7342  
UN AgroVoc c_1424

**Celtis**  NALT 23557  
UN AgroVoc c_9699

**Cenchrus**  NALT 23574  
UN AgroVoc c_1427

**Cenchrus ciliaris**  NALT 20310  
UN AgroVoc c_1428

**Cenchrus setigerus**  NALT 23576  
UN AgroVoc c_1429

**Cenococcum**  NALT 5227  
UN AgroVoc c_31548

**Centaurea**  NALT 13258  
UN AgroVoc c_24614  
Dbpedia Centaurea

**Centaurea cyanus**  NALT 23593  
UN AgroVoc c_24615

**Centipedegrass**  NALT 23657  
UN AgroVoc c_37582

**Central nervous system**  NALT 19220  
UN AgroVoc c_1438  
The part of the nervous system that consists of the brain, spinal cord, and meninges. Source: NCI thesaurus link

**Centranthus**  NALT 23694  
UN AgroVoc c_330111  
Dbpedia Centranthus

**Centrarchidae**  NALT 23701  
UN AgroVoc c_42558  
Dbpedia Centrarchidae

**Centre pivot irrigation**  NALT 23647  
UN AgroVoc c_9703

**Centris**  NALT 10031  
UN AgroVoc c_29818
Centropomidae  NALT 23735
    UN AgroVoc c_42283
    Dbpedia Centropomidae

Centrosera  NALT 23738
    UN AgroVoc c_1445

Centrosera acutifolium  NALT 23739
    UN AgroVoc c_33641

Centrosera brasilianum  NALT 23740
    UN AgroVoc c_33642

Centrosera pubescens  NALT 23742
    UN AgroVoc c_1447

Cephaelis  NALT 23746
    UN AgroVoc c_1449

Cephalcia  NALT 23752
    UN AgroVoc c_1453

Cephalopoda  NALT 637
    UN AgroVoc c_1456

Cephalosporins  NALT 10194
    UN AgroVoc c_1458

Cephalosporium  NALT 23769
    UN AgroVoc c_1459

Cephenemyia  NALT 23786
    UN AgroVoc c_16232

Cepheidae  NALT 23788
    UN AgroVoc c_29853

Cephus  NALT 23790
    UN AgroVoc c_1461

Cerambycidae  NALT 9814
    UN AgroVoc c_30017

Ceramiaceae  NALT 5200
    UN AgroVoc c_49786

Ceraphronidae  NALT 10674
    UN AgroVoc c_29854

Cerastoderma edule  NALT 22430
    UN AgroVoc c_48381
Ceratitis  NALT 23876
       UN AgroVoc c_1462
Ceratitis capitata  NALT 23878
       UN AgroVoc c_30614
Ceratocystis  NALT 23904
       UN AgroVoc c_1463
       Rank of Genus, Microascales genera incertae sedis. (source: NALT)
Ceratocystis fagacearum  NALT 23905
       UN AgroVoc c_33645
Ceratocystis fimbriata  NALT 23906
       UN AgroVoc c_33325
Ceratocystis paradoxa  NALT 23907
       UN AgroVoc c_33647
Ceratocystis ulmi  NALT 23908
       UN AgroVoc c_33648
Ceratomyxa  NALT 23916
       UN AgroVoc c_9709
Ceratonia  NALT 20865
       UN AgroVoc c_32959
Ceratonia siliqua  NALT 22589
       UN AgroVoc c_1464
Ceratophyllaceae  NALT 23923
       UN AgroVoc c_26267
Ceratophyllidae  NALT 21330
       UN AgroVoc c_30397
Ceratopogonidae  NALT 13723
       UN AgroVoc c_1465
Ceratotherca  NALT 23946
       UN AgroVoc c_1467
Ceratozamia  NALT 23950
       UN AgroVoc c_35603
Cercidiphyllaceae  NALT 23953
       UN AgroVoc c_26268
Cercopidae  NALT 4571
       UN AgroVoc c_1469
Cercopoidea  NALT 10836
    UN AgroVoc c_30712

Cercoseptoria  NALT 24010
    UN AgroVoc c_31550

Cercospora  NALT 24011
    UN AgroVoc c_1470

Cercospora beticola  NALT 24013
    UN AgroVoc c_33649

Cercospora kikuchii  NALT 24016
    UN AgroVoc c_33652

Cercospora nicotianae  NALT 24017
    UN AgroVoc c_33653

Cercospora oryzae  NALT 24018
    UN AgroVoc c_33654

Cercospora sojina  NALT 24019
    UN AgroVoc c_33655

Cercosporella  NALT 24027
    UN AgroVoc c_16156

Cercosporidium  NALT 24032
    UN AgroVoc c_27149

Cereal byproducts  NALT 24036
    UN AgroVoc c_1471

Cereal protein  NALT 24044
    UN AgroVoc c_23999

Cerebellum  NALT 8211
    UN AgroVoc c_9711
    The portion of the brain located at the base of the skull that is responsible for balance, equilibrium and movement. Source: NCI thesaurus link

Cerebrosides  NALT 24055
    UN AgroVoc c_36868

Cerebrospinal fluid  NALT 18339
    UN AgroVoc c_1475
    The fluid that is contained within the brain ventricles, the subarachnoid space and the central canal of the spinal cord. Source: NCI thesaurus link

Cerebrovascular disorders  NALT 24052
    UN AgroVoc c_9712
A spectrum of pathological conditions of impaired blood flow in the brain. They can involve vessels (arteries; or veins) in the cerebrum, the cerebellum, and the brain stem. (source: NALT)

**Cerebrum**  NALT 19222  
UN AgroVoc c_9713

**Ceriman**  NALT 11669  
UN AgroVoc c_9714

**Ceroplastes**  NALT 24077  
UN AgroVoc c_1477

**Ceroplastes floridensis**  NALT 24080  
UN AgroVoc c_30804

**Cerotoma**  NALT 24085  
UN AgroVoc c_15951

**Cerotoma trifurcata**  NALT 16175  
UN AgroVoc c_30026

**Ceroxylon**  NALT 12003  
UN AgroVoc c_1478

**Cervidae**  NALT 6088  
UN AgroVoc c_1480

**Cervus**  NALT 24110  
UN AgroVoc c_34162

**Cervus elaphus**  NALT 24117  
UN AgroVoc c_9718

**Cestoda**  NALT 24136  
UN AgroVoc c_1481

**Cestode infections**  NALT 24139  
UN AgroVoc c_9721

**Cestrum**  NALT 24145  
UN AgroVoc c_34591

**Cetacea**  NALT 544  
UN AgroVoc c_1482

**Ceutorhynchus**  NALT 24155  
UN AgroVoc c_1484

**Ceutorhynchus assimilis**  NALT 20738  
UN AgroVoc c_36338

**Chabertia**  NALT 24168  
UN AgroVoc c_1485
Seed coverings separated from cereal grains after threshing, together with other stem or leaf debris from the process. (source: NALT)
Chalk brood    NALT 12877
     UN AgroVoc c_36485
Chalk soils    NALT 24304
     UN AgroVoc c_1493
Chamaecyparis    NALT 24307
     UN AgroVoc c_1494
Chamaecyparis obtusa    NALT 24311
     UN AgroVoc c_34592
Chamaedorea    NALT 12004
     UN AgroVoc c_34599
Chamaemyiidae    NALT 24360
     UN AgroVoc c_30468
Chamois    NALT 24388
     UN AgroVoc c_24106
     Library of Congress sh85022443
Chamomile    NALT 24391
     UN AgroVoc c_9733
     The flower-heads of either the plant Anthemis nobilis or the plant Matricaria chamomilla. Chamomile has a warm aromatic odour and a very bitter taste and contains volatile oils which are a mixture of butyl and amyl angelates and valerates. Due to its coumarin constituents, large doses may interfere with coagulation. (NCI04)
     Source: NCI thesaurus link
Chanidae    NALT 24410
     UN AgroVoc c_39258
     Library of Congress sh85022522
     Use for milkfishes; For snakeheads use Channidae. (source: NALT)
Channidae    NALT 24414
     UN AgroVoc c_45096
     Use for snakeheads; For milkfishes use Chanidae. (source: NALT)
Chanos    NALT 24412
     UN AgroVoc c_1499
     Library of Congress sh85022537
Chanos chanos    NALT 24421
     UN AgroVoc c_39259
Chaoboridae    NALT 24423
     UN AgroVoc c_30469
     Library of Congress sh85022559
Cheaoborus  NALT 24426  
UN AgroVoc c_30470  
Library of Congress sh85022560

Characeae  NALT 24434  
UN AgroVoc c_33326

Characiformes  NALT 24449  
UN AgroVoc c_39781

Charadriiformes  NALT 88  
UN AgroVoc c_1502  
Dbpedia Charadriiformes

Charales  NALT 24438  
UN AgroVoc c_330285  
Library of Congress sh88022325

Charophyceae  NALT 24466  
UN AgroVoc c_33660

Charophyta  NALT 24  
UN AgroVoc c_33661

Cheese whey  NALT 24515  
UN AgroVoc c_35804  
The whey removed during the cheesemaking process; for cheeses made with cheese whey USE whey cheeses. (source: NALT)

Cheesemaking  NALT 24505  
UN AgroVoc c_1506  
Library of Congress sh99005888

Chelates  NALT 262  
UN AgroVoc c_37641

Chelating agents  NALT 211  
UN AgroVoc c_1510

Chelation  NALT 24573  
UN AgroVoc c_28287

Chelicerata  NALT 74  
UN AgroVoc c_331238  
Dbpedia Chelicerata

Chelidae  NALT 24578  
UN AgroVoc c_32571  
Library of Congress sh85022869
Chemelonia mydas  NALT 24590
  UN AgroVoc c_49084
Cheloniidae  NALT 22462
  UN AgroVoc c_32572
  Library of Congress sh85022875
Chelonus  NALT 19136
  UN AgroVoc c_29839
Chelyridae  NALT 24596
  UN AgroVoc c_32573
  Dbpedia Chelyridae
Chemical composition  NALT 12908
  UN AgroVoc c_1794
Chemical compounds  NALT 8
  UN AgroVoc c_49870
Chemical control  NALT 24625
  UN AgroVoc c_1514
chemical degradation  NALT 24630
  UN AgroVoc c_37525
  The degradation of a substance by a chemical agent or energy source such as light, heat, or electricity. (source: NALT)
chemical ecology  NALT 6551
  UN AgroVoc c_37526
Chemical precipitation  NALT 24645
  UN AgroVoc c_29047
Chemical pulp  NALT 24649
  UN AgroVoc c_1518
  Pulp made from chemically treated fibers (source: NALT)
chemical reactions  NALT 3982
  UN AgroVoc c_25191
Chemical soil types  NALT 2734
  UN AgroVoc c_1519
chemical structure  NALT 17203
  UN AgroVoc c_15893
  Library of Congress sh85022955
  The spatial arrangement of atoms in a molecule, as well as the number, type and location of chemical bonds between atoms. (source: NALT)
  A representation of the arrangement of atoms and bonds. Source: NCI thesaurus link
chemical substances  NALT 183
  UN AgroVoc c_49872

Chemiluminescence immunoassays  NALT 24711
  UN AgroVoc c_29658

Chemistry  NALT 8467
  UN AgroVoc c_1522
  The science of the composition, structure, properties, and reactions of matter, especially of atomic and molecular systems. Source: NCI thesaurus link

chemoreceptors  NALT 24720
  UN AgroVoc c_32644
  Cells specialized to detect chemical substances and relay that information centrally in the nervous system. Chemoreceptors may monitor external stimuli, as in taste and olfaction, or internal stimuli, such as the concentrations of oxygen and carbon dioxide in the blood. (source: NALT)

Chemotaxis  NALT 24725
  UN AgroVoc c_9757
  The characteristic directional movement or orientation of an organism or cell along a chemical concentration gradient either toward or away from the chemical stimulus. Source: NCI thesaurus link

chemotaxonomy  NALT 24724
  UN AgroVoc c_1526
  Classification of organisms based on differences of the biochemical composition. (source: NALT)

Chemotropism  NALT 24729
  UN AgroVoc c_9760

Chenopodium  NALT 24730
  UN AgroVoc c_1528
  Dbpedia Chenopodium

Chenopodium ambrosioides  NALT 24744
  UN AgroVoc c_1529

Chenopodium quinoa  NALT 24749
  UN AgroVoc c_1531

Cherax  NALT 24763
  UN AgroVoc c_1532

Cherax destructor  NALT 24765
  UN AgroVoc c_46856

Cherax quadricarinatus  NALT 24766
  UN AgroVoc c_46857

Cherax tenuimanus  NALT 24767
  UN AgroVoc c_46855
Cherimoyas  NALT 9681  
UN AgroVoc c_9761

Cherries   NALT 24769
UN AgroVoc c_1534

Cherry capsicum   NALT 22075
UN AgroVoc c_9770

cherry laurel   NALT 24773
UN AgroVoc c_24436

chervil   NALT 10080
UN AgroVoc c_9772

Chestnuts   NALT 22871
UN AgroVoc c_25467

Chewing gum   NALT 24794
UN AgroVoc c_1536

Cheyletidae   NALT 2115
UN AgroVoc c_30927
Library of Congress sh85023195

Cheyletiella   NALT 24802
UN AgroVoc c_1537

Cheyletiellidae   NALT 24803
UN AgroVoc c_30928

Chicken anemia virus   NALT 24817
UN AgroVoc c_23350

Chicken meat   NALT 24840
UN AgroVoc c_24000

chickens   NALT 19929
UN AgroVoc c_1540

Chickpeas   NALT 16207
UN AgroVoc c_9785
Library of Congress sh85023307

Chicks   NALT 17604
UN AgroVoc c_1541
Library of Congress sh85023311

Chicory   NALT 24863
UN AgroVoc c_9786
Chikungunya virus  NALT 6987
    UN AgroVoc c_35376

Chilled meat  NALT 24936
    UN AgroVoc c_9794

Chilo  NALT 24947
    UN AgroVoc c_1549
    Library of Congress sh85023939

Chilo auricilius  NALT 24950
    UN AgroVoc c_27151

Chilo infuscattellus  NALT 24951
    UN AgroVoc c_30304

Chilo partellus  NALT 24953
    UN AgroVoc c_27152

Chilo sacchariphagus  NALT 24955
    UN AgroVoc c_27153

Chilo suppressalis  NALT 12965
    UN AgroVoc c_27157

Chilocorus  NALT 24968
    UN AgroVoc c_30048

Chilopoda  NALT 23655
    UN AgroVoc c_1552

Chimaera  NALT 24978
    UN AgroVoc c_1553

Chimaeridae  NALT 24979
    UN AgroVoc c_38904
    Dbpedia Chimaeridae
    Library of Congress sh85023949

Chimaeriformes  NALT 24982
    UN AgroVoc c_1555
    Library of Congress sh85023950

Chinchillas  NALT 25070
    UN AgroVoc c_1557
    Dbpedia Chinchillas
    Library of Congress sh85024228
Chinodoxa NALT 25166
UN AgroVoc c_1558

Chionoecetes NALT 25171
UN AgroVoc c_1559

Chionoecetes opilio NALT 25173
UN AgroVoc c_47229

Chironemidae NALT 21626
UN AgroVoc c_43970

Chironomus NALT 25187
UN AgroVoc c_30472
Library of Congress sh85024461

Chironomus riparius NALT 25195
UN AgroVoc c_30473

Chiroptera NALT 545
UN AgroVoc c_1560

Chitin synthesis inhibitors NALT 16672
UN AgroVoc c_35054

Chitinase NALT 25210
UN AgroVoc c_1562

Chitosan NALT 25209
UN AgroVoc c_28288
Library of Congress sh85024494

Chlamydia NALT 25224
UN AgroVoc c_1563
Library of Congress sh87005330
A genus of bacteria within the Chlamydiae phylum that contains only the three species Chlamydia trachomatis, Chlamydia suis, and Chlamydia muridarum. Source: NCI thesaurus link

Chlamydomonadaceae NALT 19055
UN AgroVoc c_330319

Chlamydomonas NALT 25250
UN AgroVoc c_35531
Chlamydomonas reinhardtii  NALT 25268
UN AgroVoc c_35534

Chlamydospores  NALT 25275
UN AgroVoc c_35122

Chlamys  NALT 25282
UN AgroVoc c_1565
Library of Congress sh88021183

Chloral hydrate  NALT 25284
UN AgroVoc c_9816

A synthetic monohydrate of chloral with sedative, hypnotic, and anticonvulsive properties. Chloral hydrate is converted to the active compound trichloroethanol by hepatic alcohol dehydrogenase. The agent interacts with various neurotransmitter-operated ion channels, thereby enhancing gamma-aminobutyric acid (GABA)-A receptor mediated chloride currents and inhibiting amino acid receptor-activated ion currents. In addition, chloral hydrate enhances the agonistic effects of glycine receptors, inhibits AMPA-induced calcium influx in cortical neurons, and facilitates 5-HT3 receptor-mediated currents in ganglionic neurons. Overall, this results in a depressant effect on the central nervous system. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Chloramben  NALT 12290
UN AgroVoc c_31302

Chloramphenicol  NALT 10195
UN AgroVoc c_9817

An antibiotic first isolated from cultures of Streptomyces venezuelae in 1947 but now produced synthetically. It has a relatively simple structure and was the first broad-spectrum antibiotic to be discovered. It acts by interfering with bacterial protein synthesis and is mainly bacteriostatic. (source: NALT)

A semisynthetic, broad-spectrum antibiotic derived from Streptomyces venezuelae with primarily bacteriostatic activity. Chloramphenicol diffuses through the bacterial cell wall and reversibly binds to the bacterial 50S ribosomal subunit. The binding interferes with peptidyl transferase activity, thereby prevents transfer of amino acids to the growing peptide chains and blocks peptide bond formation. As a result bacterial protein synthesis is blocked and impede bacterial cell proliferation. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Chloranthaceae  NALT 25291
UN AgroVoc c_26263
Chlorates  NALT 25294
UN AgroVoc c_33126
Library of Congress sh85024526

Chlordane  NALT 25301
UN AgroVoc c_31304
Library of Congress sh85024527

Chlordane is a chlorinated hydrocarbon used as a non-systemic contact insecticide for lawns and crops. Actually a complex mixture of isomers, other chlorinated hydrocarbons, and by-products, chlordane is used in termite and ant control, and as a protective treatment for underground cables. Chlordane may be irritant and toxic by ingestion, inhalation, or skin absorption; toxic effects may be cumulative. When heated to decomposition, chlordane emits toxic fumes of carbon monoxide, hydrogen chloride, chlorine, and phosgene. Chlordane is very persistent in the environment, surviving in soils for more than 20 years. U.S. production of chlordane was stopped in 1976. (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Chlordecone  NALT 25302
UN AgroVoc c_31305
Library of Congress sh85024528

A very stable, colorless, odorless, synthetic chlorinated polycyclic hydrocarbon that is a degradation product of Mirex. Chlordecone has been used as an insecticide on bananas, non-bearing citrus trees, tobacco, lawns and flowers. Exposure to this substance causes neurological symptoms, such as tremors and slurred speech. Chlordecone is reasonably anticipated to be a human carcinogen based on evidence of carcinogenicity in experimental animals. (NCI05) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Chlordimeform  NALT 2082
UN AgroVoc c_31306

Chlorella  NALT 25303
UN AgroVoc c_9818
Dbpedia Chlorella
Library of Congress sh85024529

Chlorella pyrenoidosa  NALT 25305
UN AgroVoc c_33662
Library of Congress sh88022330

Chlorella vulgaris  NALT 25307
UN AgroVoc c_33663

Chlorellaceae  NALT 25308
UN AgroVoc c_330323
Chlorfenvinphos  NALT 25316
    UN AgroVoc c_31307
Chlorfluazuron  NALT 16667
    UN AgroVoc c_36697
Chlorflurenol  NALT 25317
    UN AgroVoc c_1566
Chloridazon  NALT 25318
    UN AgroVoc c_31308
Chlorides  NALT 7277
    UN AgroVoc c_1567
    Includes inorganic salts and chloride ions. (source: NALT)
Chlorimuron  NALT 25332
    UN AgroVoc c_34802
Chlorinated hydrocarbons  NALT 22231
    UN AgroVoc c_35055
    Chemicals containing only chlorine, carbon, and hydrogen. These include a class of persistent, broad-spectrum insecticides that linger in the environment and accumulate in the food chain. (source: NALT)
chlorination  NALT 24659
    UN AgroVoc c_34803
    Library of Congress sh85024540
Chlorine  NALT 25296
    UN AgroVoc c_1568
    Library of Congress sh85024541
    Do not confuse with chlorins. (source: NALT)
    An element with atomic symbol Cl, atomic number 17, and atomic weight 35.05. Source: NCI thesaurus link
Chloris  NALT 25349
    UN AgroVoc c_1569
Chlormequat  NALT 1384
    UN AgroVoc c_1572
Chlorochroa  NALT 25374
    UN AgroVoc c_30687
Chlorococcales  NALT 24442
    UN AgroVoc c_330310
    Library of Congress sh85024557
Chlorofluorocarbons  NALT 24166  
UN AgroVoc c_34806  
Library of Congress sh85024561  
A series of hydrocarbons containing both chlorine and fluorine. These have been used as refrigerants, blowing agents, cleaning fluids, solvents, and as fire extinguishing agents. (source: NALT)  

Chloroform  NALT 25338  
UN AgroVoc c_29696  
A colorless, volatile, liquid derivative of trichloromethane with an ether-like odor. Formerly used as an inhaled anesthetic during surgery, the primary use of chloroform today is in industry, where it is used as a solvent and in the production of the refrigerant freon. Acute chloroform toxicity results in impaired liver function, cardiac arrhythmia, nausea and central nervous system dysfunction. As a byproduct of water chlorination, chloroform may be present in small amounts in chlorinated water. (NCI04) Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link  

Chlorogenic acid  NALT 25419  
UN AgroVoc c_36179  
Library of Congress sh85024566  
A polyphenol and the ester of caffeic acid and quinic acid that is found in coffee and black tea, with potential antioxidant and chemopreventive activities. Chlorogenic acid scavenges free radicals, which inhibits DNA damage and may protect against the induction of carcinogenesis. In addition, this agent may upregulate the expression of genes involved in the activation of the immune system and enhances activation and proliferation of cytotoxic T-lymphocytes, macrophages, and natural killer cells. Chlorogenic acid also inhibits the activity of matrix metalloproteinases. Source: NCI thesaurus link  

Chlorophenols  NALT 1350  
UN AgroVoc c_24983  

Chlorophyceae  NALT 3133  
UN AgroVoc c_1576  

Chlorophylls  NALT 25453  
UN AgroVoc c_1577  
Library of Congress sh85024579  

Chloropidae  NALT 25466  
UN AgroVoc c_30479  
Library of Congress sh87003723  

chloroplasts  NALT 25479  
UN AgroVoc c_9824  
Library of Congress sh85024586
Chlorops  NALT 25467
  UN AgroVoc: c_1578

Chlorosis  NALT 944
  UN AgroVoc: c_1579
  Library of Congress: sh85024588

Chlorothalonil  NALT 25490
  UN AgroVoc: c_1580

Chlorotoluron  NALT 25492
  UN AgroVoc: c_37171

Chlorpropham  NALT 25515
  UN AgroVoc: c_1581

Chlorpyrifos-methyl  NALT 25518
  UN AgroVoc: c_31315

Chlorsulfuron  NALT 25519
  UN AgroVoc: c_34807

Chlortetracycline  NALT 10505
  UN AgroVoc: c_9826

  A tetracycline with a 7-chloro substitution. (source: NALT)

Choanephora  NALT 17891
  UN AgroVoc: c_1583
  Library of Congress: sh88021879

Choanephora cucurbitarum  NALT 25524
  UN AgroVoc: c_34511

Chocolate  NALT 25530
  UN AgroVoc: c_1582
  Library of Congress: sh85024603

  A cocoa mixture usually including cocoa butter, cocoa liquor and a sweetener, most frequently used as a candy or flavoring. Includes bittersweet, semi-sweet chocolate. Cocoa content may vary. (source: NALT)

Cholecalciferol  NALT 1542
  UN AgroVoc: c_9832

  A steroid hormone produced in the skin when exposed to ultraviolet light or obtained from dietary sources. The active form of cholecalciferol, 1,25-dihydroxycholecalciferol (calcitriol) plays an important role in maintaining blood calcium and phosphorus levels and mineralization of bone. The activated form of cholecalciferol binds to vitamin D receptors and modulates gene expression. This leads to an increase in serum calcium concentrations by increasing intestinal absorption of phosphorus and calcium, promoting distal renal tubular reabsorption of calcium and increasing osteoclastic resorption. Source: NCI thesaurus link

  Reference: FDA UNII link
  Look-up using Google link
Cholecystitis  
**NALT 25550**
**UN AgroVoc c_23809**
**Library of Congress sh85024641**

An acute or chronic inflammation involving the gallbladder wall. It may be associated with the presence of gallstones. Source: NCI thesaurus link

**cholecystokinin  **  
**NALT 23189**
**UN AgroVoc c_36979**
**Library of Congress sh85024642**

A 33-amino acid peptide secreted by the upper intestinal mucosa and also found in the central nervous system. It causes gallbladder contraction, release of pancreatic exocrine (or digestive) enzymes, and affects other gastrointestinal functions. Cholecystokinin may be the mediator of satiety. (source: NALT)

Cholera  
**NALT 15160**
**UN AgroVoc c_34154**
**Library of Congress sh85024645**

Cholesterol  
**NALT 18135**
**UN AgroVoc c_1584**

An animal sterol found in the body tissues (and blood plasma) of vertebrates. It can be found in large concentrations within the liver, spinal cord, and brain. Cholesterol is an important component of the membranes of cells, providing stability. It is the major precursor for the synthesis of vitamin D, of the various steroid hormones, including cortisol, cortisone, and aldosterone in the adrenal glands, and of the sex hormones progesterone, estrogen, and testosterone. Cholesterol also has an important role for the brain synapses as well as in the immune system. In conditions featuring elevated low density lipoproteins (LDL), cholesterol often forms plaque deposits in the walls of arteries, a condition known as atherosclerosis, which is a major contributor to coronary heart disease and other forms of cardiovascular disease. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Choline  
**NALT 17367**
**UN AgroVoc c_1585**

Cholinesterase  
**NALT 3985**
**UN AgroVoc c_1586**

Chondrichthyes  
**NALT 843**
**UN AgroVoc c_9833**
Dbpedia Chondrichthyes
Chondrilla  NALT 13261
  UN AgroVoc c_24735
Chondrilla juncea  NALT 25596
  UN AgroVoc c_24736
Chondrostereum  NALT 10855
  UN AgroVoc c_31718
Chondrus  NALT 25633
  UN AgroVoc c_27158
Chondrus crispus  NALT 25634
  UN AgroVoc c_49683
Chops  NALT 25641
  UN AgroVoc c_1587
Chordata  NALT 37
  UN AgroVoc c_1588
Choreutidae  NALT 25657
  UN AgroVoc c_30188
  Library of Congress sh85024745
Chorioptes  NALT 25681
  UN AgroVoc c_9837
Chorioptes bovis  NALT 25682
  UN AgroVoc c_30915
Choristoneura  NALT 25688
  UN AgroVoc c_1589
Choristoneura occidentalis  NALT 25691
  UN AgroVoc c_30361
Choristoneura pinus  NALT 25692
  UN AgroVoc c_30362
Choristoneura rosaceana  NALT 25693
  UN AgroVoc c_30363
Choroid plexus  NALT 25709
  UN AgroVoc c_13460
  Blood vessels forming villous structures in the third, fourth, and lateral ventricles of the brain. Source: NCI thesaurus link
Chorthippus  NALT 3023
  UN AgroVoc c_31925

1.7. Glossary
The genetic material of the nucleus, consisting of deoxyribonucleoprotein, which occurs in two forms during the phase between mitotic divisions: 1) as heterochromatin, seen as condensed, readily stainable clumps; 2) as euchromatin, dispersed lightly staining or nonstaining material. During mitotic division the chromatin condenses into chromosomes.

Source: NCI thesaurus link

Staining of bands, or chromosome segments, allowing the precise identification of individual chromosomes or parts of chromosomes. (source: NALT)

The treatment of chromosomes to reveal characteristic patterns of horizontal bands. The banding patterns lend each chromosome a distinctive appearance so the 22 pairs of human non-sex chromosomes and the X and Y chromosomes can be identified and distinguished without ambiguity. Banding also permits the recognition of
chromosome deletions (lost segments), chromosome duplications (surplus segments) and other types of structural rearrangements of chromosomes. Source: NCI thesaurus link

**chromosome mapping**  
NALT 25849  
UN AgroVoc c_331006  
Any method used for determining the location of and relative distances between genes on a chromosome. (source: NALT)

**chromosome number**  
NALT 25866  
UN AgroVoc c_1597

**Chromosome pairing**  
NALT 13546  
UN AgroVoc c_33465  
The alignment of chromosomes at homologous sequences during cell division. (source: NALT)

**chromosome translocation**  
NALT 25839  
UN AgroVoc c_24003  
Breakage and removal of a large segment of DNA from one chromosome, followed by the segment’s attachment to a different chromosome. (source: NALT)

**chromosomes**  
NALT 276  
UN AgroVoc c_1598

**Chronic toxicity**  
NALT 25889  
UN AgroVoc c_34808  
Adverse reaction of an organism to a continuous or repeated exposure to a chemical substance over a long period of time. (source: NALT)

**Chrysanthemum**  
NALT 13264  
UN AgroVoc c_1599  
Dbpedia Chrysanthemum  
Library of Congress sh85025424

**Chrysanthemum vulgare**  
NALT 25978  
UN AgroVoc c_37709

**Chrysocharis**  
NALT 26017  
UN AgroVoc c_29880

**Chrysodeixis**  
NALT 26026  
UN AgroVoc c_1602

**Chrysomela**  
NALT 26042  
UN AgroVoc c_1603  
Library of Congress sh87006723

**Chrysomelidae**  
NALT 1952  
UN AgroVoc c_30022
Chrysonymphalus  NALT 26081
  UN AgroVoc c_30812

Chrysomya  NALT 21284
  UN AgroVoc c_30451

Chrysomyxa  NALT 26090
  UN AgroVoc c_31847

Chrysopa  NALT 26095
  UN AgroVoc c_24328
  Library of Congress sh85025445

Chrysoperla  NALT 26102
  UN AgroVoc c_24329
  Library of Congress sh94006502

Chrysoperla carnea  NALT 26098
  UN AgroVoc c_24330
  Library of Congress sh85025446

Chrysophyceae  NALT 25732
  UN AgroVoc c_35535
  Library of Congress sh85025447

Chrysophyllum  NALT 26110
  UN AgroVoc c_1604
  Dbpedia Chrysophyllum

Chrysopidae  NALT 26096
  UN AgroVoc c_30834
  Library of Congress sh85025448

Chrysopogon  NALT 26115
  UN AgroVoc c_1606

Chrysops  NALT 26120
  UN AgroVoc c_9848

Chrysosporium  NALT 26126
  UN AgroVoc c_31552
  A mitosporic Onygenaceae fungal genus which causes adiaspiromycosis, a pulmonary mycosis of man and rodents. One of its teleomorphs is Ajellomyces. (source: NALT)

Chrysothamnus  NALT 13265
  UN AgroVoc c_27160

Chymosin  NALT 13041
  UN AgroVoc c_24394
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1.7. Glossary 397
Ciguatera is a form of human poisoning caused by the consumption of subtropical and tropical marine finfish which have accumulated naturally occurring toxins through their diet. The toxins are known to originate from several dinoflagellate (algae) species that are common to ciguatera endemic regions in the lower latitudes. (source: NALT)
Circadian rhythm

The regular recurrence, in cycles of about 24 hours, of biological processes or activities, such as sensitivity to drugs and stimuli, hormone secretion, sleeping, and feeding, (source: NALT)

Circinella

Circinotrichum

Circoviridae

Circulifer

Circulifer tenellus

Cirrhinus

Cirrhinus cirrhosus

Cirripedia

Cirsium

Cirsium arvense

Cistaceae

Cistanche

Cistus

Cistus ladanifer

Citral
Citric acid  NALT 26418

A tricarboxylic acid found in citrus fruits. Citric acid is used as an excipient in pharmaceutical preparations due to its antioxidant properties. It maintains stability of active ingredients and is used as a preservative. It is also used as an acidulant to control pH and acts as an anticoagulant by chelating calcium in blood. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Citobacter freundii  NALT 15291

A species of facultatively anaerobic, gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile by peritrichous flagella, oxidase negative, catalase positive, grows in KCN medium, and successfully ferment sucrose, raffinose and melibiose. C. freundii is most commonly found in water, sewage, soil and food and is an opportunistic pathogen in neonates and immunocompromised patients. Source: NCI thesaurus link
Citrullus lanatus var. citroides  NALT 26454
  UN AgroVoc c_27485
Citrus  NALT 4824
  UN AgroVoc c_1637
  Library of Congress sh85026225
Citrus aurantiiifolia  NALT 26475
  UN AgroVoc c_1638
Citrus aurantium  NALT 17100
  UN AgroVoc c_1639
Citrus fruits  NALT 16721
  UN AgroVoc c_1641
  Library of Congress sh85026231
Citrus jambhiri  NALT 26481
  UN AgroVoc c_35536
Citrus junos  NALT 26482
  UN AgroVoc c_37111
Citrus limon  NALT 26485
  UN AgroVoc c_1643
Citrus macrophylla  NALT 26487
  UN AgroVoc c_35537
Citrus medica  NALT 26446
  UN AgroVoc c_1644
Citrus paradisi  NALT 26492
  UN AgroVoc c_1645
Citrus reticulata  NALT 26494
  UN AgroVoc c_1646
Citrus sinensis  NALT 26495
  UN AgroVoc c_1647
Citrus unshiu  NALT 26497
  UN AgroVoc c_35538
Cixiidae  NALT 26586
  UN AgroVoc c_30743
Cladonia  NALT 26592
  UN AgroVoc c_31804
  Library of Congress sh85026516
Cladophoraceae  NALT 15989
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    Library of Congress sh85026522
Cladophorales  NALT 8358
    UN AgroVoc c_330307
    Library of Congress sh85026523
Cladosporium  NALT 26607
    UN AgroVoc c_23908
    Library of Congress sh85026524
Cladosporium cladosporioides  NALT 26610
    UN AgroVoc c_36119
Cladosporium cucumerinum  NALT 26611
    UN AgroVoc c_36117
Cladosporium herbarum  NALT 26612
    UN AgroVoc c_36118
Clams  NALT 26636
    UN AgroVoc c_1650
Clappertonia  NALT 26638
    UN AgroVoc c_1651
Clarias  NALT 26640
    UN AgroVoc c_24616
    Library of Congress sh85026567
Clarias batrachus  NALT 26642
    UN AgroVoc c_24739
Clarias gariepinus  NALT 26643
    UN AgroVoc c_35396
    Library of Congress sh85026568
Clariidae  NALT 26641
    UN AgroVoc c_36325
Clausena  NALT 26673
    UN AgroVoc c_1654
Clausena lansium  NALT 26675
    UN AgroVoc c_1656
Clavibacter  NALT 15217
    UN AgroVoc c_33330
Clavibacter michiganensis  NALT 11130
  UN AgroVoc c_33331

Claviceps  NALT 26714
  UN AgroVoc c_1657
  Library of Congress sh85026843

Claviceps fusiformis  NALT 26716
  UN AgroVoc c_32314

Claviceps purpurea  NALT 26718
  UN AgroVoc c_24331
  Library of Congress sh85026845

Claws  NALT 26735
  UN AgroVoc c_1658

Clay minerals  NALT 6708
  UN AgroVoc c_15836
  Use for the mineral; For clay as a building material used in pottery and construction USE clay. (source: NALT)

Clay soils  NALT 26755
  UN AgroVoc c_1659
  Library of Congress sh85026874

Claypan soils  NALT 26756
  UN AgroVoc c_1660
  Library of Congress sh85026880

Cleistogamy  NALT 26792
  UN AgroVoc c_1663
  Library of Congress sh85026930
  The condition of having flowers which self-pollinate in the bud, without the opening of the flower. The flowers are often small and inconspicuous. (source: NALT)

Clematis  NALT 26796
  UN AgroVoc c_1664

Clementines  NALT 26507
  UN AgroVoc c_9895

Clenbuterol  NALT 7815
  UN AgroVoc c_34809
  A substituted phenylaminoethanol and a long-acting beta-2 adrenergic agonist with sympathomimetic activity. Clenbuterol selectively binds to and activates beta-2 adrenergic receptors in bronchiolar smooth muscle, thereby causing stimulation of adenyl cyclase, the enzyme that catalyzes the conversion of adenosine triphosphate (ATP) to cyclic-3',5'-adenosine monophosphate (cAMP). Increased intracellular cAMP levels cause relaxation of smooth muscle. In addition, clenbuterol also stimulates central nervous system (CNS), and causes an increase in blood pressure and heart rate due to both beta-2 and beta-1 adrenergic activities. This agent may

1.7. Glossary 403
also exert an anabolic or anti-catabolic effect due to as of yet unidentified mechanisms. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using CAS number link

Clepsis  NALT 26823
  UN AgroVoc c_24617

Cleridae  NALT 24493
  UN AgroVoc c_30042

Clerodendrum  NALT 26831
  UN AgroVoc c_26444

Clethraceae  NALT 26845
  UN AgroVoc c_26236
  Dbpedia Clethraceae
  Library of Congress sh85027002

Cletus  NALT 26853
  UN AgroVoc c_30651

Cletus punctiger  NALT 26855
  UN AgroVoc c_30652

climatic factors  NALT 26882
  UN AgroVoc c_29554
  Library of Congress sh85027040

Climatic soil types  NALT 12168
  UN AgroVoc c_1668

climatic zones  NALT 12169
  UN AgroVoc c_1669
  Library of Congress sh85027043

Clindamycin  NALT 10197
  UN AgroVoc c_36181

An antibacterial agent that is a semisynthetic analog of lincomycin. (source: NALT)

A semisynthetic broad spectrum antibiotic produced by chemical modification of the parent compound lincomycin. Clindamycin dissociates peptidyl-tRNA from the bacterial ribosome, thereby disrupting bacterial protein synthesis. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link
Clitocybe  NALT 4985
  UN AgroVoc c_31703

Clitoria  NALT 26928
  UN AgroVoc c_1675

Clitoria ternatea  NALT 12946
  UN AgroVoc c_1676

Clivina  NALT 22100
  UN AgroVoc c_33666

Cloaca  NALT 26934
  UN AgroVoc c_9901
  The singular posterior opening of the intestinal and urinary tracts of birds, reptiles, amphibians, marsupials and monotremes. Source: NCI thesaurus link

Clomazone  NALT 26942
  UN AgroVoc c_34765

Clonal variation  NALT 26943
  UN AgroVoc c_27611

Clones  NALT 26945
  UN AgroVoc c_1678

Clonorchis  NALT 26956
  UN AgroVoc c_1679

Clopidol  NALT 26960
  UN AgroVoc c_9902

Closteroviridae  NALT 6570
  UN AgroVoc c_331490

Closteroviruses  NALT 16342
  UN AgroVoc c_32854

Clostridium  NALT 26973
  UN AgroVoc c_1680
  A genus of gram-positive, obligate anaerobic bacteria in the Firmicutes phylum capable of producing endospores. Source: NCI thesaurus link

Clostridium botulinum  NALT 14641
  UN AgroVoc c_21492
  Library of Congress sh85027143

Clostridium butyricum  NALT 27008
  UN AgroVoc c_27487
  Library of Congress sh88023232

1.7. Glossary
A species of strictly anaerobic, Gram positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is motile, produces the type E toxin, can only grow in the absence of oxygen, produces butyric acid, forms endospores and ferments granulate. C. butyricum is a causative agent of botulism. Source: NCI thesaurus link

**Clostridium chauvoei**  NALT 14672  
UN AgroVoc c_16390  
Library of Congress sh88023235

**Clostridium difficile**  NALT 14704  
UN AgroVoc c_37056  
Library of Congress sh85027144  
A species of Clostridium that is the most significant cause of pseudomembranous colitis. Source: NCI thesaurus link

**Clostridium pasteurianum**  NALT 8236  
UN AgroVoc c_27488  
Library of Congress sh88023234

**Clostridium perfringens**  NALT 14849  
UN AgroVoc c_32272  
Library of Congress sh86007486  
A species of anaerobic, Gram positive, rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile, hydrolyzes gelatin, produces enterotoxin, is beta-hemolytic and catalase negative. C. perfringens is a food borne pathogen, being the causative agent of pig-bel syndrome and gas gangrene. Source: NCI thesaurus link

**Clostridium tetani**  NALT 14929  
UN AgroVoc c_21494  
Library of Congress sh88023240  
A species of anaerobic, Gram positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is motile by peritrichous flagella, indole and lipase positive, lecithinase negative, hydrolyzes gelatin, ferments inositol and does not ferment glucose or maltose. C. tetani may colonize the intestinal tract of humans and is pathogenic, being the causative agent of Tetanus infection. Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the NIH NCBI link

**Clostridium thermocellum**  NALT 14840  
UN AgroVoc c_27489  
Library of Congress sh88023239

**Clostridium tyrobutyricum**  NALT 27114  
UN AgroVoc c_37068  
A species of anaerobic, Gram positive, rod shaped bacteria assigned to the phylum Firmicutes. This species is sporulating, ferments glucose and xylose and produces butyric acid and acetic acid as fermentation by-products. C. tyrobutyricum is present in milk and causes late-blowing defect in cheeses with high pH leading to product loss. Source: NCI thesaurus link
Cloves  NALT 27286
UN Agrovoc c_23597

Cloxacillin  NALT 27287
UN Agrovoc c_9932
A semi-synthetic antibiotic that is a chlorinated derivative of oxacillin. (source: NALT)
A semisynthetic beta-lactamase resistant penicillin antibiotic with antibacterial activity. Cloxacillin binds to and
inactivates penicillin-binding proteins (PBPs) located on the inner membrane of the bacterial cell wall, thereby
preventing the cross-linkage of peptidoglycans, which are critical components of the bacterial cell wall. This
leads to an interruption of the bacterial cell wall and causes bacterial cell lysis. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Clubionidae  NALT 11753
UN Agrovoc c_30875
Library of Congress sh85027229

Clupea  NALT 27292
UN Agrovoc c_32961

Clupea harengus  NALT 27293
UN Agrovoc c_1682

Clupeidae  NALT 6850
UN Agrovoc c_39007
Dbpedia Clupeidae

Clupeiformes  NALT 27296
UN Agrovoc c_39001
Dbpedia Clupeiformes

Cnaphalocrocis  NALT 27331
UN Agrovoc c_1686
Library of Congress sh85027275

Cnaphalocrocis medinalis  NALT 27332
UN Agrovoc c_30305
Library of Congress sh85027276

Cnephasia  NALT 27338
UN Agrovoc c_1687
Coastal plains  NALT 6752

The lowland area between the seashore and the nearest hills, often gently sloping seaward, and representing a strip of sea bottom that has emerged in recent geologic time. (source: NALT)

Coastal soils  NALT 27365

Coastal waters  NALT 27371

Coasts  NALT 27369

coat proteins  NALT 22083

Use for viral capsid proteins; for the outer proteinaceous viral structure USE capsid. (source: NALT)

Cobalt  NALT 27388

An element with atomic symbol Co, atomic number 27, and atomic weight 58.93. Source: NCI thesaurus link

Cocaine  NALT 27401

A tropane alkaloid with central nervous systems (CNS) stimulating and local anesthetic activity. Cocaine binds to the dopamine, serotonin, and norepinephrine transport proteins and inhibits the re-uptake of dopamine, serotonin, and norepinephrine into pre-synaptic neurons. This leads to an accumulation of the respective neurotransmitters in the synaptic cleft and may result in increased postsynaptic receptor activation. The mechanism of action through which cocaine exerts its local anesthetic effects is by binding to and blocking the voltage-gated
sodium channels in the neuronal cell membrane. By stabilizing neuronal membranes, cocaine inhibits the initiation and conduction of nerve impulses and produces a reversible loss of sensation. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

*Coccidae* NALT 24078
UN AgroVoc c_30803

*Coccidia* NALT 11029
UN AgroVoc c_1703

*Coccidioides* NALT 27433
UN AgroVoc c_1704

*Coccidiosis* NALT 27431
UN AgroVoc c_1705
Library of Congress sh85027570

Protozoan infection found in animals and man. It is caused by several different genera of Coccidia. (source: NALT)

A parasitic infection caused by Coccidia. It affects livestock, birds and humans. In humans the parasite infests the intestinal tract and may cause watery diarrhea, abdominal pain, fever, nausea and vomiting. Source: NCI thesaurus link

*Coccinella* NALT 27441
UN AgroVoc c_15953

*Coccinella septempunctata* NALT 27442
UN AgroVoc c_30049

*Coccinellidae* NALT 4031
UN AgroVoc c_30045
Dbpedia Coccinellidae

*Coccinia* NALT 27465
UN AgroVoc c_331523

*Coccomyxaceae* NALT 25389
UN AgroVoc c_330314

*Coccus* NALT 27404
UN AgroVoc c_1707

*Coccus hesperidum* NALT 20091
UN AgroVoc c_30805
Cochliobolus  NALT 27511  
UN AgroVoc c_1708

Cochliobolus carbonum  NALT 27512  
UN AgroVoc c_34515

Cochliobolus heterostrophus  NALT 17567  
UN AgroVoc c_34519

Cochliobolus lunatus  NALT 27516  
UN AgroVoc c_35470

Cochliobolus miyabeanus  NALT 17569  
UN AgroVoc c_34512

Cochliobolus sativus  NALT 17575  
UN AgroVoc c_34517

Cochliomyia  NALT 21285  
UN AgroVoc c_30452

Cochliomyia hominivorax  NALT 21324  
UN AgroVoc c_30453

Cochlonema  NALT 27536  
UN AgroVoc c_31777

Cochylis  NALT 27542  
UN AgroVoc c_17436

Cockerels  NALT 24854  
UN AgroVoc c_9959

Cocoa beans  NALT 20754  
UN AgroVoc c_1711  
The commodity product; for the beverage USE cocoa (beverage) (source: NALT)

Cocoa butter  NALT 27554  
UN AgroVoc c_28260

Cocoa powder  NALT 27563  
UN AgroVoc c_33967  
Ground cocoa solids. (source: NALT)

Cocoa products  NALT 25531  
UN AgroVoc c_331527

Coconut meal  NALT 27575  
UN AgroVoc c_29441

Coconut milk  NALT 27580  
UN AgroVoc c_29210
**coconut oil**  NALT 27581

UN AgroVoc c_1714

Library of Congress sh85027628

The edible oil extracted from the kernel or meat of the coconut of Cocos nucifera. In addition to its use as a food ingredient and cooking oil, coconut oil is commonly used in skincare preparations and soaps. Source: NCI thesaurus link

**Coconut**  NALT 27585

UN AgroVoc c_25470

Library of Congress sh85027625

Coconuts  NALT 981

UN AgroVoc c_36538

Library of Congress sh85027632

Cocoons  NALT 12005

UN AgroVoc c_32962

Cocos nucifera  NALT 27583

UN AgroVoc c_1716

Codiaceae  NALT 14247

UN AgroVoc c_49480

Codiaeum  NALT 27617

UN AgroVoc c_15499

Codinaea  NALT 27622

UN AgroVoc c_31554

Codium  NALT 27607

UN AgroVoc c_330703

Library of Congress sh85027655

codons  NALT 27633

UN AgroVoc c_37477

Coeloides  NALT 19137

UN AgroVoc c_37797
Coelomomyces NALT 17922
   UN AgroVoc c_24619
   Library of Congress sh85027675

Coelomycetes NALT 8051
   UN AgroVoc c_31537
   Library of Congress sh85027677

Cofactors NALT 23547
   UN AgroVoc c_27490

Coffea NALT 21002
   UN AgroVoc c_1720

Coffea arabica NALT 11639
   UN AgroVoc c_1721

Coffea canephora NALT 27700
   UN AgroVoc c_1723

Coffea liberica NALT 27701
   UN AgroVoc c_1727

Coffee beans NALT 27703
   UN AgroVoc c_28379
   The commodity product; for the beverage USE coffee (beverage) (source: NALT)

Coffee pulp NALT 27728
   UN AgroVoc c_34239
   Library of Congress sh85027721

Coix NALT 27743
   UN AgroVoc c_1735

Colaspis NALT 26051
   UN AgroVoc c_1739

Colchicine NALT 27763
   UN AgroVoc c_1741

An alkaloid isolated from Colchicum autumnale with anti-gout and anti-inflammatory activities. The exact mechanism of action by which colchicines exerts its effect has not been completely established. Colchicine binds to tubulin, thereby interfering with the polymerization of tubulin, interrupting microtubule dynamics, and disrupting mitosis. This leads to an inhibition of migration of leukocytes and other inflammatory cells, thereby reducing the inflammatory response to deposited urate crystals. Colchicine may also interrupt the cycle of monosodium urate crystal deposition in joint tissues, thereby also preventing the resultant inflammatory response. Overall, colchicine decreases leukocyte chemotaxis/migration and phagocytosis to inflamed areas, and inhibits the formation and release of a chemotactic glycoprotein that is produced during phagocytosis of urate crystals. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link
1.7. Glossary

Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Colchicum** NALT 27764
UN AgroVoc c_1742
Dbpedia Colchicum

**Cold** NALT 27767
UN AgroVoc c_1743
Library of Congress sh85027909

**Cold season** NALT 27781
UN AgroVoc c_29557

**Cold stress** NALT 1730
UN AgroVoc c_37531

**Cold tolerance** NALT 136
UN AgroVoc c_9994

**Cold zones** NALT 11923
UN AgroVoc c_1745

cole crops** NALT 19380
UN AgroVoc c_331529

**Coleophora** NALT 27805
UN AgroVoc c_1746
Library of Congress sh85027945

**Coleophora laricella** NALT 27806
UN AgroVoc c_30190

**Coleophoridae** NALT 22785
UN AgroVoc c_30189
Library of Congress sh85027946

**Coleoptera** NALT 9732
UN AgroVoc c_1747

**Coleoptiles** NALT 27848
UN AgroVoc c_24007

**Colias** NALT 27873
UN AgroVoc c_24620

**Colic** NALT 27874
UN AgroVoc c_1751
A clinical syndrome with intermittent abdominal pain characterized by sudden onset and cessation. It is usually associated with obstruction of the intestines; of the cystic duct; or of the urinary tract. (source: NALT)

**Colicins**  NALT 15224  
UN AgroVoc c_34240

**Coliform bacteria**  NALT 15079  
UN AgroVoc c_15894  
A group of gram-negative, rod-shaped bacteria that do not form endospores. They are found in many environments, including the intestinal tract and feces of animals. Some species are economically important as livestock pathogens. (source: NALT)

**Colinus**  NALT 27875  
UN AgroVoc c_10001

**Colitis**  NALT 27877  
UN AgroVoc c_10002  
Library of Congress sh85027957  
Inflammation of the colon section of the large intestine, usually with symptoms such as diarrhea (often with blood and mucus), abdominal pain, and fever. (source: NALT)  
Inflammation of the colon. Source: NCI thesaurus link

**Collagen**  NALT 27895  
UN AgroVoc c_1755  
Library of Congress sh85027969  
A family of large fibrous proteins that are the main components of connective tissue and are responsible for maintaining tissue structure. Source: NCI thesaurus link

**Collagenases**  NALT 27897  
UN AgroVoc c_10003  
Library of Congress sh85027972

**Collembola**  NALT 27926  
UN AgroVoc c_1759

**Collenchyma**  NALT 27933  
UN AgroVoc c_1760

**Colletotrichum**  NALT 27641  
UN AgroVoc c_1761

**Colletotrichum capsici**  NALT 27941  
UN AgroVoc c_34523

**Colletotrichum coccodes**  NALT 27942  
UN AgroVoc c_33332

**Colletotrichum dematium**  NALT 27943  
UN AgroVoc c_34530
Colletotrichum lindemuthianum  NALT 27945
  UN AgroVoc c_34529
  Library of Congress sh88022037

Colletotrichum trifolii   NALT 27948
  UN AgroVoc c_34528

Colletotrichum truncatum  NALT 27949
  UN AgroVoc c_34525

Colloidal properties     NALT 27974
  UN AgroVoc c_1762

Colloids              NALT 184
  UN AgroVoc c_1763

Collybia             NALT 4986
  UN AgroVoc c_31704

Colocasia           NALT 11664
  UN AgroVoc c_1764
  Dbpedia Colocasia

Colocasia esculenta  NALT 12670
  UN AgroVoc c_1765

Colombus grass       NALT 28056
  UN AgroVoc c_11280

Colon               NALT 27880
  UN AgroVoc c_10010

  The part of the large intestine measured from the cecum to the rectum consisting of ascending, transverse, descending and sigmoid portions. The purpose of the colon is to remove water from digested food prior to excretion. Source: NCI thesaurus link

colonizing ability    NALT 27998
  UN AgroVoc c_36703

  ability of an organism (e.g, microbe, plant, animal) to survive and thrive in a new habitat. (source: NALT)

Colony stimulating factor  NALT 28005
  UN AgroVoc c_35079

  A substance that stimulates the production of blood cells. Colony-stimulating factors include granulocyte colony-stimulating factor (G-CSF), granulocyte-macrophage colony-stimulating factor (GM-CSF), and promegapoietin. Source: NCI thesaurus link

Colostrum          NALT 18315
  UN AgroVoc c_1772
  Library of Congress sh85028714

  A thick, protein-rich substance secreted by the breasts during the second half of pregnancy and for a few days after birth before the breast milk comes in. It contains antibodies which serve to give the baby protection from
disease and also has a laxative effect on the colon which helps to expel the plug of meconium and facilitate the establishment of normal bowel movements. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link

coloured guinea grass  NALT 18234
  UN AgroVoc c_11279

Colpoma  NALT 28037
  UN AgroVoc c_31829

Coltricia  NALT 10856
  UN AgroVoc c_31719

Colubridae  NALT 18407
  UN AgroVoc c_32567

Columbicola  NALT 28050
  UN AgroVoc c_10020
  Library of Congress sh85028748

Columbiformes  NALT 90
  UN AgroVoc c_1774

Coma  NALT 28072
  UN AgroVoc c_10025
  A state of profound unconsciousness associated with markedly depressed cerebral activity. Causes include central nervous system damage, intoxication, and metabolic abnormalities. Source: NCI thesaurus link

Combretaceae  NALT 9748
  UN AgroVoc c_1776
  Dbpedia Combretaceae

Combretum  NALT 28108
  UN AgroVoc c_26448
  Dbpedia Combretum

Combustion  NALT 20526
  UN AgroVoc c_1777
  The chemical reaction of oxygen with another element or compound. The reaction is accompanied by the release of heat and, usually, light. Use for chemical reaction with oxygen producing heat; For the state of being on fire USE burning; For the intentional use of fire as a management practice USE prescribed burning. (source: NALT)

Commelina  NALT 28117
  UN AgroVoc c_32269
  Dbpedia Commelina
Commenaceae  NALT 8759  
UN AgroVoc c_26300

Commelinales  NALT 28120  
UN AgroVoc c_330473  
Dbpedia Commelinales  
Library of Congress sh85028891

Commensalism  NALT 28122  
UN AgroVoc c_33255  
Library of Congress sh85028900

Commiphora  NALT 20552  
UN AgroVoc c_26449

common fir  NALT 1649  
UN AgroVoc c_18744

Comoviruses  NALT 8665  
UN AgroVoc c_32855

Compensatory growth  NALT 22958  
UN AgroVoc c_34810

Comperiella  NALT 28324  
UN AgroVoc c_37798

Comperiella bifasciata  NALT 28325  
UN AgroVoc c_37799

Complement fixation tests  NALT 28345  
UN AgroVoc c_1792

Compositae  NALT 2047  
UN AgroVoc c_15766  
Dbpedia Compositae

Composting  NALT 22226  
UN AgroVoc c_15956

The biodecomposition of organic material, such as animal wastes, plant residues or sludges, in the presence of air, by controlled methods including mechanical mixing and aerating. (source: NALT)

Compound fertilizers  NALT 28395  
UN AgroVoc c_1797

compressibility  NALT 28401  
UN AgroVoc c_28307  
Library of Congress sh85029439

The ability of a material to be reduced in size or volume by compression. (source: NALT)
concanavalin A  NALT 28443
UN AgroVoc c_35974
A mannose-binding lectin originally isolated from jack-bean, Canavalia ensiformis. Concanavalin A is a potent lymphocyte mitogen and a stimulator of matrix metalloproteinases, thereby exhibiting immunostimulatory effects. It is used in the characterization and purification of glycoproteins. Source: NCI thesaurus link

Condiments  NALT 459
UN AgroVoc c_1805
Seasonings and flavorings that are generally added to foods by the consumer after preparation. (source: NALT)

Congenital abnormalities  NALT 26788
UN AgroVoc c_10058
Use for those abnormalities existing at, and usually before, birth; For abnormal development after birth USE abnormal development. (source: NALT)

Congo jute  NALT 20992
UN AgroVoc c_10066

conidia  NALT 8505
UN AgroVoc c_10069
Library of Congress sh85031128

Conidiobolus  NALT 28524
UN AgroVoc c_27164

Conidiophores  NALT 28528
UN AgroVoc c_10070

Coniella  NALT 27642
UN AgroVoc c_31555

Coniferous forests  NALT 28534
UN AgroVoc c_1813
Dbpedia Coniferous forests

Coniophora  NALT 10857
UN AgroVoc c_31720

Coniophora puteana  NALT 28542
UN AgroVoc c_33670

Coniopterygidae  NALT 28544
UN AgroVoc c_30837
Library of Congress sh85031137

Coniothyrium  NALT 27643
UN AgroVoc c_16233
Conjunctiva  NALT 28561
UN AgroVoc c_10074
A thin, transparent tissue divided into the palpebral conjunctiva (covering the inner side of the eye lid) and the bulbar conjunctiva (covering the eyeball). Source: NCI thesaurus link

Conjunctivitis  NALT 28562
UN AgroVoc c_10075
Library of Congress sh85031146
Inflammation of the conjunctiva of the eye. Source: NCI thesaurus link

Connaraceae  NALT 5093
UN AgroVoc c_26278
Library of Congress sh85031153

Connective tissue  NALT 4227
UN AgroVoc c_10076
The supporting or framework tissue of the animal body, formed of fibrous and ground substance with more or less numerous cells of various kinds; it is derived from the mesenchyme, and this in turn from the mesoderm; the varieties of connective tissue are: areolar or loose; adipose; dense, regular or irregular, white fibrous; elastic; mucous; and lymphoid tissue; cartilage; and bone; the blood and lymph may be regarded as connective tissues the ground substance of which is a liquid. Source: NCI thesaurus link

Conocybe  NALT 4987
UN AgroVoc c_31705

Conoderus  NALT 28577
UN AgroVoc c_1816
Library of Congress sh85031199

Conophthorus  NALT 28583
UN AgroVoc c_30135
Library of Congress sh85031204

Conophytum  NALT 5891
UN AgroVoc c_34732

Conopomorpha  NALT 28587
UN AgroVoc c_26450
Library of Congress sh2002001999

Conopomorpha cramerella  NALT 3084
UN AgroVoc c_26451

Conotrachelus  NALT 28588
UN AgroVoc c_30067
Library of Congress sh87020392

Conotrachelus nenuphar  NALT 28589
UN AgroVoc c_30068
Conservation tillage  NALT 28614

UN AgroVoc c_33445

Any of several farming methods that provide for seed germination, plant growth, and weed control yet maintain effective ground cover throughout the year and disturb the soil as little as possible. The aim is to reduce soil loss and energy use while maintaining crop yields and quality. No-till is the most restrictive (soil-conserving) form of conservation tillage. Other practices include ridge-till, strip-till, and mulch-till. (source: NALT)

Consistency  NALT 28635

UN AgroVoc c_24152

A description about the firmness, uniformity or make-up of an entity. Source: NCI thesaurus link

Constipation  NALT 28643

UN AgroVoc c_10077

Infrequent or difficult evacuation of feces. (source: NALT)

Irregular and infrequent or difficult evacuation of the bowels. Source: NCI thesaurus link

constructed wetlands  NALT 12628

UN AgroVoc c_331329

Consumer behaviour  NALT 28652

UN AgroVoc c_1821

The predicted or observable activity or manner in which people make decisions regarding the procurement of goods or services; specifically, what, when, why, where, how often and from whom goods and services are bought. (source: NALT)

Contagious bovine pleuropneumonia  NALT 15193

UN AgroVoc c_16706

Contagious caprine pleuropneumonia  NALT 15194

UN AgroVoc c_16707

Contagious caprine pleuropneumonia  NALT 15194

UN AgroVoc c_16707

Contagious equine metritis  NALT 15161

UN AgroVoc c_16408

Contarinia  NALT 23242

UN AgroVoc c_1832

Library of Congress sh85031527

Continuous cropping  NALT 28756

UN AgroVoc c_1835

The growing of a single crop species on a field year after year. Contrast crop rotation and mixed cropping. (source: NALT)

control methods  NALT 10302

UN AgroVoc c_5728
Convallaria  NALT 28811
    UN AgroVoc c_1845
    Library of Congress sh85031676
Convallaria majalis  NALT 28812
    UN AgroVoc c_24622
Conventional tillage  NALT 26762
    UN AgroVoc c_34250
Convolvulaceae  NALT 12136
    UN AgroVoc c_1849
Convolvulus  NALT 28837
    UN AgroVoc c_10087
    Dbpedia Convolvulus
Convolvulus arvensis  NALT 28844
    UN AgroVoc c_33335
Conyza  NALT 13271
    UN AgroVoc c_26452
Cooking  NALT 15573
    UN AgroVoc c_1851
    The act of preparing something to eat by the application of heat. Source: NCI thesaurus link
Cooking quality  NALT 28873
    UN AgroVoc c_330711
Cooperia  NALT 28932
    UN AgroVoc c_1863
Cooperia oncophora  NALT 28934
    UN AgroVoc c_31138
Copaifera  NALT 20872
    UN AgroVoc c_32551
Copepoda  NALT 2119
    UN AgroVoc c_1865
Copernicia  NALT 12006
    UN AgroVoc c_1866
Copidosoma  NALT 28942
    UN AgroVoc c_29872
    Library of Congress sh85032271

1.7. Glossary
Copper NALT 28946
  UN AgroVoc c_1868
  Library of Congress sh85032278
  An element with atomic symbol Cu, atomic number 29, and atomic weight 63. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Copper oxychloride NALT 25325
  UN AgroVoc c_37920

Coppicing NALT 28960
  UN AgroVoc c_1872

Coprinus NALT 4988
  UN AgroVoc c_24623

Coprinus cinereus NALT 28961
  UN AgroVoc c_36442

Coptotermes NALT 28983
  UN AgroVoc c_1875

Coptotermes formosanus NALT 28986
  UN AgroVoc c_30634

Coquillettidia NALT 28990
  UN AgroVoc c_30511

Coquillettidia perturbans NALT 28991
  UN AgroVoc c_30512

Coraciiformes NALT 91
  UN AgroVoc c_1879

Coral reefs NALT 11507
  UN AgroVoc c_1880

Corallinaceae NALT 8112
  UN AgroVoc c_49777

Corals NALT 10049
  UN AgroVoc c_1882

Corchorus NALT 29033
  UN AgroVoc c_1883
  Dbpedia Corchorus
Corchorus capsularis  NALT 29034
   UN AgroVoc c_1884
Corchorus olitorius  NALT 29035
   UN AgroVoc c_1885
Coreyra  NALT 29039
   UN AgroVoc c_1886
   Library of Congress sh85032554
Coreyra cephalonica  NALT 29040
   UN AgroVoc c_30306
Cordana  NALT 29042
   UN AgroVoc c_31556
Cordeauxia  NALT 20873
   UN AgroVoc c_32965
Cordia  NALT 18604
   UN AgroVoc c_27165
Cordia alliodora  NALT 29043
   UN AgroVoc c_27166
Cordyceps  NALT 26722
   UN AgroVoc c_1889
   Library of Congress sh85032574
Cordyline  NALT 5045
   UN AgroVoc c_1890
   Dbpedia Cordyline
Cordyline fruticosa  NALT 29051
   UN AgroVoc c_37361
Coregonus  NALT 29056
   UN AgroVoc c_1892
   Dbpedia Coregonus
Coreidae  NALT 2010
   UN AgroVoc c_30650
Coriandrum  NALT 10932
   UN AgroVoc c_32966
   Library of Congress sh85032600
Coriandrum sativum  NALT 25112
   UN AgroVoc c_1893
Use for the coriander plant as a whole; For the fresh green leaves of the plant as an herb, USE cilantro; For the whole or ground dried seeds of the plant as a spice; USE coriander seed. (source: NALT)

**Coriaria**  NALT 29083  
UN AgroVoc c_23910  
Library of Congress sh85032601

**Coriariaceae**  NALT 29084  
UN AgroVoc c_23909

**Coriolus**  NALT 10858  
UN AgroVoc c_31721

**Coriolus versicolor**  NALT 29097  
UN AgroVoc c_32097

**Cork**  NALT 29111  
UN AgroVoc c_1895

**Corms**  NALT 29123  
UN AgroVoc c_1897  
Library of Congress sh85032624

A solid, short, swollen underground stem which serves as an asexual propagule for the plant, lasts only one year, and bears the next year's growth at the top of the old corm. (source: NALT)

**Corn flour**  NALT 29149  
UN AgroVoc c_25472

**Corn starch**  NALT 29170  
UN AgroVoc c_15500

**Cornaceae**  NALT 13806  
UN AgroVoc c_1898  
Dbpedia Cornaceae  
Library of Congress sh88022701

**Cornales**  NALT 5944  
UN AgroVoc c_330197

**Cornea**  NALT 29206  
UN AgroVoc c_10112  
Library of Congress sh85032796

A dome-shaped, transparent, avascular tissue covering the front of the eye. It is composed of five layers: squamous epithelium, Bowman’s membrane, stroma, Descemet’s membrane, and endothelium. Refraction of light contributing to eye’s focusing ability is its characteristic function. It contains unmyelinated nerve endings which are responsible for the high sensitivity of the tissue. Source: NCI thesaurus link

**Corned beef**  NALT 29209  
UN AgroVoc c_1899
Coronavirus: A genus of single-stranded, positive-sense RNA viruses in the family coronaviridae. The coronavirus genome exhibits helical symmetry. Source: NCI thesaurus link

Corpus luteum hormones: The outer layer of the cerebrum composed of neurons and unmyelinated nerve fibers. It is responsible for memory, attention, consciousness and other higher levels of mental function. Source: NCI thesaurus link
Cortisone  NALT 29334
   UN AgroVoc c_10125
   Library of Congress sh85033100
   A steroid hormone synthesized and secreted by the adrenal gland and necessary for life. It is involved with maintaining cardiovascular function, blood glucose balance, regulating the inflammatory response and metabolism of proteins, carbohydrates, and fat. Source: NCI thesaurus link

Corydalidae  NALT 29339
   UN AgroVoc c_331571
   Library of Congress sh85033116

Corydalis  NALT 29343
   UN AgroVoc c_33671
   Dbpedia Corydalis
   Library of Congress sh85033117

Corylus  NALT 16980
   UN AgroVoc c_1912

Corylus avellana  NALT 28187
   UN AgroVoc c_32098

Corynebacterium  NALT 15218
   UN AgroVoc c_1913
   A genus of Gram-positive, aerobic or facultatively anaerobic, non-motile, non-sporulated, rod-shaped Actinobacteria. Most are a part of normal skin flora. Source: NCI thesaurus link

Corynebacterium ovis  NALT 29397
   UN AgroVoc c_16456

Corynebacterium pseudotuberculosis  NALT 14870
   UN AgroVoc c_32099
   A species of aerobic or facultatively anaerobic, Gram-positive, coryneform, pleomorphic bacilli assigned to the phylum Actinobacteria. This species is nonmotile, non-sporule, catalase and urease positive, oxidase and pyrazinamidase negative, non-lipophilic, reduces nitrate, and does not hydrolyze gelatin. C. pseudotuberculosis is known to cause caseous lymphadenitis in animals and can be pathogenic in humans. Source: NCI thesaurus link

Corynespora  NALT 29500
   UN AgroVoc c_31557
   Library of Congress sh85033128

Corynespora cassicola  NALT 29501
   UN AgroVoc c_33337

Coryneum  NALT 27644
   UN AgroVoc c_26453
Coryphaena NALT 29507
   UN AgroVoc c_1914
Coryphaena hippurus NALT 29509
   UN AgroVoc c_42860
Coryphaenidae NALT 29508
   UN AgroVoc c_42859
Corythucha NALT 29520
   UN AgroVoc c_1915
       Library of Congress sh85033134
Cosmopolites NALT 29548
   UN AgroVoc c_1916
Cosmopolites sordidus NALT 15714
   UN AgroVoc c_30069
Cosmopterigidae NALT 29550
   UN AgroVoc c_30191
       Library of Congress sh85033185
Cosmos NALT 13273
   UN AgroVoc c_23911
Cosmos bipinnatus NALT 17032
   UN AgroVoc c_23912
Cossidae NALT 22624
   UN AgroVoc c_30192
       Library of Congress sh85033191
Cossus NALT 29557
   UN AgroVoc c_1917
Costelytra NALT 29567
   UN AgroVoc c_1921
Costelytra zealandica NALT 29568
   UN AgroVoc c_30127
Costus NALT 29566
   UN AgroVoc c_34604
       Library of Congress sh85033278
Costus speciosus NALT 29575
   UN AgroVoc c_34605
Cotesia NALT 19138
   UN AgroVoc c_27123

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Cotesia flavipes  NALT 10618
   UN AgroVoc c_37012
Cotesia glomerata  NALT 10621
   UN AgroVoc c_34382
Cotesia marginiventris  NALT 10624
   UN AgroVoc c_34378
Cotesia plutellae  NALT 10628
   UN AgroVoc c_37014
Cotesia rubecula  NALT 10630
   UN AgroVoc c_34380
Cotoneaster  NALT 29588
   UN AgroVoc c_1923
   Dbpedia Cotoneaster
Cottidae  NALT 29617
   UN AgroVoc c_45364
Cotton  NALT 4418
   UN AgroVoc c_1926
   Library of Congress sh85033302
Cottonseed  NALT 29647
   UN AgroVoc c_25473
   Library of Congress sh85033362
Cottonseed meal  NALT 29638
   UN AgroVoc c_35678
   Library of Congress sh85033366
cottonseed oil  NALT 28880
   UN AgroVoc c_25474
   Library of Congress sh85033369
   The edible oil extracted from the seeds of Gossypium hirsutum and Gossypium herbaceum. Cottonseed oil is used both as a cooking oil and a food ingredient. Source: NCI thesaurus link
   Reference: FDA UNII link
   Reference the ITIS link
   Reference the NIH NCBI link
   Reference USDA PLANTS link
   Look-up using CAS number link
Cottus  NALT 29618
   UN AgroVoc c_1929
Coturnix NALT 29669
UN AgroVoc c_331518

Coturnix coturnix NALT 29670
UN AgroVoc c_10137

Cotyledons NALT 29675
UN AgroVoc c_1930

Cotylurus NALT 29676
UN AgroVoc c_1931

Cough NALT 918
UN AgroVoc c_10139

A sudden, often repetitive, spasmodic contraction of the thoracic cavity, resulting in violent release of air from the lungs, and usually accompanied by a distinctive sound. Source: NCI thesaurus link

Coumaphos NALT 29682
UN AgroVoc c_31316

Coumaric acids NALT 16647
UN AgroVoc c_36532

Coumarins NALT 10267
UN AgroVoc c_1933

Cowpeas NALT 16208
UN AgroVoc c_1938

Library of Congress sh85033658

any bean of the genus Vigna. (source: NALT)

Cowpox virus NALT 29754
UN AgroVoc c_10147

Cows NALT 16309
UN AgroVoc c_1939

Mature females in the family Bovidae. (source: NALT)

Coxiella NALT 20522
UN AgroVoc c_1940

A genus of Gram-negative, acidophilic, rod-shaped, obligate intracellular bacteria in the phylum Proteobacteria. Source: NCI thesaurus link

Coxiella burnetii NALT 29761
UN AgroVoc c_36027

A species of aerobic, Gram negative, coccobacilli shaped bacteria in the phylum Proteobacteria. This species is obligately intracellular, sporeforming, acidophilic, pleomorphic and catalase positive. C. burnetti is pathogenic, being the causative agent of Q fever. Source: NCI thesaurus link
<table>
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<td>Cratylia</td>
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</table>
Crayfish  NALT 11495
  UN AgroVoc c_1950

Cream  NALT 29921
  UN AgroVoc c_1951
  Library of Congress sh85033804
  A semi-solid composed of an emulsion of lipids, hydrocarbons, waxes, or polyols in water. Source: NCI thesaurus link

Cream cheese  NALT 24523
  UN AgroVoc c_10155
  Library of Congress sh85033805

Creatine  NALT 29929
  UN AgroVoc c_1952
  An endogenous amino acid derivative produced by vertebrate animals and occurring primarily in muscle cells. Creatine is important for energy storage; it is phosphorylated to creatine phosphate, which serves as a phosphate donor in the conversion of ADP to ATP and supplies energy necessary for muscle contraction. Dietary supplementation with creatine may improve muscle wasting associated with cancer and other chronic diseases. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Creatine kinase  NALT 29930
  UN AgroVoc c_29528
  Library of Congress sh85033820
  Creatine kinase B-type (381 aa, ~43 kDa) is encoded by the human CKB gene. This protein plays a role in both energy homeostasis and creatine metabolism. Source: NCI thesaurus link

Creatinine  NALT 29932
  UN AgroVoc c_1953
  Library of Congress sh85033821
  The breakdown product of creatine, a constituent of muscle tissue, that is excreted by the kidney and whose serum level is used to evaluate kidney function. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
An oily liquid mixture of phenols, creosols, and polycyclic aromatic hydrocarbons, obtained by the distillation of coal tar or wood tar, especially from beech wood. (source: NALT)

A rare transmissible encephalopathy most prevalent between the ages of 50 and 70 years. Affected individuals may present with sleep disturbances, personality changes, ataxia, aphasia, visual loss, weakness, muscle atrophy, myoclonus, progressive dementia, and death within one year of disease onset. Pathological features include prominent cerebellar and cerebral cortical spongiform degeneration and the presence of prions. (source: NALT)
Cristulariella  NALT 30063  
UN AgroVoc c_31558

Crithidia  NALT 30064  
UN AgroVoc c_10167

Crocidolomia  NALT 29799  
UN AgroVoc c_24333

crocodiles  NALT 30081  
UN AgroVoc c_1962  
Library of Congress sh85034208

Crocodilia  NALT 904  
UN AgroVoc c_49102  
Dbpedia Crocodilia  
Library of Congress sh85034212

Crocodylidae  NALT 30084  
UN AgroVoc c_32560

Crocodylus niloticus  NALT 30085  
UN AgroVoc c_49112

Crocodylus porosus  NALT 30086  
UN AgroVoc c_49109  
Library of Congress sh85034215

Crocosmia  NALT 30087  
UN AgroVoc c_23913  
Dbpedia Crocosmia

Crocus  NALT 30088  
UN AgroVoc c_1963

Crocus sativus  NALT 30089  
UN AgroVoc c_1964

Cronartium  NALT 30095  
UN AgroVoc c_1965

Cronartium fusiforme  NALT 30099  
UN AgroVoc c_34532

Cronartium quercuum  NALT 30100  
UN AgroVoc c_34531

Crop management  NALT 14  
UN AgroVoc c_16094
Crop residues  NALT 24251
    UN AgroVoc c_16118
    Any organic matter left in the field after the harvest of a crop, e.g. leaves, stalks, stubble, roots, hulls. (source: NALT)

Crop rotation  NALT 30158
    UN AgroVoc c_6662
    System of cultivation where different crops are planted in consecutive growing seasons to maintain soil fertility. (source: NALT)

Crop weed competition  NALT 30169
    UN AgroVoc c_35265

Crop yield  NALT 30142
    UN AgroVoc c_10176

cropping systems  NALT 28763
    UN AgroVoc c_1971
    The pattern of crops grown on a given piece of land, or order in which the crops are cultivated over a fixed period. (source: NALT)

Crops  NALT 7140
    UN AgroVoc c_1972

Cross immunity  NALT 30199
    UN AgroVoc c_32797

Cross pollination  NALT 30201
    UN AgroVoc c_1973

cross resistance  NALT 30204
    UN AgroVoc c_37726

Crossandra  NALT 1974
    UN AgroVoc c_331561

Crossbreds  NALT 9220
    UN AgroVoc c_1975

Crossing over  NALT 24805
    UN AgroVoc c_27495
    The reciprocal exchange of segments at corresponding positions along pairs of homologous chromosomes by symmetrical breakage and crosswise rejoining forming cross-over sites that are resolved during chromosome segregation. Crossing-over typically occurs during meiosis but it may also occur in the absence of meiosis, for example, with bacterial chromosomes, organelle chromosomes, or somatic cell nuclear chromosomes. (source: NALT)

Crotalaria  NALT 30232
    UN AgroVoc c_1977
    Dbpedia Crotalaria
Crotalaria juncea  NALT 30234
   UN AgroVoc c_1978
Croton  NALT 30253
   UN AgroVoc c_1979
Croton tiglium  NALT 30256
   UN AgroVoc c_1980
Crown gall  NALT 30260
   UN AgroVoc c_37530
crows  NALT 29337
   UN AgroVoc c_1981
Cruciferae  NALT 6585
   UN AgroVoc c_15808
Crude protein  NALT 30272
   UN AgroVoc c_24013
Crumenulopsis  NALT 30280
   UN AgroVoc c_31792
Crustacea  NALT 75
   UN AgroVoc c_1984
   Dbpedia Crustacea
Cryoprotectants  NALT 216
   UN AgroVoc c_35066
Cryphonectria  NALT 30350
   UN AgroVoc c_24625
Cryphonectria parasitica  NALT 24785
   UN AgroVoc c_32270
Cryptocodiaceae  NALT 30360
   UN AgroVoc c_49466
Cryptobia  NALT 30364
   UN AgroVoc c_10184
   Library of Congress sh85034429
Cryptocarya  NALT 30367
   UN AgroVoc c_32103
   Dbpedia Cryptocarya
Cryptococcus (homoptera)  NALT 30371
   UN AgroVoc c_37645

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Cryptococcus neoformans  NALT 30375
   UN AgroVoc c_37684
   Library of Congress sh88022039
   A species of the fungus cryptococcus, the causative agent of cryptococcosis. Source: NCI thesaurus link
Cryptodiaporthe  NALT 30377
   UN AgroVoc c_24626
Cryptogams  NALT 6349
   UN AgroVoc c_1987
   Plants and plant-like organisms, such as mosses, ferns, fungi, and algae, that reproduce by spores and not by seeds. (source: NALT)
Cryptolaemus  NALT 27450
   UN AgroVoc c_30050
Cryptolaemus montrouzieri  NALT 30382
   UN AgroVoc c_30051
Cryptolestes  NALT 30385
   UN AgroVoc c_1988
Cryptolestes ferrugineus  NALT 30386
   UN AgroVoc c_31168
Cryptomeria  NALT 30391
   UN AgroVoc c_32968
   Dbpedia Cryptomeria
Cryptomeria japonica  NALT 30393
   UN AgroVoc c_1989
Cryptonemiaceae  NALT 4574
   UN AgroVoc c_49793
   Library of Congress sh88022346
Cryptophagidae  NALT 13663
   UN AgroVoc c_30060
Cryptophilea  NALT 30424
   UN AgroVoc c_1990
   Library of Congress sh85034462
Cryptophilea leucotreta  NALT 30426
   UN AgroVoc c_30365
   Library of Congress sh85034463
Cryptorchidism  NALT 30434
   UN AgroVoc c_1991
A developmental defect characterized by failure of the testes to descend into the scrotum. (source: NALT)

Cryptosorella  NALT 30442
UN AgroVoc c_31743

Cryptosporidium  NALT 27414
UN AgroVoc c_10186
A genus of parasitic protozoa that is the cause of cryptosporidiosis. Source: NCI thesaurus link

Cryptosporidium baileyi  NALT 30443
UN AgroVoc c_35479

Cryptosporidium parvum  NALT 30444
UN AgroVoc c_34678

Cryptotermes  NALT 30446
UN AgroVoc c_1993
Library of Congress sh85034472

Crystallization  NALT 30455
UN AgroVoc c_1994

Cteniceria  NALT 30457
UN AgroVoc c_1995

Ctenocephalides  NALT 30463
UN AgroVoc c_30402

Ctenocephalides canis  NALT 30465
UN AgroVoc c_30403

Ctenopharyngodon  NALT 30473
UN AgroVoc c_15958
Library of Congress sh85034531

Ctenopharyngodon idella  NALT 30474
UN AgroVoc c_24334
Library of Congress sh85034532

Cuculogaster  NALT 30490
UN AgroVoc c_10193
Library of Congress sh85034664

Cucujidae  NALT 27813
UN AgroVoc c_30062

Cuculiformes  NALT 92
UN AgroVoc c_1999
Cucumbers  NALT 30502  
UN AgroVoc c_10195  
Library of Congress sh85034673

Cucumis  NALT 30505  
UN AgroVoc c_2001  
Library of Congress sh85034676

Cucumis anguria  NALT 30506  
UN AgroVoc c_2002

Cucumis melo  NALT 30507  
UN AgroVoc c_2003

Cucumis metuliferus  NALT 30508  
UN AgroVoc c_32106

Cucumis sativus  NALT 30503  
UN AgroVoc c_2004

Cucumoviruses  NALT 19971  
UN AgroVoc c_32856

Cucurbita  NALT 30542  
UN AgroVoc c_2007  
Dbpedia Cucurbita  
Library of Congress sh85034677

Cucurbita foetidissima  NALT 30545  
UN AgroVoc c_2008

Cucurbita maxima  NALT 30546  
UN AgroVoc c_2009

Cucurbita moschata  NALT 30107  
UN AgroVoc c_2011

Cucurbita pepo  NALT 30547  
UN AgroVoc c_2012  
Library of Congress sh85034678

Cucurbitaceae  NALT 11202  
UN AgroVoc c_2013

Culex  NALT 30589  
UN AgroVoc c_2015  
Library of Congress sh85034703

Culex annulirostris  NALT 30590  
UN AgroVoc c_30513
Culex nigripalpus  NALT 30592
    UN AgroVoc c_30514

Culex pipiens  NALT 30593
    UN AgroVoc c_30516
    Library of Congress sh85034704

Culex quinquefasciatus  NALT 30594
    UN AgroVoc c_30517
    Library of Congress sh85034705

Culex restuans  NALT 30595
    UN AgroVoc c_30518

Culex salinarius  NALT 30596
    UN AgroVoc c_30519

Culex tarsalis  NALT 30599
    UN AgroVoc c_30520
    Library of Congress sh91002905

Culex tritaeniorhynchus  NALT 30602
    UN AgroVoc c_30521

Culicidae  NALT 4448
    UN AgroVoc c_2016

Culicinomyces  NALT 30632
    UN AgroVoc c_31560

Culicoides  NALT 23934
    UN AgroVoc c_10196

Culicoides brevitarsis  NALT 30633
    UN AgroVoc c_27172

Culicoides furens  NALT 30634
    UN AgroVoc c_27173

Culicoides nubeculosus  NALT 30637
    UN AgroVoc c_27178

Culicoides variipennis  NALT 30640
    UN AgroVoc c_27180
    Library of Congress sh87020140

Culiseta  NALT 6731
    UN AgroVoc c_30522
    Library of Congress sh85034709

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Culiseta incidens  NALT 30645
    UN AgroVoc c_30523
Culiseta inornata  NALT 30646
    UN AgroVoc c_30524
Culiseta melanura  NALT 30647
    UN AgroVoc c_30525
    Library of Congress sh85034710
Cultural control  NALT 28785
    UN AgroVoc c_2020
Cultural soil types  NALT 5473
    UN AgroVoc c_2022
Cumin  NALT 30718
    UN AgroVoc c_10205
Cuminum  NALT 10936
    UN AgroVoc c_32969
Cuminum cyminum  NALT 30719
    UN AgroVoc c_2024
Cunninghamella  NALT 30726
    UN AgroVoc c_31811
Cunninghamia  NALT 30728
    UN AgroVoc c_32107
    Library of Congress sh85034813
Cunninghamia lanceolata  NALT 25083
    UN AgroVoc c_32108
Cunoniaceae  NALT 30729
    UN AgroVoc c_26277
    Dbpedia Cunoniaceae
    Library of Congress sh85034815
Cuphea  NALT 30732
    UN AgroVoc c_27181
Cupressaceae  NALT 21318
    UN AgroVoc c_2025
Cupressus  NALT 30738
    UN AgroVoc c_2026
    Dbpedia Cupressus
Cupressus arizonica  NALT 30750  
UN AgroVoc c_26455

Cupressus lusitanica  NALT 30751  
UN AgroVoc c_26456  
Library of Congress sh85034834

Cupressus macrocarpa  NALT 30752  
UN AgroVoc c_26457

Cupressus sempervirens  NALT 30753  
UN AgroVoc c_26458

Curculio  NALT 15610  
UN AgroVoc c_2028  
Library of Congress sh85034846

Curculio caryae  NALT 30761  
UN AgroVoc c_30070

Curculio elephas  NALT 24789  
UN AgroVoc c_34435

Curculionidae  NALT 10021  
UN AgroVoc c_30063  
Library of Congress sh85032553

Curcuma  NALT 30808  
UN AgroVoc c_2029  
Library of Congress sh85034848

Curcuma domestica  NALT 30809  
UN AgroVoc c_10208

Curcuma xanthorrhiza  NALT 30810  
UN AgroVoc c_2036

Curcumin  NALT 30815  
UN AgroVoc c_36415

A phytopollyphenol pigment isolated from the plant Curcuma longa, commonly known as turmeric, with a variety of pharmacologic properties. Curcumin blocks the formation of reactive-oxygen species, possesses anti-inflammatory properties as a result of inhibition of cyclooxygenases (COX) and other enzymes involved in inflammation; and disrupts cell signal transduction by various mechanisms including inhibition of protein kinase C. These effects may play a role in the agent’s observed antineoplastic properties, which include inhibition of tumor cell proliferation and suppression of chemically induced carcinogenesis and tumor growth in animal models of cancer. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation

1.7. Glossary
Look-up synonyms

Look-up using CAS number link

**Cured meat**  NALT 15070
    UN AgroVoc c_2038

**Curimatidae**  NALT 24450
    UN AgroVoc c_39958
    Dbpedia Curimatidae
    Library of Congress sh85034855

**Curium**  NALT 3199
    UN AgroVoc c_24832
    Library of Congress sh85034863

**Curvularia**  NALT 30876
    UN AgroVoc c_2040

**Cuscuta**  NALT 30878
    UN AgroVoc c_2041

**Cussonia**  NALT 11738
    UN AgroVoc c_33676

**Cut flowers**  NALT 30899
    UN AgroVoc c_16485
    Library of Congress sh85034986

**Cut foliage**  NALT 30900
    UN AgroVoc c_32418

**Cuterebra**  NALT 30915
    UN AgroVoc c_10227
    Library of Congress sh90002347

**Cyanamides**  NALT 21107
    UN AgroVoc c_2052
    Library of Congress sh85035026

**Cyanazine**  NALT 30950
    UN AgroVoc c_31318

**Cyanides**  NALT 30955
    UN AgroVoc c_2053

**Cyanidin**  NALT 10005
    UN AgroVoc c_10230

**Cyanogenic glycosides**  NALT 30977
    UN AgroVoc c_35074
Cyanophyta  NALT 72
  UN AgroVoc c_16234
  Cyanobacteria is at the level of phylum; do not confuse with the genus Cyanobacterium in the order Chroococcales. (source: NALT)

Cyathostoma  NALT 30988
  UN AgroVoc c_33679

Cycadaceae  NALT 31000
  UN AgroVoc c_26312
  Library of Congress sh85035048

Cycadopsida  NALT 860
  UN AgroVoc c_330961

Cycas  NALT 31001
  UN AgroVoc c_10235
  Library of Congress sh85035051

Cyclamates  NALT 31007
  UN AgroVoc c_10236
  Library of Congress sh85035057

Cyclamen  NALT 31008
  UN AgroVoc c_10237
  Library of Congress sh85035058

Cyclaneusma  NALT 31015
  UN AgroVoc c_31830
  Rank of Genus, Helotiales genera incertae sedis. (source: NALT)

Cyclanthaceae  NALT 31018
  UN AgroVoc c_2055

Cyclocephala  NALT 31036
  UN AgroVoc c_30128

Cyclodextrins  NALT 31046
  UN AgroVoc c_10240

Cycloheximide  NALT 10317
  UN AgroVoc c_31319

Cyclophosphamide  NALT 10463
  UN AgroVoc c_2058
  A synthetic alkylating agent chemically related to the nitrogen mustards with antineoplastic and immunosuppressive activities. In the liver, cyclophosphamide is converted to the active metabolites aldophosphamide and phosphoramidate mustards, which bind to DNA, thereby inhibiting DNA replication and initiating cell death. Source: NCI thesaurus link

1.7. Glossary
Reference: FDA UNII link
Look-up using CAS number link

Cyclopteridae  NALT 31076
UN AgroVoc c_45463
Library of Congress sh85035102

Cyclopterus  NALT 31077
UN AgroVoc c_2059
Library of Congress sh85035103

Cydia  NALT 31083
UN AgroVoc c_2061
Library of Congress sh92002606

Cydia funebrana  NALT 31086
UN AgroVoc c_34436

Cydia nigricana  NALT 31087
UN AgroVoc c_30367

Cydia pomonella  NALT 27624
UN AgroVoc c_30368

Cydnidae  NALT 4376
UN AgroVoc c_30657

Cydonia  NALT 31112
UN AgroVoc c_32970

Cydonia oblonga  NALT 31113
UN AgroVoc c_2062

Cyfluthrin  NALT 31116
UN AgroVoc c_20615

Cyhalothrin  NALT 31123
UN AgroVoc c_35076

Cyhexatin  NALT 2086
UN AgroVoc c_31320

Cylas  NALT 19731
UN AgroVoc c_24335
Library of Congress sh85035124

Cylas formicarius  NALT 31124
UN AgroVoc c_29999
Library of Congress sh85035125
Cylindrocarpon  NALT 31130  
 UN AgroVoc c_16157

Cylindrocladium  NALT 31136  
 UN AgroVoc c_31561

Cylindrocopturus  NALT 30767  
 UN AgroVoc c_30071

Cylindrocopturus adspersus  NALT 31139  
 UN AgroVoc c_30072

Cylindrosporium  NALT 27646  
 UN AgroVoc c_26459

Cymadothea  NALT 31149  
 UN AgroVoc c_31748

Cymbidium  NALT 31159  
 UN AgroVoc c_10245  
 Dbpedia Cymbidium  
 Library of Congress sh85035142

Cymbopogon  NALT 31164  
 UN AgroVoc c_2063  
 Dbpedia Cymbopogon

Cymbopogon citratus  NALT 31165  
 UN AgroVoc c_35540

Cynanchum  NALT 12768  
 UN AgroVoc c_33680  
 Dbpedia Cynanchum

Cynara  NALT 13277  
 UN AgroVoc c_2064  
 Library of Congress sh85035149

Cynara cardunculus  NALT 22432  
 UN AgroVoc c_2065

Cynipidae  NALT 6737  
 UN AgroVoc c_29860

Cynodon  NALT 31194  
 UN AgroVoc c_2067

Cynodon dactylon  NALT 16739  
 UN AgroVoc c_2069

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Cynodon nlemfuensis  NALT 31195  
UN AgroVoc c_33681

Cynoscion  NALT 31207  
UN AgroVoc c_2070

Cynosorus  NALT 31208  
UN AgroVoc c_2071

Cyperaceae  NALT 18428  
UN AgroVoc c_2072  
Dbpedia Cyperaceae

Cypermethrin  NALT 31222  
UN AgroVoc c_31321

Cyperus  NALT 31213  
UN AgroVoc c_2073

Cyperus esculentus  NALT 26143  
UN AgroVoc c_2074

Cyperus papyrus  NALT 31228  
UN AgroVoc c_2075

Cyperus rotundus  NALT 31229  
UN AgroVoc c_16235

Cyprinidae  NALT 1793  
UN AgroVoc c_40064  
Dbpedia Cyprinidae

Cypriniformes  NALT 27390  
UN AgroVoc c_40040

Cyprinodontidae  NALT 31276  
UN AgroVoc c_41829

Cyprinodontiformes  NALT 11143  
UN AgroVoc c_24627  
Dbpedia Cyprinodontiformes

Cyprinus  NALT 31264  
UN AgroVoc c_2079

Cyprinus carpio  NALT 31281  
UN AgroVoc c_36301
Cyripedium  NALT 31283
  UN AgroVoc c_35541
  Dbpedia Cyripedium
Cyproconazole  NALT 28444
  UN AgroVoc c_36942
Cyromazine  NALT 25216
  UN AgroVoc c_36698
Cyrtomenus  NALT 31101
  UN AgroVoc c_27182
Cyrtomenus bergi  NALT 31302
  UN AgroVoc c_27183
Cyrtorhinus  NALT 31313
  UN AgroVoc c_30671
  Library of Congress sh85035201
Cyrtorhinus lividipennis  NALT 31315
  UN AgroVoc c_30672
Cyrtosperma  NALT 11665
  UN AgroVoc c_2082
Cystathionine  NALT 31321
  UN AgroVoc c_36895
Cysteamine  NALT 7816
  UN AgroVoc c_37546
Cysteine  NALT 31327
  UN AgroVoc c_2084
  A non-essential sulfur-containing amino acid in humans, related to cystine, Cysteine is important for protein synthesis, detoxification, and diverse metabolic functions. Found in beta-keratin, the main protein in nails, skin, and hair, Cysteine is important in collagen production, as well as skin elasticity and texture. Also required in the manufacture of amino acid taurine, Cysteine is a component of the antioxidant glutathione, and plays a role in the metabolism of essential biochemicals such as coenzyme A, heparin, and biotin. (NCI04) Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
Cysticercosis  NALT 24142
  UN AgroVoc c_2085

1.7. Glossary
Infection with cysticercus, the larval form of the various tapeworms of the genus Taenia (usually T. solium in man). In humans they penetrate the intestinal wall and invade subcutaneous tissue, brain, eye, muscle, heart, liver, lung, and peritoneum. Brain involvement results in neurocysticercosis. (source: NALT)

A parasitic infection caused by the larval form of Taenia solium. It is a disseminated infection affecting the central nervous system, subcutaneous tissues, lungs, heart and liver. The most serious complications result from infection of the brain parenchyma. Patients may develop seizures, hydrocephalus, encephalopathy and meningoencephalitis. Source: NCI thesaurus link

**Cystine**  NALT 7787
UN AgroVoc c_2086

Not considered one of the 20 amino acids, Cystine is a sulfur-containing derivative obtained from oxidation of cysteine amino acid thiol side chains. It functions as an antioxidant and protects tissues against radiation and pollution, slowing the aging process. It also aids protein synthesis. Cystine is abundant in many proteins of skeletal tissues and skin, and found in insulin and digestive enzymes chromotrypsinogen A, papain, and trypsinogen. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Cystitis**  NALT 17888
UN AgroVoc c_10254

An acute or chronic inflammatory process affecting the bladder. Source: NCI thesaurus link

**Cystocaulus**  NALT 31372
UN AgroVoc c_2087

**Cytauxzoon**  NALT 31383
UN AgroVoc c_10257

**Cytidine**  NALT 31385
UN AgroVoc c_2088

**Cytisus**  NALT 31389
UN AgroVoc c_26460

**Cytisus scoparius**  NALT 20055
UN AgroVoc c_26461

**Cytochalasins**  NALT 31419
UN AgroVoc c_28330

**Cytochemistry**  NALT 23360
UN AgroVoc c_37168

Branch of histochemistry associated with the localization of cellular components by specific staining methods, as for example the localization of acid phosphatases by the Gomori method. Source: NCI thesaurus link
Cytochrome b  NALT 31423
   UN AgroVoc c_32420
   Library of Congress sh85035230

Cytochrome c  NALT 31426
   UN AgroVoc c_32421
   Library of Congress sh85035230

Cytochrome f  NALT 31429
   UN AgroVoc c_32422
   Library of Congress sh87005369

Cytochromes  NALT 31424
   UN AgroVoc c_27497
   Library of Congress sh85035230

Cytogenetics  NALT 8825
   UN AgroVoc c_2089
   The branch of biology that studies the cellular aspects of heredity, especially the chromosomes. Includes the study of disease states caused by numerical and structural chromosome abnormalities. Source: NCI thesaurus link

Cytokines  NALT 28015
   UN AgroVoc c_35078

Cytokinins  NALT 31445
   UN AgroVoc c_2090

Cytomegalovirus  NALT 24000
   UN AgroVoc c_10259
   Library of Congress sh85035244
   A genus of the family herpesviridae, subfamily beta herpesvirinae, infecting the salivary glands, liver, spleen, lungs, eyes, and other organs, in which they produce characteristically enlarged cells with intranuclear inclusions. Source: NCI thesaurus link
   Reference: FDA UNII link

Cytophaga  NALT 31451
   UN AgroVoc c_10260
   Library of Congress sh85035245

Cytophagales  NALT 31462
   UN AgroVoc c_2092

cytoplasm  NALT 23437
   UN AgroVoc c_2093
   That portion of the cell contained within the plasma membrane but excluding the nucleus. Source: NCI thesaurus link

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Cytoplasmic inheritance   NALT 31477
   UN AgroVoc c_2094
   Library of Congress sh85035253
   Transmission of parental characters by extrachromosomal means such as by the DNA in mitochondria, chloroplasts or plasmids. (source: NALT)

Cytoplasmic male sterility   NALT 31481
   UN AgroVoc c_27498
   Library of Congress sh85035254

Cytosine   NALT 31497
   UN AgroVoc c_2096
   A pyrimidine base found in DNA and RNA that pairs with guanine. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Cytospora   NALT 27647
   UN AgroVoc c_14388

Cytotoxicity   NALT 31518
   UN AgroVoc c_34251
   The adverse effect of some iatrogenic therapies. It is an accepted side effect in radiation therapy where the desired effect is to kill rapidly growing tumor cells. In the killing of tumor cells, other cells that are rapidly growing e.g hair, mucous membranes are also killed. Source: NCI thesaurus link

Dacnusa   NALT 19139
   UN AgroVoc c_26462

Dacrycarpus   NALT 31538
   UN AgroVoc c_24742

Dactylella   NALT 31542
   UN AgroVoc c_31540

Dactylis   NALT 31550
   UN AgroVoc c_2100

Dactylis glomerata   NALT 27550
   UN AgroVoc c_2101

Dactyloctenium   NALT 31557
   UN AgroVoc c_2102

Dactylorygidae   NALT 31561
   UN AgroVoc c_32008
Dactylogyrus  NALT 31562
   UN AgroVoc c_32009

Dactylopiidae  NALT 27476
   UN AgroVoc c_30808
   Library of Congress sh85035367

Dactylopius  NALT 31564
   UN AgroVoc c_33685
   Library of Congress sh85035368

Dactylorhiza  NALT 31566
   UN AgroVoc c_37114
   Library of Congress sh85035370

Dacus  NALT 31578
   UN AgroVoc c_2105
   Library of Congress sh85035373

Daedalea  NALT 10860
   UN AgroVoc c_24628

Daemonorops  NALT 12008
   UN AgroVoc c_2107
   Library of Congress sh85035378

Dahlia  NALT 13278
   UN AgroVoc c_10266
   Library of Congress sh85035416

Daidzein  NALT 1538
   UN AgroVoc c_37220
   An isoflavone extract from soy, which is an inactive analog of the tyrosine kinase inhibitor genistein. It has antioxidant and phytoestrogenic properties. (NCI) Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Dairies  NALT 5484
   UN AgroVoc c_34761

Dairy cattle  NALT 23071
   UN AgroVoc c_2108
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Daphnia magna  NALT 31734
   UN AgroVoc c_30848
   Library of Congress sh95004488

Daphnia pulex  NALT 31735
   UN AgroVoc c_30849
   Library of Congress sh85035778

Daphniidae  NALT 19264
   UN AgroVoc c_46134

Dasineura  NALT 23244
   UN AgroVoc c_2125

Dasineura brassicae  NALT 31751
   UN AgroVoc c_30461

Dasyatidae  NALT 31757
   UN AgroVoc c_38677
   Library of Congress sh85035840

Dasyatis  NALT 31758
   UN AgroVoc c_2126

Dasychira  NALT 31759
   UN AgroVoc c_2127

Dasytricha  NALT 26275
   UN AgroVoc c_10288

Dates  NALT 31794
   UN AgroVoc c_25475

Datiscaceae  NALT 31797
   UN AgroVoc c_26261

Datura  NALT 31800
   UN AgroVoc c_2130
   Library of Congress sh85035892

Datura metel  NALT 31802
   UN AgroVoc c_37118

Datura stramonium  NALT 31803
   UN AgroVoc c_26468
   Library of Congress sh85035895

Daucus  NALT 10940
   UN AgroVoc c_2131

1.7. Glossary
Daucus carota  NALT 22693
   UN AgroVoc c_2132
Davainea  NALT 31828
   UN AgroVoc c_2134
Davaineidae  NALT 29668
   UN AgroVoc c_31949
   Library of Congress sh85035912
Dazomet  NALT 31843
   UN AgroVoc c_31322
Deafness  NALT 31859
   UN AgroVoc c_2136
   An inherited or acquired condition characterized by the inability to hear in one or both ears. Source: NCI thesaurus link
Deamination  NALT 7826
   UN AgroVoc c_2137
Death  NALT 739
   UN AgroVoc c_2138
   The cessation of life. Source: NCI thesaurus link
Debaryomyces  NALT 31871
   UN AgroVoc c_31774
   Rank of Genus, Saccharomycetaceae incertae sedis. (source: NALT)
Decaffeination  NALT 31879
   UN AgroVoc c_28332
Decapoda  NALT 13193
   UN AgroVoc c_2141
Deep tillage  NALT 31935
   UN AgroVoc c_36704
deer  NALT 7153
   UN AgroVoc c_2152
Defence mechanisms  NALT 17454
   UN AgroVoc c_35269
   Use for the ability of pathogens, pests or parasites to defend themselves against the host’s response to attack; For the ability of hosts to respond to the attack of pathogens, pests or parasites USE “resistance mechanisms” or one of its narrower terms. (source: NALT)
Deficiency diseases  NALT 16732
   UN AgroVoc c_2154
Diseases caused by an insufficient intake of essential nutrients, i.e., protein (or amino acids), vitamins, and minerals or inadequacy intake of calories. (source: NALT)

**Defoliants**  NALT 218

- **UN AgroVoc c_2157**
- **Library of Congress sh85036461**

Chemicals which cause leaves or other foliage to drop from a plant, usually to facilitate harvest. (source: NALT)

**Defoliation**  NALT 12578

- **UN AgroVoc c_15579**

Use for the loss of leaf area by pests, disease, grazing animals, wind, storms, pollution, drought or other stresses. Includes simulated defoliation; For the physiological foliage loss in response to natural environmental cycles USE leaf abscission; For the intentional defoliation of plants by agrochemicals USE defoliants. (source: NALT)

**Degradation**  NALT 17316

- **UN AgroVoc c_2159**

The reduction of a chemical compound to one less complex, as by splitting off one or more groups. Source: NCI thesaurus link

**Dehiscence**  NALT 32020

- **UN AgroVoc c_2161**

The splitting open at maturity of pods of capsules along definite lines or sutures. (source: NALT)

- A splitting open of an anatomical structure, zone, or organ with the exposure or discharge of its content. Source: NCI thesaurus link

**Dehorning**  NALT 32021

- **UN AgroVoc c_6075**
- **Library of Congress sh85036488**

**Deightonella**  NALT 32037

- **UN AgroVoc c_31563**
- **Library of Congress sh85036497**

**Delayed hypersensitivity**  NALT 32067

- **UN AgroVoc c_29597**

**Delesseriaceae**  NALT 3140

- **UN AgroVoc c_49788**

**Delia**  NALT 10013

- **UN AgroVoc c_2165**

**Delia antiqua**  NALT 32119

- **UN AgroVoc c_30436**

**Delia coarctata**  NALT 32120

- **UN AgroVoc c_30437**

**Delia floralis**  NALT 25716

- **UN AgroVoc c_30438**
Delia platura  NALT 32121
    UN AgroVoc c_30439
Delia radicum  NALT 20735
    UN AgroVoc c_30440
Delignification  NALT 24661
    UN AgroVoc c_24014
    Removal of part or all of the lignin from wood by chemical treatment. (source: NALT)
Delonix  NALT 20878
    UN AgroVoc c_33338
Delonix regia  NALT 32143
    UN AgroVoc c_33339
Delphacidae  NALT 32150
    UN AgroVoc c_30744
Delphinapterus  NALT 32159
    UN AgroVoc c_33686
Delphinapterus leucas  NALT 32160
    UN AgroVoc c_33687
Delphinidae  NALT 32161
    UN AgroVoc c_48955
Delphinidin  NALT 10006
    UN AgroVoc c_36689
Delphinium  NALT 32166
    UN AgroVoc c_2166
    Dbpedia Delphinium
    Library of Congress sh85036604
Delphinus  NALT 32162
    UN AgroVoc c_2167
    Library of Congress sh95002716
Delta soils  NALT 32183
    UN AgroVoc c_2169
Deltamethrin  NALT 32233
    UN AgroVoc c_33971
Deltas  NALT 32184
    UN AgroVoc c_2170
    Library of Congress sh85036614
Demodex  NALT 32255
   UN AgroVoc c_2176

Demodex canis  NALT 32257
   UN AgroVoc c_30930

Demodicidae  NALT 32256
   UN AgroVoc c_30929

Demodicosis  NALT 32258
   UN AgroVoc c_24159

Denaturation  NALT 24640
   UN AgroVoc c_2178
   Use for reordering of the molecular structure of proteins or nucleic acids which leads to loss of function; for hydrolysis of a peptide bond in a protein USE proteolysis; for the general break down of proteins in organisms or products USE protein degradation. (source: NALT)

Dendrobiyum  NALT 32275
   UN AgroVoc c_2179
   Delpedia Dendrobiyum
   Library of Congress sh85036707

Dendrocalamus  NALT 32276
   UN AgroVoc c_2180

Dendrocalamus strictus  NALT 32277
   UN AgroVoc c_2181

Dendrochronology  NALT 5080
   UN AgroVoc c_33475
   The study of annual growth rings of a tree in order to determine the historical date of their formation and the age of the tree. (source: NALT)

Dendroctonus  NALT 32284
   UN AgroVoc c_2182

Dendroctonus frontalis  NALT 32286
   UN AgroVoc c_30136

Dendroctonus micans  NALT 32288
   UN AgroVoc c_30137
   Library of Congress sh85036714

Dendroctonus ponderosae  NALT 32289
   UN AgroVoc c_30138

Dendroctonus pseudotsugae  NALT 32290
   UN AgroVoc c_30139
**Dendroctonus rufipennis**  NALT 32291  
UN AgroVoc c_30140

**Dendroctonus terebrans**  NALT 17821  
UN AgroVoc c_30141

**Dendrodichium**  NALT 32302  
UN AgroVoc c_2183

**Dendrolimus**  NALT 32305  
UN AgroVoc c_2184

**Dendrolimus punctatus**  NALT 32308  
UN AgroVoc c_37017

**Denitrification**  NALT 24662  
UN AgroVoc c_15869

**Density**  NALT 20350  
UN AgroVoc c_2186  
Library of Congress sh85036848  
The amount of something per unit size. Source: NCI thesaurus link

**Densovirus**  NALT 32365  
UN AgroVoc c_10331

**Dental caries**  NALT 22511  
UN AgroVoc c_16410  
Library of Congress sh85036872

**Deois**  NALT 23980  
UN AgroVoc c_30716

**Deoxyribonuclease**  NALT 32396  
UN AgroVoc c_29499  
Library of Congress sh85037006  
Enzymes that catalyze the hydrolytic cleavage of phosphodiester bond linkages in the DNA backbone. Deoxyribonucleases belong to a larger family of nucleases, which cleave DNA bases at various positions in the DNA backbone. Source: NCI thesaurus link

**Deoxyribonucleic acid**  NALT 1560  
UN AgroVoc c_10337  
A long linear double-stranded polymer formed from nucleotides attached to a deoxyribose backbone and found in the nucleus of a cell; associated with the transmission of genetic information. Source: NCI thesaurus link

**Deoxyribonucleosides**  NALT 29048  
UN AgroVoc c_32025
Dermatitis

An inflammatory process affecting the skin. Signs include red rash, itching, and blister formation. Representative examples are contact dermatitis, atopic dermatitis, and seborrheic dermatitis. Source: NCI thesaurus link
Dermatophagoides  NALT 32477
  UN AgroVoc c_30920
  Library of Congress sh85037097
Dermatophagoides farinae  NALT 7589
  UN AgroVoc c_30921
Dermatophagoides pteronyssinus  NALT 32478
  UN AgroVoc c_30922
  Library of Congress sh85062546
Dermatophilus  NALT 32482
  UN AgroVoc c_2196
  Library of Congress sh85037101
  A genus of facultatively anaerobic, Gram positive, cocci shaped bacterium in the phylum Actinobacteria and the family Dermatophilaceae. Source: NCI thesaurus link
Dermatophilus congolensis  NALT 3526
  UN AgroVoc c_27184
  Library of Congress sh85037102
  A species of facultatively anaerobic, Gram positive, cocci shaped bacterium in the phylum Actinobacteria. This species is catalase positive, urease negative, slightly beta-hemolytic weekly ferments xylose. D. congolensis is pathogenic, being the causative agent of Dermatophilosis, also called Mud fever and Rainscald. Source: NCI thesaurus link
Dermestes  NALT 32492
  UN AgroVoc c_2197
  Library of Congress sh85037105
Dermestes maculatus  NALT 32493
  UN AgroVoc c_30102
  Library of Congress sh85037107
Dermestidae  NALT 10063
  UN AgroVoc c_30099
Dermochelyidae  NALT 32504
  UN AgroVoc c_32574
Dermochelys  NALT 32505
  UN AgroVoc c_2198
Dermochelys coriacea  NALT 32506
  UN AgroVoc c_49073
Derris  NALT 32515
  UN AgroVoc c_2200
Deschampsia  NALT 32519
    UN AgroVoc c_32109

Desert soils  NALT 32536
    UN AgroVoc c_2203
    Library of Congress sh85037150

Desertification  NALT 32537
    UN AgroVoc c_2204
    Library of Congress sh85037156

Deserts  NALT 12170
    UN AgroVoc c_2205

Desiccants  NALT 219
    UN AgroVoc c_26769
    Chemicals used for promoting drying of living tissues. (source: NALT)

Desiccated coconut  NALT 27587
    UN AgroVoc c_2206

Desmanthus  NALT 32546
    UN AgroVoc c_2209
    Dbpedia Desmanthus

Desmedipham  NALT 22159
    UN AgroVoc c_31323

Desmodium intortum  NALT 32575
    UN AgroVoc c_2213

Desmodium uncinatum  NALT 32577
    UN AgroVoc c_2214

Desmodus  NALT 32596
    UN AgroVoc c_24289
    Library of Congress sh85037224

Desmoscolecidae  NALT 32598
    UN AgroVoc c_33688

Desmoscolex  NALT 32599
    UN AgroVoc c_33689

Desorption  NALT 32602
    UN AgroVoc c_15963
    The process of removing an absorbed or adsorbed substance. (source: NALT)

Desserts  NALT 463
    UN AgroVoc c_24015
Detomidine  NALT 32801
  UN AgroVoc c_37251

Deuterium  NALT 32805
  UN AgroVoc c_33476
  Library of Congress sh85037316
  The stable isotope of hydrogen. It has one neutron and one proton in the nucleus. (source: NALT)

Deuteromycotina  NALT 5226
  UN AgroVoc c_31535
  The Fungi Imperfecti / Deuteromycetes group is not accepted in the 2007 classification by Hibbett, D.S., et al., 2007. Mycological Research 111: 509-547. The term is retained for the purposes of retrieval of historical records on this group and for the purpose of providing a placement of species that have not found another placement in modern fungal classification. (source: NALT)

Deutzia  NALT 32817
  UN AgroVoc c_34733

developmental stages  NALT 4287
  UN AgroVoc c_2230

Devilpeppers  NALT 11188
  UN AgroVoc c_10357
  Dbpedia Devilpeppers

Dew  NALT 32941
  UN AgroVoc c_2231
  Library of Congress sh85037410

Dexamethasone  NALT 10153
  UN AgroVoc c_26770
  A synthetic adrenal corticosteroid with potent anti-inflammatory properties. In addition to binding to specific nuclear steroid receptors, dexamethasone also interferes with NF-kB activation and apoptotic pathways. This agent lacks the salt-retaining properties of other related adrenal hormones. (NCI04) Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Dextranase  NALT 32948
  UN AgroVoc c_29500
  Library of Congress sh85037425

Dextrins  NALT 31047
  UN AgroVoc c_2234
  Library of Congress sh85037426
Diabetes  NALT 18127
    UN AgroVoc c_10361
Diabrotica  NALT 26052
    UN AgroVoc c_2235
    Library of Congress sh85037478
Diabrotica balteata  NALT 15726
    UN AgroVoc c_30027
Diabrotica barberi  NALT 29180
    UN AgroVoc c_30028
Diabrotica longicornis  NALT 32980
    UN AgroVoc c_30029
Diabrotica speciosa  NALT 32981
    UN AgroVoc c_30030
Diabrotica undecimpunctata  NALT 32982
    UN AgroVoc c_30031
Diabrotica virgifera  NALT 32983
    UN AgroVoc c_30032
Diacrisia  NALT 11932
    UN AgroVoc c_2236
Diadegma  NALT 8881
    UN AgroVoc c_29912
Diadegma semiclausum  NALT 33004
    UN AgroVoc c_37773
Diadromus  NALT 33013
    UN AgroVoc c_29913
    Library of Congress sh85037485
Diaeretiella  NALT 10772
    UN AgroVoc c_34679
Diaeretiella rapae  NALT 10787
    UN AgroVoc c_36363
Dialeurodes  NALT 6291
    UN AgroVoc c_2239
Diallate  NALT 32960
    UN AgroVoc c_31324
Diallel analysis  NALT 33037
UN AgroVoc c_37366
mating a group of genotypes in all possible combinations in order to determine the relative genetic contribution of each parent to specific characters in the offspring. (source: NALT)

Dianthoviruses  NALT 22553
UN AgroVoc c_32857

Dianthus  NALT 22752
UN AgroVoc c_2241

Dianthus caryophyllus  NALT 22543
UN AgroVoc c_32110

Diapause  NALT 33062
UN AgroVoc c_2242
Library of Congress sh85037578

Diaphania  NALT 29800
UN AgroVoc c_30307

Diaphania indica  NALT 33067
UN AgroVoc c_34437

Diaphania nitidalis  NALT 33068
UN AgroVoc c_30308

Diaphorina  NALT 10658
UN AgroVoc c_27186

Diaphorina citri  NALT 12935
UN AgroVoc c_27187

Diaphragm  NALT 33073
UN AgroVoc c_24397
Library of Congress sh85037585
Fibromuscular tissue that separates the thoracic from the abdominal cavity. It increases the volume of the thoracic cavity through contractions, thus facilitating respiration. Source: NCI thesaurus link

Diaporthales  NALT 11068
UN AgroVoc c_31649
Library of Congress sh85037598

Diaporthe  NALT 33074
UN AgroVoc c_2243
Library of Congress sh85037599

Diaporthe helianthi  NALT 33081
UN AgroVoc c_33807
Diaporthe phaseolorum  NALT 33082
  UN AgroVoc c_37088
  Library of Congress sh85037600
Diaprepes  NALT 30770
  UN AgroVoc c_2244
Diaprepes abbreviatus  NALT 33090
  UN AgroVoc c_30073
Diapriidae  NALT 33091
  UN AgroVoc c_29863
Diaspididae  NALT 10597
  UN AgroVoc c_30809
Diatraea  NALT 29801
  UN AgroVoc c_2245
  Library of Congress sh85037631
Diatraea grandiosella  NALT 33157
  UN AgroVoc c_30309
Diatraea saccharalis  NALT 33159
  UN AgroVoc c_30310
Diazinon  NALT 33166
  UN AgroVoc c_31326
Dicalcium phosphate  NALT 21125
  UN AgroVoc c_2247
Dicamba  NALT 12291
  UN AgroVoc c_2248
Dicentrarchus  NALT 22133
  UN AgroVoc c_2249
  Library of Congress sh85037660
Dicentrarchus labrax  NALT 33194
  UN AgroVoc c_34680
Dichanthium  NALT 33202
  UN AgroVoc c_2250
Dichanthium annulatum  NALT 33203
  UN AgroVoc c_2251
Dichapetalaceae  NALT 23327
  UN AgroVoc c_26243
  Library of Congress sh85037664
Dichelobacter  NALT 22408
UN AgroVoc c_35918

Dichelobacter nodosus  NALT 15426
UN AgroVoc c_35919

Dichlobenil  NALT 33212
UN AgroVoc c_31327

Dichlofluanid  NALT 33213
UN AgroVoc c_31328

Dichlorprop  NALT 33216
UN AgroVoc c_31329

Dichlorvos  NALT 9917
UN AgroVoc c_31330

Dichrothocharys  NALT 33222
UN AgroVoc c_2252

Dichrothocharys cinerea  NALT 33223
UN AgroVoc c_331155

Dichlofop  NALT 33227
UN AgroVoc c_31332

Dicofol  NALT 2087
UN AgroVoc c_31333

Dicoumarol  NALT 29695
UN AgroVoc c_10367

Dicrocoeliidae  NALT 19082
UN AgroVoc c_31975

Dicrocoelium  NALT 33242
UN AgroVoc c_2254

Dicrocoelium dendriticum  NALT 33245
UN AgroVoc c_31976

Dicrotrophos  NALT 33249
UN AgroVoc c_31334

Dictyocaulidae  NALT 9366
UN AgroVoc c_31016

Dictyocaulus  NALT 33265
UN AgroVoc c_2256

Dictyocaulus arnfieldi  NALT 33266
UN AgroVoc c_31017
Dictyocaulus filaria  NALT 33267
    UN AgroVoc c_31018
Dictyocaulus viviparus  NALT 33268
    UN AgroVoc c_31019
Dictyopharidae  NALT 33279
    UN AgroVoc c_32190
    Library of Congress sh85037703
Dictyoptera  NALT 17966
    UN AgroVoc c_2257
Dictyostelium  NALT 33290
    UN AgroVoc c_31747
    Library of Congress sh85037706
Dictyostelium discoideum  NALT 33291
    UN AgroVoc c_33691
    Library of Congress sh85037707
Dicyphus  NALT 33296
    UN AgroVoc c_37800
Dicyphus tamaninii  NALT 33298
    UN AgroVoc c_37801
Didymella  NALT 33310
    UN AgroVoc c_2259
    Rank of Genus, Pleosporales incertae sedis. (source: NALT)
Didymella applanata  NALT 33311
    UN AgroVoc c_32112
Didymella bryoniae  NALT 33312
    UN AgroVoc c_32113
Didymosphaeria  NALT 33317
    UN AgroVoc c_31749
Dieffenbachia  NALT 11666
    UN AgroVoc c_16236
Diehliomyces  NALT 33330
    UN AgroVoc c_31790
    Rank of Genus, Ascomycota incertae sedis. (source: NALT)
Dieldrin  NALT 31049
    UN AgroVoc c_16178
Dielectric properties  NALT 33331
  UN AgroVoc c_2260

diet  NALT 295
  UN AgroVoc c_2261
  Use for what is eaten, when it is eaten, and how much is eaten. (source: NALT)
  The customary allowance of food and drink taken by a person or an animal from day to day, particularly one
  especially planned to meet specific requirements of the individual, including or excluding certain items of food;
  a prescribed course of eating and drinking in which the amount and kind of food, as well as the times at which
  it is to be taken, are regulated for therapeutic purposes or selected with reference to a particular state of health.
  Source: NCI thesaurus link

Dietary guidelines  NALT 33420
  UN AgroVoc c_35725

Dietetic foods  NALT 464
  UN AgroVoc c_2262

Dietetics  NALT 33379
  UN AgroVoc c_2263
  Library of Congress sh86005508

Difenacoum  NALT 29692
  UN AgroVoc c_31335

Difenzoquat  NALT 33493
  UN AgroVoc c_31336

Diffusion  NALT 33500
  UN AgroVoc c_24936
  The movement of chemical species under the influence of a concentration difference and as a result of random
  thermal agitation. The species will move from the high concentration area to the low concentration area till the
  concentration is uniform in the whole phase. Source: NCI thesaurus link

Diflubenzuron  NALT 16668
  UN AgroVoc c_24018

digesta  NALT 18340
  UN AgroVoc c_10372

Digestibility  NALT 33529
  UN AgroVoc c_2266

Digestion  NALT 23533
  UN AgroVoc c_2271
  The process or act of converting food into chemical substances that can be absorbed and assimilated. Source:
  NCI thesaurus link

Digestive juices  NALT 17155
  UN AgroVoc c_2274
Digestive system  NALT 8969
    UN AgroVoc c_2275

Digestive system diseases  NALT 334
    UN AgroVoc c_2276

Digitalis  NALT 33584
    UN AgroVoc c_2277
    Dbpedia Digitalis

Digitalis lanata  NALT 33587
    UN AgroVoc c_37120

Digitalis purpurea  NALT 33588
    UN AgroVoc c_34610

Digitaria  NALT 33594
    UN AgroVoc c_2278
    Dbpedia Digitaria

Digitaria ciliaris  NALT 33595
    UN AgroVoc c_36614

Digitaria eriantha  NALT 33596
    UN AgroVoc c_36616

Digitaria exilis  NALT 33597
    UN AgroVoc c_2280

Digitaria sanguinalis  NALT 33600
    UN AgroVoc c_37121

Diglyphus  NALT 33625
    UN AgroVoc c_26471

Diglyphus intermedius  NALT 33627
    UN AgroVoc c_26472

Digoxigenin  NALT 22387
    UN AgroVoc c_36641

Diheteropogon  NALT 33629
    UN AgroVoc c_2282

Diheterospora  NALT 33630
    UN AgroVoc c_31565

Dilepididae  NALT 25528
    UN AgroVoc c_31953

Dill  NALT 8822
    UN AgroVoc c_10377
Dilleniaceae  NALT 33638
  UN AgroVoc c_26253
Dilleniales  NALT 33639
  UN AgroVoc c_331145
Dimethoate  NALT 33654
  UN AgroVoc c_31338
Dimetridazole  NALT 10506
  UN AgroVoc c_10380
Diminazene  NALT 7709
  UN AgroVoc c_10381
Dimocarpus  NALT 33663
  UN AgroVoc c_37372
  Dbpedia Dimocarpus
Dimocarpus longan  NALT 33664
  UN AgroVoc c_16539
Diniconazole  NALT 28445
  UN AgroVoc c_33973
Dinitramine  NALT 33695
  UN AgroVoc c_31339
Dinocap  NALT 2088
  UN AgroVoc c_31340
Dinophyceae  NALT 17936
  UN AgroVoc c_33692
Dinophysis  NALT 33716
  UN AgroVoc c_34681
Dinoseb  NALT 33725
  UN AgroVoc c_31341
Dioctophymatidae  NALT 9367
  UN AgroVoc c_31020
Diopsidae  NALT 33741
  UN AgroVoc c_30540
  Library of Congress sh85038123
Diopsis  NALT 33743
  UN AgroVoc c_2285
  Library of Congress sh85038124
Diopidae  NALT 33744
    UN AgroVoc c_30196
    Library of Congress sh85038125

Dioryctria  NALT 33749
    UN AgroVoc c_2287

Dioryctria amatella  NALT 33752
    UN AgroVoc c_30312

Dioscorea  NALT 33757
    UN AgroVoc c_2288
    Dbpedia Dioscorea

Dioscorea alata  NALT 33759
    UN AgroVoc c_2289

Dioscorea bulbifera  NALT 5868
    UN AgroVoc c_2290

Dioscorea cayenensis  NALT 33760
    UN AgroVoc c_2291

Dioscorea esculenta  NALT 33764
    UN AgroVoc c_2293

Dioscorea rotundata  NALT 33766
    UN AgroVoc c_2298

Dioscorea trifida  NALT 33767
    UN AgroVoc c_2299

Dioscoreaceae  NALT 33758
    UN AgroVoc c_2300
    Library of Congress sh85038134

Diospyros  NALT 33780
    UN AgroVoc c_2302
    Dbpedia Diospyros
    Library of Congress sh85038138

Diospyros kaki  NALT 33782
    UN AgroVoc c_2304

Diospyros lotus  NALT 33783
    UN AgroVoc c_2305

Diospyros virginiana  NALT 33787
    UN AgroVoc c_2306

1.7. Glossary
Dioxins  NALT 33791
  UN AgroVoc c_33477
  Library of Congress sh85038140

Diparopsis   NALT 33794
  UN AgroVoc c_2307
  Library of Congress sh85038141

dipeptides   NALT 22587
  UN AgroVoc c_35978

Dipetalonema   NALT 33799
  UN AgroVoc c_2308
  Library of Congress sh88021617

Dipetalonema reconditum   NALT 33800
  UN AgroVoc c_31089

Diphenamid   NALT 7663
  UN AgroVoc c_31343

Diphyllolothriidae   NALT 33806
  UN AgroVoc c_31955
  Library of Congress sh88021739

Diphyllolothrium   NALT 33807
  UN AgroVoc c_2309
  Library of Congress sh85038160

Diphysa   NALT 33811
  UN AgroVoc c_2310

Diplocarpon   NALT 33823
  UN AgroVoc c_31793
  Library of Congress sh88021937

Diplodia   NALT 27649
  UN AgroVoc c_2312

Diplodia pinea   NALT 33844
  UN AgroVoc c_34534

Diplodinium   NALT 26276
  UN AgroVoc c_10387

Diploids   NALT 31439
  UN AgroVoc c_32971

Diplopoda   NALT 21294
  UN AgroVoc c_2314
Diptoptera  NALT 17719
    UN AgroVoc c_30414
Diploptera punctata  NALT 33873
    UN AgroVoc c_30415
Diplostomidae  NALT 5965
    UN AgroVoc c_31979
Diplostomum  NALT 33875
    UN AgroVoc c_26474
Diplostomum spathaceum  NALT 33877
    UN AgroVoc c_31981
Diplotaxis tenuifolia  NALT 33878
    UN AgroVoc c_24744
Diplura  NALT 21609
    UN AgroVoc c_2315
Diprion  NALT 33891
    UN AgroVoc c_2317
    Library of Congress sh85038228
Diprion pini  NALT 28217
    UN AgroVoc c_29865
    Library of Congress sh87020305
Diprion similis  NALT 33892
    UN AgroVoc c_29866
    Library of Congress sh87020306
Diprionidae  NALT 28539
    UN AgroVoc c_29864
Dipsacaceae  NALT 23750
    UN AgroVoc c_26280
    Library of Congress sh85038233
Dipsacales  NALT 4332
    UN AgroVoc c_330107
    Dbpedia Dipsacales
Diptera  NALT 5616
    UN AgroVoc c_2318
Dipterocarpaceae  NALT 9636
    UN AgroVoc c_2319
    Library of Congress sh85038240

1.7. Glossary
Dipterocarpus  NALT 33931
    UN AgroVoc c_2320
    Dbpedia Dipterocarpus

Dipteryx  NALT 33939
    UN AgroVoc c_2321

Dipylidium  NALT 33942
    UN AgroVoc c_2322
    Library of Congress sh85038242

Dipylidium caninum  NALT 33943
    UN AgroVoc c_31954
    Library of Congress sh85038243

Diquat  NALT 33945
    UN AgroVoc c_31344

Dirofilaria  NALT 33958
    UN AgroVoc c_2325
    Library of Congress sh85038280

Dirofilaria immitis  NALT 33959
    UN AgroVoc c_31091

Dirofilariasis  NALT 33961
    UN AgroVoc c_16714

disaccharides  NALT 23453
    UN AgroVoc c_10390

disaster preparedness  NALT 33982
    UN AgroVoc c_37971

Disasters  NALT 2151
    UN AgroVoc c_5082

discoloration  NALT 28021
    UN AgroVoc c_26771

    The abnormal change in the original color of materials or products; For the process of removing color from materials or products USE decolorization. (source: NALT)

Discula  NALT 27650
    UN AgroVoc c_33346

Discula destructiva  NALT 34008
    UN AgroVoc c_37558

Disease control  NALT 290
    UN AgroVoc c_2327
**Disease prevention**  NALT 34019
UN AgroVoc c_10394

**Disease resistance**  NALT 151
UN AgroVoc c_2328

Describing any organism which has low susceptibility or has the ability to withstand a disease caused by infectious agents (i.e., viruses, bacteria, fungi) or by parasitic nematodes, protozoa and helminths. (source: NALT)

**Disease surveillance**  NALT 17543
UN AgroVoc c_16411

The collection, analysis, and communication of information for the purpose of disease prevention and control, especially applicable to infectious disease. (source: NALT)

**Disease transmission**  NALT 34056
UN AgroVoc c_2329

**Disinfectants**  NALT 221
UN AgroVoc c_2331

Substances used on inanimate objects that destroy harmful microorganisms or inhibit their activity. (source: NALT)

**Disonycha**  NALT 26055
UN AgroVoc c_34439

**Dispersions**  NALT 186
UN AgroVoc c_2333

A two-phase system consisting of the distribution of finely divided particles in a continuous medium. (source: NALT)

**Dissolved oxygen**  NALT 8380
UN AgroVoc c_36106

The amount of free oxygen in water. (source: NALT)

**Dissolving pulp**  NALT 24650
UN AgroVoc c_28132

**Distemper**  NALT 21862
UN AgroVoc c_27088

**Distichlis**  NALT 34089
UN AgroVoc c_26476

**Distichlis spicata**  NALT 34090
UN AgroVoc c_26477

**Disulfoton**  NALT 34121
UN AgroVoc c_31346

**Diterpenoids**  NALT 34125
UN AgroVoc c_32428
Terpenoids having a C20 skeleton. (source: NALT)

Ditylenchus  NALT 8931  
UN AgroVoc c_2340

Ditylenchus destructor  NALT 34137  
UN AgroVoc c_30985

Ditylenchus dipsaci  NALT 34138  
UN AgroVoc c_30986

Diuraphis  NALT 10730  
UN AgroVoc c_30771

Diuraphis noxia  NALT 10715  
UN AgroVoc c_30772

Diuresis  NALT 34144  
UN AgroVoc c_2341  
Library of Congress sh85038565

Diuretics  NALT 34147  
UN AgroVoc c_2342

Diuron  NALT 34151  
UN AgroVoc c_31347  
Library of Congress sh85038569

DNA probes  NALT 34219  
UN AgroVoc c_35733  
Species- or subspecies-specific DNA (including complementary DNA; conserved genes, whole chromosomes, or whole genomes) used in hybridization studies in order to identify microorganisms, to measure DNA-DNA homologies, to group subspecies, etc. The DNA probe hybridizes with a specific mRNA, if present. (source: NALT)

A piece of DNA that has been labeled, usually radioactively or with a fluorescent dye, which is used in hybridization studies. Applications include Northern and Southern blots, in situ hybridization techniques, and diagnostic tests. DNA probes can be highly specific or degenerate. Source: NCI thesaurus link

DNA replication  NALT 34224  
UN AgroVoc c_35086  
Library of Congress sh90005926  
The process by which a DNA molecule is duplicated. (source: NALT)

The process by which the two strands of a DNA double helix separate, allowing each strand to act as a template for the synthesis of a complementary strand by specific base pairing. Includes autonomous but not virus replication. Source: NCI thesaurus link

Dociostaurus  NALT 3027  
UN AgroVoc c_2349
Docosahexaenoic acid  NALT 34265
    UN AgroVoc c_37443
    A polyunsaturated very long-chain fatty acid with a 22-carbon backbone and 6 double bonds. Four separate
    isomers can be called by this name. Source: NCI thesaurus link

Dodine  NALT 34281
    UN AgroVoc c_31350

dogs  NALT 21847
    UN AgroVoc c_2352

Dolichodoridae  NALT 8128
    UN AgroVoc c_31021

Dolichopodidae  NALT 33908
    UN AgroVoc c_30541

Dolichovespula  NALT 34332
    UN AgroVoc c_29959

Dolomite  NALT 22256
    UN AgroVoc c_29215
    Library of Congress sh85038887

dolphins  NALT 29511
    UN AgroVoc c_2354

Dolycoris  NALT 16750
    UN AgroVoc c_2355

domestic animals  NALT 9579
    UN AgroVoc c_2356

Domestication  NALT 19695
    UN AgroVoc c_2360
    The process of breeding for one or more desirable characteristics in plants and animals. (source: NALT)

dominant genes  NALT 34352
    UN AgroVoc c_2361
    Genes that influence the phenotype both in the homozygous and the heterozygous state. (source: NALT)

Donacidae  NALT 17698
    UN AgroVoc c_48279

Dopamine  NALT 1436
    UN AgroVoc c_16179
    One of the catecholamine neurotransmitters in the brain. It is derived from tyrosine and is the precursor to
    norepinephrine and epinephrine. Dopamine is a major transmitter in the extrapyramidal system of the brain, and
    important in regulating movement. A family of receptors mediate its action. (source: NALT)
The hydrochloride salt form of dopamine, a monoamine compound with positive inotropic activity. Dopamine is a naturally occurring catecholamine formed by decarboxylation of dehydroxyphenylalanine and a precursor of norepinephrine and epinephrine. Dopamine binds to alpha-1- and beta-1-adrenergic receptors. Mediated through myocardial beta-1-adrenergic receptors, dopamine increase heart rate and force, thereby increasing cardiac output. Alpha-1-adrenergic receptor stimulation on vascular smooth muscle, leads to vasoconstriction and results in an increase in systemic vascular resistance. Stimulation of dopaminergic receptors in renal vasculature, leads to renal blood vessel dilation, and an increase in glomerular filtration rate, renal blood flow, sodium excretion, and urine output. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Dormancy  NALT 34368
UN AgroVoc c_2369

Dormancy breaking  NALT 19663
UN AgroVoc c_26865

Dorosoma  NALT 27297
UN AgroVoc c_2371
Library of Congress sh85039115

Dorylaimidae  NALT 34384
UN AgroVoc c_27189
Library of Congress sh87003801

Dosage  NALT 34392
UN AgroVoc c_36906

Dothideales  NALT 11086
UN AgroVoc c_31651


Double cropping  NALT 30184
UN AgroVoc c_10441
Library of Congress sh85039176
Two different crops grown on the same area in one growing season. (source: NALT)

Dourine  NALT 34435
UN AgroVoc c_10444
Library of Congress sh85039208

Down  NALT 34441
UN AgroVoc c_10447
doxorubicin  NALT 10464  
UN AgroVoc c_37484  
Antineoplastic antibiotic obtained from Streptomyces peucetius. It is a hydroxy derivative of daunorubicin.  
(source: NALT)  
An anthracycline antibiotic with antineoplastic activity. Doxorubicin, isolated from the bacterium Streptomyces peucetius var. caesius, is the hydroxylated congener of daunorubicin. Doxorubicin intercalates between base pairs in the DNA helix, thereby preventing DNA replication and ultimately inhibiting protein synthesis. Additionally, doxorubicin inhibits topoisomerase II which results in an increased and stabilized cleavable enzyme-DNA linked complex during DNA replication and subsequently prevents the ligation of the nucleotide strand after double-strand breakage. Doxorubicin also forms oxygen free radicals resulting in cytotoxicity secondary to lipid peroxidation of cell membrane lipids; the formation of oxygen free radicals also contributes to the toxicity of the anthracycline antibiotics, namely the cardiac and cutaneous vascular effects. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link  
Dracaena  NALT 5047  
UN AgroVoc c_10452  
Dracunculidae  NALT 9368  
UN AgroVoc c_31024  
Library of Congress sh85039258  
Dracunculus  NALT 34462  
UN AgroVoc c_31025  
Library of Congress sh85039260  
Drain pipes  NALT 34476  
UN AgroVoc c_25669  
drainage  NALT 34479  
UN AgroVoc c_2372  
The systematic withdrawal of fluids and discharges from a wound, sore or cavity. Source: NCI thesaurus link  
drainage systems  NALT 12582  
UN AgroVoc c_25331  
Mannmade systems of furrows, ditches, tile drains, pipes, etc. which collect and remove water from a central location. (source: NALT)  
Drainage water  NALT 34496  
UN AgroVoc c_2374  
Any water, usually precipitation or irrigation water, that enters, interacts with, and then leaves a landscape. (source: NALT)
Drakes  NALT 34506  
UN AgroVoc c_10456
Drechslera  NALT 34511  
UN AgroVoc c_2379
Dreissena polymorpha  NALT 34518  
UN AgroVoc c_48596
Dreissenidae  NALT 17699  
UN AgroVoc c_48595
Drepanopeziza  NALT 34524  
UN AgroVoc c_31794
Drepanosiphum  NALT 10731  
UN AgroVoc c_30773
dressing percentage  NALT 22331  
UN AgroVoc c_32430
Dreyfusia  NALT 4084  
UN AgroVoc c_10460
Dreyfusia piceae  NALT 4080  
UN AgroVoc c_34440
Dried fish  NALT 34532  
UN AgroVoc c_2381
Dried fruits  NALT 34533  
UN AgroVoc c_2382
Dried meat  NALT 34535  
UN AgroVoc c_2383
Dried milk  NALT 31631  
UN AgroVoc c_2384
Dairy product made from milk by the removal of 95-98% of the water. (source: NALT)
Dried skim milk  NALT 34547  
UN AgroVoc c_16486
The product obtained by removing water from pasteurized skim milk. It contains not more than 5% moisture and not more than 1.5% milk fat unless otherwise indicated. (source: NALT)
Dried vegetables  NALT 34536  
UN AgroVoc c_16487
Dried whey  NALT 34548  
UN AgroVoc c_24019
Drinking water   NALT 18867
                  UN AgroVoc c_10463
                  Potable water for consumption. Source: NCI thesaurus link

Dromedaries   NALT 21537
                UN AgroVoc c_10467

Droseraceae   NALT 33736
                UN AgroVoc c_26293
                Library of Congress sh85039636

Drosophila   NALT 34599
                UN AgroVoc c_2390
                Dpmedia Drosophila
                A genus of small, American flies, Diptera. The best known species is D. Melanogaster, often called the fruit fly, but more correctly termed the vinegar fly. First investigated by T.H. Morgan and his group, it has been extensively used in genetic studies. More recently it has been used for studies of embryonic development. Source: NCI thesaurus link

Drosophila melanogaster   NALT 34603
                UN AgroVoc c_30543
                Library of Congress sh85039645

Drosophila pseudoobscura   NALT 34604
                UN AgroVoc c_30544
                Library of Congress sh85039651

Drosophila simulans   NALT 34606
                UN AgroVoc c_30545

Drosophila subobscura   NALT 34607
                UN AgroVoc c_30546
                Library of Congress sh85039652

Drosophila virilis   NALT 34608
                UN AgroVoc c_30547

Drosophilidae   NALT 33909
                UN AgroVoc c_30542

Drought   NALT 33990
                UN AgroVoc c_2391
                Library of Congress sh85039663

Drought tolerance   NALT 137
                UN AgroVoc c_14914

Drug residues   NALT 10183
                UN AgroVoc c_10470
Drug resistance  NALT 132  
UN AgroVoc c_10471  
Library of Congress sh85039708  
Mechanisms, functions, activities, or processes exhibited by tumors or pathogens to withstand previously toxic drugs. Source: NCI thesaurus link

Drug therapy  NALT 24728  
UN AgroVoc c_2394

Drug toxicity  NALT 34664  
UN AgroVoc c_10472  
An adverse effect of a drug used therapeutically or diagnostically. Source: NCI thesaurus link

drugs  NALT 286  
UN AgroVoc c_2395  
Any chemical compounds, including nutrients, that are used in the prevention, diagnosis, treatment, or cure of disease, for the relief of pain, or to control or improve any physiological or pathological disorder in humans or animals. (source: NALT)

Dry matter content  NALT 24608  
UN AgroVoc c_2398

Dry period  NALT 34713  
UN AgroVoc c_24020  
The time in late pregnancy when a cow (or other lactating animal) ceases to give milk. Commonly, U.S. dairy cows are dried off 60 days before calving. (source: NALT)

Dry season  NALT 34717  
UN AgroVoc c_2400

Dryobalanops  NALT 33932  
UN AgroVoc c_2404

Dryocosmus  NALT 31193  
UN AgroVoc c_29861

Dryomyzidae  NALT 33910  
UN AgroVoc c_30548

Dryopteris  NALT 34751  
UN AgroVoc c_35660  
Dbpedia Dryopteris  
Library of Congress sh85039827

Duck meat  NALT 34835  
UN AgroVoc c_24021

Ducklings  NALT 34840  
UN AgroVoc c_15538
ducks  NALT 8583
  UN AgroVoc c_2406

Dugong dugon  NALT 34857
  UN AgroVoc c_48922

Dugongidae  NALT 34856
  UN AgroVoc c_48921
  Dbpedia Dugongidae
  Library of Congress sh85039922

Dumontiaceae  NALT 1594
  UN AgroVoc c_49795

Dunaliella  NALT 34871
  UN AgroVoc c_33347

Dunaliella salina  NALT 34872
  UN AgroVoc c_49475

Dunaliella tertiolecta  NALT 34873
  UN AgroVoc c_34611

Dunaliellaceae  NALT 27973
  UN AgroVoc c_49474

Dune soils  NALT 27366
  UN AgroVoc c_2409

Dunes  NALT 16127
  UN AgroVoc c_2410

Dung beetles  NALT 28972
  UN AgroVoc c_33976

Duodenum  NALT 34887
  UN AgroVoc c_10486
  Library of Congress sh85039998
  A jointed tube 25-30 cm long that connects the stomach to the jejunum. Source: NCI thesaurus link

Duration  NALT 976
  UN AgroVoc c_2412
  The period of time during which something continues. Source: NCI thesaurus link

durians  NALT 34902
  UN AgroVoc c_10488
  a large oval tasty but foul-smelling fruit with a prickly rind (source: NALT)

Durio  NALT 18459
  UN AgroVoc c_2413
An acute or chronic disorder, affecting the sympathetic or parasympathetic nervous system. It can be primary, the result of central nervous system degeneration, or secondary due to diabetes or alcoholism. Patients with the chronic form of this disorder usually have a progressive clinical course and a poor prognosis. Source: NCI thesaurus link

Abnormal development of cartilage and bone. (source: NALT)

Slow or difficult obstetric labor or childbirth. (source: NALT)
Dytiscidae  NALT 4934
  UN AgroVoc c_30105
  Dbpedia Dytiscidae
eagles  NALT 2162
  UN AgroVoc c_2431
Ear cropping  NALT 35075
  UN AgroVoc c_2432
Ear diseases  NALT 335
  UN AgroVoc c_2433
Earias  NALT 35085
  UN AgroVoc c_2434
Earias insulana  NALT 35086
  UN AgroVoc c_30250
Earias vittella  NALT 35087
  UN AgroVoc c_30251
Early diagnosis  NALT 34031
  UN AgroVoc c_36584
early selection  NALT 35101
  UN AgroVoc c_36927
Ears  NALT 35074
  UN AgroVoc c_2436
Earthquakes  NALT 498
  UN AgroVoc c_2440
earthworms  NALT 35126
  UN AgroVoc c_29109
  Library of Congress sh85040510
Eastern spruce budworm  NALT 25690
  UN AgroVoc c_37610
Eating disorders  NALT 9839
  UN AgroVoc c_8879
Ebenaceae  NALT 33781
  UN AgroVoc c_2450
  Dbpedia Ebenaceae
  Library of Congress sh85040645
ecdysones  NALT 6901
  UN AgroVoc c_16540
Ecdysterone  NALT 1406
    UN AgroVoc c_35095

Echinacea purpurea  NALT 19616
    UN AgroVoc c_34734

Echinochloa  NALT 35615
    UN AgroVoc c_2452

Echinochloa colona  NALT 35616
    UN AgroVoc c_2453

Echinochloa crus galli  NALT 15889
    UN AgroVoc c_10527

Echinochloa frumentacea  NALT 15891
    UN AgroVoc c_2454

Echinochloa polystachya  NALT 29951
    UN AgroVoc c_2455

Echinococcosis  NALT 24143
    UN AgroVoc c_16415
    A parasitic infection caused by tapeworm larvae of Echinococcus. It affects livestock and humans. It is characterized by the formation of hydatid cysts mainly in the liver, lungs, spleen, and kidneys. Rupture of the cysts may lead to shock. Source: NCI thesaurus link

Echinococcus  NALT 35629
    UN AgroVoc c_2458
    Library of Congress sh85040694

Echinococcus granulosus  NALT 35631
    UN AgroVoc c_31962
    Library of Congress sh85040695

Echinococcus multilocularis  NALT 35632
    UN AgroVoc c_31963

Echinoderms  NALT 57
    UN AgroVoc c_10528
    Library of Congress sh85040701

Echinoidea  NALT 35635
    UN AgroVoc c_32012

Echinostoma  NALT 35656
    UN AgroVoc c_2460

Echinostoma revolutum  NALT 35658
    UN AgroVoc c_31983
Echinostomatidae  NALT 33510
  UN AgroVoc c_31982
  Library of Congress sh85040709

Echium  NALT 18606
  UN AgroVoc c_32124

Eclampsia  NALT 35667
  UN AgroVoc c_10529
  Library of Congress sh91004075
  A potentially life-threatening pregnancy-related disorder characterized by tonic-clonic seizures in association with hypertension after the twentieth week of gestation and up to six weeks postpartum and in the absence of other potential causes of seizures. Source: NCI thesaurus link

Ecological soil types  NALT 7016
  UN AgroVoc c_2463

ecological succession  NALT 360
  UN AgroVoc c_2464

ecology  NALT 352
  UN AgroVoc c_2467
  The branch of biology concerned with the relations between organisms and their environment. Source: NCI thesaurus link

ecosystems  NALT 5579
  UN AgroVoc c_2482
  A functional system which includes the organisms of a natural community together with their environment. (source: NALT)

ecotones  NALT 354
  UN AgroVoc c_33481
  Library of Congress sh90000487
  Zones of transition where two or more ecosystems meet. (source: NALT)

Ecotoxicology  NALT 35713
  UN AgroVoc c_35788
The term was first coined in 1969 by Ren

Ecotypes  NALT 17556
  UN AgroVoc c_27505
A subspecific group that is genetically adapted to a particular habitat. (source: NALT)

Ectoparasites  NALT 12543
  UN AgroVoc c_10532

Eczema  NALT 32466
  UN AgroVoc c_10536
A form of dermatitis characterized by red, itchy, scaly, or crusty patches that can be chronic or intermittent. Source: NCI thesaurus link

**Edible films**  NALT 429  
UN AgroVoc c_35014

**Edwardsiella**  NALT 12723  
UN AgroVoc c_10541

A genus of facultatively anaerobic, Gram negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Enterobacteriaceae. Source: NCI thesaurus link

**Egg laying**  NALT 9481  
UN AgroVoc c_10547

**Egg products**  NALT 34531  
UN AgroVoc c_2499

Use egg products or one of its narrower terms for eggs as food; for eggs as embryonic structures USE eggs; for the female germ cell USE ova; for the group of eggs (ova) laid by a female in a single egg-laying event USE egg masses. (source: NALT)

**Eggs**  NALT 24837  
UN AgroVoc c_2502

Use for eggs as embryonic structures; for the female germ cell USE ova; for the group of eggs (ova) laid by a female in a single egg-laying event USE egg masses; for eggs as food USE egg products or one of its narrower terms. (source: NALT)

**Ehrlichia**  NALT 29733  
UN AgroVoc c_2504

A genus of bacteria that is primarily vectored by ticks and cause disease in humans, ruminants, canids, and rodents. (source: NALT)

**Eimeria**  NALT 27416  
UN AgroVoc c_2506

**Ejaculation**  NALT 9465  
UN AgroVoc c_2507

The release of semen through the penis during orgasm. (NCI) Source: NCI thesaurus link

**Elaeagnus umbellata**  NALT 14068  
UN AgroVoc c_50125

**Elaeidobius**  NALT 30771  
UN AgroVoc c_26479  
Library of Congress sh88000874

**Elaeis**  NALT 12010  
UN AgroVoc c_32975
**Elaeocarpaceae**  NALT 12206  
UN AgroVoc c_23917  
Library of Congress sh85041485

**Elapidae**  NALT 27392  
UN AgroVoc c_32568

**Elateridae**  NALT 5520  
UN AgroVoc c_8413

**Elatobium**  NALT 10733  
UN AgroVoc c_2511

**Electrical conductivity**  NALT 28491  
UN AgroVoc c_24022

**Electrical properties**  NALT 21955  
UN AgroVoc c_2517

**Electrolytes**  NALT 224  
UN AgroVoc c_2521

Substances that ionize into anions and cations in body fluids. Electrolytes regulate nerve and muscle function and water distribution between cells, plasma, and interstitial fluid. Imbalances can cause serious physiologic effects, including seizures, cardiac arrhythmias and convulsions. Source: NCI thesaurus link

**Electromagnetic radiation**  NALT 17516  
UN AgroVoc c_36146

The radiation of energy as transverse waves produced by moving charges. Source: NCI thesaurus link

**Electronics**  NALT 26354  
UN AgroVoc c_2522

**Elements**  NALT 264  
UN AgroVoc c_2526

**Eleocharis**  NALT 31214  
UN AgroVoc c_32976  
Library of Congress sh85042519

**Elettaria cardamomum**  NALT 8019  
UN AgroVoc c_2529

**Eleutherococcus**  NALT 2030  
UN AgroVoc c_92361  
Dbpedia Eleutherococcus

**elks**  NALT 7154  
UN AgroVoc c_2536

**Elsinoe**  NALT 34398  
UN AgroVoc c_2538

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Emaciation  NALT 160

Clinical manifestation of excessive leanness usually caused by disease or a lack of nutrition. (source: NALT)

Embryo transfer  NALT 9027

The transfer of mammalian embryos from an in vivo or in vitro environment to a suitable host to improve pregnancy or gestational outcome in human or animal. (source: NALT)

Refers to a step in the process of in vitro fertilization (IVF) whereby one or several embryos are removed from an embryo culture and placed into the uterus of the female with the intent to establish a pregnancy. Source: NCI thesaurus link

Embryology  NALT 17473

The branch of biology that studies the formation and early development of living organisms. Source: NCI thesaurus link

Embryonic mortality  NALT 9466

Death of the embryo during embryogenesis. (source: NALT)

Embryonic structures  NALT 8970

Emissions  NALT 34940

Discharges into the environment, such as gases, particulates, odors, dust, heat, steam, etc. (source: NALT)

Emodin  NALT 10059

Empoasca  NALT 26190

Emulsifiers  NALT 225

Emulsions  NALT 187

Emus  NALT 7155

Emydidae  NALT 25989
**Encarsia**  NALT 10703
UN AgroVoc c_15966

**Encephalitis**  NALT 19231
UN AgroVoc c_10594

Inflammation of the brain due to infection, autoimmune processes, toxins, and other conditions. Viral infections are a relatively frequent cause of this condition. Use for encephalitis of general nature; for encephalitis caused by viral agents USE viral encephalitis. (source: NALT)

An acute inflammatory process affecting the brain parenchyma. Causes include viral infections and less frequently bacterial infections, toxins, and immune-mediated processes. Source: NCI thesaurus link

**Encephalomalacia**  NALT 23681
UN AgroVoc c_35097

Softening or loss of brain tissue following cerebral infarction; cerebral ischemia, infection, craniocerebral trauma, or other injury.  (source: NALT)

Localized atrophy of the brain parenchyma due to aging, hemorrhage, infarct, or inflammation. Source: NCI thesaurus link

**Encephalopathy**  NALT 23682
UN AgroVoc c_35096

A functional and/or structural disorder of the brain caused by diseases (e.g. liver disease, kidney disease), medications, chemicals, and injuries. Source: NCI thesaurus link

**Encyrtidae**  NALT 5106
UN AgroVoc c_29871

**Endangered species**  NALT 17424
UN AgroVoc c_2557

Animals, plants, birds, fish, or other living organisms threatened with extinction by man-made or natural changes in the environment. (source: NALT)

**Endocrine diseases**  NALT 336
UN AgroVoc c_2558

**Endocrine glands**  NALT 4351
UN AgroVoc c_2559

**Endocrinology**  NALT 513
UN AgroVoc c_10598

The science and medical specialty concerned with the metabolism, physiology, or hormonal secretions and their physiologic and pathologic relations. Source: NCI thesaurus link

**Endocytosis**  NALT 23424
UN AgroVoc c_49883

Cellular uptake of extracellular materials within membrane-limited vacuoles or microvesicles. Endosomes play a central role in endocytosis. Source: NCI thesaurus link

**Endogonales**  NALT 2124
UN AgroVoc c_31652

**Endosulfan** NALT 31050

UN AgroVoc c_31352

**Endothia** NALT 33075

UN AgroVoc c_2563

**Endotoxins** NALT 32188

UN AgroVoc c_2564

Toxins closely associated with the living cytoplasm or cell wall of certain microorganisms, which do not readily diffuse into the culture medium, but are released upon lysis of the cells. (source: NALT)

**Endrin** NALT 26191

UN AgroVoc c_31353

**Energy balance** NALT 15589

UN AgroVoc c_2566

**Energy expenditure** NALT 15958

UN AgroVoc c_37629

the combination of basal energy needs, plus the thermic effect of food, plus a small amount of energy needed to perform the most basic sedentary activities. (source: NALT)

**Energy metabolism** NALT 8391

UN AgroVoc c_10611

Any subcellular or molecular event, process, or condition concerned with storing and generating metabolic energy. Source: NCI thesaurus link

**Engraulidae** NALT 27302

UN AgroVoc c_39143

**Ensilage (product)** NALT 6326

UN AgroVoc c_10623

Any crop that is harvested green and preserved in a succulent condition by partial fermentation in a more-or-less airtight container such as a silo. (source: NALT)

**Entamoeba** NALT 8008

UN AgroVoc c_10624

**Enteritis** NALT 15142

UN AgroVoc c_10625

Use for the inflammation of the intestine; for the inflammation of the mucous membrane of the intestine and stomach USE gastroenteritis. (source: NALT)

Inflammation of the small intestine. Source: NCI thesaurus link

**Enterobacter** NALT 4616

UN AgroVoc c_23918

A genus of Gram-negative, motile, facultative anaerobic, rod-shaped bacteria with peritrichous flagella in the phylum Proteobacteria. Source: NCI thesaurus link
**Enterobacter aerogenes** NALT 4618

UN AgroVoc c_37065

A species of facultatively anaerobic, Gram negative, rod shaped bacterium in the phylum Proteobacteria. This species is motile, oxidase and indole negative, catalase and citrate positive, ferments lactose and is considered a coliform bacteria. E. aerogenes is found in the gastrointestinal tract and is an opportunistic pathogen commonly acquired nosocomially, causing skin, soft tissue, respiratory, urinary tract and eye infections. Source: NCI thesaurus link

**Enterobacter cloacae** NALT 4620

UN AgroVoc c_37067

A species of facultatively anaerobic, Gram negative, rod shaped bacterium in the phylum Proteobacteria. This species is motile by peritrichous flagella, oxidase, urease and indole negative, catalase positive, reduces nitrate, does not degrade pectate and produces acid from sorbitol. E. cloacae is associated with hospital-acquired urinary and respiratory tract infections and is used in industry for explosives biodegradation. Source: NCI thesaurus link

**Enterobacteriaceae** NALT 7184

UN AgroVoc c_2580

A taxonomic family of Gram-negative bacterium, which are found in water, soil or the gut, in the phylum Proteobacteria that includes the genera Aranicola, Buttiauxella, Cedecea, Cronobacter, Enterobacter and Citrobacter, among others. Source: NCI thesaurus link

**Enterocolitis** NALT 27879

UN AgroVoc c_16724

Inflammation of the mucosa of both the small intestine and the large intestine. Etiology includes ischemia, infections, allergic, and immune responses. (source: NALT)

An inflammatory process affecting the small intestine and colon. Causes include viruses, bacteria, radiation, and antibiotics use. Source: NCI thesaurus link

**Enterotoxins** NALT 15206

UN AgroVoc c_2583

Substances that are toxic to the intestinal tract causing vomiting, diarrhea, etc.; most common enterotoxins are produced by bacteria. (source: NALT)

**Enterovirus** NALT 18945

UN AgroVoc c_2584

Library of Congress sh85044093

A (+) strand single strand RNA virus of the picornavirus family. Poliovirus is an enterovirus. Source: NCI thesaurus link

**Entodinium** NALT 26277

UN AgroVoc c_10628

**Entomology** NALT 980

UN AgroVoc c_2588

Entomology; the branch of zoology that studies insects. Source: NCI thesaurus link

**Entomophthorales** NALT 15992

UN AgroVoc c_31656

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**environment** NALT 26877  
UN AgroVoc e_2593

The totality of surrounding conditions. Source: NCI thesaurus link

**Environmental degradation** NALT 2715  
UN AgroVoc e_34821

**environmental factors** NALT 4631  
UN AgroVoc e_2594

**Environmental impact** NALT 10090  
UN AgroVoc e_24420

**environmental management** NALT 28751  
UN AgroVoc e_37875

**environmental protection** NALT 16782  
UN AgroVoc e_15898

Environmental protection includes prevention (avoidance) strategies to protect the environment from future damage or degradation; and control measures to restore and maintain environmental quality. (source: NALT)

**Enzyme inhibitors** NALT 25590  
UN AgroVoc e_2599

**Enzymes** NALT 6744  
UN AgroVoc e_2603

**Eoreuma** NALT 29802  
UN AgroVoc e_27191

**Eoreuma loftini** NALT 2892  
UN AgroVoc e_30315

**Eperua** NALT 20893  
UN AgroVoc e_33349

**Ephedrine** NALT 7817  
UN AgroVoc e_22561

**Ephemeroptera** NALT 15512  
UN AgroVoc e_2609

**Ephestia** NALT 8427  
UN AgroVoc e_2610

**Ephestia elutella** NALT 27560  
UN AgroVoc e_30316

**Ephestia kuehniella** NALT 8429  
UN AgroVoc e_30317
**Ephydridae**  NALT 33911  
UN AgroVoc c_30549

**Epichloe**  NALT 26723  
UN AgroVoc c_24336  
Library of Congress sh97004689

**Epidemiology**  NALT 149  
UN AgroVoc c_2615  
Library of Congress sh85044373

The study of the various factors influencing the occurrence, distribution, prevention, and control of disease, injury, and other health-related events in a defined population. (source: NALT)

The study of the causes, incidence and distribution of disease in the population and its application for prevention or control. Source: NCI thesaurus link

**Epididymis**  NALT 22094  
UN AgroVoc c_10635

A crescent-like structure located in the upper and posterior surfaces of the testis. It consists of the efferent ductules and the duct of the epididymis. It facilitates the maturation of sperm that is produced in the testis. Source: NCI thesaurus link

**Epilachna**  NALT 27452  
UN AgroVoc c_2618

**Epilepsy**  NALT 10276  
UN AgroVoc c_24112

A brain disorder characterized by episodes of abnormally increased neuronal discharge resulting in transient episodes of sensory or motor neurological dysfunction, or psychic dysfunction. These episodes may or may not be associated with loss of consciousness or convulsions. Source: NCI thesaurus link

**Epilobium**  NALT 24363  
UN AgroVoc c_10638  
Dbpedia Epilobium

**Epilobium angustifolium**  NALT 24365  
UN AgroVoc c_37122

**Epimedium**  NALT 16689  
UN AgroVoc c_26486  
Dbpedia Epimedium

**Epipremnum**  NALT 11667  
UN AgroVoc c_37124

**Epithelium**  NALT 9530  
UN AgroVoc c_2624  
Library of Congress sh85044466
The avascular cellular layers that cover body surfaces and cavities and may form glands. Source: NCI thesaurus link

**Epitrix**  NALT 26057
UN AgroVoc c_2626

**Equidae**  NALT 13176
UN AgroVoc c_2628

Taxonomic family which includes horses, zebras, and asses. Source: NCI thesaurus link

**Equine arteritis virus**  NALT 12450
UN AgroVoc c_37927

**Equine encephalomyelitis**  NALT 6997
UN AgroVoc c_16417

A group of Alphavirus infections which affect horses and man, transmitted via the bites of mosquitoes. Disorders in this category are endemic to regions of South America and North America. (source: NALT)

**Equine infectious anaemia**  NALT 8771
UN AgroVoc c_2630

Viral disease of horses caused by the equine infectious anemia virus. It is characterized by intermittent fever, weakness, and anemia. Chronic infection consists of acute episodes with remissions. (source: NALT)

**Eretmocerus**  NALT 10705
UN AgroVoc c_27192

**Eretmochelys**  NALT 24592
UN AgroVoc c_2637

Library of Congress sh88006351

**Ergot alkaloids**  NALT 19967
UN AgroVoc c_2640

**Ergotism**  NALT 26721
UN AgroVoc c_21831

Poisoning caused by ingesting ergotized grain or by the misdirected or excessive use of ergot as a medicine. (source: NALT)

**Ericaceae**  NALT 8718
UN AgroVoc c_2641
Dbpedia Ericaceae

**Ericales**  NALT 26851
UN AgroVoc c_2642
Library of Congress sh85044613

**Erigeron**  NALT 13296
UN AgroVoc c_37125
Eriococcidae  NALT 27477
  UN AgroVoc c_30818

Eriophyidae  NALT 1568
  UN AgroVoc c_2649

Eriosoma  NALT 10734
  UN AgroVoc c_8551

Eroded soil  NALT 10096
  UN AgroVoc c_2650

erosion control  NALT 28603
  UN AgroVoc c_2652

Eruca  NALT 19578
  UN AgroVoc c_15796

Eruca sativa  NALT 19395
  UN AgroVoc c_15797

Erucic acid  NALT 34269
  UN AgroVoc c_2654
  
  A monounsaturated very long-chain fatty acid with a 22-carbon backbone and a single double bond originating from the 9th position from the methyl end, with the double bond in the cis- configuration. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Erwinia  NALT 15219
  UN AgroVoc c_2655

Erwinia amylovora  NALT 14615
  UN AgroVoc c_24747

Erysipelothrix rhusiopathiae  NALT 14756
  UN AgroVoc c_35449
  
  A species of facultatively anaerobic, Gram positive, rod shaped bacterium assigned to the phylum Firmicutes. This species is nonsporulating, not acid fast, decolorizes rapidly so may appear Gram negative, alpha-hemolytic and catalase and oxidase negative. E. rhusiopathiae is found in a variety of host animals including fish and swine as well as in feces and sewage. It is pathogenic in a variety of organisms including domestic swine and humans, causing both cutaneous and septicemic infections and the disease swine erysipelas. Source: NCI thesaurus link

Erysiphales  NALT 12840
  UN AgroVoc c_31657
  
Erysiphe graminis  NALT 18277
    UN AgroVoc c_27196
Erythroblasts  NALT 18524
    UN AgroVoc c_10664
erythrocytes  NALT 18081
    UN AgroVoc c_2659
Erythroneura  NALT 26192
    UN AgroVoc c_2660
Erythropoietin  NALT 28017
    UN AgroVoc c_27517
    Library of Congress sh85044756
Escherichia coli  NALT 14692
    UN AgroVoc c_33700
    A common, gram negative gut bacterium that has been studied intensively by geneticists because of its small genome size, normal lack of pathogenicity, and ease of growth in the laboratory. Source: NCI thesaurus link
    Reference: FDA UNII link
    Reference the NIH NCBI link
Essential amino acids  NALT 7789
    UN AgroVoc c_29774
Essential fatty acids  NALT 11684
    UN AgroVoc c_26842
essential oils  NALT 6885
    UN AgroVoc c_2669
    Volatile oils in aromatic plants which give the characteristic odor or flavor to the plant. Often used in fragrances and flavorings. (source: NALT)
Esterases  NALT 22292
    UN AgroVoc c_2670
Esterification  NALT 24666
    UN AgroVoc c_28361
Esters  NALT 2335
    UN AgroVoc c_2671
Estigmene  NALT 11933
    UN AgroVoc c_30179
Ethanol  NALT 6145
    UN AgroVoc c_10677
A colorless organic liquid also known as ethyl alcohol or grain alcohol. Ethanol’s primary physiologic effects involve the central nervous system. Depending on the dose delivered, ethanol behaves as an anxiolytic, a depressant, or a general anesthetic. Ethanol-induced immunosuppression involves dysregulation of CD4+ T cells. (NCI04) Source: NCI thesaurus link

**Ethephon**  NALT 1372
UN AgroVoc c_15899

**Ethnobotany**  NALT 10107
UN AgroVoc c_24023

The plant lore and agricultural customs of a people. In the fields of ethnomedicine and ethnopharmacology, the emphasis is on traditional medicine and the existence and medicinal uses of plants and plant extracts and their constituents, both historically and in modern times. (source: NALT)

**Ethylene**  NALT 6486
UN AgroVoc c_2679

**Ethylene production**  NALT 1195
UN AgroVoc c_33984

**Eucalyptus globulus**  NALT 18224
UN AgroVoc c_2692

**Eucalyptus pilularis**  NALT 17851
UN AgroVoc c_2697

**eukaryotic cells**  NALT 23461
UN AgroVoc c_2705

Cells of the higher organisms, containing a true nucleus bounded by a nuclear membrane. (source: NALT)

**Eulecanium**  NALT 27405
UN AgroVoc c_2716

**Eulophidae**  NALT 2686
UN AgroVoc c_29879

**Euonymus**  NALT 23318
UN AgroVoc c_35544

**Eupatorium**  NALT 13299
UN AgroVoc c_24751
Dbpedia Eupatorium
Library of Congress sh88022788

**Eupelmidae**  NALT 8564
UN AgroVoc c_29884

**Euphorbia antisyphilitica**  NALT 21784
UN AgroVoc c_2718

**Euphorbiaceae**  NALT 1956
UN AgroVoc c_2720
Eupoecilia  NALT 27324
    UN AgroVoc c_2721
Eupoecilia ambiguella  NALT 27326
    UN AgroVoc c_30372
Euproctis chrysorrhoea  NALT 20121
    UN AgroVoc c_30231
European foul brood  NALT 16272
    UN AgroVoc c_36484
Eurotiales  NALT 12841
    UN AgroVoc c_31658
Eurytomidae  NALT 16679
    UN AgroVoc c_29885
Eurytrema  NALT 33243
    UN AgroVoc c_2728
Euseius gossipi  NALT 7474
    UN AgroVoc c_33707
Euterpe  NALT 12012
    UN AgroVoc c_33708
Euthanasia  NALT 9565
    UN AgroVoc c_24169
Eutypa  NALT 33163
    UN AgroVoc c_24339
Eutypella  NALT 33164
    UN AgroVoc c_31745
    Library of Congress sh85045917
Euxoa  NALT 25704
    UN AgroVoc c_2735
Euxoa messoria  NALT 31743
    UN AgroVoc c_30252
Evaporated milk  NALT 28465
    UN AgroVoc c_2737
    Dairy product made by removal of about 60% of the water to concentrate the milk and sterilizing to prevent spoilage. (source: NALT)
Evergestis  NALT 29803
    UN AgroVoc c_27203
evolution NALT 4040
   UN AgroVoc c_2745
   The process of cumulative change over successive generations through which organisms acquire their distinguishing morphological and physiological characteristics. Source: NCI thesaurus link

Excreta NALT 50
   UN AgroVoc c_2749

Excretion NALT 31966
   UN AgroVoc c_2750
   The process by which waste matter is discharged from the body Source: NCI thesaurus link

Exobasidiales NALT 15999
   UN AgroVoc c_31787

Exochomus NALT 27454
   UN AgroVoc c_33348

Exocoetidae NALT 31278
   UN AgroVoc c_41405

Exocrine glands NALT 8439
   UN AgroVoc c_27975

Exotoxins NALT 15207
   UN AgroVoc c_2755
   Toxins produced, especially by bacterial or fungal cells, and released into the culture medium or environment. (source: NALT)

Explosions NALT 2149
   UN AgroVoc c_24937

Exserohilum NALT 32812
   UN AgroVoc c_34701

Extracellular fluid NALT 18341
   UN AgroVoc c_10719

Extracts NALT 228
   UN AgroVoc c_2767

Eye diseases NALT 337
   UN AgroVoc c_2770

Eyes NALT 28392
   UN AgroVoc c_2771

Faba beans NALT 16211
   UN AgroVoc c_10722
Fagaceae  NALT 22864
  UN AgroVoc c_2773
Fagales  NALT 16978
  UN AgroVoc c_2774
Fagopyrum esculentum  NALT 20261
  UN AgroVoc c_2777
Fagus grandifolia  NALT 7537
  UN AgroVoc c_24636
Faidherbia albida  NALT 1911
  UN AgroVoc c_10734
falcons  NALT 17611
  UN AgroVoc c_2782
fallow  NALT 30185
  UN AgroVoc c_34007
Fanniidae  NALT 33912
  UN AgroVoc c_30552
Library of Congress sh95002853
Fasciolidae  NALT 33512
  UN AgroVoc c_31984
Fasting  NALT 33458
  UN AgroVoc c_16545
Use for the voluntary total deprivation of food by humans; for the involuntary and continuous deprivation of
foods to humans USE starvation. (source: NALT)
Abstaining from food. Source: NCI thesaurus link
Fat substitutes  NALT 467
  UN AgroVoc c_34306
Fatsia  NALT 11739
  UN AgroVoc c_33351
Fatsia japonica  NALT 11730
  UN AgroVoc c_33352
Fatty acids  NALT 19252
  UN AgroVoc c_2818
Fatty alcohols  NALT 6147
  UN AgroVoc c_2819
Feather meal  NALT 9044
UN AgroVoc c_15901

Protein feed supplement obtained by hydrolysis of feathers under heat and pressure. (source: NALT)

Feathers  NALT 34442
UN AgroVoc c_2822

Feed additives  NALT 4062
UN AgroVoc c_2827

Substances added to feeds to alter, improve or maintain feed characteristics or quality. Use for the addition of nutritive substances as part of the formulation of specific feed products; For substances which are typically not consumed as a single item of a meal or diet, but are added to the diet to improve the nutritional status of animals or added to feeds to enhance the nutrient content or nutritional value of feeds, ADD feed supplements. (source: NALT)

feed composition  NALT 10480
UN AgroVoc c_10770

Use for descriptions of the composition of feeds, without regard to their efficacy in the organism; For articles evaluating the ability of a feed to contribute to the diet and/or nutritional status of an animal, USE “nutritive value” or one of its narrower terms. (source: NALT)

feed formulations  NALT 33405
UN AgroVoc c_10772

Feed intake  NALT 9326
UN AgroVoc c_16126

Feed processing  NALT 25637
UN AgroVoc c_16127

Feed quality  NALT 33531
UN AgroVoc c_15850

feed supplements  NALT 33468
UN AgroVoc c_2837

Nutrients or other compounds designed to improve the nutrient content and nutritive value of feeds, and/or the nutritional status of animals. Use for substances which are typically not consumed as a single item of a meal or diet, but are added to the diet to improve the nutritional status of animals or added to feeds to enhance the nutrient content or nutritional value of feeds; For the addition of nutritive substances as part of the formulation of specific feed products, ADD feed additives. (source: NALT)

Feeding level  NALT 4029
UN AgroVoc c_16128

Feeding preferences  NALT 25541
UN AgroVoc c_29779
Feedlots  NALT 9194  
UN AgroVoc c_2842  
Confinement facilities where cattle are fed to produce beef for the commercial trade. (source: NALT)

Feeds  NALT 5445  
UN AgroVoc c_2843  
Use for foodstuffs used to feed livestock and other animals; for the raw material used in industrial processing which is converted to other products USE feedstocks. (source: NALT)

Felidae  NALT 2932  
UN AgroVoc c_15601  
Taxonomic family which includes domestic and wild cats such as lions and tigers. Source: NCI thesaurus link

Feline infectious peritonitis  NALT 22917  
UN AgroVoc c_16423  
Common coronavirus infection of cats caused by the feline infectious peritonitis virus (Feline coronavirus). The disease is characterized by a long incubation period, fever, depression, loss of appetite, wasting, and progressive abdominal enlargement. Infection of cells of the monocyte-macrophage lineage appears to be essential in FIP pathogenesis. (source: NALT)

Female genital diseases  NALT 24101  
UN AgroVoc c_2849

Females  NALT 29755  
UN AgroVoc c_15969

Fenthion  NALT 14210  
UN AgroVoc c_31376

Fermentation  NALT 6138  
UN AgroVoc c_2855

Fermented foods  NALT 16323  
UN AgroVoc c_27521

Ferritin  NALT 18156  
UN AgroVoc c_37715  
An iron protein complex, containing up to 23% iron, formed by the union of ferric iron with apoferritin; it is found in the intestinal mucosa, spleen, bone marrow, reticulocytes, and liver, and regulates iron storage and transport from the intestinal lumen to plasma. Source: NCI thesaurus link

Ferroxidase  NALT 24099  
UN AgroVoc c_29502

Fertilizer application  NALT 11357  
UN AgroVoc c_10795

Fertilizers  NALT 5568  
UN AgroVoc c_2867
Any organic or inorganic material of natural or synthetic origin which is added to soil to provide nutrients, including nitrogen, phosphorus, and potassium, necessary to sustain plant growth. (source: NALT)

**Fertilirrigation** NALT 24708

UN AgroVoc c_16548

**Ferula** NALT 10949

UN AgroVoc c_33355

**Ferulic acid** NALT 29688

UN AgroVoc c_33987

**fever** NALT 157

UN AgroVoc c_10810

An abnormal elevation of body temperature, usually as a result of a pathologic process. (source: NALT)

Elevation of body temperature above normal due to inflammatory or immune responses. Source: NCI thesaurus link

**Fibrinogen** NALT 18158

UN AgroVoc c_34825

A fibrillar protein present in blood plasma; it converts to fibrin during the process of blood clot formation. Source: NCI thesaurus link

**Fibrinolysis** NALT 26360

UN AgroVoc c_10827

**Fibroblasts** NALT 23462

UN AgroVoc c_2880

Library of Congress sh85048034

Connective tissue cells which secrete an extracellular matrix rich in collagen and other macromolecules. (source: NALT)

**Fibroma** NALT 705

UN AgroVoc c_2881

A benign neoplasm arising from the fibrous tissues. It is characterized by the presence of spindle-shaped fibroblasts. Source: NCI thesaurus link

**Field crops** NALT 30190

UN AgroVoc c_10836

Library of Congress sh85048088

**Fields** NALT 5371

UN AgroVoc c_2894

**Filiariidae** NALT 9370

UN AgroVoc c_31026

**Filaroididae** NALT 9371

UN AgroVoc c_31028
Filobasidiales  NALT 16000
   UN AgroVoc c_331234

Fingerlings  NALT 32887
   UN AgroVoc c_10850
   Young immature fish less than one year old, between 2-25 cm in length, and often used for stocking, line feeds and baits. (source: NALT)

Fiorinia  NALT 33105
   UN AgroVoc c_2906
   Library of Congress sh85048442

Fires  NALT 33991
   UN AgroVoc c_2915

firsz  NALT 1646
   UN AgroVoc c_37689

fish  NALT 845
   UN AgroVoc c_15903
   Includes common types of fish; For taxonomic classification SEE Pisces. (source: NALT)
   A grouping of jawed and jawless vertebrate animals usually having fins and a covering of scales or plates, breathing by means of gills, and living almost entirely in the water. Source: NCI thesaurus link

Fish culture  NALT 11414
   UN AgroVoc c_2918
   The cultivation of fish, including freshwater and marine species, for food or other purposes. (source: NALT)

Fish diseases  NALT 9127
   UN AgroVoc c_2920
   Diseases of freshwater, marine, hatchery or aquarium fish. This term includes diseases of both teleosts (true fish) and elasmobranchs (sharks, rays and skates). (source: NALT)

Fish feeding  NALT 11416
   UN AgroVoc c_2922

Fish meal  NALT 9047
   UN AgroVoc c_2925

fish oils  NALT 9159
   UN AgroVoc c_2926
   Library of Congress sh85048643

Fish ponds  NALT 6352
   UN AgroVoc c_2929

Fish products  NALT 9444
   UN AgroVoc c_2930
Flavivirus  NALT 11826
   UN AgroVoc c_2963
   A genus of enveloped viruses with a genome consisting of a single molecule of linear positive-sense single-stranded RNA. Source: NCI thesaurus link

Flavones  NALT 11062
   UN AgroVoc c_10890

Flavonoids  NALT 10004
   UN AgroVoc c_2964

Flocks  NALT 9096
   UN AgroVoc c_10913
   Use for birds, goats, and sheep. (source: NALT)

Flooding tolerance  NALT 139
   UN AgroVoc c_36989

Flora  NALT 17393
   UN AgroVoc c_2983

Floriculture  NALT 30902
   UN AgroVoc c_16488

Flowering  NALT 9966
   UN AgroVoc c_2992

Flowers  NALT 8699
   UN AgroVoc c_2993

Flufenoxuron  NALT 2093
   UN AgroVoc c_35111

Fluid mechanics  NALT 4649
   UN AgroVoc c_25344
   The study of the mechanical properties of fluids, i.e. liquids and gases, in motion or at rest. (source: NALT)
Flunixin NALT 8454
   UN AgroVoc c_36726

Fluorides NALT 30334
   UN AgroVoc c_2995

Fluorosis NALT 18510
   UN AgroVoc c_10937
   Library of Congress sh85049442

Fluorouracil NALT 10466
   UN AgroVoc c_2998
   An antimetabolite fluoropyrimidine analog of the nucleoside pyrimidine with antineoplastic activity. Fluorouracil and its metabolites possess a number of different mechanisms of action. In vivo, fluorouracil is converted to the active metabolite 5-fluorouridine monophosphate (F-UMP); replacing uracil, F-UMP incorporates into RNA and inhibits RNA processing, thereby inhibiting cell growth. Another active metabolite, 5-5-fluoro-2’-deoxyuridine-5’-O-monophosphate (F-dUMP), inhibits thymidylate synthase, resulting in the depletion of thymidine triphosphate (TTP), one of the four nucleotide triphosphates used in the in vivo synthesis of DNA. Other fluorouracil metabolites incorporate into both RNA and DNA; incorporation into RNA results in major effects on both RNA processing and functions. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Flusilazole NALT 28446
   UN AgroVoc c_36916

Fly ash NALT 12903
   UN AgroVoc c_24840
   Library of Congress sh85049586

Foeniculum NALT 10950
   UN AgroVoc c_3003
   Dbpedia Foeniculum

Folpet NALT 33175
   UN AgroVoc c_33487

Fomes NALT 10861
   UN AgroVoc c_3010

Fomitopsis NALT 10862
   UN AgroVoc c_15816

Food additives NALT 2887
   UN AgroVoc c_3011
Any substance added to food to: 1) maintain product consistency, 2) improve or maintain nutritional value, 3) maintain palatability or wholesomeness, 4) provide leavening or control pH, or 5) enhance flavor or impart desired color. Use for the addition of nutritive substances as part of the formulation of specific food products; for substances which are typically not consumed as a single item of a meal or diet, but are added to the diet to improve the nutritional status of organisms or added to foods to enhance the nutrient content or nutritional value of foods, ADD dietary supplements. (source: NALT)

**Food allergies**  NALT 6560  
UN AgroVoc c_3013  
Dbpedia Food allergies  
In a true food allergy, the body’s immune system recognizes a reaction-provoking substance, or allergen, in the food—usually a protein—as foreign and produces antibodies. Use for food that is ingested; For allergies caused by touching foods USE contact dermatitis. (source: NALT)

**food composition**  NALT 10481  
UN AgroVoc c_10961  
Use for descriptions of the composition of foods, without regard to their efficacy in the organism; For articles evaluating the ability of a food to contribute to the diet and/or nutritional status of a human, USE “nutritive value” or one of it narrower terms. (source: NALT)

**Food contamination**  NALT 4404  
UN AgroVoc c_10962  
Use for the chemical, physical or biological contamination of food; For the overall process of protection against intentional contamination of the food supply USE food defense. (source: NALT)

**Food crops**  NALT 30191  
UN AgroVoc c_3017  
Dbpedia Food crops  
Use for plants cultivated for food; For plants that serve as a source of food for phytophagous organisms USE food plants. (source: NALT)

**food fortification**  NALT 33471  
UN AgroVoc c_25238  
Use for addition of a nutrient to a food to increase the nutrient content above natural levels; For the addition of a nutrient to a processed food to replace losses of the nutrient that occured during processing USE food enrichment. (source: NALT)

**food handling**  NALT 28871  
UN AgroVoc c_9001004  

**Food intake**  NALT 11272  
UN AgroVoc c_3022  
Use for the quantity of food eaten by individuals or groups or animals or humans in epidemiological or study settings; for the consumption of food by humans at the local, regional, or national level as an economic indicator USE food consumption. (source: NALT)

**food irradiation**  NALT 27776  
UN AgroVoc c_49980
Dbpedia food irradiation

**Food preservation**  NALT 21908

UN AgroVoc e_25005
Dbpedia Food preservation

A variety of methods used to maintain foods in an edible state. (source: NALT)

**Food processing**  NALT 2132

UN AgroVoc e_37969
Dbpedia Food processing

The treatments used to manufacture food products for retail markets; For the preparation of foods for meals
USE food preparation; For production of food at the local, regional, or national level as an economic indicator
USE food production; For the preparation of harvested or gathered commodities, such as food crops, feed crops
or wood, for fresh market or processing USE postharvest treatment. (source: NALT)

**Food quality**  NALT 27606

UN AgroVoc e_10965
Dbpedia Food quality

**Food safety**  NALT 10482

UN AgroVoc e_33995
Dbpedia Food safety

The fitness of a food for human consumption. (source: NALT)

Policies, practices and research that ensure the fitness of food for human consumption. Source: NCI thesaurus
link

**Food spoilage**  NALT 17374

UN AgroVoc e_10970

Varying degrees of physical, chemical and/or biological deterioration of food sensory properties, nutrient con-
tent, and/or safety. Major causes include: 1) growth and activity of microorganisms, 2) natural enzymes, 3)
insects, parasites and rodents, 4) temperature, 5) moisture and dryness, 6) air/oxygen, 7) light, 9) time. (source: NALT)

**foods**  NALT 408

UN AgroVoc e_3032

**Foot diseases**  NALT 338

UN AgroVoc e_3035

**forage**  NALT 6298

UN AgroVoc e_36108

Roughage crops of high feeding value, high in fiber, and grown especially to feed ruminants. Includes grasses
and legumes cut at the proper stage of maturity and stored to preserve quality. Use for the edible plant parts
other than grain that are grazed by animals or that can be harvested for feeding of animals; For crops grown for
consumption by livestock USE forage crops. (source: NALT)

**Forced feeding**  NALT 9182

UN AgroVoc e_3038
Forcipomyia  NALT 23936
    UN AgroVoc c_3040
Foreign bodies  NALT 9285
    UN AgroVoc c_28320
forest decline  NALT 31920
    UN AgroVoc c_29300
    A complex disorder involving abiotic and biotic stresses on a forest stand that results in a slow, progressive
decrease in growth with loss of health and vigor. Mortality is common. However, affected trees may recover
once the stresses are removed. Natural factors (hurricanes, floods, fires, drought, pests, etc.) as well as human
activity (deforestation and forest degradation) are involved. (source: NALT)
Forest plantations  NALT 12610
    UN AgroVoc c_3048
Forest products  NALT 25726
    UN AgroVoc c_3049
    Dbpedia Forest products
Forest soils  NALT 35691
    UN AgroVoc c_3051
forests  NALT 18644
    UN AgroVoc c_3062
Forficulidae  NALT 32462
    UN AgroVoc c_30625
    Library of Congress sh85050751
Formaldehyde  NALT 6180
    UN AgroVoc c_3064
    A colorless poisonous gas synthesized by the oxidation of methanol and used as an antiseptic, disinfectant,
histologic fixative, and general-purpose chemical reagent for laboratory applications. Formaldehyde is readily
soluble in water and is commonly distributed as a 37% solution in water; formalin, a 10% solution of formalde-
hyde in water, is used as a disinfectant and to preserve biological specimens. Environmentally, formaldehyde
may be found in the atmosphere, smoke from fires, automobile exhaust and cigarette smoke. Small amounts are
produced during normal metabolic processes in most organisms, including humans. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Formicidae  NALT 3111
    UN AgroVoc c_517
    Dbpedia Formicidae
Formononetin  NALT 1544
          UN AgroVoc c_36149

Fossils  NALT 7416
          UN AgroVoc c_10989

Fowlpox virus  NALT 14221
          UN AgroVoc c_331475

Foxes  NALT 21848
          UN AgroVoc c_3073

Fracture fixation  NALT 18519
          UN AgroVoc c_33998
          An orthopedic procedure to set the position of broken bones while they heal. Source: NCI thesaurus link

Fragaria chiloensis  NALT 16126
          UN AgroVoc c_3077

Francisella tularensis  NALT 15369
          UN AgroVoc c_36366
          A species of aerobic, Gram negative, coccobacilli shaped bacterium in the phylum Proteobacteria. It has two main serotypes, Jellison Type A and Jellison Type B. This species is hemolytic, oxidase negative, catalase positive and nonfermentative. F. tularensis is pathogenic, being a causative agent of Tularemia which is mainly contracted when handling infected rabbits. This bacterium has been classified as a Category A critical biological agent due to its ease of dissemination by aerosol, causing high mortality with the potential for a major public health impact. Source: NCI thesaurus link

Frangipani  NALT 11187
          UN AgroVoc c_11007

Fraxinus  NALT 12915
          UN AgroVoc c_3086

Free amino acids  NALT 7748
          UN AgroVoc c_24275

Freemartinism  NALT 23109
          UN AgroVoc c_3088
          A condition occurring in the female offspring of dizygotic twins in a mixed-sex pregnancy, usually in cattle. Freemartinism can occur in other mammals. When placental fusion between the male and the female fetuses permits the exchange of fetal cells and fetal hormones, testicular hormones from the male fetus can androgenize the female fetus producing a sterile XX/XY chimeric “female” (chimerism). (source: NALT)

Freezing  NALT 28917
          UN AgroVoc c_3091
          The removal of heat to change a substance from a liquid to a solid. (source: NALT)

Freshwater molluscs  NALT 11512
          UN AgroVoc c_3106
Frogs NALT 7156
    UN AgroVoc c_3112
Frost resistance NALT 27790
    UN AgroVoc c_11025
Frozen foods NALT 28824
    UN AgroVoc c_16490
Dbpedia Frozen foods
Fructokinase NALT 35384
    UN AgroVoc c_33999
fruit drop NALT 1822
    UN AgroVoc c_16184
Fruit juices NALT 11284
    UN AgroVoc c_3123
Fruit products NALT 11313
    UN AgroVoc c_3125
Fruit pulps NALT 26547
    UN AgroVoc c_3126
Fruiting NALT 7130
    UN AgroVoc c_15971
Frying NALT 28864
    UN AgroVoc c_3132
Fucose NALT 6218
    UN AgroVoc c_3135
fuels NALT 17362
    UN AgroVoc c_3136
Use for materials which are used for the purpose of releasing energy; For the use of wood as a source of energy USE fuelwood; For the living or dead vegetation that can be ignited USE fuels (fire ecology). (source: NALT)
Fuelwood NALT 17336
    UN AgroVoc c_3137
Use for the use of wood as a source of energy; For the living or dead vegetation that can be ignited USE fuels (fire ecology); For materials which are used for the purpose of releasing energy USE fuels. (source: NALT)
Fulgoroidea NALT 13803
    UN AgroVoc c_30742
Fumaria officinalis NALT 28191
    UN AgroVoc c_33717
Fumariaceae NALT 20221
    UN AgroVoc c_33923
Fumaric acid  NALT 33180
  UN AgroVoc c_36953

Fumigation  NALT 28787
  UN AgroVoc c_3142

Fungal antigens  NALT 10361
  UN AgroVoc c_11041

Fungal spores  NALT 4445
  UN AgroVoc c_35118

fungicides  NALT 821
  UN AgroVoc c_3146

  Use for the antifungal substances used in the control of plant fungal diseases and fungal growth on abiotic materials (wood, plastics, etc.); for the antifungal substances that are used in drug therapy of animals and humans USE antifungal agents. (source: NALT)

Furathiocarb  NALT 22164
  UN AgroVoc c_34281

furazolidone  NALT 10508
  UN AgroVoc c_11049

  A nitrofuran antimicrobial agent used in the treatment of diarrhea or enteritis caused by bacteria or protozoan infections. Furazolidone is also active in treating typhoid fever, cholera and salmonella infections. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Furfural  NALT 6181
  UN AgroVoc c_24029

Furosemide  NALT 10388
  UN AgroVoc c_11050

  A sulfamoylanthranilic acid derivative, also known as frusemide, and potent loop diuretic. Furosemide is widely used to treat hypertension and edema. This agent is highly bound to albumin and is largely excreted unchanged in the urine. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
Furrow irrigation  NALT 29299
UN AgroVoc c_3154
A surface irrigation method in which water is run in small ditches or furrows, usually spaced closely together between crop rows or groups of rows. (source: NALT)

Fusarium  NALT 32390
UN AgroVoc c_3156
A genus of filamentous fungi in the phylum Ascomycota that is widely distributed in soil and in association with plants. Source: NCI thesaurus link

Fusicocum  NALT 27653
UN AgroVoc c_31571

Fusobacterium necrophorum  NALT 2930
UN AgroVoc c_35450
A species of anaerobic, Gram-negative, rod shaped bacteria in the phylum Fusobacteria. This species is non-spore forming, does not hydrolyze dextran and is superoxide dismutase and lysine decarboxylase negative. F. necrophorum is found in the intestinal tract of humans and animals, but is more likely to be associated with infections in animals. Source: NCI thesaurus link

Gadidae  NALT 18654
UN AgroVoc c_41470

Gaeumannomyces  NALT 33076
UN AgroVoc c_24639
Library of Congress sh85052709

Galactans  NALT 4973
UN AgroVoc c_3164

Galactitol  NALT 6199
UN AgroVoc c_37369

Galactose  NALT 6219
UN AgroVoc c_3166

Galactosidases  NALT 6905
UN AgroVoc c_3167

Galerucella  NALT 26058
UN AgroVoc c_34444

Galinsoga  NALT 13304
UN AgroVoc c_11068

Gall bladder  NALT 9338
UN AgroVoc c_3173

Galliformes  NALT 93
UN AgroVoc c_3176
Dbpedia Galliformes
game birds  NALT 17601
   UN AgroVoc c_3180
   Birds which are widely hunted for sport. (source: NALT)

Gametocytes  NALT 32889
   UN AgroVoc c_35939
   Undifferentiated plant or animal cells that divide by meiosis to produce gametes. (source: NALT)

Ganglia  NALT 1617
   UN AgroVoc c_3187

Ganoderma  NALT 10863
   UN AgroVoc c_15973

Garcinia  NALT 27306
   UN AgroVoc c_3190

Gardening  NALT 28709
   UN AgroVoc c_3195

gardens  NALT 11814
   UN AgroVoc c_3196

garlic  NALT 6645
   UN AgroVoc c_11091
   A bulbous herb isolated from the plant Allium sativum with potential antineoplastic activity. Garlic contains a number of different organosulfur compounds, some of which have displayed antineoplastic activity. (NCI04)
   Source: NCI thesaurus link
   Reference: FDA UNII link
   Reference the ITIS link
   Reference the NIH NCBI link
   Reference USDA PLANTS link

Garryaceae  NALT 29205
   UN AgroVoc c_26239
   Dbpedia Garryaceae

Gases  NALT 188
   UN AgroVoc c_3197

Gasterosteidae  NALT 30586
   UN AgroVoc c_41671

Gastritis  NALT 33572
   UN AgroVoc c_11103
   Inflammation of the stomach, especially the gastric mucosa. (source: NALT)
   Inflammation of the stomach. Source: NCI thesaurus link
Gastroenteritis  NALT 33573
  UN AgroVoc c_11104
  Use for the inflammation of the mucous membrane of the intestine and stomach; for the inflammation of the intestine USE enteritis. (source: NALT)
  An inflammatory disorder that affects the upper and lower gastrointestinal tract. Most commonly, this is attributed to viruses; however bacteria, parasites or adverse reactions can also be the culprit. Symptoms include acute diarrhea and vomiting. Source: NCI thesaurus link

Gastrointestinal agents  NALT 9862
  UN AgroVoc c_3199

Gastrointestinal hormones  NALT 25552
  UN AgroVoc c_16211
  Hormones secreted by the gastrointestinal mucosa that affect the timing or the quality of secretion of digestive enzymes, and regulate the motor activity of the digestive system organs. (source: NALT)

Gastrointestinal motility  NALT 33548
  UN AgroVoc c_3200

Gastropoda  NALT 638
  UN AgroVoc c_3201
  Dbpedia Gastropoda

Gastrothylacidae  NALT 22541
  UN AgroVoc c_31989

Gaviiformes  NALT 94
  UN AgroVoc c_3206

Gazelles  NALT 9889
  UN AgroVoc c_3207

goose  NALT 8584
  UN AgroVoc c_3208

Gelechiidae  NALT 8550
  UN AgroVoc c_30197
  Dbpedia Gelechiidae

gels  NALT 189
  UN AgroVoc c_11114

gene banks  NALT 7766
  UN AgroVoc c_11116
  A large database of gene sequence data. Use for databases of gene sequence data; for discussions of physical collections of DNA USE “DNA libraries”; for genetic resources stored in a germplasm collection, USE germplasm conservation. (source: NALT)

gene frequency  NALT 6534
  UN AgroVoc c_37332
The proportion of one particular in the total of all alleles for one genetic locus in a breeding population. (source: NALT)

**Gene fusion**  NALT 26950

UN AgroVoc c_27528

The genetic recombination of the parts of two or more genes resulting in a gene with different or additional regulatory regions, or a new chimeric gene product. (source: NALT)

Any hybrid gene formed from two previously separate genes. Such fusions occur as a result of translocation, intersitial deletion or chromosomal inversion, and often result in gene products with functions different from the two fusion partners. Gene fusions are associated frequently with hematological cancers, sarcomas and prostate cancer. Source: NCI thesaurus link

**Gene transfer**  NALT 17418

UN AgroVoc c_24846

The introduction of functional (usually cloned) genes into cells and organisms by a variety of techniques, resulting in genetically transformed cells and individuals. (source: NALT)

Incorporation of new DNA into an organism's cells, usually by a vector such as a modified virus. Used in gene therapy.(From Human Genome Project Information). Source: NCI thesaurus link

**genes**  NALT 6539

UN AgroVoc c_3214

Specific sequences of nucleotides along a molecule of DNA (or, in the case of some viruses, RNA) which represent functional units of heredity. Most eukaryotic genes contain a set of coding regions (exons) that are spliced together in the transcript, after removal of intervening sequence (introns) and are therefore labeled split genes. (source: NALT)

**Genetic disorders**  NALT 18968

UN AgroVoc c_3217

**Genetic engineering**  NALT 17343

UN AgroVoc c_15974

Directed modification of the gene complement of a living organism by such techniques as altering the DNA, substituting genetic material by means of a virus, transplanting whole nuclei, transplanting cell hybrids, etc. (source: NALT)

The technology of preparing recombinant DNA in vitro by cutting up DNA molecules and splicing together fragments from more than one organism. Source: NCI thesaurus link

**Genetic improvement**  NALT 19696

UN AgroVoc c_11119

**Genetic polymorphism**  NALT 17293

UN AgroVoc c_24031

Library of Congress sh85053865

The regular and simultaneous occurrence in a single interbreeding population of two or more discontinuous genotypes. The concept includes differences in genotypes ranging in size from a single nucleotide site (polymorphism, single nucleotide) to large nucleotide sequences visible at a chromosomal level. (source: NALT)
The regular and simultaneous occurrence of alternative nucleotide sequences at equivalent locations of the genetic material among individuals of a single interbreeding population that are not maintained by recurrent mutation. Polymorphisms may range in size from single nucleotide to large nucleotide sequence variation visible at the chromosomal level. Source: NCI thesaurus link

**Genetic resistance**  NALT 17455

UN AgroVoc c_35130

The relative amount of heritable qualities possessed by an organism that reduces the degree of damage to the organism by pests, pathogens, injuries or other deleterious agents. (source: NALT)

**genetic resources**  NALT 9219

UN AgroVoc c_3218

**Genetic soil types**  NALT 6337

UN AgroVoc c_3219

**genetic variation**  NALT 10351

UN AgroVoc c_15975

Genetic Variation consists of deviation(s) in the nucleotide sequence of the genetic material of an individual from that typical of the group to which the individual belongs, or deviation(s) in the nucleotide sequence of the genetic material of offspring from that of its parents. Source: NCI thesaurus link

**Genetic vectors**  NALT 26955

UN AgroVoc c_27532

Any DNA molecule capable of autonomous replication within a host cell and into which other DNA sequences can be inserted and thus amplified. Many are derived from plasmids, bacteriophages or viruses. They are used for transporting foreign genes into recipient cells. Genetic vectors possess a functional replicator site and contain genetic markers to facilitate their selective recognition. (source: NALT)

**Genetically modified foods**  NALT 413

UN AgroVoc c_37879

Dbpedia Genetically modified foods

Foods produced from genetically modified organisms. These species have undergone directed modification of their gene complement using such techniques as altering the DNA, substituting genetic material by means of a virus, transplanting whole nuclei, transplanting cell hybrids, etc. (source: NALT)

**genetically modified organisms**  NALT 17344

UN AgroVoc c_34285

**genetics**  NALT 9222

UN AgroVoc c_3222

The branch of biology that deals with heredity, especially the mechanisms of hereditary transmission and the variation of inherited characteristics among similar or related organisms Source: NCI thesaurus link

**genomics**  NALT 17410

UN AgroVoc c_92382

Library of Congress sh2002000809

The branch of genetics that studies organisms in terms of their genomes, i.e., their complete DNA sequence. (source: NALT)
Genotoxicity  NALT 34182
UN AgroVoc c_36150
The degree to which a toxin has adverse effects on DNA. (source: NALT)
genotypes  NALT 17553
UN AgroVoc c_3225
The genetic constitution of an organism, cell, individual or taxon, as distinct from its physical appearance (i.e., phenotype). (source: NALT)
Gentianaceae  NALT 23626
UN AgroVoc c_16246
Gentianales  NALT 11166
UN AgroVoc c_11124
Dbpedia Gentianales
Gentiobiose  NALT 33968
UN AgroVoc c_3226
Disaccharide consisting of two glucose units in a beta (1-6) glycosidic linkage. (source: NALT)
Geochemistry  NALT 17384
UN AgroVoc c_24848
Geocoris  NALT 17106
UN AgroVoc c_30662
Geographical distribution  NALT 17394
UN AgroVoc c_5083
Geography  NALT 17388
UN AgroVoc c_3230
The science that deals with the world and its inhabitants; a description of the earth, or a portion of the earth, including its structure, features, products, political divisions, and the people by whom it is inhabited. Source: NCI thesaurus link
Geology  NALT 497
UN AgroVoc c_3232
Geometridae  NALT 1798
UN AgroVoc c_24645
Geotrupidae  NALT 27819
UN AgroVoc c_30108
Geraniales  NALT 15667
UN AgroVoc c_3241
Dbpedia Geraniales
Library of Congress sh85054280
Geraniol  NALT 6150
  UN AgroVoc c_27534

Gerbera  NALT 13307
  UN AgroVoc c_3243
  Library of Congress sh85054287

Germplasm conservation  NALT 17325
  UN AgroVoc c_3250

Use for genetic resources stored in a germplasm collection; for physical collections of DNA USE DNA libraries; for databases of gene sequence data USE gene banks. (source: NALT)

Gesneriaceae  NALT 2579
  UN AgroVoc c_3251

Gestation period  NALT 9469
  UN AgroVoc c_3252

Getah virus  NALT 6988
  UN AgroVoc c_35373

Giardia  NALT 33857
  UN AgroVoc c_31172

A genus of parasitic protozoa that is the cause of giardiasis. Source: NCI thesaurus link

Gigartinaceae  NALT 16774
  UN AgroVoc c_49784

Gilletteella  NALT 4085
  UN AgroVoc c_11150

Gills  NALT 9339
  UN AgroVoc c_3262

Gilpinia  NALT 33898
  UN AgroVoc c_3263
  Library of Congress sh85054954

Gilpinia hercyniae  NALT 33894
  UN AgroVoc c_29867

Gin (beverage)  NALT 34100
  UN AgroVoc c_11154

Gingiva  NALT 9531
  UN AgroVoc c_11159

The soft tissue surrounding the neck of individual teeth as well as covering the alveolar bone. The tissue is fibrous and continuous with the periodontal ligament and mucosal covering. Source: NCI thesaurus link

1.7. Glossary
Gizzard  NALT 33557  
UN AgroVoc c_3268

The thick-walled muscular pouch, part of the digestive system of birds, insects and invertebrates, which is responsible for digestion. It is located beneath the crop in birds and reptiles. Source: NCI thesaurus link

Glanders  NALT 15164  
UN AgroVoc c_16740

A contagious disease of horses that can be transmitted to humans. It is caused by Pseudomonas mallei (syn. Burkholderia mallei) and characterized by ulceration of the respiratory mucosa and an eruption of nodules on the skin. (source: NALT)

Gleditsia  NALT 20898  
UN AgroVoc c_3275  
Dbpedia Gleditsia

Gliadin  NALT 24045  
UN AgroVoc c_11169

Global warming  NALT 26876  
UN AgroVoc c_34836

Gloeophyllum  NALT 10864  
UN AgroVoc c_23925

Gloeosporium  NALT 27654  
UN AgroVoc c_3280

Glomerella cingulata  NALT 27952  
UN AgroVoc c_32151

Glossinidae  NALT 33913  
UN AgroVoc c_3282

Glucans  NALT 16831  
UN AgroVoc c_3285

Glucocorticoids  NALT 4346  
UN AgroVoc c_3286

Gluconeogenesis  NALT 22203  
UN AgroVoc c_3306

Biosynthesis of glucose from nonhexose or non-carbohydrate precursors, such as lactate; pyruvate; alanine; and glycerol. (source: NALT)

The biosynthesis of new glucose as opposed to that generated by the metabolism of glycogen. Gluconeogenesis occurs mainly in the liver or kidneys, and involves the biosynthesis of glucose from 3-carbon or 4-carbon non-carbohydrate precursors such as amino acids or fats. Source: NCI thesaurus link

Gluconobacter  NALT 2462  
UN AgroVoc c_11178
Glucose  NALT 6220
  UN AgroVoc c_3287

A simple sugar monosaccharide having two isoforms, alpha and beta, with a chemical structure of C6H12O6 that acts as an energy source for both plants and animals by reacting with oxygen, generating carbon dioxide and water, and releasing energy. Source: NCI thesaurus link

Reference: FDA UNII link

Glucose 6 phosphate isomerase  NALT 35560
  UN AgroVoc c_34880

Glucose oxidase  NALT 6117
  UN AgroVoc c_27535

Glucose tolerance  NALT 18128
  UN AgroVoc c_11180

Glucosidases  NALT 6911
  UN AgroVoc c_3288

Glucosides  NALT 25285
  UN AgroVoc c_24032

Glues  NALT 27747
  UN AgroVoc c_11181

Glutamate ammonia ligase  NALT 7678
  UN AgroVoc c_27537

Glutamate decarboxylase  NALT 22271
  UN AgroVoc c_27536
  Library of Congress sh85055378

Glutamate dehydrogenase  NALT 7717
  UN AgroVoc c_29506

Glutamic acid  NALT 7791
  UN AgroVoc c_3291

Glutamine  NALT 7792
  UN AgroVoc c_3292

A nonessential amino acid. Glutamine can donate the ammonia on its side chain to the formation of urea (for eventual excretion by the kidneys) and to purines (necessary for the synthesis of nucleic acids). Glutamic acid-to-glutamine conversion, in which an ammonia group is added to glutamic acid (catalyzed by glutamine synthase), is of central importance in the regulation of toxic levels of ammonia in the body. This agent is a substrate for the production of both excitatory and inhibitory neurotransmitters (glutamate and GABA) and is also an important source of energy for the nervous system. Glutamine may become a conditionally essential amino acid during certain catabolic states. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

1.7. Glossary
Glycerin NALT 6200
UN AgroVoc c_11185

A trihydroxyalcohol with localized osmotic diuretic and laxative effects. Glycerin elevates the blood plasma osmolality thereby extracting water from tissues into interstitial fluid and plasma. This agent also prevents water reabsorption in the proximal tubule in the kidney leading to an increase in water and sodium excretion and a reduction in blood volume. Administered rectally, glycerin exerts a hyperosmotic laxative effect by attracting water into the rectum, thereby relieving constipation. In addition, glycerin is used as a solvent, humectant and vehicle in various pharmaceutical preparations. Source: NCI thesaurus link

Reference: FDA UNII link

Glycine (amino acid) NALT 7793
UN AgroVoc c_3299

Glycine max NALT 34329
UN AgroVoc c_3301

Glycoalkaloids NALT 6894
UN AgroVoc c_15977

Glycogenolysis NALT 22205
UN AgroVoc c_3304

The release of glucose from glycogen by glycogen phosphorylase (phosphorolysis). The released glucose-1-phosphate is then converted to glucose-6-phosphate by phosphoglucomutase before entering glycolysis. Glycogenolysis is stimulated by glucagon or epinephrine via the activation of phosphorylase kinase. (source: NALT)

Glycolipids NALT 22218
UN AgroVoc c_32670

glycols NALT 6151
UN AgroVoc c_11190
Glycolysis  NALT 22206
UN AgroVoc c_3305
A metabolic process that converts glucose into two molecules of pyruvic acid through a series of enzymatic reactions. Energy generated by this process is conserved in two molecules of ATP. Glycolysis is the universal catabolic pathway for glucose, free glucose, or glucose derived from complex carbohydrates, such as glycogen and starch. (source: NALT)

A series of anaerobic chemical reactions that cells utilize to produce energy. Glycolysis is a biochemical pathway in which glucose is catabolized into lactate or pyruvate via enzymatic reactions to generate ATP. Source: NCI thesaurus link

Glyconeogenesis  NALT 22207
UN AgroVoc c_11177
The biosynthesis of glycogen from nonhexose or non-carbohydrate precursors. Use for biosynthesis of glycogen from non-carbohydrate precursors, such as lactate; for biosynthesis of glycogen from glucose USE glycogenesis. (source: NALT)

Glycoproteins  NALT 12715
UN AgroVoc c_3307

Glycosaminoglycans  NALT 25607
UN AgroVoc c_26784

Glycosidases  NALT 35445
UN AgroVoc c_3308

Glycosides  NALT 7865
UN AgroVoc c_3309

Glycosuria  NALT 22212
UN AgroVoc c_3310
Library of Congress sh85055409

Glycosyltransferases  NALT 35335
UN AgroVoc c_11192

Glycyphagidae  NALT 13488
UN AgroVoc c_30913

Glyoxylate cycle  NALT 17287
UN AgroVoc c_3314

Gnathostomatidae  NALT 9372
UN AgroVoc c_31030

Gnetopsida  NALT 864
UN AgroVoc c_330330

Gnomonia  NALT 33077
UN AgroVoc c_31744
Goat cheese  NALT 24529
  UN AgroVoc c_32463
  Library of Congress sh85055489

Goats  NALT 22030
  UN AgroVoc c_3324

Gobio  NALT 31265
  UN AgroVoc c_34448

Goldfish  NALT 11466
  UN AgroVoc c_3326

Golgi apparatus  NALT 33284
  UN AgroVoc c_3327
  A stack of flattened vesicles located between the nucleus and the secretory pole or surface of a cell. Functions in posttranslational processing and sorting of proteins, receiving them from the rough endoplasmic reticulum and directing them to secretory vesicles, lysosomes, or the cell membrane. The movement of proteins takes place by transfer vesicles that bud off from the rough endoplasmic reticulum or golgi apparatus and fuse with the golgi, lysosomes or cell membrane. Source: NCI thesaurus link

Gonadal dysgenesis  NALT 35031
  UN AgroVoc c_36709
  A congenital disorder characterized by the presence of extremely hypoplastic gonads preventing the development of secondary sex characteristics. Source: NCI thesaurus link

Gonadotropins  NALT 25680
  UN AgroVoc c_3329
  Library of Congress sh85055839

Gonads  NALT 9340
  UN AgroVoc c_34291
  Organs which produce gametes. (source: NALT)

Gonioctena  NALT 26059
  UN AgroVoc c_3330

Goniozus  NALT 16914
  UN AgroVoc c_29829

Gonipterus  NALT 30774
  UN AgroVoc c_24647

Gossypium arboreum  NALT 29624
  UN AgroVoc c_3336

Gossypium barbadense  NALT 29625
  UN AgroVoc c_3337

Gossypium herbaceum  NALT 29626
  UN AgroVoc c_3338
Gossypium hirsutum  NALT 29627

UN AgroVoc c_3339

Gout  NALT 6720

UN AgroVoc c_16431

Gracilariaceae  NALT 23915

UN AgroVoc c_49780

Gracillaridae  NALT 3082

UN AgroVoc c_331350

Graft compatibility  NALT 28321

UN AgroVoc c_3342

Use for the compatibility/incompatibility of grafts in plants; For the immunological attack mounted by a graft towards a host in animals and humans USE graft versus host reactions; For the immune response of the host to an incompatible graft in animals and humans USE graft rejection. (source: NALT)

Grain crops  NALT 24038

UN AgroVoc c_3348

Crops, mostly grass crops, that are grown for their edible seeds, such as corn, wheat, rye, buckwheat, amaranth, and etc. Grain markets include soybeans as grains. (source: NALT)

gram negative bacteria  NALT 15081

UN AgroVoc c_3352

gram positive bacteria  NALT 15082

UN AgroVoc c_3353

Gramineae  NALT 2592

UN AgroVoc c_13474

Graminella  NALT 26199

UN AgroVoc c_30726

Graminella nigrifrons  NALT 17859

UN AgroVoc c_30727

Granulocytes  NALT 16036

UN AgroVoc c_11258

Granuloma  NALT 748

UN AgroVoc c_35136

Library of Congress sh85056443

An inflammatory reaction usually caused by infectious organisms, foreign bodies, or cholesterol deposits. It is characterized by the presence of epithelioid histiocytes and chronic inflammation. Source: NCI thesaurus link

Granulosa cells  NALT 23466

UN AgroVoc c_36737
Grapefruits  NALT 26515
  UN AgroVoc c_3358
  Library of Congress sh85056457

Graphocephala  NALT 26200
  UN AgroVoc c_30728

Graphognathus  NALT 30775
  UN AgroVoc c_3361

grasses  NALT 28913
  UN AgroVoc c_3362

Grassland soils  NALT 30686
  UN AgroVoc c_3365

grasslands  NALT 9709
  UN AgroVoc c_3366

Grazing  NALT 9183
  UN AgroVoc c_25243
  Feeding on standing vegetation, as by livestock or wild animals. (source: NALT)

Green manures  NALT 28617
  UN AgroVoc c_3375
  Crops grown to be incorporated into the soil to increase soil quality, fertility and structure. (source: NALT)

greenhouse effect  NALT 13660
  UN AgroVoc c_15585
  A popular term used to describe the roles of greenhouse gases in keeping the Earth’s surface warmer than it would be otherwise. These ”radiatively active” gases are relatively transparent to incoming shortwave radiation, but are relatively opaque to outgoing longwave radiation, trapping it for subsequent re-radiation back to the surface, maintaining higher surface temperatures. (source: NALT)

Greenhouse gases  NALT 5847
  UN AgroVoc c_34841
  Those gases, such as water vapor, carbon dioxide, tropospheric ozone, nitrous oxide, and methane, that are transparent to solar radiation but opaque to longwave radiation. Their action is similar to that of glass in a greenhouse. (source: NALT)

Greenhouse soils  NALT 30687
  UN AgroVoc c_3378

Gregarinida  NALT 11030
  UN AgroVoc c_31193

Gremmeniella  NALT 20176
  UN AgroVoc c_15822

grilling  NALT 28865
  UN AgroVoc c_50130
Griseofulvin    NALT 2483
    UN AgroVoc c_11363
    An antifungal agent derived from the mold Penicillium griseofulvum that is used to treat fungal infections of the
    skin and nails. Griseofulvin binds to tubulin, disrupting microtubule function and inhibiting mitosis. Source:
    NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link

Grossulariaceae    NALT 19834
    UN AgroVoc c_3388

groundwater    NALT 11571
    UN AgroVoc c_3391

Groundwater flow    NALT 15968
    UN AgroVoc c_32472

Groundwater recharge    NALT 34498
    UN AgroVoc c_24035

Group behaviour    NALT 27910
    UN AgroVoc c_11371

growing media    NALT 623
    UN AgroVoc c_3393
    Use for the substrates used for growing plants in containers; for the artificial media or substrates used for growing
    organisms in vitro USE culture media. (source: NALT)

Growth disorders    NALT 1762
    UN AgroVoc c_3396
    Library of Congress sh85057530

Growth factors    NALT 3937
    UN AgroVoc c_36557

Growth rings    NALT 32283
    UN AgroVoc c_3399
    The layer of wood growth put on a tree during a single growing season. In the temperate zone, the annual
    growth rings of many species (e.g., oaks and pines) are readily distinguished because of the differences in the
    cells formed during the early and late parts of the season. In some temperate zone species (e.g., black gum and
    sweetgum) and many tropical species, annual growth rings are not easily recognized. (source: NALT)

Gruiformes    NALT 95
    UN AgroVoc c_3401
    Dbpedia Gruiformes
A comprehensive term for nonvolatile viscous plant exudates, which either dissolve or swell up in contact with water. Many substances referred to as gums, such as pine and spruce gum, are actually oleoresins. (source: NALT)
The natural environment where an organism, population or community lives, including those biotic and abiotic factors affecting it. (source: NALT)

**Habronematidae**  NALT 9374  
UN AgroVoc c_31031

**HACCP**  NALT 30070  
UN AgroVoc c_35137  
A systematic approach to be used in food processing as a means to assure food safety. (source: NALT)

**Haemaphysalis**  NALT 6654  
UN AgroVoc c_3460

**haematology**  NALT 17474  
UN AgroVoc c_11425

**Haematozoa**  NALT 11031  
UN AgroVoc c_35942

**Haemobartonella**  NALT 1085  
UN AgroVoc c_11449

**Haemodoraceae**  NALT 8946  
UN AgroVoc c_26309

**Haemoproteus**  NALT 27419  
UN AgroVoc c_3466

**Haemulidae**  NALT 9651  
UN AgroVoc c_42986  
Dbpedia Haemulidae

**Haliotis**  NALT 1572  
UN AgroVoc c_3475

**Halloysite**  NALT 26743  
UN AgroVoc c_15838

**Halogenated hydrocarbons**  NALT 25337  
UN AgroVoc c_3476

**Halogens**  NALT 13201  
UN AgroVoc c_3477

**Halothane**  NALT 8808  
UN AgroVoc c_11445  
A nonflammable, halogenated, hydrocarbon and general inhalation anesthetic. Although the exact mechanism of action is unknown, halothane provides relatively rapid induction of anesthesia by depressing the central nervous system, thereby producing a reversible loss of consciousness and sensation. (NCI05) Source: NCI thesaurus link  
Reference: FDA UNII link

1.7. Glossary
Look-up using CAS number link

**Hamamelidaceae**  NALT 7257
  UN AgroVoc c_3478

**Hamsters**  NALT 25091
  UN AgroVoc c_3482

**Hantavirus**  NALT 20410
  UN AgroVoc c_35746
  A genus of single-stranded, segmented, negative-sense RNA viruses in the family bunyaviridae. These viruses are transmitted by aerosolized rodent excreta or rodent bites. Source: NCI thesaurus link

**Haplodiplosis**  NALT 23245
  UN AgroVoc c_3489

**Haploids**  NALT 31440
  UN AgroVoc c_33070
  Library of Congress sh85058795

**Hard cheese**  NALT 24496
  UN AgroVoc c_16492

**Harmonia**  NALT 27455
  UN AgroVoc c_30054

**Harpalus**  NALT 22101
  UN AgroVoc c_30014

**Harvesting**  NALT 30144
  UN AgroVoc c_3500

**Hatching**  NALT 9470
  UN AgroVoc c_3504

**hawks**  NALT 2163
  UN AgroVoc c_3507

**Hazelnuts**  NALT 29370
  UN AgroVoc c_18248

**Head**  NALT 16135
  UN AgroVoc c_3509
  The anterior and superior part of a human bearing the mouth, the brain and sensory organs. Source: NCI thesaurus link

**Health hazards**  NALT 2152
  UN AgroVoc c_34013
  Biological, chemical or physical agent or condition with the potential to cause an adverse health effect. (source: NALT)
Hearing  NALT 31861
    UN AgroVoc c_3514
    The auditory faculty, the perception of sound by the ear. Source: NCI thesaurus link

Heart  NALT 9341
    UN AgroVoc c_3516
    Use for the heart as a whole; for the heart as tissue USE myocardium. (source: NALT)
    A hollow organ located slightly to the left of the middle portion of the chest. It is composed of muscle and it is
    divided by a septum into two sides: the right side which receives de-oxygenated blood from the body and the
    left side which sends newly oxygenated blood to the body. Each side is composed of two chambers: the atrium
    (receiving blood) and ventricle (ejecting blood). Source: NCI thesaurus link

heart diseases  NALT 12350
    UN AgroVoc c_3517

Heat stress  NALT 1731
    UN AgroVoc c_11488

Heat tolerance  NALT 140
    UN AgroVoc c_11486

Heathland soils  NALT 35692
    UN AgroVoc c_3523

Heavy metals  NALT 10454
    UN AgroVoc c_2223

Hebeloma  NALT 4992
    UN AgroVoc c_31708
    Library of Congress sh85059857

Hedera  NALT 11740
    UN AgroVoc c_3526

Heifers  NALT 23072
    UN AgroVoc c_3535
    Library of Congress sh85059942
    Bovine females that have not given birth to calves. (source: NALT)

Helianthemum  NALT 26386
    UN AgroVoc c_33729

Helianthus  NALT 13316
    UN AgroVoc c_3538
    Dbpedia Helianthus

Helianthus annuus  NALT 28239
    UN AgroVoc c_3539

1.7. Glossary
Helicobacter pylori  NALT 21682

Bacteria that cause stomach inflammation (gastritis) and ulcers in the stomach. This bacteria is the most common cause of ulcers worldwide. It is often referred to as H. pylori. H. pylori infection is usually acquired from contaminated food and water and through person to person spread. The infection is common in crowded living conditions with poor sanitation. In countries with poor sanitation, 90% of the adult population can be infected. In the U.S., 30% of the adult population is infected. One out of six patients with H. pylori infection develops ulcers of the duodenum or the stomach. This bacteria is also believed to be associated with stomach cancer and a rare type of lymph gland tumor called gastric MALT lymphoma. Infected persons usually carry the infection indefinitely, unless treated with medications to eradicate the bacteria. (MedicineNet.com) Source: NCI thesaurus link

Helicobasidium  NALT 13923

Helicoverpa zea  NALT 18446

Heligmonellidae  NALT 9375

Heligmosomidae  NALT 9376

Heliothis  NALT 25323

Heliotropium  NALT 18607

Hellula  NALT 29804

Helminths  NALT 9354

Wormlike parasites of animals, including parasitic stages of nematodes, cestodes, trematodes, acanthocephalans and nematomorphs, especially those parasitizing the intestines of vertebrates. (source: NALT)

Helotiales  NALT 8039


Hemerobiidae  NALT 20078

Hemicycliophora  NALT 30014

Hemiptera  NALT 20321

Dbpedia Hemiptera
The taxonomic status of the Hemiptera, Homoptera and Heteroptera remains controversial. Keeping ordinal rank of Hemiptera until new classification scheme is proposed. Families, genera, and species are listed under the orders Heteroptera and Homoptera. (source: NALT)

**Hemp**  NALT 21899  
UN AgroVoc c_3558

**Hendersonula**  NALT 27655  
UN AgroVoc c_31576

**Hens**  NALT 24855  
UN AgroVoc c_11525  
Adult female chickens. Use for chicken hens; For female turkeys, USE turkey hens. (source: NALT)

**Heparin**  NALT 10265  
UN AgroVoc c_32480  
A sulfur-rich glycosaminoglycan with anticoagulant property. Heparin binds to antithrombin III to form a heparin-antithrombin III complex. The complex binds to and irreversibly inactivates thrombin and other activated clotting factors, such as factors IX, X, XI, and XII, thereby preventing the polymerization of fibrinogen to fibrin and the subsequent formation of clots. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using CAS number link

**Hepatopancreas**  NALT 9342  
UN AgroVoc c_34294

**Hepatotoxins**  NALT 4813  
UN AgroVoc c_24552

**Hepatozoon**  NALT 27422  
UN AgroVoc c_3563

**Heptachlor**  NALT 31051  
UN AgroVoc c_31392

**Heracleum**  NALT 10955  
UN AgroVoc c_26519

**Herbaria**  NALT 18790  
UN AgroVoc c_3565

**Herbicides**  NALT 822  
UN AgroVoc c_3566  
Pesticides that kill weeds and other plants that grow where they are not wanted. (source: NALT)

**Herbivores**  NALT 31997  
UN AgroVoc c_3567

**Herds**  NALT 9097  
UN AgroVoc c_3569  
Use for camels, cattle, deer, elephants, horses, oxen, and swine. (source: NALT)
Hernia  NALT 752
  UN AgroVoc c_16433
  Protrusion of tissue, structure, or part of an organ through the bone, muscular tissue, or the membrane by which it is normally contained. Hernia may involve tissues such as the abdominal wall or the respiratory diaphragm. (source: NALT)
  The protrusion of part of an organ or fibroadipose tissue through an abnormal opening. Source: NCI thesaurus link

Herpesviridae  NALT 31446
  UN AgroVoc c_3574

Herpetology  NALT 1145
  UN AgroVoc c_3573

Hesperidin  NALT 17357
  UN AgroVoc c_35020

Hesperiidae  NALT 21444
  UN AgroVoc c_30216

Heterobasidion  NALT 10866
  UN AgroVoc c_23933

Heterochromatin  NALT 25760
  UN AgroVoc c_26786
  Library of Congress sh85060524
  The portion of chromosome material that remains condensed and is transcriptionally inactive during interphase. (source: NALT)
  A tightly packed area of chromatin that may function to protect chromosome integrity and regulate gene expression. Source: NCI thesaurus link

heterocyclic compounds  NALT 3817
  UN AgroVoc c_3579

Heteroderidae  NALT 13555
  UN AgroVoc c_31038

Heteropeza  NALT 23246
  UN AgroVoc c_3582

Heterophyidae  NALT 33515
  UN AgroVoc c_31990

Heteroptera  NALT 7290
  UN AgroVoc c_3585
  The taxonomic status of the Hemiptera, Homoptera and Heteroptera remains controversial. Keeping ordinal rank of Heteroptera until new classification scheme is proposed. (source: NALT)

Hexaconazole  NALT 28447
  UN AgroVoc c_36943
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<td>High fructose corn syrup</td>
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<td>Hippodamia convergens</td>
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</table>

The offspring of a stallion (male horse) and a jennet (female ass). (source: NALT)
A semi-essential amino acid (children should obtain it from food) needed in humans for growth and tissue repair, Histidine is important for maintenance of myelin sheaths that protect nerve cells and is metabolized to the neurotransmitter histamine. Histamines play many roles in immunity, gastric secretion, and sexual functions. Histidine is also required for blood cell manufacture and protects tissues against damage caused by radiation and heavy metals. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

The study of the structure of the cells and their arrangement to constitute tissues and, finally, the association among these to form organs. In pathology, the microscopic process of identifying normal and abnormal morphologic characteristics in tissues, by employing various cytochemical and immunocytochemical stains. Source: NCI thesaurus link

The microscopic study of characteristic tissue abnormalities by employing various cytochemical and immunocytochemical stains. Source: NCI thesaurus link

Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, through AIDS-related complex (ARC), to acquired immunodeficiency syndrome (AIDS). (source: NALT)
Holcus lanatus  NALT 28245  
UN AgroVoc c_37128  

Homogenized milk  NALT 31633  
UN AgroVoc c_11580  

Homoptera  NALT 13800  
UN AgroVoc c_3649  

The taxonomic status of the Hemiptera, Homoptera and Heteroptera remains controversial. Keeping ordinal rank of Homoptera until new classification scheme is proposed. (source: NALT)  

Hopea  NALT 33933  
UN AgroVoc c_3659  

Hoploaimidae  NALT 10685  
UN AgroVoc c_24759  

Hops  NALT 19828  
UN AgroVoc c_11596  

Hordeiviruses  NALT 10042  
UN AgroVoc c_32860  

Hordeum bulbosum  NALT 20338  
UN AgroVoc c_23935  

Hordeum vulgare  NALT 15852  
UN AgroVoc c_3662  

Hormone agonists  NALT 514  
UN AgroVoc c_33933  

Chemical substances that have an affinity for and stimulate physiologic activity at cell receptors normally stimulated by naturally occurring hormones, thus triggering a biochemical response. (source: NALT)  

Hormone antagonists  NALT 515  
UN AgroVoc c_33077  

Chemical substances which inhibit the function of the endocrine glands, the biosynthesis of their secreted hormones, or the action of hormones upon their specific sites. For external agents where hormone disruption is desirable (e.g., targeted insect control or suppression of reproduction cycles in domestic animals); For external agents (e.g., pollutants, pesticides, contaminants) that interfere with the role of natural hormones in nontarget organisms USE endocrine-disrupting chemicals. (source: NALT)  

Hormone receptors  NALT 516  
UN AgroVoc c_26875  

Hormones  NALT 517  
UN AgroVoc c_3663  

Chemical substances having a specific regulatory effect on the activity of a certain organ or organs. The term is applied to substances secreted by various endocrine glands and transported in the bloodstream to the target organs, and is also extended to include those substances that are not produced by the endocrine glands but that have similar effects. (source: NALT)
**Horns**  NALT 10566  
UN AgroVoc c_3665

**horseradish**  NALT 12263  
UN AgroVoc c_11614

**Horticultural soils**  NALT 30688  
UN AgroVoc c_3670

**horticulture**  NALT 18  
UN AgroVoc c_3671

**hosts**  NALT 836  
UN AgroVoc c_3673

**Howardula**  NALT 6520  
UN AgroVoc c_30971

**Human behaviour**  NALT 10091  
UN AgroVoc c_28698

Use for the observable patterns of human actions and reactions; For the influence of mankind’s activities on the environment and other species USE anthropogenic activities; For the physical activities of humans used to accomplish their routine tasks USE physical activity. (source: NALT)

**Human diseases**  NALT 327  
UN AgroVoc c_29198

**human nutrition**  NALT 4298  
UN AgroVoc c_27933

**Humectants**  NALT 232  
UN AgroVoc c_15985

**Humid zones**  NALT 26892  
UN AgroVoc c_3688

Regions where the average relative humidity is high, and the precipitation is sufficient to support forests. (source: NALT)

**Humoral immunity**  NALT 10233  
UN AgroVoc c_11639

Immune processes mediated by antibodies Source: NCI thesaurus link

**Humulus**  NALT 21893  
UN AgroVoc c_3691

**Hyadaphis**  NALT 10738  
UN AgroVoc c_3702

**Hyaenidae**  NALT 30092  
UN AgroVoc c_15603
Hyalophora cecropia  NALT 23271
  UN AgroVoc c_30336

Hyalopterus  NALT 10739
  UN AgroVoc c_3704

Hybridization  NALT 30217
  UN AgroVoc c_3706

Hybridomas  NALT 23404
  UN AgroVoc c_27546

Hybrids  NALT 30997
  UN AgroVoc c_3707
  The viable cell resulting from the fusion of a cytoplasm (cytoplasm remaining after the enculeation of a cell) with a whole cell. (source: NALT)

Hydrangeaceae  NALT 31932
  UN AgroVoc c_3711
  Dbpedia Hydrangeaceae

Hydraulic structures  NALT 21737
  UN AgroVoc c_3714
  A manmade structure that serves the purpose of diverting, restricting, stopping, or otherwise controlling the natural flow of water. (source: NALT)

Hydrazides  NALT 31686
  UN AgroVoc c_3716

Hydrocarbons  NALT 6468
  UN AgroVoc c_3719

Hydrocephalus  NALT 23683
  UN AgroVoc c_16754
  A disorder characterized by an abnormal increase of cerebrospinal fluid in the ventricles of the brain. Source: NCI thesaurus link

Hydrocharitaceae  NALT 31682
  UN AgroVoc c_26306

Hydrochoerus hydrochaeris  NALT 22096
  UN AgroVoc c_331511

Hydroelectric power  NALT 31694
  UN AgroVoc c_25612
  Use for the generation of electric power usually from water released in controlled amounts though a system of turbines; For the more general concept of electrical or mechanical energy harnessed from the action of falling or flowing water or due to water temperature differentials USE water power. (source: NALT)

Hydrogen  NALT 32806
  UN AgroVoc c_3724

1.7. Glossary
Hydrogen cyanamide  NALT 30947
  UN AgroVoc c_35772

Hydrogenation  NALT 17397
  UN AgroVoc c_3726

Hydrogeology  NALT 11569
  UN AgroVoc c_11669

Hydrolases  NALT 2707
  UN AgroVoc c_3729

Hydrology  NALT 67
  UN AgroVoc c_3731

Hydrolysis  NALT 24669
  UN AgroVoc c_24940

A chemical reaction in which a water molecule is added to a compound. This addition often involves the splitting or cleavage of the molecule. The hydroxyl group is incorporated into one fragment of the compound and the hydrogen atom in the other. Source: NCI thesaurus link

Hydroxamic acids  NALT 7735
  UN AgroVoc c_34020

A group of weak acids with the general chemical formula RC(=O)N(R')OH and antineoplastic and antimicrobial activities. Hydroxamic acids covalently bind to the zinc(II) ion in the active sites of matrix metalloproteinases (MMP), thereby inhibiting the action of MMPs, inducing extracellular matrix degradation, and inhibiting angiogenesis, tumor growth and invasion, and metastasis. (NCI04) Source: NCI thesaurus link

Hydroxides  NALT 7278
  UN AgroVoc c_3736

Hydroxylation  NALT 24670
  UN AgroVoc c_27547

Hydroxyproline  NALT 7796
  UN AgroVoc c_3738

Hydrozoa  NALT 4591
  UN AgroVoc c_49208

Hylemya  NALT 10014
  UN AgroVoc c_3742

Hylobius  NALT 30777
  UN AgroVoc c_3744
  Library of Congress sh85063570

Hylocereus  NALT 20785
  UN AgroVoc c_34616
  Dbpedia Hylocereus
Hyperplasia  NALT 754
  UN AgroVoc c_23810

  An increase in the number of cells in a tissue or organ, not due to tumor formation. It differs from hypertrophy, which is an increase in bulk without an increase in the number of cells. (source: NALT)

  An abnormal increase in the number of cells in an organ or a tissue with consequent enlargement. Source: NCI thesaurus link

1.7. Glossary
Hypersensitivity  NALT 6555
  UN AgroVoc c_274

  Altered reactivity to an antigen, which can result in pathologic reactions upon subsequent exposure to that particular antigen. Use for hypersensitivity in humans and animals; For hypersensitivity in plants USE hypersensitive response. (source: NALT)

  An immune response that occurs following exposure to an innocuous antigen, but that does not require the presence of preformed antibodies to the antigen. Source: NCI thesaurus link

Hypertension  NALT 10391
  UN AgroVoc c_11682

  Hypertension is persistently high arterial blood pressure and may have no known cause or be associated with other diseases. Hypertension is considered a risk factor for the development of heart disease, peripheral vascular disease, stroke and kidney disease. (source: NALT)

  Blood pressure that is abnormally high. Source: NCI thesaurus link

Hypertrophy  NALT 755
  UN AgroVoc c_16435

  General increase in bulk of a part or organ, due to cell enlargement and accumulation of fluids and secretions, not due to tumor formation, nor to an increase in the number of cells (hyperplasia). (source: NALT)

  Abnormal enlargement of a body part or organ. Source: NCI thesaurus link

Hyphaene  NALT 12014
  UN AgroVoc c_3766

Hyphantria  NALT 11934
  UN AgroVoc c_3768

Hyphomycetes  NALT 3007
  UN AgroVoc c_31536

Hypochlorites  NALT 21117
  UN AgroVoc c_28411

Hypocreales  NALT 12842
  UN AgroVoc c_31664


Hypoderma bovis  NALT 23117
  UN AgroVoc c_30568

Hypoderma lineatum  NALT 28175
  UN AgroVoc c_30569

Hypomyces  NALT 26724
  UN AgroVoc c_27217

Hypophthalmichthys  NALT 31266
  UN AgroVoc c_32161

  Dbpedia Hypophthalmichthys
Hypothalamus  NALT 19224
UN AgroVoc c_11691

An important supervisory center in the brain, rich in ganglia, nerve fibers, and synaptic connections. It is composed of several sections called nuclei, each of which controls a specific function. The hypothalamus regulates body temperature, blood pressure, heartbeat, metabolism of fats and carbohydrates, and sugar levels in the blood. Through direct attachment to the pituitary gland, the hypothalamus also meters secretions controlling water balance and milk production in the female. The role of the hypothalamus in awareness of pleasure and pain is well established in the laboratory. It is involved in the expression of emotions, such as fear and rage, and in sexual behaviors. Despite its numerous vital functions, the hypothalamus in humans accounts for only 1/300 of total brain weight, and is about the size of an almond. Structurally, it is joined to the thalamus; the two work together to monitor the sleep-wake cycle. Source: NCI thesaurus link

Hypothermia  NALT 158
UN AgroVoc c_11692

Lower than normal body temperature, especially in warm-blooded animals. (source: NALT)
Abnormally low body temperature. Source: NCI thesaurus link

Hystrichopsyllidae  NALT 22937
UN AgroVoc c_30398

Icacinaceae  NALT 23328
UN AgroVoc c_26288

Ice  NALT 190
UN AgroVoc c_3782
Water frozen in the solid state. Source: NCI thesaurus link

Icerya  NALT 29661
UN AgroVoc c_3787

Icerya purchasi  NALT 29662
UN AgroVoc c_30824

Ichneumonidae  NALT 5782
UN AgroVoc c_29906

Ichthyology  NALT 1146
UN AgroVoc c_3788

Ichthyophthirius  NALT 26280
UN AgroVoc c_11697

Ictalurus punctatus  NALT 23031
UN AgroVoc c_37031
Immediate hypersensitivity reaction - type I reaction, involves immunoglobulin E (IgE)-mediated release of chemical mediators from mast cells and basophils. Th2 cells produce IL-4 and IL-13, which then act on B cells to promote the production of antigen-specific IgE. Reexposure to the antigen can then result in the antigen binding to and cross-linking the bound IgE antibodies on the mast cells and basophils. This causes the release of preformed mediators (histamine, tryptase, tryptase, chemotactic factors), newly synthesized mediators (leukotrienes, prostaglandin, thromboxane, platelet-activating factor, adenosine, bradykinin), and cytokines from these cells that results in structural and functional changes to the affected tissue. Source: NCI thesaurus link

Immune response  NALT 10232

Any immune system response of an organisms to an internal or invasive threat. Source: NCI thesaurus link

Immune system  NALT 8973

The complex group of organs like thymus, spleen, tonsils, lymphatic system, hematopoetic system and cells like lymphocytes, granulocytes, monocytes and macrophages that defends the body against infection or disease. It consists of a complex interrelated cellular, molecular and genetic component. Source: NCI thesaurus link

Immunity  NALT 2996

UN AgroVoc c_3802
The protection against infectious disease conferred by the immune response. It encompasses the capacity to distinguish foreign material from self, and to neutralize, eliminate, or metabolize that which is foreign. Source: NCI thesaurus link

**Immunization**  NALT 3926

Deliberate stimulation of the host’s immune response. Active immunization involves administration of antigens or immunologic adjuvants. Passive immunization involves administration of immune sera or lymphocytes or their extracts (e.g., transfer factor, immune RNA) or transplantation of immunocompetent cell producing tissue (thymus or bone marrow). (source: NALT)

Inoculating an individual with either killed or live agents to prevent contraction of a disease. Source: NCI thesaurus link

**Immunogenetics**  NALT 10352

A subdiscipline of genetics which deals with the genetic basis of the immune response (immunity). (source: NALT)

A sub-field of genetics that uses both genetic and immunological analyses to study the genetics behind antibody formation and the immune response. (Biotech Life Science Dictionary) Source: NCI thesaurus link

**Immunology**  NALT 17475

The study of the immune system and its reaction to pathogens, as well as its malfunctions (autoimmune diseases, allergies, rejection of organ transplants). Source: NCI thesaurus link

**Immunopathology**  NALT 9410

The branch of pathology focusing on immune diseases. Source: NCI thesaurus link

**Immunotherapy**  NALT 10543

Therapy designed to induce changes in a patient’s immune status in order to treat disease. Source: NCI thesaurus link
A laboratory method where ova are placed in a medium to which spermatozoa are added for fertilization. The zygote(s) produced are introduced into a uterus for development. (source: NALT)

Fertilization of an ovum outside of the body. Source: NCI thesaurus link

Inbreeding  NALT 30218
UN AgroVoc c_3817
The mating of plants or non-human animals which are closely related genetically. (source: NALT)

indigestion  NALT 925
UN AgroVoc c_11754
Library of Congress sh85040341

Indigo  NALT 34981
UN AgroVoc c_16494

Indigofera tinctoria  NALT 34971
UN AgroVoc c_3835

Individual feeding  NALT 9184
UN AgroVoc c_3837

Indoles  NALT 1517
UN AgroVoc c_3839

Induced abortion  NALT 1787
UN AgroVoc c_11761
Use for the intentional termination of a pregnancy before the embryo or fetus is viable outside of the uterus; For the expulsion of the embryo or fetus before it is viable outside of the uterus without deliberate interference from humans USE abortion (animals). (source: NALT)

Abortion brought on intentionally. Source: NCI thesaurus link

Induced resistance  NALT 17456
UN AgroVoc c_16186

Infant feeding  NALT 18862
UN AgroVoc c_3849

Infant foods  NALT 470
UN AgroVoc c_3850
Dbpedia Infant foods

Infection  NALT 757
UN AgroVoc c_3852

Infectious bursal disease virus  NALT 14202
UN AgroVoc c_35738
A species of Avibirnavirus causing severe inflammation of the bursa of Fabricius in chickens and other fowl. Transmission is thought to be through contaminated feed or water. Vaccines have been used with varying degrees of success. (source: NALT)
**infectious diseases**  NALT 15154

UN AgroVoc c_34024

Use for infectious diseases of animals and humans; For infectious diseases of plants USE plant diseases and disorders. (source: NALT)

**Inflammation**  NALT 758

UN AgroVoc c_3856

A pathological process characterized by injury or destruction of tissues caused by a variety of cytologic and chemical reactions. It is usually manifested by typical signs of pain, heat, redness, swelling, and loss of function. (source: NALT)

A localized protective response resulting from injury or destruction of tissues. Inflammation serves to destroy, dilute, or wall off both the injurious agent and the injured tissue. In the acute phase, inflammation is characterized by the signs of pain, heat, redness, swelling, and loss of function. Histologically, inflammation involves a complex series of events, including dilatation of arterioles, capillaries, and venules, with increased permeability and blood flow; exudation of fluids, including plasma proteins; and leukocyte migration into the site of inflammation. Source: NCI thesaurus link

**Inflorescences**  NALT 19194

UN AgroVoc c_3858

**ingredients**  NALT 3928

UN AgroVoc c_26791

**Inonotus**  NALT 10868

UN AgroVoc c_31724

**Inorganic acids**  NALT 2881

UN AgroVoc c_3880

**Inorganic compounds**  NALT 265

UN AgroVoc c_3881

**Insect diseases**  NALT 9129

UN AgroVoc c_3886

**insect growth regulators**  NALT 17498

UN AgroVoc c_25401

Use for synthetic chemical compounds, usually that mimic natural hormones, that are used to control the growth of insects; For naturally occurring hormones that regulate biological functions such as molting and growth in insects USE insect hormones. (source: NALT)

**Insect viruses**  NALT 15491

UN AgroVoc c_11791

viruses that infect insect hosts. (source: NALT)

**Insecticides**  NALT 823

UN AgroVoc c_3887

Pesticides that kill insects. (source: NALT)
Insectivora  NALT 548
    UN AgroVoc c_3888

**Instant coffee**  NALT 27725
    UN AgroVoc c_16495
    Library of Congress sh85027704

**Instant foods**  NALT 28825
    UN AgroVoc c_3896
    Dbpedia Instant foods
    Foods in dried form that are ready to eat with the addition of water. (source: NALT)

**Instars**  NALT 32893
    UN AgroVoc c_11800

**Insulin**  NALT 32965
    UN AgroVoc c_3901
    A 51-amino acid pancreatic hormone that plays a major role in the regulation of glucose metabolism, directly by suppressing endogenous glucose production (glycogenolysis; gluconeogenesis) and indirectly by suppressing glucagon secretion and lipolysis. (source: NALT)

    Insulin (51 aa, ~6 kDa) is encoded by the human INS gene. This protein is involved in the direct regulation of glucose metabolism. Source: NCI thesaurus link

**Integrated pest management**  NALT 17501
    UN AgroVoc c_34030
    A pest management strategy using a systematic approach in which pest populations are monitored to determine if and when control methods are required. Integrated pest management (IPM) uses biological, chemical, physical, cultural and/or genetic control methods in order to minimize pesticide use, reduce production costs, and protect the environment. (source: NALT)

**Integument**  NALT 9103
    UN AgroVoc c_3904

**Intercropping**  NALT 6581
    UN AgroVoc c_3910
    The growing of two or more different species of crops simultaneously, as in alternate rows in the same field or single tract of land. (source: NALT)

**Interface phenomena**  NALT 28697
    UN AgroVoc c_3913

**Interspecific competition**  NALT 28330
    UN AgroVoc c_32648

**Intervertebral disks**  NALT 22714
    UN AgroVoc c_11814

**Intestinal obstruction**  NALT 33574
    UN AgroVoc c_23818
Intraspecific competition  NALT 35676

UN AgroVoc c_32649

Inula  NALT 13326

UN AgroVoc c_34618

Invasive species  NALT 28000

UN AgroVoc c_49865

Invasive species are those plants, animals, and microbes not native to a region which, when introduced either accidentally or intentionally, cause economic or environmental harm or harm to human health. See Executive Order 13112 (February 1999). (source: NALT)

Invertebrate viruses  NALT 9404

UN AgroVoc c_3928

viruses that infect invertebrate hosts. (source: NALT)

Invertebrates  NALT 9359

UN AgroVoc c_3929

Ionization  NALT 24672

UN AgroVoc c_25736

Any process by which a neutral atom gains or loses electrons, thus acquiring a net charge, as the dissociation of a substance in solution into ions or ion production by the passage of radioactive particles. Source: NCI thesaurus link

Ionophores  NALT 234

UN AgroVoc c_34032

Chemical agents that increase the permeability of biological or artificial lipid membranes to specific ions. Most ionophores are relatively small organic molecules that act as mobile carriers within membranes or coalesce to form ion permeable channels across membranes. (source: NALT)

Ions  NALT 235

UN AgroVoc c_16162

An atom or molecule having a positive or negative charge owing to the loss or gain of one or more electrons. Source: NCI thesaurus link

Ipil (intsia)  NALT 20912

UN AgroVoc c_11829

Ipomoea  NALT 28841

UN AgroVoc c_3935

Library of Congress sh85067869

Iprodione  NALT 33176

UN AgroVoc c_36565

Ips grandicollis  NALT 35173

UN AgroVoc c_30149
Ips paraconfusus  NALT 21221
   UN AgroVoc c_30150

Iridaceae  NALT 14444
   UN AgroVoc c_3944
   Dbpedia Iridaceae

Iridoviridae  NALT 25348
   UN AgroVoc c_3946

Iron  NALT 33434
   UN AgroVoc c_3950
   An element with atomic symbol Fe, atomic number 26, and atomic weight 55.85. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Irrigated soils  NALT 30689
   UN AgroVoc c_3953

Irrigation  NALT 24709
   UN AgroVoc c_3954
   Application of water to soil for the purpose of plant production. (source: NALT)

Irrigation canals  NALT 21741
   UN AgroVoc c_25340

Irrigation systems  NALT 16017
   UN AgroVoc c_25332

Isatis  NALT 19585
   UN AgroVoc c_33739
   Library of Congress sh85068334

Isoamylase  NALT 35469
   UN AgroVoc c_34033

Isocitrate dehydrogenase  NALT 6124
   UN AgroVoc c_29511

Isocitrate lyase  NALT 35540
   UN AgroVoc c_29512

Isoflavones  NALT 31597
   UN AgroVoc c_35021
Isoleucine  NALT 7797
   UN AgroVoc c_3966
   One of nine essential amino acids in humans (present in dietary proteins), Isoleucine has diverse physiological functions, such as assisting wound healing, detoxification of nitrogenous wastes, stimulating immune function, and promoting secretion of several hormones. Necessary for hemoglobin formation and regulating blood sugar and energy levels, isoleucine is concentrated in muscle tissues in humans. Isoleucine is found especially in meats, fish, cheese, eggs, and most seeds and nuts. (NCI04) Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

isomaltose  NALT 33969
   UN AgroVoc c_11849

Isomerases  NALT 6216
   UN AgroVoc c_3967

Isomerization  NALT 24673
   UN AgroVoc c_27561

Isoniazid  NALT 10431
   UN AgroVoc c_11850
   A synthetic derivative of nicotinic acid with anti-mycobacterial properties. Although its mechanism of action is still unclear, isoniazid appears to block the synthesis of mycolic acids, major components of the mycobacterial cell wall. This agent is only active against actively growing mycobacteria because, as a pro-drug, it requires activation in susceptible mycobacterial species. Isoniazid also interferes with mycobacterial metabolism of vitamin B6. Resistance occurs due to decreased bacterial wall penetration. (NCI04) Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Isopoda  NALT 12226
   UN AgroVoc c_3968

Isospora  NALT 27423
   UN AgroVoc c_3970

Isotopes  NALT 267
   UN AgroVoc c_11852

Isotricha  NALT 26281
   UN AgroVoc c_11853
A macrocyclic lactone derived from Streptomyces avermitilis with antiparasitic activity. Ivermectin exerts its anthelmintic effect via activating glutamate-gated chloride channels expressed on nematode neurons and pharyngeal muscle cells. Distinct from the channel opening induced by endogenous glutamate transmitter, ivermectin-activated channels open very slowly but essentially irreversibly. As a result, neurons or muscle cells remain at either hyperpolarisation or depolarisation state, thereby resulting in paralysis and death of the parasites. Ivermectin does not readily pass the mammal blood-brain barrier to the central nervous system where glutamate-gated chloride channels locate, hence the hosts are relatively resistant to the effects of this agent. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using CAS number link

Includes taxonomic classification of Ixodida; For common types SEE ticks. (source: NALT)

A clinical manifestation of hyperbilirubinemia, characterized by yellowish staining of the skin; mucous membrane; and sclera. Clinical jaundice usually is a sign of liver dysfunction. (source: NALT)

Yellow pigmentation of the skin, mucous membranes, and the eyes due to hyperbilirubinemia. Causes include liver disease, biliary tract obstruction, and hemolysis. Source: NCI thesaurus link
Jerusalem artichokes  NALT 12573
    UN AgroVoc c_11903
Joint diseases  NALT 9661
    UN AgroVoc c_4051
Juglandaceae  NALT 22731
    UN AgroVoc c_4055
Juglans cinerea  NALT 20642
    UN AgroVoc c_4058
Juglans nigra  NALT 17825
    UN AgroVoc c_4059
Juniperus  NALT 30741
    UN AgroVoc c_4062
Juniperus communis  NALT 28199
    UN AgroVoc c_4063
Justicia  NALT 1979
    UN AgroVoc c_27220
Jute  NALT 29036
    UN AgroVoc c_4065
Juveniles  NALT 32894
    UN AgroVoc c_25393
Kabatina  NALT 27656
    UN AgroVoc c_31579
Kalanchoe  NALT 29867
    UN AgroVoc c_26538
    Dbpedia Kalanchoe
    Library of Congress sh96005383
Kallymeniaceae  NALT 13983
    UN AgroVoc c_49792
    Library of Congress sh88022397
Kalotermitidae  NALT 30447
    UN AgroVoc c_30630
    Library of Congress sh85071377
Kanamycin  NALT 7869
    UN AgroVoc c_11937
    Antibiotic complex produced by Streptomyces kanamyceticus from Japanese soil. Comprises 3 components: kanamycin A, the major component, and kanamycins B and C, the minor components. (source: NALT)

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An aminoglycoside antibiotic with antimicrobial property. Amikacin irreversibly binds to the bacterial 30S ribosomal subunit, specifically in contact with 16S rRNA and S12 protein within the 30S subunit. This leads to interference with translational initiation complex and, misreading of mRNA, thereby hampering protein synthesis and resulting in bactericidal effect. This agent is usually used for treatment of E. coli, Proteus species (both indole-positive and indole-negative), E. aerogenes, K. pneumoniae, S. marcescens, and Acinetobacter species.

Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Kaolinite NALT 26748
 UN AgroVoc c_16135

Kapok NALT 23308
 UN AgroVoc c_16497

Keissleriella NALT 34401
 UN AgroVoc c_31750

Keratin NALT 9452
 UN AgroVoc c_4088

Keratitis NALT 29208
 UN AgroVoc c_11959
 Library of Congress sh85072035
 Inflammation of the cornea. Source: NCI thesaurus link

Keratoconjunctivitis NALT 28565
 UN AgroVoc c_16770
 Library of Congress sh85072037
 Simultaneous inflammation of the cornea and conjunctiva. (source: NALT)

Kermesidae NALT 27478
 UN AgroVoc c_30819

Kerridae NALT 27479
 UN AgroVoc c_30821

Ketamine NALT 31057
 UN AgroVoc c_11962
 A cyclohexanone derivative with analgesic and anesthetic properties. Although its mechanism of action is not well understood, ketamine appears exerts complex pharmacological actions including inhibition of biogenic amine uptake, binding to opioid receptors, and inhibition of N-methyl D-aspartate (NMDA) receptors. Because of the involvement of spinal NMDA receptors in the process of central sensitization, this agent may reduce pain perception and induce sedation. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Keto acids NALT 2369
 UN AgroVoc c_4090
Ketones  NALT 1390
    UN AgroVoc c_4093

Ketones  NALT 989
    UN AgroVoc c_11964

    Use for the monosaccharides; For the metabolic disease USE ketosis. (source: NALT)

Kidney beans  NALT 16214
    UN AgroVoc c_4098

Kidney diseases  NALT 15638
    UN AgroVoc c_11973

Kidneys  NALT 9343
    UN AgroVoc c_4099

kinases  NALT 2325
    UN AgroVoc c_11977

Kinetin  NALT 4116
    UN AgroVoc c_4102

Kinetoplastida  NALT 30365
    UN AgroVoc c_35401

Kinins  NALT 19196
    UN AgroVoc c_16136

kitchens  NALT 20998
    UN AgroVoc c_9001009

Kittens  NALT 23065
    UN AgroVoc c_12000

Klebsiella pneumoniae  NALT 14858
    UN AgroVoc c_27563

    A species of facultatively anaerobic, Gram negative, rod shaped bacteria assigned to the phylum Proteobacteria. This species is nonmotile, oxidase negative, and produces acid from glucose, mannitol, rhamnose, arabinose and amygdalin. K. ozaenae is pathogenic and a causative agent of ozena/atrophic rhinitis. Source: NCI thesaurus link

    Reference: FDA UNII link
    Reference the NIH NCBI link

Klossiella  NALT 27424
    UN AgroVoc c_4109

Kohlrabi  NALT 19484
    UN AgroVoc c_4114

Kojic acid  NALT 10448
    UN AgroVoc c_27565

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Kola nuts  NALT 27751
  UN AgroVoc c_25471
  Library of Congress sh85072820

Labeo  NALT 31267
  UN AgroVoc c_26539
  Dbpedia Labeo
  Library of Congress sh85073625

Labiatae  NALT 2939
  UN AgroVoc c_15811
  Dbpedia Labiatae

Labiduridae  NALT 32463
  UN AgroVoc c_30626
  Library of Congress sh87007500

Laboratory animals  NALT 9147
  UN AgroVoc c_4126
  Experimental animals used either as the subject of research or as an experimental tool; For animal models of human diseases USE animal models; For mathematical models, e.g. animal genetics, USE mathematical models. (source: NALT)

Lac  NALT 18318
  UN AgroVoc c_24041

Lacanobia  NALT 33129
  UN AgroVoc c_4134

Lacanobia oleracea  NALT 33131
  UN AgroVoc c_33744

Laccaria  NALT 4994
  UN AgroVoc c_31710

Laccase  NALT 35240
  UN AgroVoc c_29513

Lachnidae  NALT 10793
  UN AgroVoc c_12031

Lactarius  NALT 4995
  UN AgroVoc c_26540

Lactate dehydrogenase  NALT 6126
  UN AgroVoc c_4138
  A family of homotetrameric cytoplasmic enzymes involved in the conversion of L-lactate and NAD to pyruvate and NADH in the final step of anaerobic glycolysis. In vertebrates, genes for three different subunits (LDH-A, LDH-B and LDH-C) exist. Source: NCI thesaurus link
Lactates NALT 7970
   UN AgroVoc c_4139

Lactation NALT 31646
   UN AgroVoc c_4140

   The processes of milk secretion by the maternal mammary glands after parturition. The proliferation of the
   mammary glandular tissue, milk synthesis, and milk expulsion or let down are regulated by the interactions of
   several hormones including estradiol; progesterone; prolactin; and oxytocin. (source: NALT)

lactation stage NALT 34715
   UN AgroVoc c_331392

lactic acid bacteria NALT 15083
   UN AgroVoc c_15990

Lactitol NALT 6201
   UN AgroVoc c_4143

Lactobacillus brevis NALT 16880
   UN AgroVoc c_33745

   A species of facultatively anaerobic/microaerophilic, Gram positive, rod shaped bacteria in the phylum Firmicutes.
   This species is nonmotile, ferments D ribose, galactose, arabinose and maltose, catalase positive, does not ferment
   mannose and hydrolyzes hippurate. L. brevis is non pathogenic but may be a concern for brewers due to its beer and
   wine spoilage ability. Source: NCI thesaurus link

Lactobacillus buchneri NALT 14647
   UN AgroVoc c_33746

Lactobacillus casei NALT 22794
   UN AgroVoc c_33748

   A species of facultatively anaerobic, Gram positive, rod shaped bacteria in the phylum Firmicutes. This species
   is nonmotile, heterofermentative, amylase positive and ferments mannitol. L. casei is non pathogenic and a
   commensal organism of the mouth and digestive tract. Source: NCI thesaurus link

Lactobacillus delbrueckii NALT 14698
   UN AgroVoc c_33750

Lactococcus lactis NALT 15301
   UN AgroVoc c_33730

   A species of Gram positive, cocci shaped, lactic acid bacteria assigned to the phylum Firmicutes. This species is
   nonmotile, catalase negative, nonsporulating and produces lactic acid from lactose fermentation. L lactis may be
   an opportunistic pathogen in humans and animals. Most significantly this microorganism is used commercially
   in the production of buttermilk and cheese. Source: NCI thesaurus link

   Reference: FDA UNII link
   Reference the NIH NCBI link

Lactones NALT 14126
   UN AgroVoc c_4145

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Lactose  NALT 33970  
    UN AgroVoc c_4146  
    A disaccharide of glucose and galactose unique to milk. (source: NALT)

Lactuca  NALT 13332  
    UN AgroVoc c_4147  
    Library of Congress sh85073875

Lactuca virosa  NALT 17675  
    UN AgroVoc c_4150

Lactulose  NALT 33971  
    UN AgroVoc c_4151  
    A disaccharide (sugar) synthesized from fructose and galactose, Lactulose is used to treat constipation and some liver diseases. Nondigestible in mammals, lactulose passes unabsorbed down to the large intestine where resident bacteria consume it and produce lactic, acetic, and formic acids, which draw fluid into the bowel to soften the stool (laxative effect). Acidification of the colon contents attracts ammonia from the bloodstream, assisting stool excretion; helpful in liver failure when ammonia cannot be detoxified. (NCI04) Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using CAS number link

Laelapidae  NALT 8716  
    UN AgroVoc c_30894

Laetiporus  NALT 10870  
    UN AgroVoc c_24652

Lagenaria  NALT 30566  
    UN AgroVoc c_4153  
    Dbpedia Lagenaria  
    Library of Congress sh85073934

Lagenaria siceraria  NALT 18864  
    UN AgroVoc c_4154

Lagenorhynchus  NALT 32163  
    UN AgroVoc c_4155

Lagomorpha  NALT 549  
    UN AgroVoc c_331508  
    Dbpedia Lagomorpha  
    The taxonomic order of mammals which include hares, rabbits and pikas. Source: NCI thesaurus link

Lagos silk rubber (tree)  NALT 11175  
    UN AgroVoc c_12052

Lameness  NALT 927  
    UN AgroVoc c_12062
Lamiales  NALT 18600
    UN AgroVoc c_330137
    Library of Congress sh85074202
Laminated wood  NALT 28374
    UN AgroVoc c_16567
Lamnidae  NALT 6846
    UN AgroVoc c_38060
Lamniformes  NALT 22352
    UN AgroVoc c_4166
    Dbpedia Lamniformes
Land  NALT 1580
    UN AgroVoc c_4172
Land resources  NALT 28597
    UN AgroVoc c_4179
land use  NALT 1581
    UN AgroVoc c_4182
Landolphia  NALT 11179
    UN AgroVoc c_4183
Landscaping  NALT 11893
    UN AgroVoc c_4186
    The design and installation of plant materials (including turf) and architectural elements. (source: NALT)
Lankesterella  NALT 27425
    UN AgroVoc c_12074
Laodelphax  NALT 32152
    UN AgroVoc c_4190
Lardizabalaceae  NALT 5922
    UN AgroVoc c_26269
large intestine  NALT 23273
    UN AgroVoc c_23815
    A muscular tube that extends from the end of the small intestine to the anus. Source: NCI thesaurus link
Laridae  NALT 24464
    UN AgroVoc c_49174
Larix gmelinii  NALT 31596
    UN AgroVoc c_4198
Larvae  NALT 23027
UN AgroVoc c_4204
Library of Congress sh85074735
The immature stage of the life cycle following hatching from the egg, especially seen in insects and other arthropods. (source: NALT)

Larvicides  NALT 824
UN AgroVoc c_12094
Chemical agents that kill the larval stage of a pest or parasite. (source: NALT)

Lasiocampidae  NALT 32306
UN AgroVoc c_30223

Lasioderma  NALT 9734
UN AgroVoc c_4208

Lasioderma serricorne  NALT 26262
UN AgroVoc c_29996

Lasioderma serricorne  NALT 26262
UN AgroVoc c_29820

Lasioglossum  NALT 33034
UN AgroVoc c_29820

Lasioptera  NALT 23247
UN AgroVoc c_4209

Lates  NALT 23737
UN AgroVoc c_24348
Dbpedia Lates

Latex  NALT 854
UN AgroVoc c_4214

Latex agglutination test  NALT 5136
UN AgroVoc c_29654
Agglutination tests in which the antigen is adsorbed onto latex particles before mixing with the antibody specific for the adsorbed antigen. (source: NALT)

Latitude  NALT 26883
UN AgroVoc c_4222
The angular distance north or south between an imaginary line around a heavenly body parallel to its equator and the equator itself. Source: NCI thesaurus link

Latrodectus mactans  NALT 17827
UN AgroVoc c_30890

Lauraceae  NALT 3317
UN AgroVoc c_4225
Dbpedia Lauraceae
Laurales  NALT 21469  
            UN AgroVoc c_331079

Laurus nobilis  NALT 16105  
            UN AgroVoc c_4227

Lawsonia (bacteria)  NALT 32226  
            UN AgroVoc c_36448

Laying performance  NALT 5070  
            UN AgroVoc c_4234

leachates  NALT 236  
            UN AgroVoc c_35164

leaf area  NALT 31998  
            UN AgroVoc c_16110

lean body mass  NALT 18334  
            UN AgroVoc c_37725

The mass of the body minus the fat. Source: NCI thesaurus link

Learning  NALT 4397  
            UN AgroVoc c_37978

The act, process, or experience of gaining knowledge or skill. Source: NCI thesaurus link

Leather  NALT 30833  
            UN AgroVoc c_4241

Leavening agents  NALT 237  
            UN AgroVoc c_34038

leaves  NALT 28537  
            UN AgroVoc c_4243

Lecanorales  NALT 12845  
            UN AgroVoc c_31665


Leccinum  NALT 18435  
            UN AgroVoc c_31741

lectins  NALT 5140  
            UN AgroVoc c_24042

Lecythidaceae  NALT 15903  
            UN AgroVoc c_4247

Leeks  NALT 6644  
            UN AgroVoc c_12128

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...
Leg weakness  NALT 928
UN AgroVoc c_26797

Leishmania braziliensis  NALT 30911
UN AgroVoc c_31173

Leishmania mexicana  NALT 30913
UN AgroVoc c_31175

Leishmania tropica  NALT 30914
UN AgroVoc c_31176

Leishmaniasis  NALT 30909
UN AgroVoc c_35197

A parasitic infection caused by protozoa of the genus Leishmania. It is transmitted to humans via the bite of sandflies. There are three main forms of the disease: cutaneous, mucocutaneous, and visceral leishmaniasis. Cutaneous leishmaniasis causes skin ulcers; mucocutaneous leishmaniasis causes destructive lesions of the mucous membranes of the nose, mouth, and throat; visceral leishmaniasis is the most severe form of the disease and is manifested with anemia, weight loss, hepatomegaly and splenomegaly. Source: NCI thesaurus link

Lema  NALT 26061
UN AgroVoc c_30033

Lemons  NALT 26517
UN AgroVoc c_4259
Library of Congress sh85075957

Lentinula  NALT 10871
UN AgroVoc c_31725

Lentinus  NALT 10872
UN AgroVoc c_4262

Lentivirus  NALT 18961
UN AgroVoc c_4263

A genus of the family Retroviridae consisting of non-oncogenic retroviruses that produce multi-organ diseases characterized by long incubation periods and persistent infection. Lentviruses are unique in that they contain open reading frames (ORFs) between the pol and env genes and in the 3’ env region. Five serogroups are recognized, reflecting the mammalian hosts with which they are associated. HIV-1 is the type species. Source: NCI thesaurus link

Lenzites  NALT 10873
UN AgroVoc c_31726

Leontodon  NALT 13337
UN AgroVoc c_12141

Leontopodium  NALT 13338
UN AgroVoc c_23941
Library of Congress sh85076029
Lepeophtheirus  NALT 21236
UN AgroVoc c_26544

Lepidium  NALT 19586
UN AgroVoc c_4265

Lepidoptera  NALT 3106
UN AgroVoc c_4268

Lepidosaphes  NALT 33107
UN AgroVoc c_4270
Library of Congress sh85076071

Leptota  NALT 4996
UN AgroVoc c_4272

Lepomis  NALT 23702
UN AgroVoc c_37034

Lepomis macrochirus  NALT 18267
UN AgroVoc c_37033

Leptinotarsa  NALT 26062
UN AgroVoc c_4275
Library of Congress sh85076094

Leptinotarsa decemlineata  NALT 26046
UN AgroVoc c_30034

Leptochloa  NALT 33813
UN AgroVoc c_4276

Leptoconops  NALT 23938
UN AgroVoc c_30467

Leptocorisa  NALT 7293
UN AgroVoc c_4277
Library of Congress sh85076104

Leptocottus  NALT 29619
UN AgroVoc c_4278
Library of Congress sh85076105

Leptoglossus  NALT 29064
UN AgroVoc c_30654

Leptopsyllidae  NALT 8110
UN AgroVoc c_30400

Leptosphaeria  NALT 34402
UN AgroVoc c_4279
Leptosphaerulina  NALT 34403
UN AgroVoc c_31751
Rank of Genus, Dothideomycetes incertae sedis. (source: NALT)

Leptospirosis  NALT 15165
UN AgroVoc c_4281
Infections with bacteria of the genus Leptospira. (source: NALT)
A contagious bacterial infection caused by spirochetes of the genus Leptospira. Humans are infected by contact with water and soil which have been contaminated with animal waste products. The signs and symptoms include an initial flu-like phase, followed by a second phase in which patients may develop meningitis, liver failure and renal failure. Source: NCI thesaurus link

Lethal dose  NALT 34021
UN AgroVoc c_12150

Leucine  NALT 7798
UN AgroVoc c_4292
One of nine essential amino acids in humans (provided by food), Leucine is important for protein synthesis and many metabolic functions. Leucine contributes to regulation of blood-sugar levels; growth and repair of muscle and bone tissue; growth hormone production; and wound healing. Leucine also prevents breakdown of muscle proteins after trauma or severe stress and may be beneficial for individuals with phenylketonuria. Leucine is available in many foods and deficiency is rare. (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Leucinodes  NALT 29808
UN AgroVoc c_4293

Leuciscus  NALT 31268
UN AgroVoc c_32170
Dbpedia Leuciscus

Leucocytozoon  NALT 27426
UN AgroVoc c_4294

Leucoptera  NALT 23571
UN AgroVoc c_4296
Library of Congress sh85076278

Leucostoma  NALT 33078
UN AgroVoc c_36445

Leucostoma cinctum  NALT 31514
UN AgroVoc c_27417
Leucostoma persoonii  NALT 31516
   UN AgroVoc c_27420

leukocytes  NALT 18082
   UN AgroVoc c_4298

Leuresthes  NALT 13587
   UN AgroVoc c_4300

Levamisole  NALT 9924
   UN AgroVoc c_36153
   The hydrochloride salt of the synthetic imidazothiazole derivative levamisole with anthelminthic and immuno-modulating activities. In immunosuppressed states, levamisole may restore immune function by: 1) stimulating antibody formation, 2) stimulating T-cell activation and proliferation, 3) potentiating monocyte and macrophage phagocytosis and chemotaxis and 4) increasing neutrophil mobility, adherence, and chemotaxis. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Liatris  NALT 13341
   UN AgroVoc c_16258

Libocedrus  NALT 13977
   UN AgroVoc c_34623
   Dbpedia Libocedrus

Libocedrus decurrens  NALT 21353
   UN AgroVoc c_34626

lidocaine  NALT 8954
   UN AgroVoc c_37244
   A synthetic aminoethylamide with local anesthetic and antiarrhythmic properties. Lidocaine stabilizes the neuronal membrane by binding to and inhibiting voltage-gated sodium channels, thereby inhibiting the ionic fluxes required for the initiation and conduction of impulses and effecting local anesthesia. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Ligaments  NALT 28571
   UN AgroVoc c_4319
Electromagnetic radiation that produces a visual sensation. (source: NALT)

Of comparatively little physical weight or density. Source: NCI thesaurus link
The study of the physical, chemical, hydrological, and biological aspects of fresh water bodies. (source: NALT)

**Limulus polyphemus**  NALT 29781
UN AgroVoc c_49353

**Linalool**  NALT 6153
UN AgroVoc c_36459

**Lincomycin**  NALT 10202
UN AgroVoc c_36154

An antibiotic produced by Streptomyces lincolnensis var. lincolnensis. It has been used in the treatment of staphylococcal, streptococcal, and Bacteroides fragilis infections. (source: NALT)

A lincosamide antibiotic derived from bacteria Streptomyces lincolnensis with activity against gram positive and anaerobic bacteria. Lincomycin binds to the 50S subunit of the bacterial ribosome resulting in the inhibition of protein synthesis and thereby produces bactericidal effects in susceptible organisms. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Lindane**  NALT 2096
UN AgroVoc c_31402
Library of Congress sh94007703

The gamma-isomer of benzene hexachloride, a colorless to white colored, synthetic, crystalline solid with a slight musty odor that emits toxic fumes of hydrochloric acid and other chlorinated compounds when heated to decomposition. Lindane is used as an insecticide for hardwood logs, lumber, and crops. Lindane also has topical pediculicide and scabicide activities probably due to its neurotoxic effects. Inhalation exposure to this substance causes severe irritation of the nose and throat, causes anemia, and affects the liver, nervous, cardiovascular, and immune system. Lindane is reasonably anticipated to be a human carcinogen. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Linepithema humile**  NALT 12084
UN AgroVoc c_37388

**Linoleic acid**  NALT 28555
UN AgroVoc c_4352

A polyunsaturated essential fatty acid found mostly in plant oils. It is used in the biosynthesis of prostaglandins and cell membranes. Source: NCI thesaurus link

Reference: FDA UNII link
linseed oil  NALT 34737
UN AgroVoc c_4353
Library of Congress sh85077257
The oil extracted from the seeds of Linum usitatissimum. Linseed oil is used as a nutritional supplement and as a polymerizing resin. Source: NCI thesaurus link
Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link
Look-up using CAS number link

Linyphiidae  NALT 11764
UN AgroVoc c_30876

Lipaphis  NALT 10743
UN AgroVoc c_4359

Lipid metabolism  NALT 17396
UN AgroVoc c_4361
Lipid Metabolism involves anabolic and catabolic biochemical changes to the hydrophobic class of biochemcials within a cell as materials needed for important life processes. Source: NCI thesaurus link

Lipid peroxidation  NALT 10490
UN AgroVoc c_34043
Peroxidase catalyzed oxidation of lipids using hydrogen peroxide as an electron acceptor. (source: NALT)
The degradation of lipids caused by an oxidative attack from free radicals. Source: NCI thesaurus link

Lipids  NALT 3990
UN AgroVoc c_4362

Lipogenesis  NALT 4222
UN AgroVoc c_4363

Lipoic acid  NALT 1171
UN AgroVoc c_4364

Lipoma  NALT 708
UN AgroVoc c_4366
A benign, usually painless, well-circumscribed lipomatous tumor composed of adipose tissue. Source: NCI thesaurus link
Lipoprotein lipase  NALT 22296
  UN AgroVoc c_29514
  Lipoprotein lipase (475 aa, ~53 kDa) is encoded by the human LPL gene. This protein is involved in the metabolism of triglycerides. Source: NCI thesaurus link

lipoproteins  NALT 11224
  UN AgroVoc c_4367

Lipooxygenase  NALT 22606
  UN AgroVoc c_12199

Liqueurs  NALT 34101
  UN AgroVoc c_4369

Liquid manures  NALT 9310
  UN AgroVoc c_4373

Liquid smoke  NALT 12589
  UN AgroVoc c_28385

Liquids  NALT 191
  UN AgroVoc c_12200

Liriomyza  NALT 5617
  UN AgroVoc c_4380

Lissorhoptrus  NALT 30780
  UN AgroVoc c_4381

Listeria  NALT 15042
  UN AgroVoc c_4382
  A genus of gram-positive, rod-shaped bacteria in the phylum Firmicutes. Source: NCI thesaurus link

Listeria monocytogenes  NALT 15309
  UN AgroVoc c_26553
  A species of facultatively anaerobic, Gram positive, rod shaped bacteria in the phylum Firmicutes. This species is motile by up to four peritrichous flagella, catalase positive, hemolytic, produces acid from glucose, trehalose, levulose and salacin, indole negative and does not reduce nitrate. L. monocytogenes is a food borne pathogen, being the causative agent of listeriosis in humans and animals. Source: NCI thesaurus link

Listeriosis  NALT 15166
  UN AgroVoc c_24119
  An infection with bacteria of the genus Listeria, especially L. monocytogenes. (source: NALT)
  A bacterial infection caused by Listeria monocytogenes. It occurs in newborns, elderly, and immunocompromised patients. The bacteria are transmitted through ingestion of contaminated food. Clinical manifestations include fever, muscle pain, respiratory distress, nausea, diarrhea, neck stiffness, irritability, seizures, and lethargy. Source: NCI thesaurus link

Listronotus  NALT 30781
  UN AgroVoc c_4383
Lithium  NALT 6404
UN AgroVoc c_4386
An element with atomic symbol Li, atomic number 3, and atomic weight 6.941. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Lithodidae  NALT 31885
UN AgroVoc c_47014

Lithological soil types  NALT 6754
UN AgroVoc c_4387

Lithospermum  NALT 18608
UN AgroVoc c_24657

litter size  NALT 9474
UN AgroVoc c_24195

Litter weight  NALT 9475
UN AgroVoc c_37246

Live mulches  NALT 28618
UN AgroVoc c_4394
Typically, plants that grow close to the ground and are sown or planted as an understory to the main crop. Live mulches protect the soil from erosion and minimally compete with the growth of the main crop. (source: NALT)

Live vaccines  NALT 13770
UN AgroVoc c_24554
Live vaccines prepared from microorganisms which have undergone physical adaptation (e.g., by radiation or temperature conditioning) or serial passage in laboratory animal hosts or infected tissue/cell cultures, in order to produce avirulent mutant strains capable of inducing protective immunity. (source: NALT)

Liver  NALT 9344
UN AgroVoc c_4395
Use for the organ of animals; For food from the livers of animals USE livers as food. (source: NALT)
A triangular-shaped organ located under the diaphragm in the right hypochondrium. It is the largest internal organ of the body, weighting up to 2 kg. Metabolism and bile secretion are its main functions. It is composed of cells which have the ability to regenerate. Source: NCI thesaurus link

Liver cirrhosis  NALT 26370
UN AgroVoc c_16771
Liver disease in which the normal microcirculation, the gross vascular anatomy, and the hepatic architecture have been variably destroyed and altered with fibrous septa surrounding regenerated or regenerating parenchymal nodules. (source: NALT)
Liver diseases  NALT 341
  UN AgroVoc c_4396
Livestock  NALT 20308
  UN AgroVoc c_4397
  Includes poultry. (source: NALT)
livestock production  NALT 9436
  UN AgroVoc c_331557
Lixus  NALT 30782
  UN AgroVoc c_4402
  Library of Congress sh85077828
Llamas  NALT 7157
  UN AgroVoc c_4405
Lobelia  NALT 21586
  UN AgroVoc c_12219
Lobsters  NALT 11496
  UN AgroVoc c_4411
  Library of Congress sh85077905
Locust bean gum  NALT 22591
  UN AgroVoc c_35357
Locusta  NALT 3030
  UN AgroVoc c_4414
Locustana  NALT 3031
  UN AgroVoc c_4415
Locusts  NALT 3044
  UN AgroVoc c_31924
  Pest insects highly destructive to plants, typically belonging to the family Acrididae. Species migrate in dense plagues. (source: NALT)
Lodging resistance  NALT 141
  UN AgroVoc c_34308
Loganiaceae  NALT 9978
  UN AgroVoc c_26233
Loins  NALT 15057
  UN AgroVoc c_4421
Loliginidae  NALT 23764
  UN AgroVoc c_48672
Lolium multiflorum  NALT 9721
   UN AgroVoc c_4424
Lolium temulentum  NALT 31746
   UN AgroVoc c_36594
Lonchaeidae  NALT 33916
   UN AgroVoc c_30561
longans  NALT 33669
   UN AgroVoc c_331528
Longevity  NALT 123
   UN AgroVoc c_4428
Longitarsus  NALT 26064
   UN AgroVoc c_30035
Lonicera  NALT 22041
   UN AgroVoc c_12240
Loose housing  NALT 9252
   UN AgroVoc c_12241
Loranthaceae  NALT 8209
   UN AgroVoc c_4435
Lota lota  NALT 20434
   UN AgroVoc c_41477
Lotus corniculatus  NALT 17599
   UN AgroVoc c_4443
Lotus uliginosus  NALT 17097
   UN AgroVoc c_4446
Low fat foods  NALT 417
   UN AgroVoc c_34044
Loxosceles reclusa  NALT 20085
   UN AgroVoc c_30879
Loxostege  NALT 29810
   UN AgroVoc c_4455
Loxostege sticticalis  NALT 16356
   UN AgroVoc c_30326
Lubricants  NALT 238
   UN AgroVoc c_25737
Lucilia  NALT 21287
   UN AgroVoc c_12265
Luffa NALT 30567
  UN AgroVoc c_4457

Luffa aegyptica NALT 30557
  UN AgroVoc c_4459

Lumbricidae NALT 6691
  UN AgroVoc c_2441

Lumbricus terrestris NALT 28185
  UN AgroVoc c_30869

Luminescence NALT 24710
  UN AgroVoc c_12270
  The emission of light that does not involve the release of heat. Source: NCI thesaurus link

Lumpy skin disease NALT 23110
  UN AgroVoc c_16775

Lungs NALT 9345
  UN AgroVoc c_4462

Lupus erythematosus NALT 14011
  UN AgroVoc c_36134
  An autoimmune, connective tissue chronic inflammatory disorder affecting the skin, joints, kidneys, lungs, heart, and the peripheral blood cells. It is more commonly seen in women than men. Variants include discoid and systemic lupus erythematosus. Source: NCI thesaurus link

Luteolysis NALT 9477
  UN AgroVoc c_36781
  Degradation of corpus luteum. In the absence of pregnancy and diminishing trophic hormones, the corpus luteum undergoes luteolysis which is characterized by the involution and cessation of its endocrine function. (source: NALT)

Lyases NALT 22240
  UN AgroVoc c_4473
  Library of Congress sh85079067

Lycopene NALT 22609
  UN AgroVoc c_28451
  A linear, unsaturated hydrocarbon carotenoid, the major red pigment in fruits such as tomatoes, pink grapefruit, apricots, red oranges, watermelon, rosehips, and guava. As a class, carotenoids are pigment compounds found in photosynthetic organisms (plants, algae, and some types of fungus), and are chemically characterized by a large polyene chain containing 35-40 carbon atoms; some carotenoid polyene chains are terminated by two 6-carbon rings. In animals, carotenoids such as lycopene may possess antioxidant properties which may retard aging and many degenerative diseases. As an essential nutrient, lycopene is required in the animal diet. (NCI04) Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link

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Lycopodiopsida  NALT 868
  UN AgroVoc c_331506

Lycosidae  NALT 11765
  UN AgroVoc c_30880

Lyctidae  NALT 27832
  UN AgroVoc c_30113

Lygaeidae  NALT 20841
  UN AgroVoc c_30658

Lymantriidae  NALT 31760
  UN AgroVoc c_30230

Lymexylidae  NALT 27833
  UN AgroVoc c_30115

Lymph  NALT 18343
  UN AgroVoc c_4481

A clear, transparent, sometimes faintly yellow and slightly opalescent fluid that is collected from the tissues throughout the body, flows in the lymphatic vessels (through the lymph nodes), and is eventually added to the venous blood circulation. Lymph consists of a clear liquid portion, varying numbers of white blood cells (chiefly lymphocytes), and a few red blood cells. Source: NCI thesaurus link

Lymph flow  NALT 26362
  UN AgroVoc c_27935

Lymphadenitis  NALT 22795
  UN AgroVoc c_12288

Inflammation of the lymph nodes. (source: NALT)

Inflammation of one or more lymph nodes. This may be secondary to an infectious process, but can be caused by malignant processes as well. Source: NCI thesaurus link

Lymphatic diseases  NALT 342
  UN AgroVoc c_4482

Diseases of lymph; lymph nodes; or lymphatic vessels. (source: NALT)

Lymphatic system  NALT 20541
  UN AgroVoc c_4483

The anatomic system that includes the lymph nodes, lymphoid tissues in various organs (spleen, thymus, tonsils, gastrointestinal tract), and lymphatic vessels. It is part of the immune system that offers protection against infections. Source: NCI thesaurus link

lymphocyte proliferation  NALT 23448
  UN AgroVoc c_29651
Morphologic alteration of small B lymphocytes or T lymphocytes in culture into large blast-like cells able to synthesize DNA and RNA and to divide mitotically. It is induced by interleukins, mitogens such as phytohemagglutinins, and by specific antigens. It may also occur in vivo, as in graft rejection. (source: NALT)

**lymphocytes** NALT 14420
UN AgroVoc c_4484

**Lymphocytic choriomeningitis virus** NALT 12050
UN AgroVoc c_12291
A species of single-stranded, negative-sense RNA viruses in the genus arenavirus and family arenaviridae. It is spread by rodents and causes meningitis and encephalitis. Source: NCI thesaurus link

**lymphokines** NALT 31444
UN AgroVoc c_35080
Soluble protein factors generated by activated lymphocytes that affect other cells, primarily those involved in cellular immunity. (source: NALT)

**Lymphoma** NALT 709
UN AgroVoc c_4485
A malignant (clonal) proliferation of B- lymphocytes or T- lymphocytes which involves the lymph nodes, bone marrow and/or extranodal sites. This category includes Non-Hodgkin lymphomas and Hodgkin lymphomas. Source: NCI thesaurus link

**Lyonetiidae** NALT 20243
UN AgroVoc c_30235

**Lyophyllum** NALT 4997
UN AgroVoc c_31711

**Lysine** NALT 7800
UN AgroVoc c_4487
One of nine essential amino acids in humans required for growth and tissue repair, Lysine is supplied by many foods, especially red meats, fish, and dairy products. Lysine seems to be active against herpes simplex viruses and present in many forms of diet supplements. The mechanism underlying this effect is based on the viral need for amino acid arginine; lysine competes with arginine for absorption and entry into cells. Lysine inhibits HSV growth by knocking out arginine. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Lysiphlebus** NALT 10775
UN AgroVoc c_29840

**Lysiphlebus testaceipes** NALT 10790
UN AgroVoc c_29841
**Lysophospholipases**  NALT 22297

UN AgroVoc c_50133

**Lysozyme**  NALT 35453

UN AgroVoc c_4488

**Lyssavirus**  NALT 13949

UN AgroVoc c_4489

A genus of enveloped, bullet or cylindrical shaped viruses in the family Rhabdoviridae. The genome is composed of a linear single-strand of negative sense RNA. Lyssavirus species 1 can be carried by any warm-blooded mammal while species 2-7 have specific hosts. Species in the genus Lyssavirus cause Rabies in humans. Source: NCI thesaurus link

**Lythraceae**  NALT 7903

UN AgroVoc c_15508

Dbpedia Lythraceae

**Macaca**  NALT 23988

UN AgroVoc c_35205

**Macrocentrus**  NALT 19148

UN AgroVoc c_29842

**Macrolepiota**  NALT 4998

UN AgroVoc c_31712

**Macrophomina**  NALT 27658

UN AgroVoc c_23944

**Macropodidae**  NALT 16918

UN AgroVoc c_331495

Dbpedia Macropodidae

**Macroposthonia**  NALT 30015

UN AgroVoc c_31015

** Macrosiphum**  NALT 10745

UN AgroVoc c_4503

**Macrosteles**  NALT 26209

UN AgroVoc c_4504

**Macrosteles quadrilineatus**  NALT 13224

UN AgroVoc c_37392

**Macrotyloma uniflorum**  NALT 34318

UN AgroVoc c_4508

**Mactridae**  NALT 17700

UN AgroVoc c_48209
Madhuca longifolia  NALT 16048
  UN AgroVoc c_4512

Madia  NALT 13345
  UN AgroVoc c_33760

Madurella  NALT 32813
  UN AgroVoc c_31581

Magicicada  NALT 26175
  UN AgroVoc c_12324
  Dbpedia Magicicada
  Library of Congress sh95003111

Magnaporthe grisea  NALT 17905
  UN AgroVoc c_37090

Magnesium  NALT 6422
  UN AgroVoc c_4517

  An alkaline earth metal, Magnesium is important for many biochemical functions and reactions; for bone and
  muscle function, protein and fatty acid formation, activation of B vitamins, blood clotting, insulin secretion,
  and ATP formation. More than 300 enzymes require magnesium for catalytic action. The adult daily require-
  ment is about 300 mg/day. Magnesium is found in many green plants, vegetables, and seeds; chlorophyll is a
  magnesium-centered porphyrin compound. Magnesium salts are used for magnesium deficiency supplemen-
  tation. (NCI04) Source: NCI thesaurus link

Magnesium chloride  NALT 25327
  UN AgroVoc c_24047

  Magnesium Chloride was used as a laxative. An alkaline earth metal, magnesium is important for many bio-
  chemical functions and reactions; for bone and muscle function, protein and fatty acid formation, activation of B
  vitamins, blood clotting, insulin secretion, and ATP formation. More than 300 enzymes require magnesium for
  catalytic action. The adult daily requirement is about 300 mg/day. Magnesium is found in many green plants,
  vegetables, and seeds; chlorophyll is a magnesium-centered porphyrin compound. Magnesium salts are used for
  magnesium deficiency supplementation. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

Magnesium fertilizers  NALT 34339
  UN AgroVoc c_27904

Magnolia  NALT 20291
  UN AgroVoc c_4519

Magnoliales  NALT 9686
  UN AgroVoc c_33762
One of a group of non-enzymatic reactions in which aldehydes, ketones, or reducing sugars react with amino acids, peptides, or proteins. (source: NALT)

Malabsorption NALT 23351
UN AgroVoc c_12341
Inadequate absorption of nutrients in the small intestine. Source: NCI thesaurus link

Malaria NALT 14167
UN AgroVoc c_34312
A protozoan infection caused by the genus Plasmodium. There are four species of Plasmodium that can infect humans: Plasmodium falciparum, vivax, ovale, and malariae. It is transmitted to humans by infected mosquitoes. Signs and symptoms include paroxysmal high fever, sweating, chills, and anemia. Source: NCI thesaurus link

Malate dehydrogenase NALT 6127
UN AgroVoc c_29515

male genital diseases NALT 30435
UN AgroVoc c_4535

males NALT 18300
UN AgroVoc c_15995

Malic acid NALT 20719
UN AgroVoc c_24421

Malic enzyme NALT 6129
UN AgroVoc c_37249
Malnutrition  NALT 20759  
  UN AgroVoc c_4543  
  A condition caused by inadequate intake or inadequate digestion of nutrients. It may result from eating an inadequate or unbalanced diet, digestive problems, absorption problems, or other medical conditions. (source: NALT)  
  Inadequate nutrition resulting from poor diet, malabsorption, or abnormal nutrient distribution. Source: NCI thesaurus link

malondialdehyde  NALT 6185  
  UN AgroVoc c_92377  
  An organic compound with the formula CH2(CHO)2, and a byproduct of lipid metabolism in the body. Malondialdehyde, a highly reactive compound, is one of the many reactive electrophile species that cause toxic stress in cells and form covalent protein adducts, called advanced lipoxidation end products (ALE). This compound also forms mutagenic DNA adducts when it reacts with deoxyadenosine and deoxyguanosine in DNA. Malondialdehyde is also found in many foods and is present in high levels in rancid foods. Source: NCI thesaurus link  
  Reference: FDA UNII link  
  Look-up using Google link  
  Rotate the 3-D representation  
  Look-up synonyms  
  Look-up using CAS number link

Malpighiaceae  NALT 15757  
  UN AgroVoc c_4546

Malting  NALT 19829  
  UN AgroVoc c_12355

Malting barley  NALT 15865  
  UN AgroVoc c_25485  
  Use for barley used for malting; for barley as an animal feed USE feed barley; for barley in general USE barley. (source: NALT)

Maltitol  NALT 6202  
  UN AgroVoc c_4549

Maltodextrins  NALT 32954  
  UN AgroVoc c_27570
Maltose  NALT 33972  
  UN AgroVoc c_4550

**Malva neglecta**  NALT 28203  
  UN AgroVoc c_33765

**Malvaceae**  NALT 1632  
  UN AgroVoc c_4556  
  Dbpedia Malvaceae

**Malvales**  NALT 18456  
  UN AgroVoc c_4557

**Mamestra**  NALT 15799  
  UN AgroVoc c_4558

**Mamestra brassicae**  NALT 15801  
  UN AgroVoc c_30259

**Mamestra configurata**  NALT 16757  
  UN AgroVoc c_30260

**Mammalia**  NALT 541  
  UN AgroVoc c_12358

  Includes taxonomic classification of Mammalia; For common types SEE mammals. (source: NALT)

**Mammalogy**  NALT 1148  
  UN AgroVoc c_4559

**mammals**  NALT 558  
  UN AgroVoc c_4560

  Includes common types of mammals; For taxonomic classification SEE Mammalia. (source: NALT)

**Mammary gland diseases**  NALT 343  
  UN AgroVoc c_4561

**Mammary glands**  NALT 2896  
  UN AgroVoc c_4562

**Mammea**  NALT 27310  
  UN AgroVoc c_4563

**Mancozeb**  NALT 22165  
  UN AgroVoc c_31408

**Mandarins**  NALT 26512  
  UN AgroVoc c_4568

**Maneb**  NALT 22166  
  UN AgroVoc c_31407
Manganese  NALT 33435
     UN AgroVoc c_4570
     An element with atomic symbol Mn, atomic number 25, and atomic weight 54.94. Source: NCI thesaurus link
Mangifera  NALT 8322
     UN AgroVoc c_4574
     Dbpedia Mangifera
Mangrove swamps  NALT 14207
     UN AgroVoc c_4577
Manihot esculenta  NALT 22821
     UN AgroVoc c_4579
Manihot glaziovii  NALT 23234
     UN AgroVoc c_4580
Manilkara zapota  NALT 2627
     UN AgroVoc c_4582
Manioc  NALT 22819
     UN AgroVoc c_12376
Mannose  NALT 6221
     UN AgroVoc c_4589
Manson (diptera)  NALT 30620
     UN AgroVoc c_30526
Mantodea  NALT 33281
     UN AgroVoc c_4591
Maple syrup  NALT 2267
     UN AgroVoc c_16498
Maranta arundinacea  NALT 12361
     UN AgroVoc c_4595
Marantaceae  NALT 21065
     UN AgroVoc c_4596
Marasmius  NALT 29811
     UN AgroVoc c_26561
Marasmiellus  NALT 4999
     UN AgroVoc c_26562
Margarine  NALT 28877
     UN AgroVoc c_4601
Margarodidae  NALT 27480
     UN AgroVoc c_30823

1.7. Glossary
Marssonina  NALT 27659  
UN AgroVoc c_23946

marsupials  NALT 550  
UN AgroVoc c_4633

Maruca  NALT 29812  
UN AgroVoc c_4636

Mast cells  NALT 23474  
UN AgroVoc c_29588

Mastadenovirus  NALT 4178  
UN AgroVoc c_12422

Mastication  NALT 24793  
UN AgroVoc c_12424

Library of Congress sh85081999

The process by which food is torn or crushed by the teeth. Source: NCI thesaurus link

Mastigomycotina  NALT 26163  
UN AgroVoc c_31635

The subdivision Mastigomycotina is not accepted in the 2007 classification by Hibbett, D.S., et al., 2007. Mycological Research 111: 509-547. The term is retained for the purposes of retrieval of historical records on this subdivision. (source: NALT)

Maternal behaviour  NALT 16452  
UN AgroVoc c_12428

Maternal immunity  NALT 28032  
UN AgroVoc c_12430

Resistance to a disease-causing agent induced by the introduction of maternal immunity into the fetus by transplacental transfer or into the neonate through colostrum and milk. (source: NALT)

Mating  NALT 9463  
UN AgroVoc c_12431

The act of pairing individuals for sexual reproduction. Source: NCI thesaurus link

Mating disruption  NALT 34069  
UN AgroVoc c_24934

mating systems  NALT 13191  
UN AgroVoc c_24923

Modes of gene transmission from one generation to the next by sexual reproduction. (source: NALT)

Matricaria  NALT 13346  
UN AgroVoc c_4652

Dbpedia Matricaria

Library of Congress sh85082208
Matthiola NALT 19591
  UN AgroVoc c_16261
  Dbpedia Matthiola
Mauritia NALT 12017
  UN AgroVoc c_4661
Mayetiola NALT 23248
  UN AgroVoc c_4664
Meat NALT 16290
  UN AgroVoc c_4669
Meat byproducts NALT 9046
  UN AgroVoc c_4671
Meat cuts NALT 25642
  UN AgroVoc c_4672
meat inspection NALT 9892
  UN AgroVoc c_4676
Meat production NALT 9437
  UN AgroVoc c_4679
Meat products NALT 9572
  UN AgroVoc c_4680
Meat quality NALT 16311
  UN AgroVoc c_12459
Meat substitutes NALT 473
  UN AgroVoc c_4681

Foods used in place of meats as the major protein source in a meal; for plant protein made to resemble meat products in texture, flavor, color and form USE meat analogs. (source: NALT)

Mebendazole NALT 9925
  UN AgroVoc c_12463

A synthetic benzimidazole derivate and anthelmintic agent. Mebendazole interferes with the reproduction and survival of helminths by inhibiting the formation of their cytoplasmic microtubules, thereby selectively and irreversibly blocking glucose uptake. This results in a depletion of glycogen stores and leads to reduced formation of ATP required for survival and reproduction of the helminth. This eventually causes the helminths death.
Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

1.7. Glossary
Mechanical damage  NALT 1141
  UN AgroVoc c_16138
Mechanics  NALT 2134
  UN AgroVoc c_35220
  A branch of physics that focuses on motion and on the reaction of physical systems to internal and external forces. (source: NALT)
Medetomidine  NALT 8455
  UN AgroVoc c_37252
Medicago lupulina  NALT 17780
  UN AgroVoc c_4691
Medicago orbicularis  NALT 17853
  UN AgroVoc c_4692
Medicago sativa  NALT 6299
  UN AgroVoc c_4693
Medicago truncatula  NALT 15896
  UN AgroVoc c_26570
medicinal properties  NALT 8450
  UN AgroVoc c_25197
Mediterranean climate  NALT 26893
  UN AgroVoc c_4697
  Climate typical of, but not exclusive to, the Mediterranean region with cool, moist winters and warm, dry summers. (source: NALT)
Medulla oblongata  NALT 19225
  UN AgroVoc c_12476
  The lower portion of the brainstem located between the pons and brainstem. This structure contains several descending and ascending tracts, lower cranial nerve nuclei, a significant proportion of the reticular system of the brainstem and other structures. Source: NCI thesaurus link
Megachile  NALT 12141
  UN AgroVoc c_29821
Megachile rotundata  NALT 6307
  UN AgroVoc c_29822
  Dbpedia Megachile rotundata
Megaloptera  NALT 29342
  UN AgroVoc c_331379
Megaptera  NALT 15581
  UN AgroVoc c_4702
Meiosis NALT 23390
UN AgroVoc c_4706

A type of cell nucleus division, occurring during maturation of the germ cells. Two successive cell nucleus divisions following a single chromosome duplication (S phase) result in daughter cells with half the number of chromosomes as the parent cells. (source: NALT)

A special form of cell division in which each daughter cell receives half the amount of DNA as the parent cell. Meiosis occurs during formation of egg and sperm cells in mammals. Source: NCI thesaurus link

Melanogromyza NALT 5618
UN AgroVoc c_4710

A malignant, usually aggressive tumor composed of atypical, neoplastic melanocytes. Most often, melanomas arise in the skin (cutaneous melanomas) and include the following histologic subtypes: superficial spreading melanoma, nodular melanoma, acral lentiginous melanoma, and lentigo maligna melanoma. Cutaneous melanomas may arise from acquired or congenital melanocytic or dysplastic nevi. Melanomas may also arise in other anatomic sites including the gastrointestinal system, eye, urinary tract, and reproductive system. Melanomas frequently metastasize to lymph nodes, liver, lungs, and brain. Source: NCI thesaurus link

Melanoplus NALT 3032
UN AgroVoc c_4714

Melastomataceae NALT 26865
UN AgroVoc c_26248

Meliaceae NALT 5186
UN AgroVoc c_4716
Dbpedia Meliaceae

Melianthaceae NALT 16753
UN AgroVoc c_26289

Melibiose NALT 33973
UN AgroVoc c_4717

A disaccharide consisting of one galactose and one glucose moiety in an alpha (1-6) glycosidic linkage. (source: NALT)

Melipona NALT 11051
UN AgroVoc c_26571
Melissa officinalis  NALT 28162  
UN AgroVoc c_25464

Meloidae  NALT 18055  
UN AgroVoc c_26572

Melons  NALT 30521  
UN AgroVoc c_12487

Menidia  NALT 13588  
UN AgroVoc c_4737

Meninges  NALT 23678  
UN AgroVoc c_4738

Any one of three membranes that surround the brain and spinal cord. Source: NCI thesaurus link

Meningitis  NALT 19232  
UN AgroVoc c_12495

Inflammation of the coverings of the brain and/or spinal cord. Infections (viral, bacterial, and fungal) are the most common causes of this condition, but other inflammatory conditions may produce this syndrome. (source: NALT)

A disorder characterized by acute inflammation of the meninges of the brain and/or spinal cord. Source: NCI thesaurus link

Menispermaceae  NALT 1854  
UN AgroVoc c_26270

Mental health  NALT 1759  
UN AgroVoc c_16571

The overall state of an individual’s psychologic constitution. Source: NCI thesaurus link

Mepiquat  NALT 1158  
UN AgroVoc c_31413

Mercuric chloride  NALT 25328  
UN AgroVoc c_16191

Library of Congress sh95007672

Meristems  NALT 11026  
UN AgroVoc c_4754

Mermithidae  NALT 4953  
UN AgroVoc c_31075

Merostomata  NALT 24577  
UN AgroVoc c_12507

Mesembryanthemum  NALT 5899  
UN AgroVoc c_12508
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<tr>
<th>Term</th>
<th>NALT Code</th>
<th>UN AgroVoc Code</th>
<th>Description</th>
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<td>Mesocricetus</td>
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<td>Mesostigmata</td>
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<td>Metabolic detoxification</td>
<td>NALT 10484</td>
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<td>Metabolism</td>
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<td>Metabolites</td>
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<td>Metallic elements</td>
<td>NALT 6401</td>
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<tr>
<td>Metalloproteins</td>
<td>NALT 28559</td>
<td>UN AgroVoc c_4773</td>
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<tr>
<td>Metals</td>
<td>NALT 6739</td>
<td>UN AgroVoc c_29036</td>
<td>Electropositive chemical elements characterised by ductility, malleability, luster, and conductance of heat and electricity. They can replace the hydrogen of an acid and form bases with hydroxyl radicals. Source: NCI thesaurus link</td>
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<tr>
<td>Metamasius</td>
<td>NALT 30784</td>
<td>UN AgroVoc c_30078</td>
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<tr>
<td>Metaplasia</td>
<td>NALT 760</td>
<td>UN AgroVoc c_36155</td>
<td>Transformation of a mature, normal cell or groups of mature cells to other forms of mature cells. The capacity for malignant transformation of metaplastic cells is a subject of controversy. Source: NCI thesaurus link</td>
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<tr>
<td>Metasequoia glyptostroboides</td>
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<td>Metastrongylidae</td>
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<td>Metazachlor</td>
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<td>Meteorus</td>
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</tbody>
</table>

1.7. Glossary
Methane  NALT 6475  
UN AgroVoc c_4784

Methanol  NALT 6154  
UN AgroVoc c_12521

Used as a solvent and as an intermediate in chemical synthesis. Component of deicing mixtures and preservatives. Toxic. Source: NCI thesaurus link

Reference: FDA UNII link 
Look-up using Google link 
Rotate the 3-D representation 
Look-up synonyms 
Look-up using CAS number link

Methionine  NALT 7801  
UN AgroVoc c_4787

One of nine essential amino acids in humans (provided by food), Methionine is required for growth and tissue repair. A sulphur-containing amino acid, methionine improves the tone and pliability of skin, hair, and strengthens nails. Involved in many detoxifying processes, sulphur provided by methionine protects cells from pollutants, slows cell aging, and is essential for absorption and bio-availability of selenium and zinc. Methionine chelates heavy metals, such as lead and mercury, aiding their excretion. It also acts as a lipotropic agent and prevents excess fat buildup in the liver. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link 
Look-up using Google link 
Rotate the 3-D representation 
Look-up synonyms 
Look-up using CAS number link

Methomyl  NALT 22167  
UN AgroVoc c_31420

Methotrexate  NALT 10468  
UN AgroVoc c_36156

An antimetabolite and antifolate agent with antineoplastic and immunosuppressant activities. Methotrexate binds to and inhibits the enzyme dihydrofolate reductase, resulting in inhibition of purine nucleotide and thymidylate synthesis and, subsequently, inhibition of DNA and RNA syntheses. Methotrexate also exhibits potent immunosuppressant activity although the mechanism(s) of actions is unclear. Source: NCI thesaurus link

Reference: FDA UNII link 
Look-up using Google link 
Rotate the 3-D representation 
Look-up synonyms 
Look-up using CAS number link

Methylation  NALT 24674  
UN AgroVoc c_24872
The covalent chemical or biochemical addition of a methyl group(s) to a compound. (NCI) Source: NCI thesaurus link

**Metolachlor**  NALT 25357
  UN AgroVoc c_31424

**Metopolophium**  NALT 10749
  UN AgroVoc c_4789

**Metopolophium dirhodum**  NALT 4017
  UN AgroVoc c_30780

**Metronidazole**  NALT 10510
  UN AgroVoc c_12530
  A synthetic nitroimidazole derivative with antiprotozoal and antibacterial activities. Although its mechanism of action is not fully elucidated, un-ionized metronidazole is readily taken up by obligate anaerobic organisms and is subsequently reduced by low-redox potential electron-transport proteins to an active, intermediate product. Reduced metronidazole causes DNA strand breaks, thereby inhibiting DNA synthesis and bacterial cell growth. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

**Metroxylon**  NALT 12018
  UN AgroVoc c_4791

**Mexacarbate**  NALT 22169
  UN AgroVoc c_31428

**Microascales**  NALT 12847
  UN AgroVoc c_31667

**microbial ecology**  NALT 17348
  UN AgroVoc c_24111

**Microbial insecticides**  NALT 15184
  UN AgroVoc c_27858

**Microbial pesticides**  NALT 17500
  UN AgroVoc c_24942
  Microbial pesticides consist of a microorganism (e.g., a bacterium, fungus, virus or protozoan) as the active ingredient. Microbial pesticides can control many different kinds of pests, although each separate active ingredient is relatively specific for its target pest(s). (source: NALT)

**Microbial proteins**  NALT 888
  UN AgroVoc c_12537
Microbiology  NALT 5841  
UN AgroVoc c_4800  
The science that deals with the study of microorganisms, including algae, archaea, bacteria, fungi, protozoa, and viruses. Source: NCI thesaurus link

Micrococcaceae  NALT 12462  
UN AgroVoc c_4803  
A taxonomic family of Gram positive, cocci shaped bacterium, which are found in the air and on the skin, in the phylum Actinobacteria that includes the genera Arthrobacter, Kocuria, and Micrococcus, among others. Source: NCI thesaurus link

Microctonus  NALT 19150  
UN AgroVoc c_29844

Microcyclus  NALT 34404  
UN AgroVoc c_24768

Microcystis  NALT 25901  
UN AgroVoc c_27230

Microgaster  NALT 19151  
UN AgroVoc c_29846

microorganisms  NALT 5881  
UN AgroVoc c_4807

Microplitis  NALT 19152  
UN AgroVoc c_37394

Micropropagation  NALT 30703  
UN AgroVoc c_24136

Micropterus  NALT 23703  
UN AgroVoc c_37036  
Library of Congress sh85084902

microtubules  NALT 31502  
UN AgroVoc c_36797  
Slender, cylindrical filaments found in the cytoskeleton of plant and animal cells. They are composed of the protein tubulin. (source: NALT)

Microtus  NALT 12708  
UN AgroVoc c_16325

Microwave cooking  NALT 28866  
UN AgroVoc c_26799  
Library of Congress sh85084956

Mikania  NALT 13348  
UN AgroVoc c_4823
Milbemycins  NALT 2097
   UN AgroVoc c_36515
   Family of macrolide antibiotics with insecticidal and acaricidal activity. milbemectin is a mixture of milbe-
   mycins A3 and A4; structure in first source; moxidectin (CL 301,423) is milbemycin B. (source: NALT)

Mildews  NALT 34451
   UN AgroVoc c_4825
   A common name for a fungus that leaves a thin white coating on the surface of plants and other materials where
   it grows. (source: NALT)

milk  NALT 631
   UN AgroVoc c_4826
   A body substance containing proteins, fats, lactose, and various vitamins and minerals produced by the mam-
   mary glands of mature female bovines. Source: NCI thesaurus link
   Reference: FDA UNII link
   Reference the ITIS link
   Reference the NIH NCBI link
   Look-up using CAS number link

Milk fat  NALT 9160
   UN AgroVoc c_4828
   Lipid component of animal milks. (source: NALT)

Milk production  NALT 9438
   UN AgroVoc c_4829

Milk protein  NALT 9453
   UN AgroVoc c_4831

Milk substitutes  NALT 474
   UN AgroVoc c_4832
   Foods that are used to replace cow’s milk in the human diet, made with nondairy ingredients. Use for products
   for human consumption; for feeding of young animals USE milk replacer. (source: NALT)

Milk yield  NALT 9414
   UN AgroVoc c_15998

milking  NALT 31645
   UN AgroVoc c_4835

Milking machines  NALT 31619
   UN AgroVoc c_4836

Millets  NALT 35617
   UN AgroVoc c_4838
   Library of Congress sh85085398
Mimosa pigra  NALT 17782
   UN AgroVoc c_35557
Mimosoideae  NALT 1583
   UN AgroVoc c_4846

   Mimosoideae holds the rank of subfamily under the family Fabaceae. (source: NALT)

Mindaridae  NALT 10794
   UN AgroVoc c_30794
Mine spoil  NALT 27359
   UN AgroVoc c_34313
Mineral content  NALT 24610
   UN AgroVoc c_4848
Mineral soils  NALT 24688
   UN AgroVoc c_4853
Mineral waters  NALT 18868
   UN AgroVoc c_12600

   Use for natural water supplies containing dissolved mineral salts; For water beverages, including beverages
   infused with mineral salts USE bottled water. (source: NALT)

Mineralization  NALT 17422
   UN AgroVoc c_15999
Mineralocorticoids  NALT 4347
   UN AgroVoc c_4854
Mineralogical soil types  NALT 6710
   UN AgroVoc c_4855
Mineralogy  NALT 30453
   UN AgroVoc c_4856
minerals  NALT 18621
   UN AgroVoc c_4857
Miridae  NALT 4089
   UN AgroVoc c_12607
Miscanthus sinensis  NALT 25127
   UN AgroVoc c_33383
Mitomycin  NALT 9926
   UN AgroVoc c_36520
mitosis  NALT 23393
   UN AgroVoc c_4870

   A type of cell nucleus division by means of which the two daughter nuclei normally receive identical comple-
   ments of the number of chromosomes of the somatic cells of the species. (source: NALT)
The usual process of somatic reproduction of cells consisting of a sequence of modifications of the nucleus that result in the formation of two daughter cells with exactly the same chromosome and DNA content as that of the original cell. It is the process by which the body grows and replaces cells and is divided into four phases. In Prophase, paired chromosomes form, nuclear membrane disappears, the achromatic spindle appears, and polar bodies form. In Metaphase, chromosomes are arranged in the equatorial plane of the central spindle to form the monaster and chromosomes separate into exactly similar halves. In Anaphase, the two groups of daughter chromosomes separate and move along the fibers of the central spindle, each toward one of the asters, forming the diaster. In Telophase, the daughter chromosomes resolve themselves into a reticulum, the daughter nuclei are formed, and the cytoplasm divides forming two complete daughter cells. Source: NCI thesaurus link

Mixed cropping  NALT 30133
UN AgroVoc c_4871

The growing of several crops simultaneously in the same field but not in rows. (source: NALT)

Mohair  NALT 8900
UN AgroVoc c_24404

Moinidae  NALT 19265
UN AgroVoc c_331264
Library of Congress sh87020459

Molasses  NALT 17769
UN AgroVoc c_4889

Mole drainage  NALT 34492
UN AgroVoc c_25350

Molecular biology  NALT 17413
UN AgroVoc c_4891
Library of Congress sh94000200

The study of biology at a molecular level. It chiefly concerns itself with understanding the interactions between the various systems of a cell, including the interrelationship of DNA, RNA and protein synthesis and learning how these interactions are regulated. The field overlaps with other areas of biology, particularly genetics and biochemistry. Source: NCI thesaurus link

molecular cloning  NALT 26948
UN AgroVoc c_27503

The insertion of recombinant DNA molecules from prokaryotic and/or eukaryotic sources into a replicating vehicle, such as a plasmid or virus vector, and the introduction of the resultant hybrid molecules into recipient cells without altering the viability of those cells. (source: NALT)

Molecular genetics  NALT 7772
UN AgroVoc c_27577
Library of Congress sh85086586

The study of the flow and regulation of genetic information between DNA, RNA, and protein molecules. Source: NCI thesaurus link

Molinate  NALT 22170
UN AgroVoc c_31429
Mollusca   NALT 53
          UN AgroVoc c_4898
          Includes taxonomic classification of Mollusca; For common types SEE molluscs. (source: NALT)
Molluscicides   NALT 825
          UN AgroVoc c_4897
          Pesticides that kill snails and slugs. (source: NALT)
Momordica   NALT 30570
          UN AgroVoc c_4902
          Dbpedia Momordica
Momordica charantia   NALT 17670
          UN AgroVoc c_4903
Monellia   NALT 10751
          UN AgroVoc c_27232
Monellia caryella   NALT 17871
          UN AgroVoc c_30781
Monelliopsis   NALT 10752
          UN AgroVoc c_27233
Monensin   NALT 10323
          UN AgroVoc c_15906
Moniezia   NALT 9805
          UN AgroVoc c_4910
Moniliophthora   NALT 10874
          UN AgroVoc c_31727
Monimiaceae   NALT 13594
          UN AgroVoc c_26273
monkeys   NALT 23238
          UN AgroVoc c_4912
monoamines   NALT 1476
          UN AgroVoc c_36158
Monocalcium phosphate   NALT 21126
          UN AgroVoc c_35362
Monochamus   NALT 23801
          UN AgroVoc c_16000
monoclonal antibodies   NALT 10220
          UN AgroVoc c_24051
Monodontidae  NALT 24146
  UN AgroVoc c_49000
Monodora  NALT 9699
  UN AgroVoc c_33770
Monogenea  NALT 22064
  UN AgroVoc c_32007
  Dbpedia Monogenea
Monographeilla nivalis  NALT 21379
  UN AgroVoc c_27235
monophenol monooxygenase  NALT 35269
  UN AgroVoc c_12643
Monopterus albus  NALT 12952
  UN AgroVoc c_42254
Monosaccharides  NALT 11647
  UN AgroVoc c_12644
Monosodium glutamate  NALT 25121
  UN AgroVoc c_12645
Monoterpenoids  NALT 6936
  UN AgroVoc c_32040
  Terpenoids having a C10 skeleton. (source: NALT)
Montmorillonites  NALT 26750
  UN AgroVoc c_16140
Moraceae  NALT 12638
  UN AgroVoc c_4932
Morantel  NALT 9927
  UN AgroVoc c_12653
Moraxella  NALT 33821
  UN AgroVoc c_4934
  A genus of Gram-negative bacteria in the Moraxellaceae family occurring as short rods, coccobacilli or diplococci. Source: NCI thesaurus link
Morbidity  NALT 34035
  UN AgroVoc c_4936
  Morbidity; the relative incidence of a particular disease in a population. Source: NCI thesaurus link
Morbillivirus  NALT 21864
  UN AgroVoc c_4937
  A genus of Paramyxovirinae which includes Measles Virus Source: NCI thesaurus link

1.7. Glossary
Morphine

The sulfate salt of morphine, an opiate alkaloid isolated from the plant Papaver somniferum and produced synthetically. Morphine binds to and activates specific opiate receptors (delta, mu and kappa), each of which are involved in controlling different brain functions. In the central nervous and gastrointestinal systems, this agent has widespread effects including analgesia, anxiolysis, euphoria, sedation, respiratory depression, and gastrointestinal system smooth muscle contraction. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Morphogenesis

The development of anatomical structures to create the form of a single- or multi-cell organism. Morphogenesis provides form changes of a part, parts, or the whole organism. (source: NALT)

The process of shape formation: the processes that are responsible for producing the complex shapes of adults from the simple ball of cells that derives from division of the fertilized egg. Source: NCI thesaurus link

Mortality

All deaths reported in a given population. (source: NALT)

The ratio of deaths in an area to the population of that area, expressed as deaths per 1000 per year. Source: NCI thesaurus link

Motivation

The psychological feature that arouses an organism to action toward a desired goal; the reason for the action; that which gives purpose and direction to behavior. Source: NCI thesaurus link

mountains

UN AgroVoc c_12676
Mouth  NALT 33560
  UN AgroVoc c_4960
  Library of Congress sh85087988

Movement disorders  NALT 35034
  UN AgroVoc c_4962

Mucorales  NALT 1826
  UN AgroVoc c_31668
  Library of Congress sh85088234

Mucuna  NALT 22658
  UN AgroVoc c_4968
  Library of Congress sh87020020

Mucus  NALT 18319
  UN AgroVoc c_4972
  The thick fluid secreted by the mucus glands in the aerodigestive tract and the vagina. Source: NCI thesaurus link

Mulches  NALT 15845
  UN AgroVoc c_4977

Mules  NALT 13178
  UN AgroVoc c_4979
  Library of Congress sh85088316
  The hybrid offspring of a jackass and a mare. (source: NALT)

Multiple cropping  NALT 30186
  UN AgroVoc c_4986
  Library of Congress sh85088364
  The growing of more than one crop consecutively in the same field in a single year. (source: NALT)

Mung beans  NALT 16192
  UN AgroVoc c_4988

Muraenidae  NALT 8924
  UN AgroVoc c_41165

Muridae  NALT 12704
  UN AgroVoc c_331512
  Taxonomic family which includes mice, rats, and gerbils. Source: NCI thesaurus link

Murraya koenigii  NALT 30859
  UN AgroVoc c_4991
Musa NALT 15716
  UN AgroVoc c_4993
Musa acuminata NALT 15717
  UN AgroVoc c_4994
Musa textilis NALT 1566
  UN AgroVoc c_4997
Muscidae NALT 13581
  UN AgroVoc c_5001
Muscle relaxants NALT 8801
  UN AgroVoc c_5002
Muscles NALT 19682
  UN AgroVoc c_5003
Muscular diseases NALT 28777
  UN AgroVoc c_5004
Muscular dystrophy NALT 35049
  UN AgroVoc c_16413
  A general term for a group of inherited disorders which are characterized by progressive degeneration of skeletal muscles without the involvement of the nervous system. (source: NALT)
  A group of inherited progressive muscle disorders characterized by muscle weakness and eventual death of the muscle tissues. Examples include Duchenne muscular dystrophy, Becker’s muscular dystrophy, Emery-Dreifuss muscular dystrophy, facioscapulohumeral muscular dystrophy, and limb-girdle muscular dystrophy. Source: NCI thesaurus link
Musculoskeletal diseases NALT 344
  UN AgroVoc c_32929
Musculoskeletal system NALT 8976
  UN AgroVoc c_5005
  The system of muscles, tendons, ligaments, bones, joints and associated tissues that move the body and maintain its form. Source: NCI thesaurus link
muskmelons NALT 21934
  UN AgroVoc c_12714
Mussels NALT 34520
  UN AgroVoc c_5010
mustard oil NALT 6758
  UN AgroVoc c_36137
  The vegetable oil pressed from seeds or the essential oil extracted from the seeds of Brassica nigra, Brassica juncea, or Brassica hirta. Mustard oil is used as a cooking oil, a source of omega-3 fatty acids, and in various medicinal preparations. Source: NCI thesaurus link
Reference: FDA UNII link
Mustela nigripes  NALT 17833
   UN AgroVoc c_37037

Mutagenesis  NALT 10457
   UN AgroVoc c_12725
   Process of generating genetic mutations. It may occur spontaneously or be induced by mutagens. (source: NALT)
   Production of genetic alterations by any technique, including chemicals, radiation, recombination, or other molecular biology methods. Source: NCI thesaurus link

Mutants  NALT 14079
   UN AgroVoc c_5013

mutation  NALT 7777
   UN AgroVoc c_5014
   Any detectable and heritable change in the genetic material that causes a change in the genotype and which is transmitted to daughter cells and to succeeding generations. (source: NALT)
   Any transmissible change in the genetic material of an organism, which can result from radiation, viral infection, transposition, treatment with mutagenic chemicals and errors during DNA replication or meiosis. As many of the simpler alterations to DNA may be repaired, such changes are only heritable once the change is fixed in the DNA by the process of replication. Mutations may be associated with genetic diversity or with pathologies including cancer. Source: NCI thesaurus link

Mycetophagidae  NALT 27837
   UN AgroVoc c_30116

Mycetophylidae  NALT 33917
   UN AgroVoc c_31231

Mycobacterium avium  NALT 14192
   UN AgroVoc c_12730
   A bacterium causing tuberculosis in domestic fowl and other birds. In pigs, it may cause localized and sometimes disseminated disease. The organism occurs occasionally in sheep and cattle. It should be distinguished from the M. avium complex, which infects primarily humans. (source: NALT)
   A species of aerobic, Gram positive, rod shaped bacteria assigned to the phylum Actinobacteria. This species is acid fast, catalase positive, niacin, peroxidase, nitrate reductase, and urease negative, and may be susceptible to nitrobenzoate, ethambutol, pyrazinamide, rifampin, and streptomycin. M. avium is found in soil and dust particles and can cause infection when inhaled or ingested, especially causing disseminated infection in immunocompromised patients. Source: NCI thesaurus link

Mycobacterium tuberculosis  NALT 15007
   UN AgroVoc c_18213
   An obligate anaerobic, weakly Gram-positive species of mycobacterium that is the cause of most cases of tuberculosis. Source: NCI thesaurus link

Mycology  NALT 17477
   UN AgroVoc c_5019

Mycophila  NALT 23249
   UN AgroVoc c_24771
Mycoplasma  NALT 13419  
UN AgroVoc c_5020  
A genus of nonmotile facultatively anaerobic bacteria that lack a true cell wall, are gram-negative, and require sterol for growth. Source: NCI thesaurus link

Mycoplasma agalactiae  NALT 10582  
UN AgroVoc c_37782

Mycoplasma bovigenitalium  NALT 13424  
UN AgroVoc c_27240

Mycoplasma hyorhinis  NALT 13434  
UN AgroVoc c_27246

Mycoplasma mycoides  NALT 13439  
UN AgroVoc c_23951

Mycoplasma pulmonis  NALT 13445  
UN AgroVoc c_27250

Mycoplasmoses  NALT 15171  
UN AgroVoc c_5022  
Infections with species of the genus Mycoplasma. (source: NALT)

Mycoses  NALT 13049  
UN AgroVoc c_5024

Mycosphaerella  NALT 34405  
UN AgroVoc c_5025

Mycosphaerella fijiensis  NALT 17812  
UN AgroVoc c_27259

Mycotoxicoses  NALT 4801  
UN AgroVoc c_12741  
Poisoning caused by the ingestion of mycotoxins (toxins of fungal origin). (source: NALT)

Mycotoxins  NALT 4808  
UN AgroVoc c_5026  
Toxic compounds produced by fungi. (source: NALT)

Myidae  NALT 17701  
UN AgroVoc c_48341  
Library of Congress sh85089233

Myiopharus  NALT 34389  
UN AgroVoc c_34461

Mylocerus  NALT 30786  
UN AgroVoc c_5030
Mymaridae  NALT 8434
  UN AgroVoc c_27266

Myndus  NALT 26587
  UN AgroVoc c_27267

Myosin  NALT 6930
  UN AgroVoc c_12750

A diverse superfamily of proteins that function as translocating proteins. They share the common characteristics of being able to bind actins and hydrolyze MgATP. Myosins generally consist of heavy chains which are involved in locomotion, and light chains which are involved in regulation. (source: NALT)

Myositis  NALT 17866
  UN AgroVoc c_16444

Inflammation of skeletal muscle. Infectious, autoimmune, and paraneoplastic processes represent some of the more common conditions that may be associated with myositis. (source: NALT)

An inflammatory process affecting the skeletal muscles. Causes include infections, injuries, and autoimmune disorders. Source: NCI thesaurus link

Myosotis  NALT 18610
  UN AgroVoc c_5033

Myxocephaulus  NALT 29620
  UN AgroVoc c_5034

Myriapoda  NALT 77
  UN AgroVoc c_5037
  Dbpedia Myriapoda

Myricaceae  NALT 28414
  UN AgroVoc c_5039
  Dbpedia Myricaceae

Myrtaceae  NALT 2128
  UN AgroVoc c_5052
  Dbpedia Myrtaceae

Myrtales  NALT 28107
  UN AgroVoc c_12754
  Library of Congress sh85089318

Myrtillocactus  NALT 20788
  UN AgroVoc c_26581
  Dbpedia Myrtillocactus

Mystus  NALT 15525
  UN AgroVoc c_35404
Mytilidae  NALT 17702
  UN AgroVoc c_48040
  Dbpedia Mytilidae
Myxospora  NALT 23917
  UN AgroVoc c_35405
Myzocallis  NALT 10753
  UN AgroVoc c_5059
Myzus  NALT 10754
  UN AgroVoc c_5060
Nabidae  NALT 31698
  UN AgroVoc c_30678
Nabis  NALT 31699
  UN AgroVoc c_30679
Nairovirus  NALT 11827
  UN AgroVoc c_35642
  A genus of enveloped, spherical viruses in the family Bunyaviridae. The genome is composed of a circular
  single-strand of negative sense RNA. Nairoviruses are tick-borne with human and animal hosts and cause hem-
  orrhagic fevers and gastroenteritis in humans. Source: NCI thesaurus link
Nanophyetidae  NALT 33519
  UN AgroVoc c_31991
Naphthenates  NALT 28955
  UN AgroVoc c_37396
Naphthols  NALT 1208
  UN AgroVoc c_36305
Napropamide  NALT 7666
  UN AgroVoc c_31434
Narcissus  NALT 31588
  UN AgroVoc c_5071
Naringin  NALT 17359
  UN AgroVoc c_35022
Nasonovia  NALT 10755
  UN AgroVoc c_5072
natural enemies  NALT 17432
  UN AgroVoc c_5085
  Living organisms found in nature that kill, weaken, or reduce the reproductive potential of other organisms.
  (source: NALT)
natural history  NALT 17478
  UN AgroVoc c_5088
  Use for organisms; For the natural history of a disease such as cancer, USE etiology. (source: NALT)
  The systematic account of natural phenomena; in medicine, the elucidation and description of disease progress.
  Source: NCI thesaurus link

Natural resources  NALT 5468
  UN AgroVoc c_5091

Naupactus  NALT 30788
  UN AgroVoc c_30079

Nauphoeta  NALT 17722
  UN AgroVoc c_30425

Nauphoeta cinerea  NALT 26323
  UN AgroVoc c_30426

Navicular disease  NALT 18502
  UN AgroVoc c_16446
  Chronic inflammation of the navicular bone and bursa of the front foot in horses, causing lameness and a short stride. (source: NALT)

Neck  NALT 18359
  UN AgroVoc c_5097
  The region that connects the head to the rest of the body. Source: NCI thesaurus link

Necrosis  NALT 761
  UN AgroVoc c_15509
  The pathological process occurring in cells that are dying from irreparable injuries. It is caused by the progressive, uncontrolled action of degradative enzymes, leading to mitochondrial swelling, nuclear flocculation, and cell lysis. Distinguish it from apoptosis which is a normal, regulated cellular process. (source: NALT)
  A cell death process that is morphologically characterized by a gain in cell volume (oncosis), swelling of organelles, plasma membrane rupture and subsequent loss of intracellular contents. Source: NCI thesaurus link

Necroviruses  NALT 24756
  UN AgroVoc c_32863

Nectar  NALT 855
  UN AgroVoc c_5098

Nectria galligena  NALT 31134
  UN AgroVoc c_34546

Nectria radicicola  NALT 31132
  UN AgroVoc c_35481

Neem extracts  NALT 14290
  UN AgroVoc c_34060
Neisseriaceae  NALT 16873  
UN AgroVoc c_5104

A taxonomic family of Gram negative, strictly aerobic bacterium in the phylum Proteobacteria that includes the genera Neisseria, Chromobacterium, Eikenella and Kingella, among others. Source: NCI thesaurus link

Nematicides  NALT 826  
UN AgroVoc c_5109

Pesticides that kill nematodes. (source: NALT)

Nematoda  NALT 58  
UN AgroVoc c_5112

nematode control  NALT 9380  
UN AgroVoc c_5110

Nematode infections  NALT 9604  
UN AgroVoc c_5111

Nematophagous fungi  NALT 17433  
UN AgroVoc c_25207

Neocallimastix  NALT 26159  
UN AgroVoc c_26583

Neochetina  NALT 30789  
UN AgroVoc c_24667

Neodiprion  NALT 33899  
UN AgroVoc c_5120

Library of Congress sh85090753

Neodiprion sertifer  NALT 33896  
UN AgroVoc c_29869

Neomycin  NALT 7870  
UN AgroVoc c_12792

Antibiotic complex produced by Streptomyces fradiae. It is composed of neomycins A, B, and C. It acts by inhibiting translation during protein synthesis. (source: NALT)

A broad spectrum aminoglycoside antibiotic derived from Streptomyces fradiae with antibacterial activity. Neomycin is an antibiotic complex consisting of 3 components: the two isomeric components B and C are the active components, and neomycin A is the minor component. Neomycin irreversibly binds to the 16S rRNA and S12 protein of the bacterial 30S ribosomal subunit. As a result, this agent interferes with the assembly of initiation complex between mRNA and the bacterial ribosome, thereby inhibiting the initiation of protein synthesis. In addition, neomycin induces misreading of the mRNA template and causes translational frameshift, thereby results in premature termination. This eventually leads to bacterial cell death. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using CAS number link
Neoplasm antigens  NALT 10363

Proteins, glycoprotein, or lipoprotein moieties on surfaces of tumor cells that are usually identified by monoclonal antibodies. Many of these are of either embryonic or viral origin. (source: NALT)

Neoplasms  NALT 702

New abnormal growth of tissue. Malignant neoplasms show a greater degree of anaplasia and have the properties of invasion and metastasis, compared to benign neoplasms. (source: NALT)

Neoseiulus californicus  NALT 7468

Neoseiulus cucumeris  NALT 7470

Neospora  NALT 27427

A genus of protozoan parasites of the subclass Coccidia. Its species are parasitic in dogs, cattle, goats, and sheep, among others. Neospora caninum, a species that mainly infects dogs, is intracellular in neural and other cells of the body, multiplies by endodyogeny, has no parasitophorous vacuole, and has numerous rhoptries. It is known to cause lesions in many tissues, especially the brain and spinal cord as well as abortion in the expectant mother. (source: NALT)

Neostigmine  NALT 25591

A parasympathomimetic agent that acts as a reversible acetylcholinesterase inhibitor. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Neotestudina  NALT 34406

Nepenthales  NALT 34598

Nephotettix  NALT 26210

Nephropidae  NALT 31886

Nephus  NALT 27457
The entire nerve apparatus, composed of a central part, the brain and spinal cord, and a peripheral part, the cranial and spinal nerves, autonomic ganglia, and plexuses. Source: NCI thesaurus link

diseases of the central and peripheral nervous system. This includes disorders of the brain, spinal cord, cranial nerves, peripheral nerves, nerve roots, autonomic nervous system, neuromuscular junction, and muscle. (source: NALT)

Diseases of the peripheral nerves external to the brain and spinal cord, which includes diseases of the nerve roots, ganglia, plexi, autonomic nerves, sensory nerves, and motor nerves. (source: NALT)

A disorder affecting the cranial nerves or the peripheral nervous system. It is manifested with pain, tingling, numbness, and muscle weakness. It may be the result of physical injury, toxic substances, viral diseases, diabetes, renal failure, cancer, and drugs. Source: NCI thesaurus link

A branch of neuroscience concerned with the physiology of the nervous system. Source: NCI thesaurus link
Neutralization  NALT 2883
UN AgroVoc c_5151
The act of rendering something ineffective or inactive. Source: NCI thesaurus link

Newcastle disease virus  NALT 14176
UN AgroVoc c_5166
The most well known avian paramyxovirus in the genus Avulavirus and the cause of a highly infectious pneumoencephalitis in fowl. It is also reported to cause conjunctivitis in humans. Transmission is by droplet inhalation or ingestion of contaminated water or food. (source: NALT)
A negative-stranded RNA virus that infects birds. It is the type strain for avian paramyxoviruses. Source: NCI thesaurus link

Niacin  NALT 12297
UN AgroVoc c_12818
A water-soluble vitamin belonging to the vitamin B family, which occurs in many animal and plant tissues, with antihyperlipidemic activity. Niacin is converted to its active form niacinamide, which is a component of the coenzymes nicotinamide adenine dinucleotide (NAD) and its phosphate form, NADP. These coenzymes play an important role in tissue respiration and in glycogen, lipid, amino acid, protein, and purine metabolism. Although the exact mechanism of action by which niacin lowers cholesterol is not fully understood, it may act by inhibiting the synthesis of very low density lipoproteins (VLDL), inhibiting the release of free fatty acids from adipose tissue, increasing lipoprotein lipase activity, and reducing the hepatic synthesis of VLDL-C and LDL-C. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Niclosamide  NALT 7692
UN AgroVoc c_12822

Nicotiana tabacum  NALT 30666
UN AgroVoc c_5177

Nicotinamide  NALT 7693
UN AgroVoc c_5178

Nicotine tobacco  NALT 14399
UN AgroVoc c_12824

Nidovirales  NALT 12448
UN AgroVoc c_37925

Nigella sativa  NALT 17745
UN AgroVoc c_26585

Nilaparvata  NALT 32154
UN AgroVoc c_5183
Nilaparvata lugens  NALT 20083  
UN AgroVoc c_25204

Nisin  NALT 15230  
UN AgroVoc c_24054  
A 34-amino acid polypeptide antibiotic produced by Streptococcus lactis. It has been used as a food preservative in canned fruits and vegetables, and cheese. (source: NALT)

Nitella  NALT 24440  
UN AgroVoc c_33386

Nitidulidae  NALT 4764  
UN AgroVoc c_30117

Nitrpyrin  NALT 10433  
UN AgroVoc c_31440

nitrate fertilizers  NALT 7973  
UN AgroVoc c_37469

Nitrate reductase  NALT 35307  
UN AgroVoc c_29520

Nitrates  NALT 4064  
UN AgroVoc c_5187  
Includes inorganic salts and nitrate ions. (source: NALT)

Nitrification  NALT 24675  
UN AgroVoc c_12834

Nitrilotriacetic acid  NALT 2355  
UN AgroVoc c_37539  
A white, crystalline solid compound. Nitrilotriacetic acid is mainly used as a chelating and eluting agent and is found in laundry detergents. Exposure to Nitrilotriacetic acid irritates the skin, eyes and respiratory tract and causes kidney and bladder damage. Nitrilotriacetic acid is reasonably anticipated to be a human carcinogen. (NCI05) Source: NCI thesaurus link

Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link

Nitrite reductase  NALT 35305  
UN AgroVoc c_29521

Nitrites  NALT 30836  
UN AgroVoc c_5190  
Includes inorganic salts and nitrite ions. (source: NALT)
nitrofural  NALT 10434
     UN AgroVoc c_12835
Nitrofurans  NALT 10449
     UN AgroVoc c_5191
nitrogen compounds  NALT 269
     UN AgroVoc c_49901
Nitrogen content  NALT 7829
     UN AgroVoc c_5193
nitrogen fertilizers  NALT 7966
     UN AgroVoc c_5195
Nitrogen fixation  NALT 17288
     UN AgroVoc c_5196
nitrogen fixing bacteria  NALT 15084
     UN AgroVoc c_27939
Nitrogen oxides  NALT 5848
     UN AgroVoc c_16002
Nitrogen phosphorus fertilizers  NALT 7981
     UN AgroVoc c_5198
Nitrogen potassium fertilizers  NALT 28398
     UN AgroVoc c_5199
Nitrogenase  NALT 35282
     UN AgroVoc c_16003
Nitroimidazoles  NALT 10521
     UN AgroVoc c_5200
Nitroso compounds  NALT 22364
     UN AgroVoc c_32047
Nitrosomonas  NALT 7935
     UN AgroVoc c_36429
Nitrosomonas europaea  NALT 15319
     UN AgroVoc c_36428
Nitzschiaeae  NALT 14472
     UN AgroVoc c_49460
Noctuidae  NALT 2536
     UN AgroVoc c_12842
Dbpedia Noctuidae
Nodaviridae  NALT 6969  
UN AgroVoc c_35629

Nomadacris  NALT 3033  
UN AgroVoc c_5206

Nonprotein nitrogen  NALT 17695  
UN AgroVoc c_24055

Nonreducing sugars  NALT 991  
UN AgroVoc c_32033

Noodles  NALT 439  
UN AgroVoc c_12848

Noradrenaline  NALT 4356  
UN AgroVoc c_12849

Notonectidae  NALT 15064  
UN AgroVoc c_30682

Novel foods  NALT 475  
UN AgroVoc c_35231  
Dbpedia Novel foods
Foods produced from ingredients that have not traditionally been used for human consumption in the area of the world in question, or that are produced by a new or extensively modified process. (source: NALT)

NPK fertilizers  NALT 15592  
UN AgroVoc c_5250

Nucleases  NALT 32399  
UN AgroVoc c_27582

Nucleic acids  NALT 34165  
UN AgroVoc c_5253
Type of substance that may be described as a linear sequence of nucleosides typically linked through phosphate esters. Source: NCI thesaurus link

Nucleosides  NALT 17907  
UN AgroVoc c_5258

Nucleotidase  NALT 35429  
UN AgroVoc c_12860

Nucleotide sequence  NALT 15977  
UN AgroVoc c_27583
The sequence of purines and pyrimidines in nucleic acids and polynucleotides. (source: NALT)
The sequence of nucleotide residues along an RNA or DNA chain. Source: NCI thesaurus link
Nucleotides  NALT 31025  
UN AgroVoc c_5259  
A subunit of DNA or RNA consisting of a nitrogenous base (adenine, guanine, thymine, or cytosine in DNA; adenine, guanine, uracil, or cytosine in RNA), a phosphate molecule, and a sugar molecule (deoxyribose in DNA and ribose in RNA). Source: NCI thesaurus link

Nutrient availability  NALT 17237  
UN AgroVoc c_5268  
The availability of nutrients to be taken up and used by living biological organisms. (source: NALT)

Nutrient balance  NALT 15590  
UN AgroVoc c_12868

Nutrient deficiencies  NALT 31983  
UN AgroVoc c_34868

Nutrient drug interactions  NALT 33356  
UN AgroVoc c_34869

Nutrient intake  NALT 22201  
UN AgroVoc c_34064

Nutrient nutrient interactions  NALT 17240  
UN AgroVoc c_34871

Nutrients  NALT 17265  
UN AgroVoc c_5274  
Any substance that contributes to the growth and health of a living organism. (source: NALT)

Nutrition  NALT 9324  
UN AgroVoc c_49892  
That which is consumed to fuel necessary life processes of an organism. Source: NCI thesaurus link

Nutrition education  NALT 28667  
UN AgroVoc c_37901  
Use for describing the act of teaching how food selection influences the health and well being of the individual and/or for motivating individual or groups to use that knowledge; for describing a general body of information on the topic of nutrition USE nutrition information. (source: NALT)

Nutrition physiology  NALT 10476  
UN AgroVoc c_5275

Nutritional status  NALT 33380  
UN AgroVoc c_24877

Nutritive value  NALT 10486  
UN AgroVoc c_5278  
An indication of the contribution of a food to the nutrient content of the diet. This value depends on the quantity of a food which is digested and absorbed and the amounts of the essential nutrients (protein, fat, carbohydrate, minerals, vitamins) which it contains. Use for evaluating the ability of a food or feed to contribute to the diet
and/or nutritional status of a human or animal; for descriptions of the composition of foods/feeds, without regard to their efficacy in the organism, USE “food composition” or one of its narrower terms. (source: NALT)

**Nuts**  NALT 6769  
UN AgroVoc c_12873

**Nyctaginaceae**  NALT 18391  
UN AgroVoc c_26231

**Nymphaeales**  NALT 20743  
UN AgroVoc c_331082

**Nymphalidae**  NALT 5188  
UN AgroVoc c_30283

**Nymphs**  NALT 32903  
UN AgroVoc c_5282

**Nypa**  NALT 12019  
UN AgroVoc c_33122

**Nyssa**  NALT 29204  
UN AgroVoc c_36059

**Nystatin**  NALT 10325  
UN AgroVoc c_12874  
Macrolide antifungal antibiotic complex produced by Streptomyces noursei, S. aureus, and other Streptomyces species. The biologically active components of the complex are nystatin A1, A2, and A3. (source: NALT)

**Oases**  NALT 32538  
UN AgroVoc c_5286  
Library of Congress sh85093584  
Fertile or green spots in a desert or wasteland, made so by the presence of the water due to the water table reaching the surface. (source: NALT)

**oats**  NALT 14116  
UN AgroVoc c_5287

**Ochroma**  NALT 18460  
UN AgroVoc c_5302

**Ocimum basilicum**  NALT 16014  
UN AgroVoc c_5305

**Octanoic acid**  NALT 22061  
UN AgroVoc c_16983

**Octopodidae**  NALT 23765  
UN AgroVoc c_48762  
Dbpedia Octopodidae
Odocoileus  NALT 24112
   UN AgroVoc c_34163
Odocoileus hemionus  NALT 17838
   UN AgroVoc c_35406
Odocoileus virginianus  NALT 31953
   UN AgroVoc c_12896
Odonata  NALT 9638
   UN AgroVoc c_5312
Oecophoridae  NALT 5231
   UN AgroVoc c_30286
Oedaleus  NALT 3034
   UN AgroVoc c_26587
Oenanthe  NALT 10978
   UN AgroVoc c_37144
Oenocarpus  NALT 12020
   UN AgroVoc c_32187
Oesophagostomum  NALT 24169
   UN AgroVoc c_5318
Oestridae  NALT 18779
   UN AgroVoc c_5320
oil spills  NALT 2153
   UN AgroVoc c_5332
oilseed protein  NALT 27588
   UN AgroVoc c_12918
oilseeds  NALT 22892
   UN AgroVoc c_25490
Oleaceae  NALT 1628
   UN AgroVoc c_5340
Olein  NALT 3993
   UN AgroVoc c_5342
Oligochaeta  NALT 9668
   UN AgroVoc c_29111
   Dbpedia Oligochaeta
Oligonychus pratensis  NALT 15772
   UN AgroVoc c_26590

1.7. Glossary
Produced by pressing olives, Olive Oil has a high content of monounsaturated fats, thought beneficial for health. Major components of the phenolic fraction of olive oil, lignans and pinoresinols are potent antioxidants present in extra virgin (first pressed) oils. Containing vitamins E and F, other antioxidant compounds, foods containing high amounts of lignan precursors may be protective against breast, colon, and prostate cancer, as well as heart diseases. Used mainly in cooking today, olive oil has been used for medicines and in cosmetics. (NCI04)

Source: NCI thesaurus link
Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link
Look-up using CAS number link

Olives NALT 28482
  UN AgroVoc c_12926

Olpidium NALT 26160
  UN AgroVoc c_16005

Ommastrephidae NALT 23766
  UN AgroVoc c_48711

Onagraceae NALT 26650
  UN AgroVoc c_5350
  Dbpedia Onagraceae

Onchocercidae NALT 2000
  UN AgroVoc c_31085

Oncideres NALT 23804
  UN AgroVoc c_5352

Oncorhynchus NALT 8356
  UN AgroVoc c_5354
  Library of Congress sh93005534

Oncorhynchus keta NALT 26146
  UN AgroVoc c_37038

Oncorhynchus kisutch NALT 27739
  UN AgroVoc c_26592
Oncorhynchus tshawytscha  NALT 25150
    UN AgroVoc c_35408
Onions  NALT 6633
    UN AgroVoc c_12934
Onthophagus gazella  NALT 20072
    UN AgroVoc c_30132
Oocystaceae  NALT 9654
    UN AgroVoc c_49470
Oogenesis  NALT 9479
    UN AgroVoc c_5360
    The development of ovum, which are the female germ cells. Oogenesis occurs by meiosis and is essential for the production of mature eggs. Source: NCI thesaurus link
Operophtera  NALT 24556
    UN AgroVoc c_5366
Operophtera brumata  NALT 24558
    UN AgroVoc c_30209
Ophiobolus  NALT 34407
    UN AgroVoc c_5367
Ophiomyia  NALT 5619
    UN AgroVoc c_5368
Ophiomyia phaseoli  NALT 5615
    UN AgroVoc c_30433
Ophiostomatales  NALT 12848
    UN AgroVoc c_31669
Ophiuroidea  NALT 16030
    UN AgroVoc c_49360
    Library of Congress sh85095056
Opiliones  NALT 11697
    UN AgroVoc c_30872
    Dbpedia Opiliones
Opisthorchiidae  NALT 26957
    UN AgroVoc c_31992
    Library of Congress sh88001494
Opius  NALT 19154
    UN AgroVoc c_29847
Orchidaceae NALT 4598
  UN AgroVoc e_5380
  Dbpedia Orchidaceae

Oreochromis NALT 26239
  UN AgroVoc e_26596
  Dbpedia Oreochromis

organic compounds NALT 270
  UN AgroVoc e_5384

Organic fertilizers NALT 9313
  UN AgroVoc e_4592

Use for fertilizers that are derived from animals or plants that are used to provide nutrients necessary to sustain plant growth, such as crab waste, animal manure, composted municipal wastes, etc.; For beneficial microorganisms that are applied to plants, seed, or soil in order to increase the amount of nutrients available to plants, such as nitrogen-fixing bacteria and mycorrhizal fungi USE biofertilizers. (source: NALT)

Organic foods NALT 418
  UN AgroVoc e_29261
  Dbpedia Organic foods

Organic food is produced without: antibiotics; growth hormones; most conventional pesticides; petroleum-based fertilizers or sewage sludge-based fertilizers; bioengineering; or ionizing radiation. USDA certification is required before a product can be labeled “organic”. Companies, including restaurants, that handle or process organic food must be certified also. (source: NALT)
Organic gardening  NALT 9314
    UN AgroVoc c_24878

organic matter  NALT 24613
    UN AgroVoc c_5387

Organic nitrogen compounds  NALT 7679
    UN AgroVoc c_5389

Organic soils  NALT 24689
    UN AgroVoc c_5390

Organic wastes  NALT 8386
    UN AgroVoc c_35237

Organochlorine compounds  NALT 1167
    UN AgroVoc c_5395

Organofluorine compounds  NALT 25417
    UN AgroVoc c_5397
    Library of Congress sh85095546

Organophosphorus compounds  NALT 31069
    UN AgroVoc c_5401

Organotin compounds  NALT 14328
    UN AgroVoc c_5403

Orius  NALT 9989
    UN AgroVoc c_30640

ornamental birds  NALT 14200
    UN AgroVoc c_5410

Ornamental plants  NALT 16259
    UN AgroVoc c_5417

Ornithodoros  NALT 4901
    UN AgroVoc c_5422

ornithology  NALT 1150
    UN AgroVoc c_49861

Orobanchaceae  NALT 4543
    UN AgroVoc c_5426

Orobanche crenata  NALT 16151
    UN AgroVoc c_35565

Orseolia  NALT 23250
    UN AgroVoc c_5429
Orthopoxvirus NALT 21535
  UN AgroVoc c_5431
  A genus of poxviruses that cause generalized infections with a rash in mammals. Orthopoxviruses are enveloped, double stranded DNA viruses. Source: NCI thesaurus link

Orthoptera NALT 3017
  UN AgroVoc c_5433
  Dbpedia Orthoptera

Oryx NALT 18914
  UN AgroVoc c_32586

Oryza glaberrima NALT 4891
  UN AgroVoc c_5436

Oryza rufipogon NALT 20107
  UN AgroVoc c_5437

Oscinella NALT 25472
  UN AgroVoc c_5440

Osmia NALT 33198
  UN AgroVoc c_29824

Osmia lignaria NALT 18232
  UN AgroVoc c_29825

Osteoarthritis NALT 12459
  UN AgroVoc c_12987
  A progressive, degenerative joint disease, the most common form of arthritis, especially in older persons. The disease is thought to result not from the aging process but from biochemical changes and biomechanical stresses affecting articular cartilage. In the foreign literature it is often called osteoarthrosis deformans. (source: NALT)

  A noninflammatory degenerative joint disease occurring chiefly in older persons, characterised by degeneration of the articular cartilage, hypertrophy of bone at the margins and changes in the synovial membrane. It is accompanied by pain and stiffness, particularly after prolonged activity. Source: NCI thesaurus link

Osteomyelitis NALT 18505
  UN AgroVoc c_12988
  An infectious inflammation of the bone usually caused by a bacteria. It may remain localized or may spread through the bone. (source: NALT)

  An acute or chronic inflammation of the bone and its structures due to infection with pyogenic bacteria. Source: NCI thesaurus link

Ostracoda NALT 30294
  UN AgroVoc c_5446

Ostreidae NALT 17703
  UN AgroVoc c_47935
  Dbpedia Ostreidae
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ostriches NALT 7158
  UN AgroVoc c_5448

Ostrinia NALT 29817
  UN AgroVoc c_5449

Otariidae NALT 11949
  UN AgroVoc c_48876

Otiidae NALT 33919
  UN AgroVoc c_30572
  Library of Congress sh85096034

Oulema NALT 26065
  UN AgroVoc c_5453
  Library of Congress sh85096123

Oulema melanopus NALT 24041
  UN AgroVoc c_30036

outcrossing NALT 30219
  UN AgroVoc c_16577
  Mating individuals that belong to different strains or families within the same breed or variety. (source: NALT)

Ovarian cysts NALT 31337
  UN AgroVoc c_12993

Ovarian diseases NALT 9844
  UN AgroVoc c_12994

Ovarian follicles NALT 30722
  UN AgroVoc c_32465

Ovaries NALT 29278
  UN AgroVoc c_5456
  Use for ovaries of animals; for plant ovaries USE plant ovary. (source: NALT)

Overdose NALT 34393
  UN AgroVoc c_37268

Overeating NALT 35203
  UN AgroVoc c_5457
  Use for humans and animals used as models in human studies; For animals USE overfeeding. (source: NALT)

Overfeeding NALT 9185
  UN AgroVoc c_27942
  Use for animals; for humans and animals used as models in human studies USE overeating. (source: NALT)
Overweight  NALT 18372
UN AgroVoc c_5459
Weight in excess of the body weight required to maintain overall health. Often defined as a Body Mass Index
greater or equal to 25 but less than 30. (source: NALT)

Ovulation  NALT 9482
UN AgroVoc c_5463
The discharge of a secondary oocyte from a vesicular follicle of the ovary. Source: NCI thesaurus link

Oxalates  NALT 7975
UN AgroVoc c_5467

Oxalic acid  NALT 33184
UN AgroVoc c_5468

Oxalidaceae  NALT 14132
UN AgroVoc c_5469
Dbpedia Oxalidaceae

Oxamyl  NALT 22171
UN AgroVoc c_31447

Oxfendazole  NALT 9930
UN AgroVoc c_36199

Oxidants  NALT 241
UN AgroVoc c_24879

Oxidation  NALT 14060
UN AgroVoc c_5472
The process of oxidizing; the addition of oxygen to a compound accompanied by a loss of electrons. Source:
NCI thesaurus link

Oxidative stress  NALT 764
UN AgroVoc c_37481
A disturbance in the prooxidant-antioxidant balance in favor of the former, leading to potential damage. Indi-
cators of oxidative stress include damaged DNA bases, protein oxidation products, and lipid peroxidation
products. The damage to biological tissues is caused by superoxide and other free radicals generated by many
factors, including exposure to alcohol, medications, trauma, cold, toxins, and radiation or by antimicrobial cellu-
lar immunity, metabolic abnormality, or “normal” aging; not synonymous with hypoxia or hyperoxia. Oxidative
stress promotes a range of degenerative disorders, including cancer, diabetes, premature aging, Alzheimer’s, and
many others. Source: NCI thesaurus link

Oxides  NALT 7279
UN AgroVoc c_5473

Oxidoreductases  NALT 3974
UN AgroVoc c_5474

Oximes  NALT 31059
UN AgroVoc c_5475
Oxya  NALT 3035
    UN AgroVoc c_5476

Oxyclozanide  NALT 8956
    UN AgroVoc c_13008

Oxygen  NALT 8381
    UN AgroVoc c_5477
    An element with atomic symbol O, atomic number 8, and atomic weight 16. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link

Oxygen consumption  NALT 8382
    UN AgroVoc c_5478
    The rate at which oxygen is used by a tissue, or the rate at which oxygen enters the blood. Use for oxygen consumption of cells, tissues or whole organisms. (source: NALT)

Oxygen requirement  NALT 8383
    UN AgroVoc c_26804

Oxyopidae  NALT 11770
    UN AgroVoc c_30884

Oxytetracycline  NALT 10513
    UN AgroVoc c_13011
    A tetracycline analog isolated from the actinomycete Streptomyces rimosus and used in a wide variety of clinical conditions. (source: NALT)

Oxyuridae  NALT 9381
    UN AgroVoc c_31101

Ozone depletion  NALT 25418
    UN AgroVoc c_35249

Pachnaeus  NALT 30791
    UN AgroVoc c_30082

Pachnaeus litus  NALT 26554
    UN AgroVoc c_30083

Pachysandra  NALT 20671
    UN AgroVoc c_26599

Pacifastacus  NALT 13195
    UN AgroVoc c_16269

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Paeubacillus NALT 15044
    UN AgroVoc c_36481

Paeubacillus larvae NALT 7574
    UN AgroVoc c_36482

Paeoniaceae NALT 33641
    UN AgroVoc c_5501

Pagrus pagrus NALT 28228
    UN AgroVoc c_43283

Pain NALT 931
    UN AgroVoc c_5503
    The sensation of discomfort, distress, or agony, resulting from the stimulation of specialized nerve endings. Source: NCI thesaurus link

Palaemonidae NALT 31887
    UN AgroVoc c_46508
    Library of Congress sh85096949

Palinuridae NALT 31888
    UN AgroVoc c_46752

palm kernel oil NALT 28885
    UN AgroVoc c_5515
    The oil from the kernel or “nut” of the palm. Compare with palm oils. (source: NALT)
    The edible oil extracted from the kernels of the oil palm, Elaeis guineensis. Palm kernel oil is commonly used as a commercial cooking oil due to its stability at high temperatures. Source: NCI thesaurus link
    Reference: FDA UNII link
    Reference the ITIS link
    Reference the NIH NCBI link
    Reference USDA PLANTS link
    Look-up using CAS number link

palm oils NALT 28886
    UN AgroVoc c_5514
    Oils pressed from the pulp of the fruit of various palms (Arecaceae). The African palm (Elaeis guineensis) is a common source for palm oil. Palm oils are high in saturated fat and carotene, and used in foods, soaps, cosmetics, candles. Compare with palm kernel oil. (source: NALT)

Palygorskite NALT 26752
    UN AgroVoc c_15837
    Library of Congress sh85097269

Palynology NALT 18792
    UN AgroVoc c_5520
The branch of science in studying spores and pollen. (source: NALT)

**Pamphiliidae**  NALT 2022
- UN AgroVoc c_29924

**Panax**  NALT 11743
- UN AgroVoc c_16009

**Panax pseudoginseng**  NALT 11732
- UN AgroVoc c_35570

**Panax quinquefolius**  NALT 7576
- UN AgroVoc c_35571

**Pancreas**  NALT 2897
- UN AgroVoc c_5526
  - Library of Congress sh85097370

- An organ behind the lower part of the stomach that is the shape of a fish and about the size of a hand. It is a compound gland composed of both exocrine and endocrine tissues. The endocrine pancreas makes insulin so that the body can use glucose (sugar) for energy. The exocrine pancreas makes enzymes that help the body digest food. Spread all over the pancreas are areas called the Islets of Langerhans. The cells in these areas each have a special purpose. The alpha cells make glucagon, which raises the level of glucose in the blood; the beta cells make insulin; the delta cells make somatostatin. There are also PP cells and D1 cells, about which little is known. Source: NCI thesaurus link

**Pancreatic juice**  NALT 18320
- UN AgroVoc c_13072

**Pandalidae**  NALT 31889
- UN AgroVoc c_46418
  - Library of Congress sh85097389

**Panonychus citri**  NALT 26550
- UN AgroVoc c_24671

**Pantomorus**  NALT 30793
- UN AgroVoc c_30084
  - Library of Congress sh85097511

**Pantothenic acid**  NALT 27695
- UN AgroVoc c_5542

**Papain**  NALT 22508
- UN AgroVoc c_5544

**Papaver somniferum**  NALT 27602
- UN AgroVoc c_5546

**Papaveraceae**  NALT 4243
- UN AgroVoc c_5547
Papayas  NALT 22509
  UN AgroVoc c_13087
  Library of Congress sh85097573

Paper  NALT 23540
  UN AgroVoc c_5548

Paperboard  NALT 22384
  UN AgroVoc c_5550

Papilio polyxenes  NALT 17818
  UN AgroVoc c_30288

Papilio xuthus  NALT 26561
  UN AgroVoc c_30289

Papilloma  NALT 712
  UN AgroVoc c_5553
  A circumscribed benign epithelial tumor projecting from the surrounding surface; more precisely, a benign epithelial neoplasm consisting of villous or arborescent outgrowths of fibrovascular stroma covered by neoplastic cells. (source: NALT)
  A benign epithelial neoplasm that projects above the surrounding epithelial surface and consists of villous or arborescent outgrowths of fibrovascular stroma. Source: NCI thesaurus link

Papio  NALT 14452
  UN AgroVoc c_331498

Parabemisia  NALT 6292
  UN AgroVoc c_32196

Paragonimidae  NALT 33521
  UN AgroVoc c_31993

Paralichthys olivaceus  NALT 16057
  UN AgroVoc c_35863

Paralithodes camtschaticus  NALT 5974
  UN AgroVoc c_47018

Paralysis  NALT 932
  UN AgroVoc c_13106
  Partial or complete loss of function of one or more muscles. It is usually caused by damage to the nervous system. Source: NCI thesaurus link

Paramecium  NALT 26284
  UN AgroVoc c_23831

Paramphistomidae  NALT 21198
  UN AgroVoc c_31996
Paraphaeosphaeria  NALT 34408
  UN AgroVoc c_31753
  Rank of Genus, Montagnulaceae incertae sedis. (source: NALT)

Parapoxvirus  NALT 18979
  UN AgroVoc c_5570
  A genus of enveloped, oval-shaped virions with surface filaments, in the family Poxviridae. The genome is composed of non-segmented, double-stranded DNA. Two distinct infection virus particles exist for Parapoxviruses and cause non-serious infection in humans. Source: NCI thesaurus link

Parascaris  NALT 12741
  UN AgroVoc c_5572

Parashorea  NALT 33934
  UN AgroVoc c_5573

Parasites  NALT 9356
  UN AgroVoc c_5574

Parasitic plants  NALT 30885
  UN AgroVoc c_5575

Parasitoids  NALT 17434
  UN AgroVoc c_34070

Parasitology  NALT 17480
  UN AgroVoc c_5578
  A branch of biology which deals with parasitic organisms with a strong emphasis on their role in disease. Source: NCI thesaurus link

Parasitoses  NALT 10499
  UN AgroVoc c_5579

Parastacidae  NALT 24764
  UN AgroVoc c_46848
  Library of Congress sh86003272

Parenchyma  NALT 25314
  UN AgroVoc c_5582
  The tissue that constitutes the essential part of an organ as contrasted with e.g., connective tissue and blood vessels. Source: NCI thesaurus link

Parkinsonia  NALT 20948
  UN AgroVoc c_29232

Parlatoria  NALT 33109
  UN AgroVoc c_5589
  Library of Congress sh85098222
Parlatoria pergandii  NALT 24253
   UN AgroVoc c_37808
Parthenium  NALT 13355
   UN AgroVoc c_24355
   Library of Congress sh85098334
Parthenogenesis  NALT 11230
   UN AgroVoc c_5598
   reproduction in which young are produced by unfertilized females. (source: NALT)
Parthenolecanium  NALT 27407
   UN AgroVoc c_5599
participation  NALT 27911
   UN AgroVoc c_37602
particle size  NALT 33651
   UN AgroVoc c_5601
Parturition  NALT 9484
   UN AgroVoc c_5604
   Library of Congress sh85098407
   The process by which a mammal gives birth. Source: NCI thesaurus link
Parturition interval  NALT 21465
   UN AgroVoc c_32397
Parvoviridae  NALT 19782
   UN AgroVoc c_5606
Paspalum dilatatum  NALT 31665
   UN AgroVoc c_5610
Paspalum notatum  NALT 15534
   UN AgroVoc c_5611
Paspalum plicatulum  NALT 20119
   UN AgroVoc c_5612
Passeriformes  NALT 96
   UN AgroVoc c_5616
Passifloraceae  NALT 4102
   UN AgroVoc c_5620
Passive immunity  NALT 4326
   UN AgroVoc c_29585
**Pasteurella multocida**  NALT 15312

UN AgroVoc c_16426

A species of Gram-negative, non-motile coccobacillus in the phylum Actinobacteria. Source: NCI thesaurus link

**Pasteurellosis**  NALT 15172

UN AgroVoc c_36183

Infections with bacteria of the genus Pasteurella. (source: NALT)

**Pasteurization**  NALT 27775

UN AgroVoc c_5623

Process of heating milk or other liquids to destroy microorganisms that can cause disease or spoilage while minimizing chemical changes that affect taste or aroma. (source: NALT)

**Pasteurized milk**  NALT 31636

UN AgroVoc c_13132

**Pastinaca**  NALT 10984

UN AgroVoc c_5624

**Pastures**  NALT 5373

UN AgroVoc c_5626

Use for agricultural land for grazing livestock; for grasslands primarily grown for making hay USE meadows. (source: NALT)

**pathogenesis**  NALT 765

UN AgroVoc c_24881

The development of a disease or disease process. (source: NALT)

The pathologic, physiologic, or biochemical mechanism resulting in the development of a disease or morbid process. Source: NCI thesaurus link

**Pathogenicity**  NALT 15187

UN AgroVoc c_5629

Ability of infectious agents (i.e., viruses, bacteria, fungi), parasitic nematodes, protozoa or helminths to cause disease. (source: NALT)

**Pathogens**  NALT 838

UN AgroVoc c_5630

Microorganisms, viruses and parasites that can cause disease. (source: NALT)

**Pathotypes**  NALT 17557

UN AgroVoc c_24059

Populations of the same species which differ by their pathogenic capability. (source: NALT)

**Paulownia tomentosa**  NALT 17121

UN AgroVoc c_26603
Pawpaw (asimina)  NALT 9688
  UN AgroVoc c_36309

Paxillus  NALT 18436
  UN AgroVoc c_26604

Peas  NALT 34712
  UN AgroVoc c_13177

Peat soils  NALT 24690
  UN AgroVoc c_5648
  Soil type derived from dead organic matter in a wet area. The reduced available oxygen results in slower
decomposition of the organic material so that the plant residues are recognizable. (source: NALT)

Peatlands  NALT 18404
  UN AgroVoc c_13929
  Peatland is a generic term for an extensive tract of wetland where peat has formed. They develop more exten-
sively in northern areas where water drainage is blocked, precipitation is retained, and organic matter decompo-
sition is slowed. (source: NALT)

pecans  NALT 22739
  UN AgroVoc c_13178

Pectinesterase  NALT 22298
  UN AgroVoc c_13183

Pectinidae  NALT 12123
  UN AgroVoc c_47979
  Dbpedia Pectinidae

Pedaliaceae  NALT 23947
  UN AgroVoc c_5652

Pediocins  NALT 15231
  UN AgroVoc c_37482

Pegomya  NALT 10016
  UN AgroVoc c_5657

Pelargonidin  NALT 10007
  UN AgroVoc c_36690

Pelecaniformes  NALT 97
  UN AgroVoc c_5661

Pelicularia  NALT 10876
  UN AgroVoc c_31728

pemphigus (skin disease)  NALT 14012
  UN AgroVoc c_35255
Penaeidae  NALT 31890
          UN AgroVoc c_46269
Penicillins  NALT 8044
          UN AgroVoc c_5670
          A group of antibiotics that contain 6-aminopenicillanic acid with a side chain attached to the 6-amino group. The penicillin nucleus is the chief structural requirement for biological activity. The side-chain structure determines many of the antibacterial and pharmacological characteristics. (source: NALT)
Penicillium  NALT 32815
          UN AgroVoc c_5671
Peniophora  NALT 10877
          UN AgroVoc c_31729
Pennisetum glaucum  NALT 15550
          UN AgroVoc c_13199
Pentalonia  NALT 10758
          UN AgroVoc c_5682
Pentalonia nigronervosa  NALT 15706
          UN AgroVoc c_33389
Pentatomidae  NALT 3144
          UN AgroVoc c_30684
Pentobarbital  NALT 15823
          UN AgroVoc c_13204
Pentose phosphate cycle  NALT 17289
          UN AgroVoc c_5686
Pentoses  NALT 995
          UN AgroVoc c_13205
Pepsin  NALT 13042
          UN AgroVoc c_5689
Peptidases  NALT 7886
          UN AgroVoc c_5690
peptides  NALT 7813
          UN AgroVoc c_5691
Peptostreptococcus  NALT 26992
          UN AgroVoc c_13233
          A genus of anaerobic, Gram positive, cocci shaped bacterium assigned to the phylum Firmicutes and the family Peptostreptococcaceae. Source: NCI thesaurus link
Peregrinus  NALT 32155
          UN AgroVoc c_27289
Peregrinus maidis NALT 29143
   UN AgroVoc c_27290
Perennials NALT 16261
   UN AgroVoc c_5696
Perianth NALT 21492
   UN AgroVoc c_5701
pericarp NALT 5993
   UN AgroVoc c_25199
   A wall of a fruit, developed from the ovary or carpel wall. (source: NALT)
Pericopsis NALT 4921
   UN AgroVoc c_5703
Peridroma saucia NALT 5773
   UN AgroVoc c_30268
Perilla frutescens NALT 16314
   UN AgroVoc c_16274
Perinatal period NALT 9485
   UN AgroVoc c_29378
Periodicity NALT 17466
   UN AgroVoc c_5708
   The tendency of a phenomenon to recur at regular intervals; in biological systems, the recurrence of certain activities (including hormonal, cellular, neural) may be annual, seasonal, monthly, daily, or more frequently (ultradian). (source: NALT)
Periphyton NALT 11518
   UN AgroVoc c_5709
   Underwater plants and animals that are firmly attached to solid surfaces such as rocks, logs, pilings, leaves and stems of aquatic plants, etc. (source: NALT)
Periplaneta NALT 17976
   UN AgroVoc c_5710
Periplaneta americana NALT 7552
   UN AgroVoc c_31919
Perissodactyla NALT 552
   UN AgroVoc c_5711
   The taxonomic order of mammals that includes odd-toed ungulates such as horses, zebras, tapirs, and rhinoceroses. Source: NCI thesaurus link
Peristenus NALT 19156
   UN AgroVoc c_29849
Peritonitis  NALT 33575
UN AgroVoc c_13247
Inflammation of the peritoneum. (source: NALT)
Inflammation of the peritoneum due to infection by bacteria or fungi. Causes include liver disease, perforation of the gastrointestinal tract or biliary tract, and peritoneal dialysis. Patients usually present with abdominal pain and tenderness, fever, chills, and nausea and vomiting. It is an emergency medical condition that requires prompt medical attention and treatment. Source: NCI thesaurus link

Perkinsiella  NALT 32156
UN AgroVoc c_5714
Library of Congress sh85099974

Peronosporales  NALT 6026
UN AgroVoc c_31670

Peroxidases  NALT 12865
UN AgroVoc c_13251
peroxidation  NALT 24677
UN AgroVoc c_28492

Peroxides  NALT 21123
UN AgroVoc c_5721
Chemical compounds containing a peroxy group in which two oxygen atoms are bound to each other by a single covalent bond and carry two unpaired electrons and two negative charges. (source: NALT)

Persea americana  NALT 14241
UN AgroVoc c_5723
pest control  NALT 291
UN AgroVoc c_5726
pest management  NALT 34011
UN AgroVoc c_13262

Pest resistance  NALT 153
UN AgroVoc c_5731
Resistance or tolerance of a host to a pest. (source: NALT)

Pestalotia  NALT 27662
UN AgroVoc c_26607

Pestalotiopsis  NALT 27663
UN AgroVoc c_26606
pesticidal properties  NALT 2071
UN AgroVoc c_5732

Pesticide application  NALT 2073
UN AgroVoc c_27879

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Pesticide formulations  NALT 4715
    UN AgroVoc c_13263

Pesticide residues  NALT 2076
    UN AgroVoc c_16154

Pesticide resistance  NALT 133
    UN AgroVoc c_25427

Pesticide synergists  NALT 5567
    UN AgroVoc c_5738

pesticides  NALT 287
    UN AgroVoc c_5739

    A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. (source: NALT)

Pestivirus  NALT 18630
    UN AgroVoc c_5740

Pests  NALT 839
    UN AgroVoc c_5741

    A general term for organisms which may cause illness or damage to humans or to crops, livestock, or materials important to humans. (source: NALT)

pet care  NALT 9058
    UN AgroVoc c_36827

Petasites  NALT 13357
    UN AgroVoc c_16275
    Dbpedia Petasites

petroleum  NALT 17688
    UN AgroVoc c_5747

Petromyzontiformes  NALT 23751
    UN AgroVoc c_38001

Petroselinum  NALT 10986
    UN AgroVoc c_5750

Petroselinum crispum  NALT 11112
    UN AgroVoc c_5751

Pezizales  NALT 12795
    UN AgroVoc c_31671

    Library of Congress sh85100520

pH  NALT 2772
    UN AgroVoc c_5753
    Quantity of dimension one used to express on a scale from 0 to 14 the amount-of-substance concentration of hydrogen ion of dilute aqueous solution, calculated as the logarithm of the reciprocal of hydrogen-ion concentration in gram atoms per liter. Source: NCI thesaurus link

Phacidiopycnis  NALT 27664
    UN AgroVoc c_26610

Phaeocryptopus  NALT 34409
    UN AgroVoc c_27292

Phaeocytostroma  NALT 27665
    UN AgroVoc c_31594

Phaeophyceae  NALT 25644
    UN AgroVoc c_5754

Phagocytes  NALT 23479
    UN AgroVoc c_5756

Phanerochaete  NALT 10879
    UN AgroVoc c_32212
    Library of Congress sh85100569

Pharmacokinetics  NALT 34640
    UN AgroVoc c_13280
    Library of Congress sh85100597
    Dynamic and kinetic mechanisms of exogenous chemical and drug absorption; biological transport; tissue distribution; biotransformation; elimination; and toxicology as a function of dosage, and rate of metabolism. It includes toxicokinetics, the pharmacokinetic mechanism of the toxic effects of a substance. ADME and ADMET are short-hand abbreviations for absorption, distribution, metabolism, elimination and toxicology. (source: NALT)
    The characteristic movements of drugs within biological systems, as affected by absorption, distribution, binding, elimination, biotransformation, and excretion; particularly the rates of such movements. Source: NCI thesaurus link

Pharmacology  NALT 24572
    UN AgroVoc c_5760
    The study of pharmacologic agents. This includes the preparation, compounding, and dispensing of drugs, as well as the characteristics and properties of drugs, their effects on the body, and how they are metabolized and eliminated from the body. Source: NCI thesaurus link

Pharynx  NALT 33561
    UN AgroVoc c_5761
    A hollow tube that starts posterior to the mouth and nasal cavity and ends superior to the trachea and esophagus. Source: NCI thesaurus link
Phenobarbital  NALT 10272
  UN AgroVoc c_13298
  A long-acting barbituric acid derivative with antipsychotic property. Phenobarbital binds to and activates the gamma-aminobutyric acid (GABA)-A receptor, thereby mimicking the inhibitory actions of GABA in the brain. The activation effects of the phenobarbital-receptor-ionophore complex include increased frequency of chloride channel openings, membrane hyperpolarization and ultimately synaptic inhibition and decreased neuronal excitability. In addition, this agent inhibits glutamate induced depolarization. Source: NCI thesaurus link

  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Phenolic acids  NALT 1496
  UN AgroVoc c_16197

Phenolic compounds  NALT 2509
  UN AgroVoc c_5772

Phenology  NALT 361
  UN AgroVoc c_5774
  The study of periodic biological phenomena with relation to climate, particularly seasonal changes. These phenomena can be used to interpret local seasons and the climatic zones. (source: NALT)

Phenothiazines  NALT 2186
  UN AgroVoc c_5775
phenotypes

The outward appearance of the individual. It is the product of interactions between genes, and between the genotype and the environment. (source: NALT)

Phenylalanine

An essential aromatic amino acid in humans (provided by food), Phenylalanine plays a key role in the biosynthesis of other amino acids and is important in the structure and function of many proteins and enzymes. Phenylalanine is converted to tyrosine, used in the biosynthesis of dopamine and norepinephrine neurotransmitters. The L-form of Phenylalanine is incorporated into proteins, while the D-form acts as a painkiller. Absorption of ultraviolet radiation by Phenylalanine is used to quantify protein amounts. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Phenylalanine ammonia lyase

A genus of enveloped, spherical shaped viruses with surface glycoproteins that are arranged in a T=12 icosahedral symmetrical lattice, in the family Bunyaviridae. The genome is composed of three linear, segmented single-strands of negative sense RNA. Phelboviruses are mosquito-borne and humans, ruminants and camels are natural hosts. This genus causes influenza-like illness and rarely hemorrhagic fevers in humans. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Look-up synonyms
Look-up using CAS number link

Phlox drummondii

A genus of enveloped, spherical shaped viruses with surface glycoproteins that are arranged in a T=12 icosahedral symmetrical lattice, in the family Bunyaviridae. The genome is composed of three linear, segmented single-strands of negative sense RNA. Phelboviruses are mosquito-borne and humans, ruminants and camels are natural hosts. This genus causes influenza-like illness and rarely hemorrhagic fevers in humans. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Look-up synonyms
Look-up using CAS number link

1.7. Glossary
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Phosphoglucomutase  NALT 35566
  UN AgroVoc c_29525

Phosphogluconate dehydrogenase  NALT 1535
  UN AgroVoc c_29526

Phosphoric monoester hydrolases  NALT 2729
  UN AgroVoc c_13317

Phosphorus  NALT 33436
  UN AgroVoc c_5804
  
  An element with atomic symbol P, atomic number 15, and atomic weight 30.97. Source: NCI thesaurus link

Phosphorus potassium fertilizers  NALT 28399
  UN AgroVoc c_5805

Phosphorylase  NALT 8247
  UN AgroVoc c_29527

Phosphorylation  NALT 24678
  UN AgroVoc c_5806
  
  Library of Congress sh85101132
  
  The creation of a phosphate derivative of an organic molecule. This is usually achieved by transferring a phosphate group from ATP via the action of a kinase. Source: NCI thesaurus link

Photolysis  NALT 24633
  UN AgroVoc c_28496

Photosynthesis  NALT 14059
  UN AgroVoc c_5812
  
  Library of Congress sh85101413
  
  The synthesis of carbohydrates from carbon dioxide and water by chlorophyll using light as energy and producing oxygen. (source: NALT)

  The process through which light energy, water, and carbon dioxide are converted to carbohydrate and oxygen in the presence of chlorophyll. Occurs in plants, algae, cyanobacteria and lichens. (BioTech Life Science Dictionary) Source: NCI thesaurus link

photosystem I  NALT 25482
  UN AgroVoc c_34952

Phoxinus  NALT 31270
  UN AgroVoc c_27293

Phragmites australis  NALT 12695
  UN AgroVoc c_23959

Phthalates  NALT 33174
  UN AgroVoc c_36823
Phthiraptera  NALT 9826
  UN AgroVoc c_5814

Phyllachorales  NALT 12851
  UN AgroVoc c_31677

Phyllobius  NALT 30795
  UN AgroVoc c_5816

Phyllocnistis citrella  NALT 26530
  UN AgroVoc c_30292

Phyllocoptera oleivora  NALT 26556
  UN AgroVoc c_27294

Phyllophoraceae  NALT 5788
  UN AgroVoc c_49771

Phyllisticta  NALT 27669
  UN AgroVoc c_5822

Phyllotreta  NALT 26069
  UN AgroVoc c_5823

Phylloxeridae  NALT 10795
  UN AgroVoc c_5824

Physalis angulata  NALT 30928
  UN AgroVoc c_26613

Physalis peruviana  NALT 21961
  UN AgroVoc c_26616

Physateridae  NALT 24149
  UN AgroVoc c_48953

Physics  NALT 975
  UN AgroVoc c_5833
  The study of those aspects of nature which can be understood in a fundamental way in terms of elementary principles and laws; the laws and properties of matter, and the forces acting upon it. Source: NCI thesaurus link

Physiographic soil types  NALT 16123
  UN AgroVoc c_5835

Physiological response  NALT 34396
  UN AgroVoc c_49894

Physiology  NALT 9418
  UN AgroVoc c_49881
The study of the mechanical, physical, and biochemical functions of living organisms. Source: NCI thesaurus link

Physoderma  NALT 17923
    UN AgroVoc c_31740

Physostigmine  NALT 22186
    UN AgroVoc c_13334

Phytelephas  NALT 12022
    UN AgroVoc c_5841

Phytic acid  NALT 10487
    UN AgroVoc c_5842

Phytoalexins  NALT 6704
    UN AgroVoc c_16109

Phytolaccaceae  NALT 22768
    UN AgroVoc c_26232

Phytomyza  NALT 5620
    UN AgroVoc c_5843

Phytophthora infestans  NALT 18857
    UN AgroVoc c_27304

Phytoplankton  NALT 11530
    UN AgroVoc c_13344

    Free-floating, mainly microscopic, photosynthetic organisms, such as algae, dinoflagellates, and diatoms, in aquatic systems. (source: NALT)

Phytoplasmas  NALT 1091
    UN AgroVoc c_26802

Phyto remediation  NALT 17229
    UN AgroVoc c_36976

    The use of plants to uptake, store, degrade, immobilize, transform, or volatilize harmful substances in order to mitigate damage to human health or the environment. (source: NALT)

Phytoseiidae  NALT 7462
    UN AgroVoc c_5846

Phytosterols  NALT 19607
    UN AgroVoc c_5847

    General term for the sterols found in plants. (source: NALT)

pica  NALT 35198
    UN AgroVoc c_33980

    The persistent eating of nonfood items. (source: NALT)
Picea abies  NALT 1685  
UN AgroVoc c_5852

Picea glauca  NALT 1679  
UN AgroVoc c_5854

Picea glehnii  NALT 1693  
UN AgroVoc c_26619

Picea mariana  NALT 1705  
UN AgroVoc c_5856

Picea pungens  NALT 18238  
UN AgroVoc c_5859

Pichia stipitis  NALT 21808  
UN AgroVoc c_35473

Piciformes  NALT 98  
UN AgroVoc c_5862  
Dbpedia Piciformes

Pickling  NALT 19843  
UN AgroVoc c_5865

A method of preserving and flavoring foods by soaking them in brine or vinegar, often spiced. (source: NALT)

Picloram  NALT 12292  
UN AgroVoc c_31467

Picornaviridae  NALT 10846  
UN AgroVoc c_5866

A family of small RNA viruses comprising some important pathogens of humans and animals. Transmission usually occurs mechanically. (source: NALT)

Piedraia  NALT 34410  
UN AgroVoc c_31754

Pieridae  NALT 11249  
UN AgroVoc c_30293

Pieris napi  NALT 12653  
UN AgroVoc c_33812

Pieris rapae  NALT 12655  
UN AgroVoc c_30295

Piesmatidae  NALT 12920  
UN AgroVoc c_30698

pigeon peas  NALT 16217  
UN AgroVoc c_13356
pigeons  NALT 28054
    UN AgroVoc c_5870

piglets  NALT 14457
    UN AgroVoc c_5872
    Library of Congress sh98003305

Pigmentation  NALT 124
    UN AgroVoc c_5873
    Pigmentation; the coloring of the skin, hair, mucous membranes, and retina of the eye. Source: NCI thesaurus link

Pigments  NALT 17171
    UN AgroVoc c_5875
    Library of Congress sh85102093

Pimpinella  NALT 10989
    UN AgroVoc c_5884

Pimpinella anisum  NALT 9616
    UN AgroVoc c_5885

Pimlea  NALT 27503
    UN AgroVoc c_29917

Pinaceae  NALT 1648
    UN AgroVoc c_5886

Pineapples  NALT 8509
    UN AgroVoc c_13394

Pinellia  NALT 11673
    UN AgroVoc c_27309

Pineus  NALT 4086
    UN AgroVoc c_13396

Pinnipedia  NALT 22576
    UN AgroVoc c_5889

Pinopsida  NALT 870
    UN AgroVoc c_330346

Pinus caribaea  NALT 22493
    UN AgroVoc c_5893

Pinus cembra  NALT 12285
    UN AgroVoc c_5894

Pinus echinata  NALT 12220
    UN AgroVoc c_5897

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Pinus elliottii  NALT 7610
            UN AgroVoc c_5898

Pinus kesiya  NALT 16611
            UN AgroVoc c_5900

Pinus massoniana  NALT 25119
            UN AgroVoc c_26623

Pinus peuce  NALT 15640
            UN AgroVoc c_34640

Pinus strobus  NALT 35192
            UN AgroVoc c_5911

Piophilidae  NALT 33921
            UN AgroVoc c_30577

Pipe drainage  NALT 34493
            UN AgroVoc c_25597

Piper betle  NALT 16908
            UN AgroVoc c_5916

Piperales  NALT 25292
            UN AgroVoc c_5922
            Dbpedia Piperales
            Library of Congress sh85102398

Piperazines  NALT 14310
            UN AgroVoc c_5923
            Library of Congress sh85102399

Pipidae  NALT 10585
            UN AgroVoc c_49061

Pirimicarb  NALT 22173
            UN AgroVoc c_31468

Piroplasmea  NALT 11033
            UN AgroVoc c_5926

Pisces  NALT 841
            UN AgroVoc c_13411

  Includes taxonomic classification of Pisces; For common types SEE fish. (source: NALT)

Pissodes  NALT 30796
            UN AgroVoc c_5928
            Library of Congress sh85102463
Pistacia  NALT 8324
    UN AgroVoc c_5929

Pistia  NALT 11674
    UN AgroVoc c_13414

Pitcairn  NALT 19957
    UN AgroVoc c_5934

Pituitary gland  NALT 9900
    UN AgroVoc c_5939
    A small, unpaired gland situated in the sella turcica tissue. It is connected to the hypothalamus by a short stalk.
    (source: NALT)
    Pea-sized endocrine gland located at the base of the brain in the pituitary fossa. It produces and secretes hormones such as oxytocin and vasopressin, to regulate the activities of the hypothalamus. Source: NCI thesaurus link

Pituitary hormones  NALT 9904
    UN AgroVoc c_5940

Placental hormones  NALT 25668
    UN AgroVoc c_26860
    Library of Congress sh85102573
    Hormones produced in the placenta during pregnancy. (source: NALT)

Plagiorchiidae  NALT 33523
    UN AgroVoc c_31998

Plankton  NALT 11519
    UN AgroVoc c_5950
    Community of tiny aquatic plants and animals, and photosynthetic bacteria, that are either free-floating or suspended in the water, with little or no power of locomotion. (source: NALT)

Planococcus citri  NALT 26541
    UN AgroVoc c_30828

Plant anatomy  NALT 851
    UN AgroVoc c_5954

Plant breeding  NALT 5631
    UN AgroVoc c_5956

Plant collections  NALT 11815
    UN AgroVoc c_5957
    Library of Congress sh86004822

Plant communities  NALT 355
    UN AgroVoc c_32514
    The various plant populations (species) that live in the same habitat or environment, typically with one or more dominant species. (source: NALT)

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Plant competition  NALT 6550
   UN AgroVoc c_35264
   The simultaneous demand of two or more plant individuals or species for a necessary resource in their environment (e.g., nutrients, water, space). (source: NALT)

Plant cuticle  NALT 30920
   UN AgroVoc c_27982
   Library of Congress sh85102724

plant damage  NALT 1735
   UN AgroVoc c_49898

plant ecology  NALT 18785
   UN AgroVoc c_5963

Plant exudates  NALT 856
   UN AgroVoc c_330819

Plant fats  NALT 27555
   UN AgroVoc c_8167
   Use for those plant lipids that are naturally solid at room temperatures. (source: NALT)

plant growth substances  NALT 14070
   UN AgroVoc c_5968
   Use for chemical substances that promote, inhibit or act on plant growth and development; for endogenous, naturally-occurring plant growth regulators USE plant hormones. (source: NALT)

Plant morphology  NALT 8591
   UN AgroVoc c_13434
   The form, shape and 3D spatial relationships (structure) of plant parts and whole plants. Use for the 3D study of individual plants and plant parts; For the spatial characterization of plant communities USE vegetation structure. (source: NALT)

plant nutrition  NALT 17679
   UN AgroVoc c_16379

Plant physiology  NALT 1821
   UN AgroVoc c_25189

Plant products  NALT 848
   UN AgroVoc c_8171

Plant protection  NALT 30154
   UN AgroVoc c_5978

Plant protein  NALT 889
   UN AgroVoc c_8172

Plant strata  NALT 5587
   UN AgroVoc c_27989
The vertical structure of plant communities. (source: NALT)

**Plant tissues**  NALT 15840
  UN AgroVoc c_27990

**Plant water relations**  NALT 34627
  UN AgroVoc c_16147

**Plantae**  NALT 858
  UN AgroVoc c_330074
  Includes taxonomic classification of Plantae; For common types SEE plants. (source: NALT)

**Plantations**  NALT 5374
  UN AgroVoc c_5990

**plants**  NALT 874
  UN AgroVoc c_5993
  Includes common types of plants; For taxonomic classification SEE Plantae. (source: NALT)

**plasma cells**  NALT 23480
  UN AgroVoc c_331325
  Library of Congress sh85103058
  Specialized forms of antibody-producing B-lymphocytes. They synthesize and secrete immunoglobulin. They are found only in lymphoid organs and at sites of immune responses and normally do not circulate in the blood or lymph. (source: NALT)

**plasmids**  NALT 26356
  UN AgroVoc c_16014
  Library of Congress sh85103093
  Extrachromosomal, usually circular DNA molecules that are self-replicating and transferable from one organism to another. They are found in a variety of bacterial, archaeal, fungal, algal, and plant species. They are used in genetic engineering as cloning vectors. Use for extrachromosomal DNA as described in the definition; for plasmids being used as genetic vectors USE plasmid vectors. (source: NALT)

**Plasmin**  NALT 35507
  UN AgroVoc c_32691

**Plasminogen activator**  NALT 35493
  UN AgroVoc c_27621
  A family of serine proteases that catalyze the proteolytic conversion of plasminogen to plasmin. Source: NCI thesaurus link

**Plasmodium**  NALT 27428
  UN AgroVoc c_5995
  A genus of parasitic protozoans that includes the causative agent of malaria. Source: NCI thesaurus link

**Plasmodium gallinaceum**  NALT 14168
  UN AgroVoc c_13451
Plastids NALT 8249
  UN AgroVoc c_5999
  Any of various cytoplasmic, membrane-bound organelles of plant and algal cells and certain protists, that contain pigments, starch, oil, or protein. (source: NALT)

Platanus occidentalis NALT 7614
  UN AgroVoc c_34744

Platycephalus NALT 25473
  UN AgroVoc c_6006

Platycodon NALT 21587
  UN AgroVoc c_16282

Platycodon grandiflorum NALT 15656
  UN AgroVoc c_16283

Platygasteridae NALT 7901
  UN AgroVoc c_29926

Platyhelminthes NALT 60
  UN AgroVoc c_6007

Platynosomum NALT 33244
  UN AgroVoc c_31978

Platyplectoptera NALT 7489
  UN AgroVoc c_30120

Platystomatidae NALT 33923
  UN AgroVoc c_30578
  Library of Congress sh85103362

Plautia stali NALT 20103
  UN AgroVoc c_30695

Plecoglossus altivelis NALT 14279
  UN AgroVoc c_35425

Plecoptera NALT 22002
  UN AgroVoc c_6009
  Dbpedia Plecoptera

Plectranthus NALT 27853
  UN AgroVoc c_6010

Pleosphaerulina NALT 34411
  UN AgroVoc c_31755

Pleosporales NALT 12852
  UN AgroVoc c_31767

**Plesiomonas shigelloides** NALT 4712

UN AgroVoc c_35452

A species of facultatively anaerobic, Gram-negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile, oxidase, catalase, ornithine and lysine decarboxylase, and arginine dihydrolase positive, Voges-Proskauer test negative, reduces nitrate, but does not hydrolyze urea or liquefy gelatin. P. shigelloides is naturally found in fresh water and other marine environments as well as on their inhabitants and causes gastroenteritis in humans and other types of infections in immunocompromised individuals. Source: [NCI thesaurus link](#)

**Pleuronectidae** NALT 13579

UN AgroVoc c_45593

**Pleuronectiformes** NALT 18799

UN AgroVoc c_45561

**Pleurotus** NALT 5001

UN AgroVoc c_6017

**Plexus** NALT 19040

UN AgroVoc c_6019

**Plumbaginaceae** NALT 12243

UN AgroVoc c_26265

**Plutella xylostella** NALT 33046

UN AgroVoc c_30387

**Plutonium** NALT 3206

UN AgroVoc c_6032

**Pneumonitis** NALT 15192

UN AgroVoc c_16797

Inflammation of any part, segment or lobe, of the lung parenchyma. (source: NALT)

An inflammatory process affecting the lung parenchyma. It is a milder form of lung inflammation compared to pneumonia. Source: [NCI thesaurus link](#)

**Pneumovirus** NALT 18989

UN AgroVoc c_6034

A genus of enveloped, spherical viruses in the family Paramyxoviridae. The genome is composed of a linear single-strand of negative sense RNA. Pneumoviruses are found in human, cattle and rodents and cause disease of the respiratory tract in humans. Source: [NCI thesaurus link](#)

**Poa annua** NALT 9707

UN AgroVoc c_24679

**Poa compressa** NALT 21711

UN AgroVoc c_6036

**Podicipediformes** NALT 99

UN AgroVoc c_6041

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Podocarpaceae  NALT 31539
  UN AgroVoc e_6042
Podophyllum  NALT 16695
  UN AgroVoc e_35574
Poeciliidae  NALT 31280
  UN AgroVoc e_41871
    Dbpedia Poeciliidae
Poekilocerus  NALT 3038
  UN AgroVoc e_33397
Poisoning  NALT 767
  UN AgroVoc e_6051
    A condition or physical state produced by the ingestion, injection or inhalation of, or exposure to a deleterious agent. (source: NALT)
Polemoniaceae  NALT 27383
  UN AgroVoc e_26294
Polianthes  NALT 5052
  UN AgroVoc e_32220
    Dbpedia Polianthes
Pollen  NALT 8701
  UN AgroVoc e_6070
Pollination  NALT 7175
  UN AgroVoc e_6073
Pollinators  NALT 7174
  UN AgroVoc e_6074
pollutants  NALT 5844
  UN AgroVoc e_6076
    Any substance introduced into environment that has adverse effects on biological systems or organisms. Use for undesirable substances in the environment; For undesirable substances in products USE adulterated products. (source: NALT)
Polluted soil  NALT 10102
  UN AgroVoc e_34324
Pollution  NALT 5845
  UN AgroVoc e_6077
pollution control  NALT 5851
  UN AgroVoc e_6078
Polyamines  NALT 7737
  UN AgroVoc e_32517
Polychaeta  NALT 9669
  UN AgroVoc c_29110
  Dbpedia Polychaeta

Polychlorinated biphenyls  NALT 25342
  UN AgroVoc c_24066

polyclonal antibodies  NALT 10222
  UN AgroVoc c_36002

polycyclic aromatic hydrocarbons  NALT 12311
  UN AgroVoc c_331394

  Polycyclic aromatic hydrocarbons (PAH) are a large class of organic compounds containing two or more fused aromatic rings made up of carbon and hydrogen atoms. They have high melting and boiling-points, low vapour pressure, water solubility, and are highly lipophilic. PAH are produced during incomplete combustion or pyrolysis of organic matter, are found in cigarette smoke, motor vehicle exhaust, used motor lubricating oil, broiled meat, coal tar, crude oil, creosote, roofing tar, dyes, plastics, and pesticides. Some members of PAH class were shown to have carcinogenic, genotoxic, and immunotoxic properties, developmental toxicity and affect reproductive health. (NCI) Source: NCI thesaurus link

Polygalacturonase  NALT 35451
  UN AgroVoc c_29529

Polygonaceae  NALT 20184
  UN AgroVoc c_6084

Polymerization  NALT 24680
  UN AgroVoc c_25200

  The act or process of changing to a polymeric form. Polymerization consists of reactions that form a compound (polymer), usually of high molecular weight, by combination of simpler molecules (monomers). Source: NCI thesaurus link

Polymers  NALT 574
  UN AgroVoc c_32041

Polymnia  NALT 13363
  UN AgroVoc c_6086

Polymorphism  NALT 8592
  UN AgroVoc c_6088

  The occurrence of different forms of individuals in a single species. (source: NALT)
  The quality or state of being able to assume different forms. Source: NCI thesaurus link

Polyodontidae  NALT 2945
  UN AgroVoc c_38990

Polyols  NALT 6156
  UN AgroVoc c_6091

polypeptides  NALT 3938
  UN AgroVoc c_27801

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Polypagotarsonemus latus  NALT 19886
  UN AgroVoc c_27311

**polyplody**  NALT 6717
  UN AgroVoc c_6094
  Library of Congress sh85104712
  The chromosomal constitution of a cell containing multiples of the normal number of chromosomes; includes triploidy (symbol: 3N), tetraploidy (symbol: 4N), etc. (source: NALT)
  A numerical chromosomal abnormality characterized by the presence of more than two sets of chromosomes. Source: NCI thesaurus link

**Polyporus**  NALT 10882
  UN AgroVoc c_15819

**Polysaccharides**  NALT 6365
  UN AgroVoc c_6097

**Polystyrene**  NALT 25577
  UN AgroVoc c_28512

**Polyunsaturated fatty acids**  NALT 11686
  UN AgroVoc c_29254
  Unsaturated fatty acids containing more than one double bond between carbon atoms. (source: NALT)

**Polyuronides**  NALT 6366
  UN AgroVoc c_32029

**Pomacea**  NALT 8135
  UN AgroVoc c_32221

**Pome fruits**  NALT 11309
  UN AgroVoc c_25497

**Poncirus trifoliata**  NALT 26567
  UN AgroVoc c_6103

**population ecology**  NALT 13988
  UN AgroVoc c_37336
  The field of ecology dealing with the dynamics of populations within species, and the patterns in space and time of the interactions of these populations with environmental factors. (source: NALT)

**population structure**  NALT 5087
  UN AgroVoc c_6115

**Populus grandidentata**  NALT 17140
  UN AgroVoc c_26641

**Populus nigra**  NALT 17796
  UN AgroVoc c_23966
Porcine circovirus  NALT 26352
   UN AgroVoc c_23354
   Porcine circovirus is no longer valid in the 8th Report of the International Committee on the Taxonomy of Viruses. Use for indexing only when the specific type is not known. (source: NALT)

Poria  NALT 10884
   UN AgroVoc c_15817

Pork  NALT 15069
   UN AgroVoc c_6120
   The meat of the domestic pig. Source: NCI thesaurus link
   Reference: FDA UNII link
   Reference the ITIS link
   Reference the NIH NCBI link

Porphyra  NALT 15745
   UN AgroVoc c_24790

Porphyrs  NALT 25454
   UN AgroVoc c_6121
   Library of Congress sh85105022

Portulacaceae  NALT 21062
   UN AgroVoc c_6126
   Dbpedia Portulacaceae

Portunidae  NALT 21275
   UN AgroVoc c_47136

Postharvest diseases  NALT 31900
   UN AgroVoc c_37448

Postia  NALT 10885
   UN AgroVoc c_35512

postmortem changes  NALT 126
   UN AgroVoc c_29236

Pot culture  NALT 28719
   UN AgroVoc c_24287

pot marigold  NALT 13250
   UN AgroVoc c_15774
   Dbpedia pot marigold

Potamididae  NALT 24070
   UN AgroVoc c_47636
Potassium   NALT 6405
UN AgroVoc c_6139
An element with atomic symbol K, atomic number 19, and atomic weight 39.10. Source: NCI thesaurus link

Potassium chloride   NALT 25330
UN AgroVoc c_6140
A metal halide composed of potassium and chloride. Potassium maintains intracellular tonicity, is required for nerve conduction, cardiac, skeletal and smooth muscle contraction, production of energy, the synthesis of nucleic acids, maintenance of blood pressure and normal renal function. This agent has potential antihypertensive effects and when taken as a nutritional supplement may prevent hypokalemia. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Potexviruses   NALT 13023
UN AgroVoc c_32865

Potyviruses   NALT 12561
UN AgroVoc c_32866

poultry   NALT 17606
UN AgroVoc c_6145
Domesticated fowl grown for their meat and eggs. Source: NCI thesaurus link
Reference: FDA UNII link

poultry housing   NALT 9256
UN AgroVoc c_6146

poultry meat   NALT 24842
UN AgroVoc c_6147

Pouteria   NALT 21348
UN AgroVoc c_6150

Pouteria sapota   NALT 21351
UN AgroVoc c_37353

Poxviridae   NALT 14219
UN AgroVoc c_6153

Prairie soils   NALT 35695
UN AgroVoc c_37707

Praon   NALT 10778
UN AgroVoc c_29850
Predation  NALT 9009
UN AgroVoc c_6162

predators  NALT 17610
UN AgroVoc c_6163

Pregnancy  NALT 9487
UN AgroVoc c_6166

The state or condition of having a developing embryo or fetus in the body (uterus), after union of an ovum and spermatozoon, during the period from conception to birth. Source: NCI thesaurus link

Pregnancy diagnosis  NALT 9033
UN AgroVoc c_16017

Preharvest treatment  NALT 11359
UN AgroVoc c_24067

Premnotrypes  NALT 30797
UN AgroVoc c_30086

preplanting treatment  NALT 11360
UN AgroVoc c_6159

Prepupae  NALT 32906
UN AgroVoc c_36539

Preservatives  NALT 245
UN AgroVoc c_6172

Pressure  NALT 13659
UN AgroVoc c_6174

The force applied to a unit area of surface. Source: NCI thesaurus link

Prevotella  NALT 15386
UN AgroVoc c_35915

A genus of anaerobic, Gram negative, rod shaped bacterium assigned to the phylum Bacteroidetes and the family Prevotellaceae. Source: NCI thesaurus link

Prevotella ruminicola  NALT 15434
UN AgroVoc c_35916

A species of obligately anaerobic, Gram-negative, rod shaped bacteria assigned to the phylum Bacteroidetes. This species is nonmotile, non-spore forming, nonpigmented, rhamnose, sucrose, esculin hydrolysis, beta-N-acetyl-glucosaminidase, and alpha-fucosidase positive, but indole and glycine aminopeptidase negative. P. ruminicola is commonly found in the rumen and hindgut of cattle and sheep where it aids in digesting protein and carbohydrate food sources, as well as to prevent bovine rumen acidosis. Source: NCI thesaurus link

primary productivity  NALT 362
UN AgroVoc c_34328

The total quantity of fixed carbon (organic matter) per unit area over time produced by photosynthesis in an ecosystem. (source: NALT)
A group of genetic, infectious, or sporadic degenerative human and animal nervous system disorders associated with abnormal prions. In humans, these conditions generally feature dementia, ataxia, and a fatal outcome. Diseases in this category include Creutzfeldt-Jakob Syndrome; scrapie; bovine spongiform encephalopathy; chronic wasting disease of mule deer and elk; and transmissible mink encephalopathy. Pathologic features include a spongiform encephalopathy without evidence of inflammation. (source: NALT)
Processed cheese  NALT 24536

UN AgroVoc c_16501

Blends of several types of cheese mixed and melted together with added emulsifiers and preservatives, sometimes sold in individually wrapped thin slices. (source: NALT)

Processed foods  NALT 15553

UN AgroVoc c_28228

Dbpedia Processed foods

Foods that are manufactured, usually on a large scale, using any of a wide variety of processing techniques, most often with the goal of preserving food for market. (source: NALT)

Prochloraz  NALT 28451

UN AgroVoc c_31471

Procyonidae  NALT 5819

UN AgroVoc c_15609

progeny  NALT 803

UN AgroVoc c_16019

Progeny testing  NALT 5632

UN AgroVoc c_6216

Evaluation of the genotype of individuals by studying the progeny derived from it by controlled breeding. (source: NALT)

Progesterone  NALT 29281

UN AgroVoc c_6218

Produced in the corpus luteum and by the placenta, as an antagonist of estrogens. Promotes proliferation of uterine mucosa and the implantation of the blastocyst, prevents further follicular development. Source: NCI thesaurus link

Proline  NALT 7803

UN AgroVoc c_6223

A cyclic, nonessential amino acid (actually, an imino acid) in humans (synthesized from glutamic acid and other amino acids). Proline is a constituent of many proteins. Found in high concentrations in collagen, proline constitutes almost a third of the residues. Collagen is the main supportive protein of skin, tendons, bones, and connective tissue and promotes their health and healing. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link
propagation materials  NALT 12615
                  UN AgroVoc c_6224
Propanil  NALT 1434
            UN AgroVoc c_31477
Propham  NALT 22174
            UN AgroVoc c_31478
Propiconazole  NALT 28452
            UN AgroVoc c_36846
Propionates  NALT 21132
            UN AgroVoc c_6226
            Library of Congress sh85107534
Propionic acid  NALT 10329
            UN AgroVoc c_6227
Propionic acid bacteria  NALT 15087
            UN AgroVoc c_36201
Propoxur  NALT 22175
            UN AgroVoc c_31479
Propyzamide  NALT 7668
            UN AgroVoc c_31481
Prosopis nigra  NALT 6359
            UN AgroVoc c_6233
Prosopis pallida  NALT 1931
            UN AgroVoc c_6234
Prostaglandins  NALT 33723
            UN AgroVoc c_6236
            A group of compounds derived from unsaturated 20-carbon fatty acids, primarily arachidonic acid, via the cyclooxygenase pathway. They are extremely potent mediators of a diverse group of physiological processes. (source: NALT)
Prostephanus  NALT 18771
            UN AgroVoc c_6237
Prosthogonimidae  NALT 33524
            UN AgroVoc c_31999
Prostigmata  NALT 2058
            UN AgroVoc c_6239
Proteaceae  NALT 4098
            UN AgroVoc c_6240
Protected cultivation NALT 30145
UN AgroVoc c_6243

Protected species NALT 17425
UN AgroVoc c_6244

Protein content NALT 30273
UN AgroVoc c_6251

Protein metabolism NALT 7756
UN AgroVoc c_6254

protein requirements NALT 7762
UN AgroVoc c_13618

Proteinase inhibitors NALT 19023
UN AgroVoc c_36656

Proteinases NALT 13040
UN AgroVoc c_13621

proteins NALT 876
UN AgroVoc c_6259

Library of Congress sh85107666

Proteolysis NALT 32271
UN AgroVoc c_6261

Use for hydrolysis of a peptide bond in a protein; for the reordering of the molecular structure of proteins or nucleic acids which leads to loss of function USE denaturation; for the general break down of proteins in organisms or products USE protein degradation. (source: NALT)

Proteolysis typically involves hydrolysis of specific peptide bond(s) with formation of smaller polypeptides in a target protein during maturation or modification of functional activity. The process may be catalyzed by proteolytic enzymes, by acids, or by bases. Source: NCI thesaurus link

protoplasts NALT 30707
UN AgroVoc c_13629

Plant, fungal or bacterial cells that have had the cell wall removed, leaving the cytoplasm, nucleus and plasma membrane intact. (source: NALT)

Protostrongylidae NALT 9383
UN AgroVoc c_31112

Prototheca NALT 25310
UN AgroVoc c_16021

A genus of green algae in the family Chlorellaceae and phylum Chlorophyta. Source: NCI thesaurus link

Protozoa NALT 62
UN AgroVoc c_6268

Library of Congress sh85107814

 unicellular heterotrophic eukaryote in the kingdom protista. Source: NCI thesaurus link
Protozoal infections  NALT 7502
  UN AgroVoc c_6269

Protura  NALT 2279
  UN AgroVoc c_6271

Provenance  NALT 17390
  UN AgroVoc c_16022

  Geographic origin, such as of organisms, seed, nursery stock or inoculum. (source: NALT)
  Where something originated or was nurtured in its early existence. Source: NCI thesaurus link

Proventriculus  NALT 33562
  UN AgroVoc c_6273

  A portion of the digestive system of birds, insects and invertebrates lying between the crop and the gizzard. It is responsible for the secretion of gastric enzymes and moving food into the gizzard. Source: NCI thesaurus link

Provitamins  NALT 1541
  UN AgroVoc c_13634

proximate composition  NALT 24614
  UN AgroVoc c_32803

Prunes  NALT 34539
  UN AgroVoc c_13635

Pruning  NALT 32141
  UN AgroVoc c_6274

  Use for the cultural practice of removing plant parts by man: For the natural process of branches dying and breaking off USE natural pruning. (source: NALT)

Prunus  NALT 8219
  UN AgroVoc c_6276

Prunus americana  NALT 7616
  UN AgroVoc c_6277

Prunus amygdalus  NALT 6770
  UN AgroVoc c_13637

Prunus angustifolia  NALT 24814
  UN AgroVoc c_6279

Prunus armeniaca  NALT 8221
  UN AgroVoc c_6280

Prunus avium  NALT 23851
  UN AgroVoc c_6281

Prunus cerasifera  NALT 24779
  UN AgroVoc c_6282
Prunus cerasus  NALT 24770
          UN AgroVoc c_6283
Prunus persica  NALT 8230
          UN AgroVoc c_6289
Prunus serotina  NALT 17739
          UN AgroVoc c_6290
Psammotettix  NALT 26219
          UN AgroVoc c_34473
Pseudallescheria  NALT 6564
          UN AgroVoc c_31808
Pseudatomoscelis seriatus  NALT 29630
          UN AgroVoc c_37415
Pseudaulacaspis  NALT 33111
          UN AgroVoc c_6296
Pseudococcidae  NALT 10573
          UN AgroVoc c_30826
Pseudococcus comstocki  NALT 28441
          UN AgroVoc c_30829
Pseudomonas  NALT 15220
          UN AgroVoc c_6304
          A genus of gram-negative, motile, non-spore-forming, rod-shaped bacteria in the phylum Proteobacteria.
          Source: NCI thesaurus link
Pseudomonas aeruginosa  NALT 14599
          UN AgroVoc c_26646
          A species of facultatively anaerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This
          species is motile, non spore forming, produces pyorubin, pyocyanin and fluorescein and has minimal nutrient
          requirements. P. aeruginosa is an opportunistic pathogen found in soil, water and as a part of skin flora that can
          cause lethal infections in cystic fibrosis patients, burn victims and immunocompromised individuals. Source:
          NCI thesaurus link
          Reference: FDA UNII link
          Reference the NIH NCBI link
Pseudomonas cichorii  NALT 15268
          UN AgroVoc c_33826
Pseudomonas fluorescens  NALT 14720
          UN AgroVoc c_26647
          A species of obligatively aerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This species
          is motile, non spore forming, a source of fluorescein and mupirocin and is used in the production of yogurt. P.
          fluorescens can be pathogenic to immunocompromised individuals. Source: NCI thesaurus link

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**Pseudomonas putida**  NALT 12519  
UN AgroVoc c_26648  
A species of aerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile, non spore forming, oxidase positive and able to degrade styrene and many aromatic hydrocarbons found in fuel oil. P. putida is rarely pathogenic and one strain can convert morphine to hydromorphone. Source: [NCI thesaurus link](#)

**Pseudoroegneria spicata**  NALT 5690  
UN AgroVoc c_36438  

**Pseudoscorpiones**  NALT 11698  
UN AgroVoc c_30873  

**Pseudothepartus**  NALT 29071  
UN AgroVoc c_32333  

**Pseudotsuga menziesii**  NALT 34433  
UN AgroVoc c_6312  

**Psila rosea**  NALT 22689  
UN AgroVoc c_30580  

**Psilidae**  NALT 33924  
UN AgroVoc c_30579  

**Psilocybe**  NALT 5002  
UN AgroVoc c_31714  

**Psilopsida**  NALT 871  
UN AgroVoc c_331507  

**Psittaciformes**  NALT 101  
UN AgroVoc c_6318  

**Psocoptera**  NALT 15847  
UN AgroVoc c_6319  

**Psorophora**  NALT 30623  
UN AgroVoc c_30527  

**Psoroptidae**  NALT 13493  
UN AgroVoc c_30914  

**Psorospermum**  NALT 27312  
UN AgroVoc c_26653  

**Psychidae**  NALT 15531  
UN AgroVoc c_30296  

**Psychodidae**  NALT 33925  
UN AgroVoc c_29353
Psychology  NALT 16448
  UN AgroVoc c_26997
  The science dealing with the study of mental processes and behavior in man and animals. (source: NALT)
  The science dealing with the study of mental processes and behavior in man and animals. Source: NCI thesaurus link

Psyllidae  NALT 20766
  UN AgroVoc c_27320

Psylliodes  NALT 26072
  UN AgroVoc c_6330

Psylloidea  NALT 10657
  UN AgroVoc c_30830

Pteridium  NALT 32352
  UN AgroVoc c_6331
  Library of Congress sh85108546

Pteridium aquilinum  NALT 19124
  UN AgroVoc c_37462

Pteromalidae  NALT 9646
  UN AgroVoc c_29929

Pteropodidae  NALT 25202
  UN AgroVoc c_331481

Pterostichus  NALT 22105
  UN AgroVoc c_30015

Ptinidae  NALT 27843
  UN AgroVoc c_30122

public health  NALT 28292
  UN AgroVoc c_6349
  Branch of medicine concerned with the prevention and control of disease and disability, and the promotion of physical and mental health of the population on the international, national, state, or municipal level. (source: NALT)
  The science and practice of protecting and improving the health of a community, as by preventive medicine, health education, control of communicable diseases, application of sanitary measures, and monitoring of environmental hazards. Source: NCI thesaurus link

Pulicidae  NALT 28189
  UN AgroVoc c_30401

Pullets  NALT 24857
  UN AgroVoc c_13666
  Young female chickens. (source: NALT)
Pullulanase  NALT 6898
  UN AgroVoc c_34089

Pulp  NALT 23541
  UN AgroVoc c_6364

Pulvinaria  NALT 27409
  UN AgroVoc c_6366
  Library of Congress sh85109050

Pummelos  NALT 26519
  UN AgroVoc c_6367
  Library of Congress sh85109058

Pumpkins  NALT 30548
  UN AgroVoc c_6369
  Library of Congress sh85109079

Pupae  NALT 32909
  UN AgroVoc c_6374

Puppies  NALT 34302
  UN AgroVoc c_13678
  Library of Congress sh85109152
  Use for young domestic dogs; For young animals of other species such as seals, mice, rats, wolves, and coyotes
  USE pups. (source: NALT)

Purines  NALT 4115
  UN AgroVoc c_6379

Purshia tridentata  NALT 9887
  UN AgroVoc c_36436

Putrescine  NALT 17371
  UN AgroVoc c_33532

Pycnoporus  NALT 10886
  UN AgroVoc c_31731

Pyralidae  NALT 2181
  UN AgroVoc c_30299
  Dbpedia Pyralidae

Pyrantel  NALT 9934
  UN AgroVoc c_13690

Pyrausta  NALT 29819
  UN AgroVoc c_24796
Q fever  NALT 29764
   UN AgroVoc c_16461

   An acute infectious disease caused by Coxiella burnetti. It is characterized by a sudden onset of fever, headache, malaise, and weakness. In humans, it is commonly contracted by inhalation of infected dusts derived from infected domestic animals. (source: NALT)

1.7. Glossary 665
A bacterial infection caused by Coxiella burnetii. It is transmitted to humans by the inhalation of infected air particles or contact with fluids and feces of infected animals. Signs and symptoms include the abrupt onset of fever, headache, myalgias, and weakness. Source: NCI thesaurus link

**Quantitative genetics**  NALT 4055

UN AgroVoc c_34327

The area of genetics concerned with the inheritance of continuously-varying traits. Most practical improvement programs involve the application of quantitative genetics. (source: NALT)

The branch of genetics concerned with the inheritance of continuously-varying traits. Source: NCI thesaurus link

**Quarantine**  NALT 28788

UN AgroVoc c_6402

Library of Congress sh85109473

Place into enforced isolation. Source: NCI thesaurus link

**Quarg**  NALT 24537

UN AgroVoc c_32527

A soft, unripened, fresh cheese that is about the consistency of yogurt. (source: NALT)

**Quaternary ammonium compounds**  NALT 2521

UN AgroVoc c_32046

**Quercetin**  NALT 17360

UN AgroVoc c_35288

A polyphenolic flavonoid with potential chemopreventive activity. Quercetin, ubiquitous in plant food sources and a major bioflavonoid in the human diet, may produce antiproliferative effects resulting from the modulation of either EGFR or estrogen-receptor mediated signal transduction pathways. Although the mechanism of action of action is not fully known, the following effects have been described with this agent in vitro: decreased expression of mutant p53 protein and p21-ras oncogene, induction of cell cycle arrest at the G1 phase and inhibition of heat shock protein synthesis. This compound also demonstrates synergy and reversal of the multidrug resistance phenotype, when combined with chemotherapeutic drugs, in vitro. Quercetin also produces anti-inflammatory and anti-allergy effects mediated through the inhibition of the lipoxygenase and cyclooxygenase pathways, thereby preventing the production of pro-inflammatory mediators. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

**Quercus agrifolia**  NALT 21225

UN AgroVoc c_33835

**Quercus douglasii**  NALT 18230

UN AgroVoc c_33838

**Quercus dumosa**  NALT 21231

UN AgroVoc c_33839
A quinidine alkaloid isolated from the bark of the cinchona tree. Quinine has many mechanisms of action, including reduction of oxygen intake and carbohydrate metabolism; disruption of DNA replication and transcription via DNA intercalation; and reduction of the excitability of muscle fibers via alteration of calcium distribution. This agent also inhibits the drug efflux pump P-glycoprotein which is overexpressed in multi-drug resistant tumors and may improve the efficacy of some antineoplastic agents. (NCI04) Source: NCI thesaurus

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Quinoline alkaloids NALT 6461
UN AgroVoc c_32021

Quinolines NALT 1546
UN AgroVoc c_6411

Quinones NALT 10058
UN AgroVoc c_6412

Rafoxanide NALT 8957
UN AgroVoc c_13738

Rai NALT 19315
UN AgroVoc c_13742
Raiilietia  NALT 31829
    UN AgroVoc c_30895

raintree  NALT 6004
    UN AgroVoc c_13748

Raisins  NALT 34540
    UN AgroVoc c_16502
    Library of Congress sh85111232

Rajiformes  NALT 25593
    UN AgroVoc c_6440
    Dbpedia Rajiformes
    Library of Congress sh85111253

Rakkyo  NALT 6614
    UN AgroVoc c_13752

Ralstonia solanacearum  NALT 14905
    UN AgroVoc c_37076

Ramie  NALT 18384
    UN AgroVoc c_6442

Rana catesbeiana  NALT 20374
    UN AgroVoc c_49054

Rangeland soils  NALT 35696
    UN AgroVoc c_6447

Rangelands  NALT 28610
    UN AgroVoc c_6448
    Land on which the historic climax plant community is predominantly grasses, grasslike plants, forbs, or shrubs. Includes lands revegetated naturally or artificially when routine management of that vegetation is accomplished mainly through manipulation of grazing. Rangelands include natural grasslands, savannas, shrublands, most deserts, tundra, alpine communities, coastal marshes, and wet meadows. (source: NALT)

Ranidae  NALT 10586
    UN AgroVoc c_32557

Ranunculaceae  NALT 2972
    UN AgroVoc c_6451
    Dbpedia Ranunculaceae

Ranunculales  NALT 16687
    UN AgroVoc c_331076

Rapeseed  NALT 19456
    UN AgroVoc c_25499
Rapeseed meal  NALT 21919
    UN AgroVoc c_16027

Rapeseed oil  NALT 21921
    UN AgroVoc c_24939

Raphanus    NALT 19595
    UN AgroVoc c_6454

Raphia       NALT 12027
    UN AgroVoc c_6456

Rare earth elements  NALT 24072
    UN AgroVoc c_24889

Raspberries    NALT 19242
    UN AgroVoc c_6458

Ratooning    NALT 30187
    UN AgroVoc c_6462

Production of a subsequent crop that results from the regrowth from roots of the previous harvested crop, as in sugarcane, pineapple, and banana. (source: NALT)

Raw milk    NALT 31637
    UN AgroVoc c_24225

Fresh, unprocessed milk as it comes from a cow, goat or other mammal. (source: NALT)

Receptors   NALT 4370
    UN AgroVoc c_49900

Recilia      NALT 26220
    UN AgroVoc c_30733

Reclaimed soil   NALT 10103
    UN AgroVoc c_6473

Recombinant antigens   NALT 10365
    UN AgroVoc c_36921

Recombinant DNA    NALT 26952
    UN AgroVoc c_27594
    Library of Congress sh85111851

Biologically active DNA which has been formed by the in vitro joining of segments of DNA from different sources usually for the purpose of genetic manipulation. Source: NCI thesaurus link

Recommended dietary allowances   NALT 33449
    UN AgroVoc c_34090

The dietary intake level that is sufficient to meet the nutrient requirements of nearly all individuals in the group. (source: NALT)
Reconstituted foods  NALT 445
UN AgroVoc c_28525
Foods which were concentrated or condensed and have been brought to their original strength by adding water. (source: NALT)

Reconstituted milk  NALT 31639
UN AgroVoc c_16503
Reconstituted milk is the product obtained by the addition of potable water to dried milk. (source: NALT)

Rectum  NALT 10589
UN AgroVoc c_13772
The terminal portion of the gastrointestinal tract, extending from the rectosigmoid junction to the anal canal. Source: NCI thesaurus link

Red currants  NALT 30849
UN AgroVoc c_6479
Library of Congress sh85112050

Reducing sugars  NALT 992
UN AgroVoc c_32034

Reduviidae  NALT 1990
UN AgroVoc c_30703
Dbpedia Reduviidae

Refined sugar  NALT 20095
UN AgroVoc c_36410

Reflectance  NALT 5996
UN AgroVoc c_28538

Regeneration  NALT 17441
UN AgroVoc c_6486
The renewal or regrowth of an anatomical part, such as one which has been injured or completely lost. (source: NALT)
Reproduction or reconstitution of a lost or injured part. (NCI) Source: NCI thesaurus link

Reindeer  NALT 31942
UN AgroVoc c_6494

Relaxin  NALT 29282
UN AgroVoc c_24073
Library of Congress sh85112505

Relay cropping  NALT 30188
UN AgroVoc c_25265
The seeding of one crop into another standing crop, e.g., winter wheat into standing soybeans. A practice of starting one crop in another. (source: NALT)
Renin  NALT 8877
    UN AgroVoc c_36924
Renin (406 aa, ~45 kDa) is encoded by the human REN gene. This protein plays a role in activation of angiotensin. Source: NCI thesaurus link

Rennet  NALT 9510
    UN AgroVoc c_24075
rennet substitutes  NALT 26153
    UN AgroVoc c_28578

Reoviridae  NALT 11456
    UN AgroVoc c_6504

Repellents  NALT 249
    UN AgroVoc c_6506
reproduction  NALT 12898
    UN AgroVoc c_6507
The generation of offspring by living organisms. Source: NCI thesaurus link

Reproductive behaviour  NALT 9010
    UN AgroVoc c_37902

Reproductive disorders  NALT 346
    UN AgroVoc c_6508

reptiles  NALT 906
    UN AgroVoc c_6511
Includes common types of reptiles; For taxonomic classifiation SEE Reptilia. (source: NALT)

Resedaceae  NALT 22026
    UN AgroVoc c_26275

Reserpine  NALT 10390
    UN AgroVoc c_13877
An alkaloid, derived from the roots of Rauwolfia serpentine and vomitoria, and an adrenergic uptake inhibitor with antihypertensive effects. Reserpine is lipid soluble and can penetrate blood-brain barrier. This agent binds and inhibits catecholamine pump on the storage vesicles in central and peripheral adrenergic neurons, thereby inhibiting the uptake of norepinephrine, dopamine serotonin into presynaptic storage vesicles. This results in catecholamines and serotonin lingering in the cytoplasm where they are destroyed by intraneuronal monoamine oxidase, thereby causing the depletion of catecholamine and serotonin stores in central and peripheral nerve terminals. Depletion results in a lack of active transmitter discharge from nerve endings upon nerve depolarization, and consequently leads to a decreased heart rate and decreased arterial blood pressure as well as sedative effects. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

residual effects  NALT 1022
    UN AgroVoc c_24408
resin canals  NALT 21743
    UN AgroVoc c_28101
    Tubular intercellular spaces lined with resin-secreting cells, common in the wood, bark, and leaves of many gymnosperms and some angiosperms. (source: NALT)

Resorcinols  NALT 6497
    UN AgroVoc c_35911
Respiratory system  NALT 5853
    UN AgroVoc c_6531
    The organs involved in the exchange of carbon dioxide and oxygen including the trachea, bronchi, bronchial tubes, lungs, and alveoli. Source: NCI thesaurus link

Respiratory system agents  NALT 10556
    UN AgroVoc c_6532
Resseliella  NALT 23251
    UN AgroVoc c_6533
Restraint of animals  NALT 9072
    UN AgroVoc c_25751
Reticulitermes flavipes  NALT 35184
    UN AgroVoc c_30635
Retroviridae  NALT 6973
    UN AgroVoc c_6541
    A family of viruses that possess RNA-dependent DNA polymerases (reverse transcriptases) and contain two identical molecules of positive sense, single-stranded RNA of high molecular weight. This RNA serves as a template for the synthesis of a complementary DNA, which may be integrated into the host DNA. Virions are enveloped. Source: NCI thesaurus link

Rhabditidae  NALT 20844
    UN AgroVoc c_31115
    Dbpedia Rhabditidae
Rhabdoviridae  NALT 31490
    UN AgroVoc c_6546
Rhagoletis pomonella  NALT 11286
    UN AgroVoc c_30619
Rhamnaceae  NALT 7003
    UN AgroVoc c_6548
    Dbpedia Rhamnaceae
Rhamnose  NALT 6222  
UN AgroVoc c_6550

rheas  NALT 7159  
UN AgroVoc c_6551

Rheiformes  NALT 102  
UN AgroVoc c_6552

Rhinocyllus  NALT 30798  
UN AgroVoc c_30087  
Library of Congress sh85113699

Rhinotermitidae  NALT 28984  
UN AgroVoc c_30631  
Library of Congress sh92002962

Rhipicephalus sanguineus  NALT 20070  
UN AgroVoc c_30965

Rhizobiaceae  NALT 5532  
UN AgroVoc c_6561

A taxonomic family of parasitic, soil borne bacterium in the phylum Proteobacteria that includes the genera Amorphomona, Agrobacterium and Rhizobium, among others. Source: NCI thesaurus link

Rhizobium  NALT 6723  
UN AgroVoc c_6563

A genus of aerobic, Gram negative, rod and cocci shaped bacterium assigned to the phylum Proteobacteria and the family Rhizobiaceae. Source: NCI thesaurus link

Rhizobium leguminosarum  NALT 14726  
UN AgroVoc c_27352

Rhizoctonia  NALT 5228  
UN AgroVoc c_6564

Rhizoglyphus  NALT 2107  
UN AgroVoc c_30909

Rhizophagidae  NALT 27844  
UN AgroVoc c_30123

Rhizophoraceae  NALT 20166  
UN AgroVoc c_6567

Rhizophyllidaceae  NALT 30421  
UN AgroVoc c_49781

Rhodes grass  NALT 25350  
UN AgroVoc c_13907
Rhodococcus (homoptera)  NALT 27411
UN AgroVoc c_34501

Rhodococcus equi  NALT 14750
UN AgroVoc c_24505

A species of aerobic, Gram positive, rod and cocci shaped bacteria assigned to the phylum Actinobacteria. This species has a pink color, is urease positive and grows on glycerol. R. equi is a lung pathogen that can infect grazing animals and immunocompromised people. Source: NCI thesaurus link

Rhodococcus fascians  NALT 15285
UN AgroVoc c_34499

Rhododendron  NALT 14297
UN AgroVoc c_6571
Dbpedia Rhododendron

Rhodomelaceae  NALT 2039
UN AgroVoc c_49787

Rhodophyceae  NALT 15747
UN AgroVoc c_6572

Rhodopseudomonas  NALT 19208
UN AgroVoc c_16029

Rhodospirillum rubrum  NALT 33248
UN AgroVoc c_27600

Rhopalidae  NALT 12157
UN AgroVoc c_30707

Rhopalomyia  NALT 23252
UN AgroVoc c_30465

Rhopalosiphum  NALT 10761
UN AgroVoc c_6577

Rhopalosiphum maidis  NALT 10821
UN AgroVoc c_30785

Rhopalosiphum padi  NALT 17591
UN AgroVoc c_30786

Rhus  NALT 8325
UN AgroVoc c_6578

Rhynchophorus  NALT 30801
UN AgroVoc c_6582
Library of Congress sh85113821
Rhytismatales  NALT 12855
  UN AgroVoc c_31678

Rhyzobius  NALT 27459
  UN AgroVoc c_26663

Rhyzopertha  NALT 18772
  UN AgroVoc c_6584

Ribes  NALT 30850
  UN AgroVoc c_6585

Ribes nigrum  NALT 17750
  UN AgroVoc c_6589

Ribonucleic acid  NALT 10538
  UN AgroVoc c_13915
  Single-stranded long chain of nucleotides containing ribose. It is the end product of DNA transcription by the
  enzyme RNA polymerase. It is essential in protein synthesis. Source: NCI thesaurus link

Ribonucleosides  NALT 4143
  UN AgroVoc c_6594

Ribose  NALT 6223
  UN AgroVoc c_6595

Ribosomal RNA  NALT 34168
  UN AgroVoc c_6596
  An RNA molecule that does not contain protein-coding sequence information and constitutes the majority of
  the cellular RNA (~80%). This nucleic acid associates with multiple proteins to form ribosomes, which are the
  organelles that drive mRNA-directed protein synthesis. Source: NCI thesaurus link

Rice soil  NALT 10101
  UN AgroVoc c_34892

Ricinus communis  NALT 22894
  UN AgroVoc c_6600

Rickets  NALT 18511
  UN AgroVoc c_6601
  A condition caused by deficiency of vitamin D, especially in infancy and childhood, with disturbance of normal
  ossification. (source: NALT)
  Bone softening and weakening usually caused by deficiency or impaired metabolism of vitamin D. Deficiency
  of calcium, magnesium, or phosphorus may also cause rickets. It predominantly affects children who suffer
  from severe malnutrition. It manifests with bone pain, fractures, muscle weakness, and skeletal deformities.
  Source: NCI thesaurus link

Rickettsiales  NALT 4557
  UN AgroVoc c_6602

1.7. Glossary
Ridge tillage  NALT 28632
UN AgroVoc c_25818

Rift Valley fever virus  NALT 16553
UN AgroVoc c_16463
A mosquito-borne species of the Phlebovirus genus and member of the sandfly fever group viruses found in
eastern, central, and southern Africa, producing massive hepatitis, abortion, and death in sheep, goats, cattle,
and other animals. It also has caused disease in humans. (source: NALT)

Rigidoporus  NALT 10887
UN AgroVoc c_31732

Rinderpest  NALT 9131
UN AgroVoc c_6605
A viral disease of cloven-hoofed animals caused by Morbillivirus (Rinderpest virus). It may be acute, subacute,
or chronic with the major lesions characterized by inflammation and ulceration of the entire digestive tract.
(source: NALT)

Ringworm  NALT 32476
UN AgroVoc c_6607

Riptortus  NALT 7296
UN AgroVoc c_30655

Riptortus clavatus  NALT 16153
UN AgroVoc c_30656

Rivers  NALT 21953
UN AgroVoc c_6617

Roadside soil  NALT 10105
UN AgroVoc c_6622

Roasting  NALT 28869
UN AgroVoc c_6623

Robinia  NALT 1940
UN AgroVoc c_6624

Robinia pseudoacacia  NALT 17777
UN AgroVoc c_6625

Rock phosphate  NALT 10644
UN AgroVoc c_6630

Rodentia  NALT 555
UN AgroVoc c_6633

Rodenticides  NALT 828
UN AgroVoc c_6632
Pesticides that are used for controlling mice and other rodents. (source: NALT)
The female germ cell (gamete). Use for the female germ cell; for eggs as embryonic structures USE eggs; for the group of eggs (ova) laid by a female in a single egg-laying event USE egg masses; for eggs as food USE egg products or one of its narrower terms. (source: NALT)

A species of enveloped, spherical viruses with a capsid with T=4 icosahedral symmetry in the Togaviridae family and Alphavirus genus. The genome is composed of monopartite, single-stranded, positive-sense RNA. Ross river viruses are found in both vertebrates and invertebrates, and cause Ross River Fever in humans. Ross river viruses are transmitted via the bite of infected mosquitoes. Source: NCI thesaurus link

A genus of double stranded RNA viruses that carry 11 unique double helix molecules of RNA that encode one or two proteins each. The RNA is surrounded by a three-layered icosahedral protein capsid. Viral particles are up to 76.5 nm in diameter and are not enveloped. Source: NCI thesaurus link

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A class of rotifers that includes about 20,000 species. They are small, aquatic animals that feed on plankton and detritus.

1.7. Glossary
Group of alpharetroviruses (Alpharetrovirus) producing sarcoma and other tumors in chickens and other fowl, and also in pigeons, ducks, and rats. (source: NALT)

A species of single-stranded, reverse-transcribing RNA retrovirus of the genus alpharetrovirus and the family retroviridae. It is the first oncovirus described in the literature and was found to cause sarcoma in chickens. Source: NCI thesaurus link

Royal jelly  NALT 18321

UN AgroVoc c_26817

A honey bee secretion that is used in the nutrition of larvae and to stimulate development of adult queens. It contains B-complex vitamins such as pantothenic acid (vitamin B5) and vitamin B6 (pyridoxine), amino acids, minerals, enzymes, monosaccharides and 10-hydroxy-2-decenoic acid (10-HDA). Royal jelly has been shown to have antibacterial and immunomodulatory activities. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Look-up using CAS number link

Rubiaceae  NALT 4215

UN AgroVoc c_6680

Dbpedia Rubiaceae

Rubidium  NALT 6406

UN AgroVoc c_24409

An element with atomic symbol Rb, atomic number 37, and atomic weight 85.468. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Rubus allegheniensis  NALT 6527

UN AgroVoc c_6683

Rubus arcticus  NALT 11918

UN AgroVoc c_33407

Rubus chamaemorus  NALT 27259

UN AgroVoc c_6685

Rubus loganobaccus  NALT 19037

UN AgroVoc c_6688

Rubus occidentalis  NALT 17799

UN AgroVoc c_6689

Rudbeckia  NALT 13373

UN AgroVoc c_34735
Rumen bacteria  NALT 15109
    UN AgroVoc c_34095

rumen fluid  NALT 33546
    UN AgroVoc c_34895

Rumex obtusifolius  NALT 17672
    UN AgroVoc c_36076

ruminants  NALT 9888
    UN AgroVoc c_6695

Mammals that have four stomachs and even-toed hooves. (source: NALT)

Rumination  NALT 33550
    UN AgroVoc c_6696

Ruminococcus  NALT 26996
    UN AgroVoc c_13995

A genus of anaerobic, Gram positive, cocci shaped bacterium assigned to the phylum Firmicutes and the family Ruminococcaceae. Source: NCI thesaurus link

Runoff  NALT 5471
    UN AgroVoc c_35388

The part of precipitation or irrigation water on land that has limited interaction with the landscape and ultimately reaches surface water, such as streams, ponds, impoundments, reservoirs, oceans, rivers, etc. (source: NALT)

Russula  NALT 5003
    UN AgroVoc c_26665

Ruta graveolens  NALT 28223
    UN AgroVoc c_6712

Rutabagas  NALT 19453
    UN AgroVoc c_6713

Rutaceae  NALT 3001
    UN AgroVoc c_6714

Rutilus  NALT 31273
    UN AgroVoc c_6715
    Library of Congress sh87004632

Sabal  NALT 12029
    UN AgroVoc c_33408

Saccharin  NALT 12621
    UN AgroVoc c_14018

1.7. Glossary
**Saccharomyces cerevisiae** NALT 15570  
UN AgroVoc c_6724  
A species of unicellular fungus used as a research subject and in baking and beer brewing. Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the ITIS link  
Reference the NIH NCBI link  
Look-up using CAS number link

**Saccharose** NALT 33974  
UN AgroVoc c_14020

**Saccharum barberi** NALT 15819  
UN AgroVoc c_6726

**Saccharum sinense** NALT 25079  
UN AgroVoc c_6728

**Sacchiphantes** NALT 4087  
UN AgroVoc c_14021

**safflower oil** NALT 28889  
UN AgroVoc c_25502  
An oil derived from the seed of the safflower, and chemically similar to sunflower oil. Two principal varieties differ in the type of fatty acids predominating the oil: those which are high in oleic acid, and those which are high in linoleic acid. The main uses of safflower oil are in cooking oils and in production of margarine and salad dressing. Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the ITIS link  
Reference the NIH NCBI link  
Reference USDA PLANTS link  
Look-up using CAS number link

**Saffron** NALT 30090  
UN AgroVoc c_14023

**Sagittaria** NALT 6395  
UN AgroVoc c_26666  
Dbpedia Sagittaria

**Sago** NALT 31006  
UN AgroVoc c_15518  
A powdered starch derived from sago palms (and other tropical palm species) and used in foods and as textile stiffening. Sago starch is similar to tapioca. (source: NALT)
Sahel  NALT 20512
UN AgroVoc c_6734

A dryland belt that stretches across Africa and is the transition zone between the Sahara Desert to the north and tropical forests to the south. (source: NALT)

Saintpaulia ionantha  NALT 4908
UN AgroVoc c_33861

Saissetia  NALT 27412
UN AgroVoc c_6738
Library of Congress sh85116642

Saissetia oleae  NALT 17808
UN AgroVoc c_30807

Salacca  NALT 12030
UN AgroVoc c_6740

Salad dressings  NALT 478
UN AgroVoc c_14029

Salads  NALT 479
UN AgroVoc c_11358

Salicornia  NALT 24737
UN AgroVoc c_14034
Dbpedia Salicornia
Library of Congress sh85116751

Salicylic acids  NALT 13133
UN AgroVoc c_24893

Saline sodic soils  NALT 24691
UN AgroVoc c_6750

Saline soils  NALT 24692
UN AgroVoc c_6748

A nonsodic soil containing sufficient soluble salt to adversely affect the growth of most crop plants with a lower limit of electrical conductivity of the saturated extract (ECe) being 4 deciSiemens / meter (dS/m), which is equivalent to a value of 4 mmhos/cm. (source: NALT)

Saline water  NALT 19128
UN AgroVoc c_16376

Salinomycin  NALT 10515
UN AgroVoc c_16200

Saliva  NALT 18322
UN AgroVoc c_6752
The watery fluid in the mouth made by the salivary glands. Saliva moistens food to help digestion and it helps protect the mouth against infections. Source: NCI thesaurus link

**Salivary glands**  NALT 2899
  UN AgroVoc c_6753

**Salix fragilis**  NALT 29786
  UN AgroVoc c_24368

**Salix nigra**  NALT 17829
  UN AgroVoc c_24369

**Salix viminalis**  NALT 16032
  UN AgroVoc c_24371

**Salmo salar**  NALT 13644
  UN AgroVoc c_14037

**Salmo trutta**  NALT 20098
  UN AgroVoc c_24702

**Salmonella choleraesuis**  NALT 14679
  UN AgroVoc c_36077

**Salmonella enteritidis**  NALT 14710
  UN AgroVoc c_33411

**Salmonella typhimurium**  NALT 15011
  UN AgroVoc c_32238

**Salmonellosis**  NALT 15176
  UN AgroVoc c_6758
  Infections with bacteria of the genus Salmonella. (source: NALT)

**Salmonidae**  NALT 29057
  UN AgroVoc c_39270
  Dbpedia Salmonidae
  Library of Congress sh85116835

**Salsola**  NALT 24738
  UN AgroVoc c_6760
  Library of Congress sh88023080

**Salt tolerance**  NALT 145
  UN AgroVoc c_24078
  The ability of an organism to resist the adverse effects of excessive soluble salts in an environment. (source: NALT)

**Salting**  NALT 19844
  UN AgroVoc c_14061
  To treat, preserve or season with common salt. (source: NALT)
Salvadoraceae  NALT 23329
   UN AgroVoc c_26286
Salvelinus alpinus  NALT 11920
   UN AgroVoc c_32239
Salvelinus confluentus  NALT 20367
   UN AgroVoc c_39304
Salvelinus fontinalis  NALT 20047
   UN AgroVoc c_35428
Salvia miltiorrhiza  NALT 25125
   UN AgroVoc c_33866
Salvinia molesta  NALT 11471
   UN AgroVoc c_33412
Sambucus  NALT 22042
   UN AgroVoc c_14065
Samia cynthia  NALT 31210
   UN AgroVoc c_34689
Samson fish  NALT 22134
   UN AgroVoc c_14066
Santalaceae  NALT 20258
   UN AgroVoc c_23972
   Dbpedia Santalaceae
Santalales  NALT 15613
   UN AgroVoc c_6786
   Dbpedia Santalales
Santolina  NALT 13374
   UN AgroVoc c_33413
Sap  NALT 857
   UN AgroVoc c_6791
Saperda  NALT 23808
   UN AgroVoc c_30020
Sapindaceae  NALT 18024
   UN AgroVoc c_6792
   Dbpedia Sapindaceae
Sapindales  NALT 2277
   UN AgroVoc c_6793
   Dbpedia Sapindales

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Saponaria officinalis  NALT 18881
     UN AgroVoc c_24373
Saponification  NALT 24683
     UN AgroVoc c_28548
Saponification number  NALT 274
     UN AgroVoc c_32541
Sapotaceae  NALT 12061
     UN AgroVoc c_6796
     Dbpedia Sapotaceae
Saprolegiales  NALT 2583
     UN AgroVoc c_31680
Sarcina  NALT 26997
     UN AgroVoc c_6802
Sarcocystis  NALT 27429
     UN AgroVoc c_6803
Sarcoma  NALT 713
     UN AgroVoc c_6805
Sarcomastigophora  NALT 8006
     UN AgroVoc c_35429
Sarcophaga  NALT 16524
     UN AgroVoc c_30590
Sarcophaga peregrina  NALT 18395
     UN AgroVoc c_30591
Sarcophagidae  NALT 17889
     UN AgroVoc c_6806
     Library of Congress sh85117515
Sarcoptidae  NALT 13495
     UN AgroVoc c_30923
Sardina pilchardus  NALT 27295
     UN AgroVoc c_37047
Sardinella  NALT 27300
     UN AgroVoc c_6811
Sardines  NALT 27299
     UN AgroVoc c_6813
Sardinops  NALT 27301
     UN AgroVoc c_6815
Satiety  NALT 33552
  UN AgroVoc c_14094
Satsumas  NALT 26572
  UN AgroVoc c_6819
Saturated fatty acids  NALT 17398
  UN AgroVoc c_29238
Saturniidae  NALT 3176
  UN AgroVoc c_30330
  Dbpedia Saturniidae
Sauces  NALT 448
  UN AgroVoc c_6821
Saururaceae  NALT 8797
  UN AgroVoc c_26262
  Dbpedia Saururaceae
Sausages  NALT 449
  UN AgroVoc c_6824
Saxifragaceae  NALT 9834
  UN AgroVoc c_6835
Scabiosa  NALT 33902
  UN AgroVoc c_27362
  Library of Congress sh85117893
Scaphoideus  NALT 26221
  UN AgroVoc c_27364
Scaphytopius  NALT 26222
  UN AgroVoc c_30735
scapula  NALT 18546
  UN AgroVoc c_14111
  The flat triangle-shaped bone that connects the humerus with the clavicle in the back of the shoulder. Source: NCI thesaurus link
Scarabaeidae  NALT 4328
  UN AgroVoc c_30124
  Dbpedia Scarabaeidae
Scathophagidae  NALT 33927
  UN AgroVoc c_30592
Scenedesmaceae  NALT 3190
  UN AgroVoc c_330316

1.7. Glossary
Schefflera  NALT 11746
      UN AgroVoc c_33871
Schinus  NALT 8327
      UN AgroVoc c_33415
Schinus terebinthifolius  NALT 19647
      UN AgroVoc c_33417
Schistocerca  NALT 3041
      UN AgroVoc c_6846
Schistocerca americana  NALT 7578
      UN AgroVoc c_31930
Schistosomatidae  NALT 33527
      UN AgroVoc c_32000
Schizachyrium scoparium  NALT 8749
      UN AgroVoc c_34649
Schizaphis  NALT 10762
      UN AgroVoc c_6848
Schizolobium  NALT 20964
      UN AgroVoc c_6849
Schizophyllum  NALT 10888
      UN AgroVoc c_31733
Sciaenidae  NALT 11146
      UN AgroVoc c_43049
      Dbpedia Sciaenidae
Sciaridae  NALT 19213
      UN AgroVoc c_30593
Scindapsus  NALT 11676
      UN AgroVoc c_23976
Sciomyzidae  NALT 33928
      UN AgroVoc c_30596
      Dbpedia Sciomyzidae
Scirpophaga  NALT 29822
      UN AgroVoc c_6858
Scirpus  NALT 31221
      UN AgroVoc c_14122
      Library of Congress sh85118719
Scirrhia  NALT 34414
  UN AgroVoc c_31757

Scirtothrips citri  NALT 26565
  UN AgroVoc c_30393

Sclerophoma  NALT 27673
  UN AgroVoc c_31606

Scleroproteins  NALT 27896
  UN AgroVoc c_32043

Scolytids  NALT 7490
  UN AgroVoc c_14123
  Library of Congress sh85118757

Scolytus  NALT 35584
  UN AgroVoc c_6867

Scomber scombrus  NALT 13615
  UN AgroVoc c_37050

Scopolamine  NALT 31805
  UN AgroVoc c_35365

A tropane alkaloid derived from plants of the nightshade family (Solanaceae), specifically Hyoscyamus niger and Atropa belladonna, with anticholinergic, antiemetic and antivertigo properties. Structurally similar to acetylcholine, scopolamine antagonizes acetylcholine activity mediated by muscarinic receptors located on structures innervated by postganglionic cholinergic nerves as well as on smooth muscles that respond to acetylcholine but lack cholinergic innervation. The agent is used to cause mydriasis, cycloplegia, to control the secretion of saliva and gastric acid, to slow gut motility, and prevent vomiting. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Scorch  NALT 951
  UN AgroVoc c_24896

Scorpaeniformes  NALT 9823
  UN AgroVoc c_45160
  Dbpedia Scorpaeniformes

Scorpion flies  NALT 17665
  UN AgroVoc c_14124

Scorpiones  NALT 11699
  UN AgroVoc c_6877
Scorzonera  NALT 13377
  UN AgroVoc c_6878
  Dbpedia Scorzonera
  Library of Congress sh85118796
Scrophulariaceae  NALT 4938
  UN AgroVoc c_6884
Scrubland soils  NALT 35699
  UN AgroVoc c_6886
Scymnus  NALT 27461
  UN AgroVoc c_35433
Scyphozoa  NALT 27344
  UN AgroVoc c_49213
  Dbpedia Scyphozoa
  Library of Congress sh85119191
Seafoods  NALT 1573
  UN AgroVoc c_6905
  Edible aquatic (freshwater or marine) organisms such as fish, shellfish, or seaweed that is used as food. (source: NALT)
Seasonal development  NALT 17442
  UN AgroVoc c_6909
seasons  NALT 14062
  UN AgroVoc c_6911
Seaweed culture  NALT 11522
  UN AgroVoc c_6914
  The cultivation of macroalgae or seaweeds for food or other purposes. (source: NALT)
Sebum  NALT 18323
  UN AgroVoc c_6917
  A thick, oily substance produced by the sebaceous glands located in the dermis. Source: NCI thesaurus link
Sechium  NALT 30571
  UN AgroVoc c_33125
  Library of Congress sh85119407
Sechium edule  NALT 24490
  UN AgroVoc c_6920
Secondary metabolites  NALT 17502
  UN AgroVoc c_34335
  Chemicals synthesized by organisms that do not appear to have a direct role in the organism’s growth. Many are used in foods, pharmaceuticals, and other industrial applications. (source: NALT)
Secretion  NALT 17176
UN AgroVoc c_6922

Sedum  NALT 29869
UN AgroVoc c_14164
Library of Congress sh85119520

seed dispersal  NALT 34074
UN AgroVoc c_6932

Seed dormancy  NALT 4929
UN AgroVoc c_14168

Seed germination  NALT 4930
UN AgroVoc c_36513

Seed mixtures  NALT 30131
UN AgroVoc c_6935

Seed quality  NALT 30155
UN AgroVoc c_14172

Seedbeds  NALT 30148
UN AgroVoc c_6942

Seedlings  NALT 32911
UN AgroVoc c_6945

Seeds  NALT 20440
UN AgroVoc c_6946

A plant structure that develops from an ovule and has as parts an embryo enclosed in a seed coat. Use for the botanical seed of a plant; For seed sold at market and intended to be used for planting USE planting seed. (source: NALT)

Seiridium  NALT 27674
UN AgroVoc c_24704

Seiridium cardinale  NALT 29505
UN AgroVoc c_26676

Selenium  NALT 13315
UN AgroVoc c_6953

A nonmetallic chemical element found in trace amounts in human body. Selenium primarily occurs in vivo as selenocompounds, mostly selenoproteins such as glutathione peroxidase and thioredoxin reductase (enzymes responsible for detoxification). Alone or in combination with Vitamin E, selenocompounds act as antioxidants. These agents scavenge free radicals; prevent blood clots by inhibiting platelet aggregation; strengthen the immune system; and have been shown, in some instances, to inhibit chromosomal damage and mutations. Exhibiting chemopreventive activity, selenocompounds also inhibit the induction of protein kinase C. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link

1.7. Glossary
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Self pollination**  NALT 26793
  UN AgroVoc c_6958

**Selfing**  NALT 30221
  UN AgroVoc c_6959

**Semanotus**  NALT 23809
  UN AgroVoc c_30021

**semiarid soils**  NALT 26887
  UN AgroVoc c_14192

**Semiarid zones**  NALT 26894
  UN AgroVoc c_6963
  Regions characterized by low and erratic rainfall, periods of drought, and where the prevalent vegetation is scattered short grasses, bunchgrasses or shrubs. (source: NALT)

**Semiochemicals**  NALT 6548
  UN AgroVoc c_32370

**Semliki Forest virus**  NALT 6993
  UN AgroVoc c_35375

**Semolina**  NALT 34928
  UN AgroVoc c_14196

**Sempervivum**  NALT 29870
  UN AgroVoc c_14197
  Library of Congress sh88023102

**Senecio**  NALT 13378
  UN AgroVoc c_14198

**Senescence**  NALT 127
  UN AgroVoc c_14200
  The gradual irreversible changes in structure and function of an organism that occur as a result of the passage of time. Use for all organisms. (source: NALT)
  The process of growing old and showing the effects of time. Source: NCI thesaurus link

**Senna alexandrina**  NALT 6280
  UN AgroVoc c_331151

**Senna obtusifolia**  NALT 22842
  UN AgroVoc c_37719

**Senna occidentalis**  NALT 22844
  UN AgroVoc c_331149
Serine  NALT 7805
UN AgroVoc c_6982
A non-essential amino acid in humans (synthesized by the body). Serine is present and functionally important in many proteins. With an alcohol group, serine is needed for the metabolism of fats, fatty acids, and cell membranes; muscle growth; and a healthy immune system. It also plays a major role in pyrimidine, purine, creatine, and porphyrin biosynthetic pathways. Serine is also found at the active site of the serine protease enzyme class that includes trypsin and chymotrypsin. (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
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Serosa  NALT 9536
UN AgroVoc c_6984
A membrane lining the external walls of the body cavities and reflected over the surfaces of protruding organs. It consists of mesothelium lying on a connective tissue layer, and secretes a watery exudate. Source: NCI thesaurus link

Serotonin  NALT 1515
UN AgroVoc c_14208
A biochemical messenger and regulator, synthesized from the essential amino acid, l-tryptophan. In humans it is found primarily in the central nervous system, gastrointestinal tract, and blood platelets. Serotonin mediates several important physiological functions including neurotransmission, gastrointestinal motility, hemostasis, and cardiovascular integrity. (source: NALT)
Serotypes  NALT 10353
  UN AgroVoc c_32699
  Subdivision of a species or subspecies distinguishable from other such strains on the basis of antigenicity.
  (source: NALT)

Serpentes  NALT 18405
  UN AgroVoc c_14209

Serratula  NALT 13379
  UN AgroVoc c_16289

Serum albumin  NALT 6033
  UN AgroVoc c_14213

sesame oil  NALT 28890
  UN AgroVoc c_25504
  The edible oil extracted from the seeds of Sesamum indicum. Sesame oil is used as a cooking oil and as a food
  ingredient. It is also used as an ingredient in medicinal preparations. Source: NCI thesaurus link
  Reference: FDA UNII link
  Reference the ITIS link
  Reference the NIH NCBI link
  Reference USDA PLANTS link
  Look-up using CAS number link

Sesamia cretica  NALT 34918
  UN AgroVoc c_30272

Sesbania  NALT 31824
  UN AgroVoc c_6993

Sesbania bispinosa  NALT 34876
  UN AgroVoc c_6994

Sesiidae  NALT 24371
  UN AgroVoc c_30338

Sesquiterpenoids  NALT 1819
  UN AgroVoc c_32543
  Terpenoids having a C15 skeleton. (source: NALT)

Setaria sphacelata  NALT 4850
  UN AgroVoc c_7003

Setosphaeria  NALT 34415
  UN AgroVoc c_27373

Sewage sludge  NALT 17526
  UN AgroVoc c_7008
Sex attractants  NALT 13783
  UN AgroVoc c_7011

Sex chromosomes  NALT 25877
  UN AgroVoc c_14225
  Library of Congress sh85120570

Sex hormones  NALT 8710
  UN AgroVoc c_7013
  Hormones having estrogenic or androgenic activity. (source: NALT)

Sexual behaviour  NALT 4303
  UN AgroVoc c_7015

Sexual dimorphism  NALT 33671
  UN AgroVoc c_32659

Sexual maturity  NALT 33218
  UN AgroVoc c_7016

Sexually transmitted diseases  NALT 34060
  UN AgroVoc c_37905
  Library of Congress sh85142634

Shade tolerance  NALT 146
  UN AgroVoc c_25267

Shallots  NALT 6634
  UN AgroVoc c_14233
  A type of onion which is formed with a head made up of several cloves, resembling garlic. (source: NALT)

Sharks  NALT 25595
  UN AgroVoc c_7028
  Dbpedia Sharks

She-oak  NALT 22908
  UN AgroVoc c_14241
  Dbpedia She-oak

Shellfish  NALT 11513
  UN AgroVoc c_7033
  Use for those aquatic invertebrate organisms that have a body enclosed in a firm, calcareous shell such as oysters and clams (Mollusca) or that have a body enclosed in a soft, thin shell such as lobsters and crabs (Crustacea). (source: NALT)
  Any aquatic invertebrate animal having a shell and belonging to the phylum Mollusca, the class Crustacea (phylum Arthropoda), or the phylum Echinodermata. The term is often used for the edible species of the groups, especially those that are fished or raised commercially. Source: NCI thesaurus link
  Reference: FDA UNII link
Shelling  NALT 32540
  UN AgroVoc c_14250

Shoots  NALT 4427
  UN AgroVoc c_14261

Shorea  NALT 33935
  UN AgroVoc c_7045

Shorea  NALT 33935
  UN AgroVoc c_7045

Library of Congress sh85121798

Shortening  NALT 28878
  UN AgroVoc c_28559

Shoulders  NALT 26726
  UN AgroVoc c_7047

Sialidae  NALT 6191
  UN AgroVoc c_331570

Siblings  NALT 804
  UN AgroVoc c_7050

Siderophores  NALT 17268
  UN AgroVoc c_33547

Microbial compounds that sequester and transport ferric iron. (source: NALT)

Sika deer  NALT 24118
  UN AgroVoc c_33549

Silage effluents  NALT 5498
  UN AgroVoc c_24082

Silene  NALT 22761
  UN AgroVoc c_14282

Silicates  NALT 21134
  UN AgroVoc c_28560

Silk  NALT 9215
  UN AgroVoc c_7063

Silphidae  NALT 22676
  UN AgroVoc c_30161

Dbpedia Silphidae

Silphium  NALT 13381
  UN AgroVoc c_14289

Siluriformes  NALT 12175
  UN AgroVoc c_40573
Silybum NALT 13382
UN AgroVoc c_14298
Library of Congress sh97008687

Silybum marianum NALT 22441
UN AgroVoc c_26680

Silymarin NALT 22703
UN AgroVoc c_35023
A mixture of flavonolignans isolated from the milk thistle plant Silybum marianum. Silymarin may act as an antioxidant, protecting hepatic cells from chemotherapy-related free radical damage. This agent may also promote the growth of new hepatic cells. (NCI04) Source: NCI thesaurus link

Simaroubaceae NALT 5800
UN AgroVoc c_26241
Dbpedia Simaroubaceae

Simmondsia chinensis NALT 20675
UN AgroVoc c_7072

Simuliidae NALT 13985
UN AgroVoc c_7075
Library of Congress sh85122769

Simulium NALT 18591
UN AgroVoc c_14304

Sinapis NALT 19597
UN AgroVoc c_32248

Sinapis acid NALT 29690
UN AgroVoc c_36535

Sindbis virus NALT 6994
UN AgroVoc c_35372
The type species of Alphavirus normally transmitted to birds by Culex mosquitoes in Egypt, South Africa, India, Malaya, the Philippines, and Australia. It may be associated with fever in humans. (source: NALT)

Sinoxylon NALT 18773
UN AgroVoc c_7080

Sinuses NALT 18329
UN AgroVoc c_7081

Sipha NALT 10764
UN AgroVoc c_30788
Siphonaptera  NALT 10664
  UN AgroVoc c_7082
Sire evaluation  NALT 9035
  UN AgroVoc c_16038
Sirenia  NALT 557
  UN AgroVoc c_7084
Sirococcus  NALT 27676
  UN AgroVoc c_31608
Sisal  NALT 5064
  UN AgroVoc c_7086
Sisymbrium  NALT 19598
  UN AgroVoc c_14315
Site preparation  NALT 4791
  UN AgroVoc c_32545
Sitobion  NALT 10765
  UN AgroVoc c_7088
Sitodiplosis  NALT 23253
  UN AgroVoc c_24706
Sitona  NALT 30802
  UN AgroVoc c_7089
  Library of Congress sh85123033
Sitona hispidulus  NALT 27268
  UN AgroVoc c_30089
Sitophilus  NALT 21056
  UN AgroVoc c_7090
  Library of Congress sh85123035
Sitophilus granarius  NALT 21058
  UN AgroVoc c_26681
Sitophilus oryzae  NALT 21060
  UN AgroVoc c_26682
Sitotroga cerealella  NALT 8907
  UN AgroVoc c_30205
Skeletal development  NALT 9114
  UN AgroVoc c_27949
  Gross development of bones from fetus to adult. (source: NALT)
Skim milk  NALT 633  
UN AgroVoc c_7096  
Milk from which sufficient cream has been removed to reduce its milk fat content to less than 0.5 % (usually less than 0.1%). (source: NALT)

Skin  NALT 32499  
UN AgroVoc c_7097  
An organ that constitutes the external surface of the body. It consists of the epidermis, dermis, and skin appendages. Source: NCI thesaurus link

Skin diseases  NALT 348  
UN AgroVoc c_7098

Skin temperature  NALT 18366  
UN AgroVoc c_14324

Skin tests  NALT 32456  
UN AgroVoc c_29665

Skull  NALT 18548  
UN AgroVoc c_7104  
The bones that form the head, made up of the bones of the braincase and face. Source: NCI thesaurus link

Slaughter weight  NALT 9416  
UN AgroVoc c_7106

sloe  NALT 17875  
UN AgroVoc c_14337

Slow release fertilizers  NALT 28796  
UN AgroVoc c_7110

small intestine  NALT 34888  
UN AgroVoc c_23814  
The section of the intestines between the pylorus and cecum. The small intestine is approximately 20 feet long and consists of the duodenum, the jejunum, and the ileum. Its main function is to absorb nutrients from food as the food is transported to the large intestine. Source: NCI thesaurus link

small ruminants  NALT 6859  
UN AgroVoc c_32579

Smicronyx  NALT 30803  
UN AgroVoc c_30092  
Library of Congress sh85123641

Snack foods  NALT 480  
UN AgroVoc c_34338  
Dbpedia Snack foods  
Foods that are eaten during snacks; For small amount of food generally eaten between larger, more complete meals USE snacks. (source: NALT)
snake bites  NALT 17653
    UN AgroVoc c_14359

Snakehead fish  NALT 24413
    UN AgroVoc c_24509

snakes  NALT 7160
    UN AgroVoc c_7122

Soaps  NALT 251
    UN AgroVoc c_28551
    Sodium or potassium salts of long chain fatty acids. (source: NALT)

Soapwort  NALT 22759
    UN AgroVoc c_24510
    Dbpedia Soapwort

Sobemoviruses  NALT 6331
    UN AgroVoc c_32867

social behaviour  NALT 16457
    UN AgroVoc c_7129

Sodic soils  NALT 24693
    UN AgroVoc c_7144
    A nonsaline soil containing sufficient exchangeable sodium (Na) to adversely affect crop production and soil structure under most conditions of soil and plant type. The sodium adsorption ratio of the saturation extract (SARe) is at least 13. (source: NALT)

Sodium  NALT 6407
    UN AgroVoc c_7145
    An element with atomic symbol Na, atomic number 11, and atomic weight 23. Source: NCI thesaurus link

Sodium azide  NALT 14306
    UN AgroVoc c_24901

Sodium bicarbonate  NALT 17006
    UN AgroVoc c_26825
    The monosodium salt of carbonic acid with alkalinizing and electrolyte replacement properties. Upon dissociation, sodium bicarbonate forms sodium and bicarbonate ions. Ion formation increases plasma bicarbonate and buffers excess hydrogen ion concentration, resulting in raised blood pH. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
**Sodium chlorate**  NALT 25295

UN AgroVoc c_32645

Library of Congress sh85124258

**Sodium chloride**  NALT 25331

UN AgroVoc c_7146

A metal halide composed of sodium and chloride with sodium and chloride replacement capabilities. When depleted in the body, sodium must be replaced in order to maintain intracellular osmolarity, nerve conduction, muscle contraction and normal renal function. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

**Soft cheese**  NALT 19841

UN AgroVoc c_16505

**Soft corn**  NALT 29133

UN AgroVoc c_14385

**Soft drinks**  NALT 16992

UN AgroVoc c_7149

Non-alcoholic, usually cold, beverages; For carbonated soft drinks or sodas USE soft drinks AND carbonated beverages. (source: NALT)

**Sogatella**  NALT 32157

UN AgroVoc c_7155

**soil air**  NALT 5823

UN AgroVoc c_7158

**Soil analysis**  NALT 179

UN AgroVoc c_7198

**Soil biology**  NALT 17421

UN AgroVoc c_7160

**soil chemistry**  NALT 24696

UN AgroVoc c_7161

**Soil classification**  NALT 33020

UN AgroVoc c_7162

**soil compaction**  NALT 28316

UN AgroVoc c_7163

Library of Congress sh98001290
Soil conservation  NALT 17339
    UN AgroVoc e_7165

Soil degradation  NALT 958
    UN AgroVoc e_7168

Soil density  NALT 20351
    UN AgroVoc e_7167

soil erosion models  NALT 5215
    UN AgroVoc e_331058

Soil exhaustion  NALT 967
    UN AgroVoc e_26857
    Library of Congress sh85124342

soil fertility  NALT 968
    UN AgroVoc e_7170

Soil horizons  NALT 1558
    UN AgroVoc e_32749

Soil hydraulic properties  NALT 14082
    UN AgroVoc e_34125

Soil management  NALT 21
    UN AgroVoc e_7176

soil morphological features  NALT 26939
    UN AgroVoc e_7179

soil organic matter  NALT 34081
    UN AgroVoc e_35657

Soil pH  NALT 2736
    UN AgroVoc e_34901

Soil pollution  NALT 961
    UN AgroVoc e_7183

Soil properties  NALT 5084
    UN AgroVoc e_330883

Soil respiration  NALT 17423
    UN AgroVoc e_33553

Soil sciences  NALT 956
    UN AgroVoc e_7188

Soil separates  NALT 26739
    UN AgroVoc e_7190
The presence or absence either of ground water or of plant available water (i.e., water held at a tension of less than 1500 kPa) in the soil or in specific horizons during periods of the year. A generally accepted classification of soil moisture regimes from wet to dry includes aquic, udic, ustic, aridic, and xeric. (source: NALT)
Solid wastes  NALT 3916
    UN AgroVoc c_7228
Solidago  NALT 13383
    UN AgroVoc c_33420
Solids  NALT 192
    UN AgroVoc c_7229
Solieriaceae  NALT 4975
    UN AgroVoc c_49773
Solifugae  NALT 11700
    UN AgroVoc c_30874
Dbpedia Solifugae
solutions  NALT 611
    UN AgroVoc c_28563
solvents  NALT 252
    UN AgroVoc c_7236
Somatic cells  NALT 23482
    UN AgroVoc c_24568
    Cells of a plant or animal other than the germ cells. (source: NALT)
Somatic embryos  NALT 12616
    UN AgroVoc c_27607
Somatotropin  NALT 9907
    UN AgroVoc c_14422
    A protein hormone produced by the anterior pituitary gland, which stimulates growth of muscle, bone and
    mammary development in young animals and increases milk production in lactating animals by making available
    nutrients for milk synthesis and secretion. (source: NALT)
Sonchus  NALT 13385
    UN AgroVoc c_14423
Sophora  NALT 35650
    UN AgroVoc c_16292
Sorbic acid  NALT 33334
    UN AgroVoc c_28210
Sorbitol  NALT 6204
    UN AgroVoc c_7240
    A sugar alcohol found in fruits and plants with diuretic, laxative and cathartic property. Unabsorbed sorbitol
    retains water in the large intestine through osmotic pressure thereby stimulating peristalsis of the intestine and
    exerting its diuretic, laxative and cathartic effect. In addition, sorbitol has one-third fewer calories and 60 % the
    sweetening activity of sucrose and is used as a sugar replacement in diabetes. Source: NCI thesaurus link
    Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Sordariales**  NALT 12856
    UN AgroVoc c_31682


**Sorghastrum nutans**  NALT 8736
    UN AgroVoc c_37622

**Sorghum bicolor**  NALT 20053
    UN AgroVoc c_7247

**Sorption**  NALT 1839
    UN AgroVoc c_7250

    The process by which one material is taken up by another. (source: NALT)

**Soups**  NALT 481
    UN AgroVoc c_16148

**soursop**  NALT 9675
    UN AgroVoc c_14452

**Sowing**  NALT 33957
    UN AgroVoc c_7268

**soybean oil**  NALT 28891
    UN AgroVoc c_16508

    The edible oil extracted from the seeds of Glycine max. Soybean oil is used as a cooking oil and food ingredient. It is also used as an ingredient in inks and paints. Source: NCI thesaurus link
    Reference: FDA UNII link
    Reference the ITIS link
    Reference the NIH NCBI link
    Reference USDA PLANTS link
    Look-up using CAS number link

**Sparidae**  NALT 2028
    UN AgroVoc c_43233

**Spathiphyllum**  NALT 11677
    UN AgroVoc c_35584

**Spawning**  NALT 33012
    UN AgroVoc c_14490

1.7. Glossary
Spear grass  NALT 8738
    UN AgroVoc c_14493
Spectinomycin  NALT 10209
    UN AgroVoc c_14496
    An antibiotic produced by Streptomyces spectabilis. It is active against gram-negative bacteria and used for the treatment of gonorrhea. (source: NALT)
    An aminocyclitol aminoglycoside antibiotic derived from Streptomyces spectabilis with bacteriostatic activity. Spectinomycin binds to the bacterial 30S ribosomal subunit. As a result, this agent interferes with the initiation of protein synthesis and with proper protein elongation. This eventually leads to bacterial cell death. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link
Spectral analysis  NALT 175
    UN AgroVoc c_28964
Sperm  NALT 18324
    UN AgroVoc c_14501
Spermatozoa  NALT 3136
    UN AgroVoc c_7287
Spermine  NALT 17372
    UN AgroVoc c_33556
    A polyamine that has a similar structure to tetradecane but the carbons at positions 1, 5, 10 and 14 are replaced by nitrogens. Spermine plays a broad role in cellular metabolic processes. Source: NCI thesaurus link
Sphaceloma  NALT 27677
    UN AgroVoc c_31610
Sphaeroceridae  NALT 28969
    UN AgroVoc c_30602
Sphaeropsis  NALT 27678
    UN AgroVoc c_16158
Sphaerulina  NALT 34416
    UN AgroVoc c_26691
Sphecidae  NALT 26172
    UN AgroVoc c_29941
Sphenisciformes  NALT 103
    UN AgroVoc c_7293
Sphenophorus  NALT 30804
    UN AgroVoc c_30094
    Library of Congress sh85126588

Sphingidae  NALT 2547
    UN AgroVoc c_30348
    Dbpedia Sphingidae

Sphyraenidae  NALT 15894
    UN AgroVoc c_44955

Spices  NALT 6746
    UN AgroVoc c_15685
    Library of Congress sh85126619

Spilanthes  NALT 13387
    UN AgroVoc c_33885
    Library of Congress sh85126640

Spilosoma  NALT 11937
    UN AgroVoc c_33424

Spinacia  NALT 24740
    UN AgroVoc c_32751
    Library of Congress sh85126661

Spinal cord  NALT 23679
    UN AgroVoc c_7305
    The elongated, approximately cylindrical part of the central nervous system of vertebrates that lies in the vertebral canal and from which the spinal nerves emerge. Source: NCI thesaurus link

Spiramycin  NALT 10516
    UN AgroVoc c_27612
    A macrolide antibiotic produced by Streptomyces ambofaciens. The drug is effective against gram-positive aerobic pathogens, N. gonorrhoeae, and staphylococci. It is used to treat infections caused by bacteria and Toxoplasma gondii. (source: NALT)

Spiroceridae  NALT 9385
    UN AgroVoc c_31119

Spirochaetales  NALT 19119
    UN AgroVoc c_7311

Spirulina platensis  NALT 12555
    UN AgroVoc c_35586

Spleen  NALT 9348
    UN AgroVoc c_7314
An organ that is part of the hematopoietic and immune systems. It is composed of the white pulp and the red pulp and is surrounded by a capsule. It is located in the left hypochondriac region. Its functions include lymphocyte production, blood cell storage, and blood cell destruction. Source: NCI thesaurus link

Spodoptera exigua   NALT 16326
    UN AgroVoc c_30277
Spodoptera littoralis   NALT 29657
    UN AgroVoc c_30278
Spodoptera litura   NALT 27317
    UN AgroVoc c_30279
Spodosols   NALT 11601
    UN AgroVoc c_36874
Spondias   NALT 8330
    UN AgroVoc c_27379
Spongipellis   NALT 10890
    UN AgroVoc c_31735
Spores   NALT 15200
    UN AgroVoc c_7324
Sprinkler irrigation   NALT 23649
    UN AgroVoc c_7338
Spumavirus   NALT 18950
    UN AgroVoc c_23152
    Genus of retroviruses which establish persistent, but non pathogenic infections in mammals and primates, including humans, chimpanzees, cattle, and cats. It is unique among retroviruses in having infectious particles that carry DNA rather than RNA. Similar to hepadnaviruses, spumaviruses bud from the endoplasmic reticulum instead of the plasma membrane. Infected cells accumulate vacuoles, giving them a foamy appearance and are often involved in syncytium formation. Source: NCI thesaurus link
Squaliformes   NALT 25594
    UN AgroVoc c_7340
Squamata   NALT 905
    UN AgroVoc c_49091
Squashes   NALT 30549
    UN AgroVoc c_37735
    Library of Congress sh85127098
Stabilizers   NALT 253
    UN AgroVoc c_7354
Stachys   NALT 16916
    UN AgroVoc c_7359
A genus of nonmotile, nonspore-forming, aerobic to facultatively anaerobic bacteria containing Gram-positive, spherical cells, 0.5-1.5 microns in diameter, which divide in more than one plane to form irregular clusters. Coagulase-positive strains produce a variety of toxins and are therefore potentially pathogenic and may cause food poisoning. They are found on the skin, in skin glands, on the nasal and other mucous membranes of warm-blooded animals, and in various food products. The type species is Staphylococcus aureus. Source: NCI thesaurus link

A species of facultatively anaerobic, Gram positive, coccis shaped bacteria in the phylum Firmicutes. This species is positive for catalase, urease, and alkaline phosphatase and negative for coagulase and oxidase. It can ferment glucose, fructose, maltose, sucrose, glycerol, mannose, lactose, and turanose but not arabinose, mannitol, xylose, cellobiose, xylitol, rhamnose or trehalose. S. epidermidis is a commensal human skin organism and can be a human pathogen causing sepsis or endocarditis in patients with implants or immunocompromised individuals. Source: NCI thesaurus link

A genus of nonmotile, nonspore-forming, aerobic to facultatively anaerobic bacteria containing Gram-positive, spherical cells, 0.5-1.5 microns in diameter, which divide in more than one plane to form irregular clusters. Coagulase-positive strains produce a variety of toxins and are therefore potentially pathogenic and may cause food poisoning. They are found on the skin, in skin glands, on the nasal and other mucous membranes of warm-blooded animals, and in various food products. The type species is Staphylococcus aureus. Source: NCI thesaurus link

A species of facultatively anaerobic, Gram positive, coccis shaped bacteria in the phylum Firmicutes. This species is positive for catalase, urease, and alkaline phosphatase and negative for coagulase and oxidase. It can ferment glucose, fructose, maltose, sucrose, glycerol, mannose, lactose, and turanose but not arabinose, mannitol, xylose, cellobiose, xylitol, rhamnose or trehalose. S. epidermidis is a commensal human skin organism and can be a human pathogen causing sepsis or endocarditis in patients with implants or immunocompromised individuals. Source: NCI thesaurus link
Stellaria  NALT 22764
          UN AgroVoc c_14580
          Dbpedia Stellaria
Stems    NALT 19257
          UN AgroVoc c_7390
Stenocarpella  NALT 27681
          UN AgroVoc c_31615
Stenocereus  NALT 20802
          UN AgroVoc c_33426
          Dbpedia Stenocereus
Stereum   NALT 10892
          UN AgroVoc c_7399
Sterigmatocystin  NALT 13072
          UN AgroVoc c_28570
          A carcinogenic mycotoxin produced by strains of the mold, Aspergillus versicolor and Aspergillus nidulans.
          (source: NALT)
Sterilized milk  NALT 12891
          UN AgroVoc c_14585
          Milk that has been heated to a temperature and for a time that kills all bacteria and spores, giving it an extended
          shelf life. (source: NALT)
Sternorrhyncha  NALT 6295
          UN AgroVoc c_30751
Sternum    NALT 18550
          UN AgroVoc c_7404
          The long, flat bone connecting with the cartilages of the first seven ribs and the clavicle. Source: NCI thesaurus
          link
Steroid hormones  NALT 4348
          UN AgroVoc c_7405
steroids    NALT 20295
          UN AgroVoc c_7407
Sterols    NALT 1419
          UN AgroVoc c_14586
          Library of Congress sh85128059
Stethorus  NALT 27464
          UN AgroVoc c_26695
**Stevia** NALT 13389
  UN AgroVoc c_24710
  Library of Congress sh85128078

**Stevia rebaudiana** NALT 21829
  UN AgroVoc c_24805

**stevioside** NALT 34129
  UN AgroVoc c_28573

**Stigmina** NALT 33488
  UN AgroVoc c_35862

**Stilesia** NALT 5980
  UN AgroVoc c_7412

**Stolbur phytoplasma** NALT 1301
  UN AgroVoc c_36334

**Stomach** NALT 9350
  UN AgroVoc c_7422

  An organ located under the diaphragm, between the liver and the spleen as well as between the esophagus and the small intestine. The stomach is the primary organ of food digestion. Source: NCI thesaurus link

**Stone fruits** NALT 11371
  UN AgroVoc c_25461

**storage proteins** NALT 884
  UN AgroVoc c_33936

**Storms** NALT 13656
  UN AgroVoc c_7436

**Strangles** NALT 15178
  UN AgroVoc c_16814

**Stratiomyidae** NALT 33929
  UN AgroVoc c_30603
  Library of Congress sh85128526

**straw** NALT 15868
  UN AgroVoc c_7441

**street foods** NALT 484
  UN AgroVoc c_29147
  Dbpedia street foods

1.7. Glossary
Streptococcaceae  NALT 1737

UN AgroVoc c_7448

A taxonomic family of Gram positive bacterium in the phylum Firmicutes that includes the genera Lactococcus and Streptococcus, among others. Source: NCI thesaurus link

Streptococcus pneumoniae  NALT 33842

UN AgroVoc c_26706

A Gram-positive, alpha-hemolytic diplococcus aerotolerant anaerobe Streptococcus species. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the NIH NCBI link

Streptomyces griseus  NALT 3623

UN AgroVoc c_27615

A species of aerobic, Gram positive, filamentous bacteria in the phylum Actinobacteria. This species is spore forming, yellow to orange colored, elastase and hydrolase positive and produces streptomycin. S. griseus is not a known pathogen. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the NIH NCBI link

Streptomyces scabies  NALT 3724

UN AgroVoc c_35455

Streptomycin  NALT 7873

UN AgroVoc c_7451

An antibiotic produced by the soil actinomycete Streptomyces griseus. It acts by inhibiting the initiation and elongation processes during protein synthesis. (source: NALT)

An aminoglycoside antibiotic derived from Streptomyces griseus with antibacterial activity. Streptomycin irreversibly binds to the 16S rRNA and S12 protein within the bacterial 30S ribosomal subunit. As a result, this agent interferes with the assembly of initiation complex between mRNA and the bacterial ribosome, thereby inhibiting the initiation of protein synthesis. In addition, streptomycin induces misreading of the mRNA template and causes translational frameshift, thereby results in premature termination. This eventually leads to bacterial cell death. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Striga asiatica  NALT 12967

UN AgroVoc c_32337

Strigeidae  NALT 10632

UN AgroVoc c_32006
Strigiformes  NALT 104
UN AgroVoc c_7454

Strip cropping  NALT 30189
UN AgroVoc c_25705
The growing of crops in a systematic arrangement of strips or bands which serve as vegetative barriers to wind and water erosion. The strips or bands may run perpendicular to the slope of the land or to the direction of prevailing winds. (source: NALT)

stroke  NALT 24058
UN AgroVoc c_14631
A sudden, nonconvulsive loss of neurologic function due to an ischemic or hemorrhagic intracranial vascular event. In general, cerebrovascular accidents are classified by anatomic location in the brain, vascular distribution, etiology, age of the affected individual, and hemorrhagic vs nonhemorrhagic nature. (From Adams, et al., Principles of Neurology, 6th ed, pp777-810) (source: NALT)

Strongylidae  NALT 9387
UN AgroVoc c_31125

Strongyloidae  NALT 9388
UN AgroVoc c_31127

Strontium  NALT 6424
UN AgroVoc c_7462
An element with atomic symbol Sr, atomic number 38, and atomic weight 87.62. Source: NCI thesaurus link Reference: FDA UNII link Look-up using Google link Rotate the 3-D representation Look-up synonyms Look-up using CAS number link

Strophanthus  NALT 11190
UN AgroVoc c_7463

Structural proteins  NALT 885
UN AgroVoc c_36871

Structural soil types  NALT 26757
UN AgroVoc c_7466

Structure activity relationships  NALT 7780
UN AgroVoc c_37258
The relationship between the chemical structure of a compound and its biological or pharmacological activity. (source: NALT)

Struthioniformes  NALT 105
UN AgroVoc c_7468
stubble  NALT 30157
  UN AgroVoc c_16650

Stylidiaceae  NALT 21591
  UN AgroVoc c_26230

Stylosanthes hamata  NALT 24548
  UN AgroVoc c_33427

Styracaceae  NALT 35208
  UN AgroVoc c_26235
  Dbpedia Styracaceae
  Library of Congress sh88023138

styrene  NALT 12312
  UN AgroVoc c_28574

Suaeda  NALT 24741
  UN AgroVoc c_27384

Subhumid zones  NALT 26895
  UN AgroVoc c_16099

Regions where the climate is intermediate between semiarid and humid, and the precipitation supports dense
growth of tall or short grasses, but not forests. (source: NALT)

Subsoiling  NALT 31941
  UN AgroVoc c_15593

Subsurface drainage  NALT 34483
  UN AgroVoc c_25349
  Library of Congress sh85129555

Subtropical soils  NALT 26889
  UN AgroVoc c_14657

Succinate dehydrogenase  NALT 35286
  UN AgroVoc c_29537
  Library of Congress sh85129592

A heterotetrameric enzyme complex found in the inner mitochondrial membrane. This protein complex cata-
ylizes the oxidation of succinate and reduction of ubiquinone and plays a role in both the citric acid cycle and
the electron transport chain. Source: NCI thesaurus link

Succinic acid  NALT 33186
  UN AgroVoc c_7489

Suckling  NALT 9186
  UN AgroVoc c_7493

Sudan kharroub  NALT 16095
  UN AgroVoc c_11966
Sugar acids  NALT 6208
  UN AgroVoc c_32030
Sugar alcohols  NALT 6196
  UN AgroVoc c_32020
Sugarcane  NALT 21832
  UN AgroVoc c_7501
Sugars  NALT 987
  UN AgroVoc c_7507
Suidae  NALT 12634
  UN AgroVoc c_31903
  Taxonomic family which includes the domestic pig Source: NCI thesaurus link
Suillus  NALT 18437
  UN AgroVoc c_26713
Sulfadimethoxine  NALT 10439
  UN AgroVoc c_36265
  A long-acting sulfonamide antibiotic used in veterinary medicine. Sulfadimethoxine inhibits bacterial synthesis of folic acid by competing with para-aminobenzoic acid (PABA) for the binding site on dihydropteroate synthase. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
Sulfadoxine  NALT 10419
  UN AgroVoc c_14672
  A broad-spectrum sulfanilamide and a synthetic analog of para-aminobenzoic acid (PABA) with bacteriostatic and antimalarial properties. Sulfadoxine competes with PABA for the bacterial enzyme dihydropteroate synthase, thereby preventing the incorporation of PABA into dihydrofolic acid, the immediate precursor of folic acid. This leads to an inhibition of parasitic folic acid synthesis and de novo synthesis of purines and pyrimidines, ultimately resulting in cell growth arrest and cell death. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link
Sulfamethoxazole  NALT 1444
  UN AgroVoc c_14673
A sulfonamide bacteriostatic antibiotic that is most commonly used in combination with trimethoprim as the drug Bactrim. Sulfamethoxazole competitively inhibits dihydropteroate synthase preventing the formation of dihydropteroic acid, a precursor of folic acid which is required for bacterial growth. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Sulfapyridine  NALT 10443
UN AgroVoc c_14674
A short-acting sulfonamide antibiotic and by-product of the non-steroidal anti-inflammatory drug sulfasalazine. Its manufacture and use were discontinued in 1990. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Sulfaquinoxaline  NALT 10444
UN AgroVoc c_14675
A sulfonamide antibiotic used in veterinary medicine and in the meat and poultry industries. Source: NCI thesaurus link

Reference: FDA UNII link
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Look-up synonyms
Look-up using CAS number link

Sulfathiazole  NALT 10445
UN AgroVoc c_36266
A short-acting sulfonamide antibiotic. Its use has been largely replaced with less toxic alternatives but is still used in combination with sulfacetamide and sulfabenzamide for the treatment of vaginal infections and for disinfecting home aquariums. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
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sunflower oil  NALT 28892
UN AgroVoc c_25506
Pressed from sunflower seeds (Helianthus annus), Sunflower Oil has a high content of beneficial monounsaturated fats, and antioxidant vitamins E and F, as well as triglycerides and linoleic acids. Used mainly in cooking today, sunflower oil has been used for medicines and in cosmetics. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link
Look-up using CAS number link

**Supella**  NALT 17975
UN AgroVoc c_30419

**Supella longipalpa**  NALT 20105
UN AgroVoc c_30420

**Superovulation**  NALT 9037
UN AgroVoc c_16048

**Superoxide dismutase**  NALT 35275
UN AgroVoc c_24091

Proteins that protect cells against elevated levels of superoxide a reactive oxygen species. These antioxidant enzymes catalyze the formation of molecular oxygen and hydrogen peroxide from the superoxide anion. They are also potential therapeutic agents in diseases related to oxidative stress and in the regulation of the aging process. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Suramin**  NALT 10498
UN AgroVoc c_14700

A polysulphonated naphthylurea with potential antineoplastic activity. Suramin blocks the binding of various growth factors, including insulin-like growth factor I (IGF-I), epidermal growth factor (EGF), platelet-derived growth factor (PDGF), and tumor growth factor-beta (TGF-beta), to their receptors, thereby inhibiting endothelial cell proliferation and migration. This agent also inhibits vascular endothelial growth factor (VEGF-) and basic fibroblast growth factor (bFGF)-induced angiogenesis; retroviral reverse transcriptase; uncoupling of G-proteins from receptors; topoisomerases; cellular folate transport; and steroidogenesis. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link

**Surface drainage**  NALT 34484
UN AgroVoc c_25594

**Surface tension**  NALT 21984
UN AgroVoc c_7531

The stretching force required to form a liquid film; the force tends to minimize the area of the surface. (source: NALT)
Surfactants  NALT 254
  UN AgroVoc c_7529

Surinam grass  NALT 19041
  UN AgroVoc c_14706

Swamp soils  NALT 35702
  UN AgroVoc c_7543

Sweat  NALT 18325
  UN AgroVoc c_7548
  The liquid secreted by the sweat glands, having a salty taste and a pH that varies from 4.5 to 7.5. Sweat produced by the eccrine sweat glands is clear with a faint characteristic odor, and contains water, sodium chloride, and traces of albumin, urea, and other compounds. Its composition varies with many factors, e.g., fluid intake, external temperature and humidity, and some hormonal activity. Sweat produced by the larger, deeper, apocrine sweat glands of the axillae contains, in addition, organic material which on bacterial decomposition produces an offensive odor. Source: NCI thesaurus link

Sweet peppers  NALT 16518
  UN AgroVoc c_14727

Sweeteners  NALT 485
  UN AgroVoc c_642
  Substances that sweeten food, beverages, medications, etc., such as sugar, saccharine or other low-calorie synthetic products. (source: NALT)

Swine  NALT 15907
  UN AgroVoc c_7555

Swine dysentery  NALT 15179
  UN AgroVoc c_16467
  Library of Congress sh85131254

Swine erysipelas  NALT 15180
  UN AgroVoc c_16468
  An acute and chronic contagious disease of young pigs caused by Erysipelothrix insidiosa (syn. Erysipelothrix rhusiopathiae). (source: NALT)

Sydowia  NALT 34417
  UN AgroVoc c_31758

Symbiosis  NALT 28123
  UN AgroVoc c_7563

Sympatholytics  NALT 34678
  UN AgroVoc c_14747

Sympathomimetics  NALT 8070
  UN AgroVoc c_14748
Drugs that mimic the effects of stimulating postganglionic adrenergic sympathetic nerves. Included here are drugs that directly stimulate adrenergic receptors and drugs that act indirectly by provoking the release of adrenergic transmitters. (source: NALT)

**Symphytum**  NALT 18613
  UN AgroVoc c_7565

**Symplocaceae**  NALT 35209
  UN AgroVoc c_26234
  Library of Congress sh88023142

**Symptomatic anthrax**  NALT 10060
  UN AgroVoc c_35390

An acute infection caused by the spore-forming bacteria Bacillus anthracis. It commonly affects hoofed animals such as sheep and goats. Infection in humans often involves the skin (cutaneous anthrax), the lungs (inhalation anthrax), or the gastrointestinal tract. (source: NALT)

**Synchytrium**  NALT 26162
  UN AgroVoc c_7570

**Synechocystis**  NALT 25902
  UN AgroVoc c_34750

**synergism**  NALT 17302
  UN AgroVoc c_16149

**Syngamidae**  NALT 9390
  UN AgroVoc c_31128

**Synovial fluid**  NALT 18345
  UN AgroVoc c_7573

A viscid fluid secreted by the synovial membrane, serving as a lubricant. Source: NCI thesaurus link

**Synthetic hormones**  NALT 518
  UN AgroVoc c_24938

Synthetic chemical compounds which mimic the activity of endogenous hormones produced in the body, but which differ in structure from naturally occurring hormones. (source: NALT)

**Syrphidae**  NALT 24553
  UN AgroVoc c_30604

**Systena**  NALT 26074
  UN AgroVoc c_33432

**Syzygium aromaticum**  NALT 22770
  UN AgroVoc c_14762

**T-lymphocytes**  NALT 23197
  UN AgroVoc c_16612

**Tabanidae**  NALT 13792
  UN AgroVoc c_7582
Tabebuia  NALT 17134
          UN AgroVoc c_16294
Tabernaemontana  NALT 11191
          UN AgroVoc c_14768
Tachinidae  NALT 11895
          UN AgroVoc c_30608
          Dbpedia Tachinidae
Taenia crassiceps  NALT 31350
          UN AgroVoc c_31964
Taenia hydatigena  NALT 31356
          UN AgroVoc c_31965
Taenia multiceps  NALT 27692
          UN AgroVoc c_31966
Taenia ovis  NALT 31352
          UN AgroVoc c_31967
Taenia pisiformis  NALT 31354
          UN AgroVoc c_31968
Taenia saginata  NALT 31344
          UN AgroVoc c_31969
Taenia solium  NALT 31346
          UN AgroVoc c_31970
Taenia taeniaeformis  NALT 31348
          UN AgroVoc c_31971
Taeniidae  NALT 35630
          UN AgroVoc c_31961
          Library of Congress sh85131888
Tagetes  NALT 13392
          UN AgroVoc c_14774
Tagetes erecta  NALT 14397
          UN AgroVoc c_331514
Tagosodes  NALT 32158
          UN AgroVoc c_35608
Tail  NALT 18360
          UN AgroVoc c_7591
          The flexible prolonged structure of the posterior part of an animal’s body. Source: NCI thesaurus link
tamalan  NALT 31649
  UN AgroVoc c_14780
  Dbpedia tamalan
  Library of Congress sh85035510

Tamarindus  NALT 20979
  UN AgroVoc c_32717

Tamarix  NALT 13376
  UN AgroVoc c_16296

Tanacetum  NALT 13393
  UN AgroVoc c_14785
  Dbpedia Tanacetum
  Library of Congress sh85132235

Tanacetum parthenium  NALT 25969
  UN AgroVoc c_37286

Tangelos  NALT 26563
  UN AgroVoc c_7600
  Library of Congress sh85132266

  Fruit of the hybrid of the grapefruit (Citrus paradisi) and tangerine (Citrus reticulata). (source: NALT)

Tangerines  NALT 26552
  UN AgroVoc c_7601

Tangors  NALT 26520
  UN AgroVoc c_7602

  Fruits of the hybrid of the sweet orange (Citrus sinensis) and Mandarin orange (Citrus reticulata). (source: NALT)

Tanning agents  NALT 256
  UN AgroVoc c_28162

Taphrina deformans  NALT 12829
  UN AgroVoc c_37054

Taphrinales  NALT 12857
  UN AgroVoc c_31687


Tapioca  NALT 22827
  UN AgroVoc c_15525

Taraxacum  NALT 13394
  UN AgroVoc c_7614

1.7. Glossary
Tartaric acid  NALT 33187

A white crystalline dicarboxylic acid found in many plants, particularly tamarinds and grapes. Tartaric acid is used to generate carbon dioxide through interaction with sodium bicarbonate following oral administration. Carbon dioxide extends the stomach and provides a negative contrast medium during double contrast radiography. In high doses, this agent acts as a muscle toxin by inhibiting the production of malic acid, which could cause paralysis and maybe death. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link
Tecoma  NALT 17135
  UN AgroVoc c_7646

Teeth  NALT 32369
  UN AgroVoc c_7650

Teflubenzuron  NALT 16670
  UN AgroVoc c_34346

Telfairia  NALT 30573
  UN AgroVoc c_7652

Temperate zones  NALT 26897
  UN AgroVoc c_7656

Temperature  NALT 5861
  UN AgroVoc c_7657
  A measure of the average kinetic energy of a system of particles. Temperature may be quantified, in the context of thermodynamics, as the potential of one system to transfer thermal energy to another system until both systems reach a state of thermal equilibrium. Source: NCI thesaurus link

Tendons  NALT 28572
  UN AgroVoc c_7663
  Fibrous bands or cords of connective tissue at the ends of muscle fibers that serve to attach the muscles to bones and other structures. (source: NALT)

Tenebrionidae  NALT 6999
  UN AgroVoc c_30170

Tenthredinidae  NALT 13573
  UN AgroVoc c_29943

Tenuazonic acid  NALT 7104
  UN AgroVoc c_28211
  3-Acetyl-5-sec-butyl-4-hydroxy-3-pyrrolin-2-one. A metabolite found in a strain of the fungus Alternaria tenuis Auct. which functions as an antibiotic with antiviral and antineoplastic properties, and may also act as a myco-toxin. (source: NALT)

Tenuipalpidae  NALT 19787
  UN AgroVoc c_7668

Tenuiviruses  NALT 35623
  UN AgroVoc c_32868

Tephritidae  NALT 1993
  UN AgroVoc c_3122

Teraponidae  NALT 17034
  UN AgroVoc c_42487
Teratogenicity  NALT 32920
  UN AgroVoc c_36321
  Having the capability of causing malformations, abnormalities or other physical defects in the developing embryo and fetus. (source: NALT)

Terminalia  NALT 28112
  UN AgroVoc c_7672
  Library of Congress sh85134017

Termitidae  NALT 7897
  UN AgroVoc c_30632

Termitomyces  NALT 5005
  UN AgroVoc c_31715

Termopsidae  NALT 31692
  UN AgroVoc c_30633

Terpenoids  NALT 6947
  UN AgroVoc c_27616
  Natural products and related compounds formally derived from isoprene units. They contain oxygen in various functional groups. (source: NALT)

Testosterone  NALT 8711
  UN AgroVoc c_7684

Testudines  NALT 24579
  UN AgroVoc c_32570

Tetanus  NALT 15181
  UN AgroVoc c_7685
  Library of Congress sh85134166
  A disease caused by tetanospasmin, a powerful protein toxin produced by Clostridium tetani. Tetanus usually occurs after an acute injury, such as a puncture wound or laceration. Generalized tetanus, the most common form, is characterized by tetric muscular contractions and hyperreflexia. Localized tetanus presents itself as a mild condition with manifestations restricted to muscles near the wound. It may progress to the generalized form. (source: NALT)
  A serious infectious disorder that follows wound contamination by the Gram-positive bacterium Clostridium tetani. The bacteria produce a neurotoxin called tetanospasmin, which causes muscle spasm in the jaw and other anatomic sites. Source: NCI thesaurus link

Tetracyclines  NALT 10210
  UN AgroVoc c_7687
  Closely congeneric derivatives of the polycyclic naphthacenecarboxamide. (source: NALT)

Tetragnathidae  NALT 11779
  UN AgroVoc c_30886

Tetrahymena  NALT 26286
  UN AgroVoc c_14836
Textural soil types NALT 26742
UN AgroVoc c_7698

Texture NALT 30275
UN AgroVoc c_15578

A measure of the variation of the intensity of a surface, quantifying properties such as smoothness, coarseness, regularity, and resiliency. The term is often used as a descriptor for the structure or organization of a tissue or organ. The three principal approaches used to describe texture are statistical, structural and spectral. Source: NCI thesaurus link

Thalassiosiraceae NALT 15238
UN AgroVoc c_49462

Thanasimus NALT 26826
UN AgroVoc c_30043

Thanatephorus NALT 10893
UN AgroVoc c_31736

Thanatephorus cucumeris NALT 29319
UN AgroVoc c_35179

Theaceae NALT 21526
UN AgroVoc c_7707

Thecodiplosis NALT 23256
UN AgroVoc c_23978

Thelaziidae NALT 9392
UN AgroVoc c_31133

Thelephora NALT 10894
UN AgroVoc c_31737
Thiabendazole  NALT 9936
UN AgroVoc c_14884
A benzimidazole derivative with anthelminthic property. Although the mechanism of action has not been fully elucidated, thiabendazole inhibits the helminth-specific mitochondrial enzyme fumarate reductase, thereby inhibiting the citric acid cycle, mitochondrial respiration and subsequent production of ATP, ultimately leading to helminth’s death. In addition, it has been suggested that thiabendazole may lead to inhibition of microtubule polymerization by binding to beta-tubulin and has an overt ovicidal effect with regard to some trichostrongylids.
Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Thiamin  NALT 16733
UN AgroVoc c_7724

Thiaminase  NALT 35518
UN AgroVoc c_34132

Thielaviopsis basicola  NALT 24287
UN AgroVoc c_34717

Thiobencarb  NALT 22177
UN AgroVoc c_31507
**Thiacyanates**  NALT 7988
UN AgroVoc c_7730

**Thiofanox**  NALT 22179
UN AgroVoc c_31509

**Thiols**  NALT 6160
UN AgroVoc c_7731

**Thiopenal**  NALT 15824
UN AgroVoc c_14861

**Thiophanate-methyl**  NALT 16651
UN AgroVoc c_31513

**Thirst**  NALT 11271
UN AgroVoc c_7734
Library of Congress sh85134902

**Thlaspi**  NALT 19601
UN AgroVoc c_14864

**Thoracic cavity**  NALT 18330
UN AgroVoc c_35336

The cavity in the vertebrate body enclosed by the ribs between the diaphragm and the neck and containing the lungs and heart. Source: NCI thesaurus link

**Thorax**  NALT 18361
UN AgroVoc c_7735

The division of the body lying between the neck and the abdomen. Source: NCI thesaurus link

**Thorns**  NALT 18549
UN AgroVoc c_35337

**Threonine**  NALT 7807
UN AgroVoc c_7737
An essential amino acid in humans (provided by food), Threonine is an important residue of many proteins, such as tooth enamel, collagen, and elastin. An important amino acid for the nervous system, threonine also plays an important role in porphyrin and fat metabolism and prevents fat buildup in the liver. Useful with intestinal disorders and indigestion, threonine has also been used to alleviate anxiety and mild depression. (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Thripidae**  NALT 21239
UN AgroVoc c_30390
Thuja  NALT 30744
   UN Agrovoc c_7742
   Library of Congress sh88023156
Thuja occidentalis  NALT 35159
   UN Agrovoc c_7743
Thunnus alalunga  NALT 5985
   UN Agrovoc c_44807
Thunnus thynnus  NALT 18265
   UN Agrovoc c_44803
Thuringiensin  NALT 14976
   UN Agrovoc c_34357
thylakoids  NALT 23410
   UN Agrovoc c_35340
   Library of Congress sh89001418
   Membranous cisternae of the chloroplast containing photosynthetic pigments, reaction centers, and the electron-transport chain. (source: NALT)
Thymelaeaceae  NALT 11583
   UN Agrovoc c_7747
   Dbpedia Thymelaeaceae
Thymidine  NALT 32402
   UN Agrovoc c_7749
   A pyrimidine nucleoside that is composed of the pyrimidine base thymine attached to the sugar deoxyribose. As a constituent of DNA, thymidine pairs with adenine in the DNA double helix. (NCI04) Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link
Thyroid hormones  NALT 21088
   UN Agrovoc c_7754
Thyrotropin  NALT 9908
   UN Agrovoc c_14881
Thyroxine  NALT 31532
   UN Agrovoc c_7755
   A hormone synthesized and secreted by the thyroid gland containing four iodine atoms and is converted to triiodothyronine (T3) in the body, influencing metabolism and organ function. Source: NCI thesaurus link

Chapter 1. Table of Contents
Thysaniezia  NALT 9807
  UN AgroVoc c_7756
Thysanoptera  NALT 4581
  UN AgroVoc c_7757
Thysanura  NALT 19851
  UN AgroVoc c_7759
  Dbpedia Thysanura
Tiamulin  NALT 10446
  UN AgroVoc c_33270
tick clover  NALT 32571
  UN AgroVoc c_14887
Tile drainage  NALT 34494
  UN AgroVoc c_25598
Tillage  NALT 25207
  UN AgroVoc c_7771
Tillandsia  NALT 19958
  UN AgroVoc c_7772
  Dbpedia Tillandsia
Tinca  NALT 31275
  UN AgroVoc c_16052
  Library of Congress sh85135509
Tineidae  NALT 27239
  UN AgroVoc c_29426
  Library of Congress sh85135517
Tingidae  NALT 1603
  UN AgroVoc c_30708
Tipulidae  NALT 29839
  UN AgroVoc c_30623
Tissue analysis  NALT 180
  UN AgroVoc c_7788
Tithonia  NALT 13397
  UN AgroVoc c_32257
Toads  NALT 8081
  UN AgroVoc c_7795
Tobacco  NALT 20518
  UN AgroVoc c_7796
  Library of Congress sh85135709
  The dried cured leaves of the tobacco plant, Nicotiana tabacum, used for smoking, chewing, or snuff. Tobacco contains nicotine, a stimulant, and other biologically active ingredients having carcinogenic properties. Source: NCI thesaurus link
  Reference: FDA UNII link
  Reference the ITIS link
  Reference the NIH NCBI link
  Reference USDA PLANTS link
  Look-up using CAS number link
Tobamoviruses  NALT 30495
  UN AgroVoc c_32869
Tocopherols  NALT 6950
  UN AgroVoc c_7798
Tofu  NALT 16167
  UN AgroVoc c_15570
  Library of Congress sh85135793
Togaviridae  NALT 6985
  UN AgroVoc c_7800
  A family of positive sense single-stranded RNA enveloped viruses that form spherical particles with an icosahedral capsid. Source: NCI thesaurus link
Toluene  NALT 12313
  UN AgroVoc c_7803
Tomusviruses  NALT 12563
  UN AgroVoc c_32871
Tomicus  NALT 17950
  UN AgroVoc c_7807
Tomicus piniperda  NALT 17952
  UN AgroVoc c_30158
Tonsils  NALT 9351
  UN AgroVoc c_24413
Tooth diseases  NALT 349
  UN AgroVoc c_7810
Topography  NALT 7261
  UN AgroVoc c_7815
  The description of an anatomical region or of a body part. Source: NCI thesaurus link
Tortricidae  NALT 2955
               UN AgroVoc c_14935

Torulopsis glabrata  NALT 21804
               UN AgroVoc c_35471

Totipotency  NALT 128
               UN AgroVoc c_10264

Toxascaris  NALT 12743
               UN AgroVoc c_7824

Toxic substances  NALT 1780
               UN AgroVoc c_7825

Toxicity  NALT 3967
               UN AgroVoc c_7826

The finding of bodily harm due to the poisonous effects of something. Source: NCI thesaurus link

Toxins  NALT 10551
               UN AgroVoc c_7828

Poisons produced by certain microorganisms, plants or animals that are often proteins. (source: NALT)

Toxocara  NALT 12744
               UN AgroVoc c_7829

Toxoplasma  NALT 27430
               UN AgroVoc c_7830

A genus of protozoa that is parasitic in humans, other mammals, and some birds. Source: NCI thesaurus link

Toxoplasmosis  NALT 27439
               UN AgroVoc c_7831

Library of Congress sh85136339

A parasitic disease contracted by the ingestion or fetal transmission of toxoplasma gondii. Source: NCI thesaurus link

Toxoptera  NALT 10768
               UN AgroVoc c_7832

Toxoptera auranti  NALT 17741
               UN AgroVoc c_30791

Toxoptera citricidus  NALT 10810
               UN AgroVoc c_30792

Toxorhynchites  NALT 30626
               UN AgroVoc c_30529

Trace elements  NALT 12372
               UN AgroVoc c_7834
Elements occurring in minute quantities in nature; For those nutrients required in minute quantities in animal and human nutrition USE dietary minerals; For those nutrients required in minute quantities in plants USE plant micronutrients. (source: NALT)

Trachichthyidae  NALT 16764
    UN AgroVoc c_42066

Trachinotus  NALT 22135
    UN AgroVoc c_7840

Trachurus  NALT 22136
    UN AgroVoc c_7842
    Dbpedia Trachurus

Trachycarpus  NALT 12035
    UN AgroVoc c_14947
    Dbpedia Trachycarpus

Tradescantia  NALT 28121
    UN AgroVoc c_35594
    Dbpedia Tradescantia

traditional medicines  NALT 10109
    UN AgroVoc c_34921
    Systems of medicine based on cultural beliefs and practices handed down from generation to generation. The concept includes mystical and magical rituals (spiritual therapies); phytotherapy; and other treatments which may not be explained by modern medicine. (source: NALT)

Tragopogon  NALT 13398
    UN AgroVoc c_7858
    Library of Congress sh85136794

Trametes  NALT 10895
    UN AgroVoc c_31738

Transamination  NALT 7827
    UN AgroVoc c_7863

Transcription factors  NALT 34250
    UN AgroVoc c_35345
    Endogenous substances, usually proteins, which are effective in the initiation, stimulation, or termination of the genetic transcription process. (source: NALT)

Transferases  NALT 3997
    UN AgroVoc c_7865

Transferrins  NALT 18164
    UN AgroVoc c_14958
    Serum beta-globulin that binds and transports iron. (source: NALT)
Transgenic animals  NALT 9587
  UN AgroVoc c_27618

Transition elements  NALT 3195
  UN AgroVoc c_7867

Transmissible gastroenteritis virus  NALT 29259
  UN AgroVoc c_14962

Transmissible gastroenteritis virus is no longer valid in the Ninth Report of the International Committee on Taxonomy of Viruses. Used for indexing only. (source: NALT)

transposons  NALT 28809
  UN AgroVoc c_36188

Discrete segments of DNA which can excise and reintegrate to another site in the genome. Most are inactive, i.e., have not been found to exist outside the integrated state. DNA transposable elements include bacterial IS (insertion sequence) elements, Tn elements, the maize controlling elements Ac and Ds, Drosophila P, gypsy, and pogo elements, the human Tigger elements and the Tc and mariner elements which are found throughout the animal kingdom. (source: NALT)

Trap crops  NALT 30194
  UN AgroVoc c_24910

trapping  NALT 22090
  UN AgroVoc c_7878

Trechus  NALT 22106
  UN AgroVoc c_30016

Tree classes  NALT 5078
  UN AgroVoc c_28173

trees  NALT 11816
  UN AgroVoc c_7887

Trehalase  NALT 6874
  UN AgroVoc c_36882

Trehalose  NALT 33975
  UN AgroVoc c_7888

Trematoda  NALT 33509
  UN AgroVoc c_7889
  Dbpedia Trematoda
  Library of Congress sh85137270

Tremellales  NALT 16009
  UN AgroVoc c_31689


Trenbolone  NALT 8298
  UN AgroVoc c_14978
Triacylglycerol lipase  NALT 22303
  UN AgroVoc c_24095

Triadimefon  NALT 28454
  UN AgroVoc c_31516

Triadimenol  NALT 28455
  UN AgroVoc c_31517

Trialeurodes  NALT 6294
  UN AgroVoc c_7892

Triallate  NALT 22180
  UN AgroVoc c_31518

Trianthema  NALT 5903
  UN AgroVoc c_33906

Triazines  NALT 31291
  UN AgroVoc c_33563

Tribolium confusum  NALT 28511
  UN AgroVoc c_30176

Tributyrin  NALT 20658
  UN AgroVoc c_7895
  A triglyceride prodrug of butyric acid with potential antineoplastic activity. Butyrate, the active metabolite of tributyrin, inhibits histone deacetylase, resulting in increased differentiation, decreased proliferation, cell cycle arrest, and apoptosis in some tumor cell lines. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Tricarboxylic acid cycle  NALT 17291
  UN AgroVoc c_7896

Trichinellidae  NALT 9393
  UN AgroVoc c_31134

Trichlorfon  NALT 9937
  UN AgroVoc c_31520

Trichodina  NALT 26287
  UN AgroVoc c_14982

Trichogaster  NALT 16543
  UN AgroVoc c_23981
Tricholoma  NALT 5006
  UN AgroVoc c_14984
Trichophyton  NALT 2625
  UN AgroVoc c_7901
Trichoplusia ni  NALT 20733
  UN AgroVoc c_30280
Trichoptera  NALT 20826
  UN AgroVoc c_7903
Trichosanthes  NALT 30574
  UN AgroVoc c_7904
Library of Congress sh85137478
Trichosirocalus  NALT 30806
  UN AgroVoc c_30097
Trichosirocalus horridus  NALT 24157
  UN AgroVoc c_30098
Trichostrongylidae  NALT 9394
  UN AgroVoc c_31137
Trichothecenes  NALT 2529
  UN AgroVoc c_16055
Trichuridae  NALT 9395
  UN AgroVoc c_31143
Tridax  NALT 13400
  UN AgroVoc c_24808
Tridax procumbens  NALT 27378
  UN AgroVoc c_24809
Triflumuron  NALT 16671
  UN AgroVoc c_36699
Trifolium alexandrinum  NALT 16755
  UN AgroVoc c_7911
Trifolium hybridum  NALT 7041
  UN AgroVoc c_7914
Trifolium incarnatum  NALT 27278
  UN AgroVoc c_7915
Trifolium pratense  NALT 27281
  UN AgroVoc c_7917

1.7. Glossary
A synthetic derivative of trimethoxybenzyl-pyrimidine with antibacterial and antiprotozoal properties. As a pyrimidine inhibitor of bacterial dihydrofolate reductase, trimethoprim binds tightly to the bacterial enzyme, blocking the production of tetrahydrofolic acid from dihydrofolic acid. The antibacterial activity of this agent is potentiated by sulfonamides. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Movement that is inducible and takes place in a direction related to that of the stimulus, such as the movement of leaves toward light in positive phototropism or away from light in negative phototropism. Use for movement in plants and other non-mobile organisms; For orientation movement of animals and other organisms with mobility (e.g. flagella, motile cilia, appendages) in response to a stimulus USE taxis (physiology). (source: NALT)

The least plentiful of all 22 amino acids and an essential amino acid in humans (provided by food), Tryptophan is found in most proteins and a precursor of serotonin. Tryptophan is converted to 5-hydroxy-tryptophan (5-HTP), converted in turn to serotonin, a neurotransmitter essential in regulating appetite, sleep, mood, and pain. Tryptophan is a natural sedative and present in dairy products, meats, brown rice, fish, and soybeans. (NCI04)

Source: NCI thesaurus link
Tungiferae

A serious Gram-negative bacterial infection caused by Francisella tularensis. It is transmitted to humans through bites from infected insects, inhaling airborne bacteria, handling infected animals, or consuming contaminated food or water. Signs and symptoms include skin ulcers, mouth sores, lymphadenopathy, sore throat, fever and pneumonia. Source: NCI thesaurus link
Arctic or subarctic regions where tree growth is limited due to low temperatures, the short growing season, and the permanently frozen subsoil. Dominant vegetation consists of grasses, sedges, mosses, lichens, and dwarf shrubs and trees. (source: NALT)

tung oil: NALT 34738
UN AgroVoc c_8005
Library of Congress sh85138600

Turmeric: NALT 30814
UN AgroVoc c_15048
Library of Congress sh85138923

turnips: NALT 19523
UN AgroVoc c_8019

Tursiops: NALT 32165
UN AgroVoc c_8021

Turtles: NALT 7161
UN AgroVoc c_8023

Tychius: NALT 30807
UN AgroVoc c_8026
Library of Congress sh85139068

Tylenchorhynchus: NALT 34309
UN AgroVoc c_31022

Tymoviruses: NALT 8662
UN AgroVoc c_32872

Typhlocyba: NALT 26226
UN AgroVoc c_8031

Typhula: NALT 10897
UN AgroVoc c_16057
Library of Congress sh85139167

Tyramine: NALT 7823
UN AgroVoc c_35346

Tyrophagus: NALT 2108
UN AgroVoc c_8035

Tyrosine: NALT 7809
UN AgroVoc c_8036

The levorotatory isomer of the aromatic amino acid tyrosine. L-tyrosine is a naturally occurring tyrosine and is synthesized in vivo from L-phenylalanine. It is considered a non-essential amino acid; however, in patients with phenylketonuria who lack phenylalanine hydroxylase and cannot convert phenylalanine into tyrosine, it is considered an essential nutrient. In vivo, tyrosine plays a role in protein synthesis and serves as a precursor for the synthesis of catecholamines, thyroxine, and melanin. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Udders  NALT 18362
  UN AgroVoc c_15065

Udotaceae  NALT 20231
  UN AgroVoc c_49502

Ullucus  NALT 15983
  UN AgroVoc c_32721

Ulmaceae  NALT 23558
  UN AgroVoc c_8042
  Library of Congress sh85139445

Ulmus americana  NALT 7568
  UN AgroVoc c_26731

Ulmus parvifolia  NALT 25081
  UN AgroVoc c_26734

Ulvaceae  NALT 18022
  UN AgroVoc c_49506

Ulvales  NALT 25449
  UN AgroVoc c_330296
  Library of Congress sh85139512

Umbelliferae  NALT 2947
  UN AgroVoc c_15810

Unaspis  NALT 33112
  UN AgroVoc c_16058
  Library of Congress sh96004333

Unaspis yanonensis  NALT 12352
  UN AgroVoc c_30817

Uncinaria  NALT 8654
  UN AgroVoc c_8055

Ungulates  NALT 12636
  UN AgroVoc c_8065

Unionidae  NALT 17705
  UN AgroVoc c_47907
Unsaturated fatty acids  NALT 33333
  UN AgroVoc c_29245

Uranium  NALT 3209
  UN AgroVoc c_8084
  A radioactive element with atomic symbol U, atomic number 92, and atomic weight 238. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Uranotaenia  NALT 30629
  UN AgroVoc c_30534

urban areas  NALT 26402
  UN AgroVoc c_8085

Urea  NALT 7699
  UN AgroVoc c_8090

Urease  NALT 7673
  UN AgroVoc c_8092

Uredinales  NALT 4446
  UN AgroVoc c_31692

Uric acid  NALT 6721
  UN AgroVoc c_8097
  A white tasteless odorless crystalline product of protein metabolism, found in the blood and urine, as well as trace amounts found in the various organs of the body. It can build up and form stones or crystals in various disease states. Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Urinary tract  NALT 17881
  UN AgroVoc c_8099

Urinary tract diseases  NALT 350
  UN AgroVoc c_8100
Urocyon  NALT 21845
    UN AgroVoc c_15112
Uroleucon  NALT 10769
    UN AgroVoc c_30793
Ursidae  NALT 5815
    UN AgroVoc c_15610
Urticaceae  NALT 18382
    UN AgroVoc c_8111
    Dbpedia Urticaceae
Ustilaginales  NALT 10055
    UN AgroVoc c_31695
Utetheisa  NALT 11939
    UN AgroVoc c_8126
Vaccination  NALT 9239
    UN AgroVoc c_15123
    Library of Congress sh85141709
    Administration of vaccines to stimulate the host’s immune response. This includes any preparation intended for
    active immunological prophylaxis. (source: NALT)
    Administration of vaccines to stimulate the host’s immune response. This includes any preparation intended for
    active immunological prophylaxis or treatment. Source: NCI thesaurus link
Vaccine adjuvants  NALT 4236
    UN AgroVoc c_34198
    The component of a vaccine which stimulates immunoreactivity against the antigen in the vaccine. The choice
    of adjuvant may relate to the therapeutic efficacy of the vaccine. (source: NALT)
Vaccines  NALT 16112
    UN AgroVoc c_8130
Vaccinium  NALT 18249
    UN AgroVoc c_8131
    Dbpedia Vaccinium
Vaccinium macrocarpon  NALT 7554
    UN AgroVoc c_8136
Vaccinium myrtillus  NALT 17150
    UN AgroVoc c_8137
Vaccinium uliginosum  NALT 18397
    UN AgroVoc c_34659
**Vaccinium vitis idaea**  NALT 29731

UN AgroVoc c_16299

**Valeriana officinalis**  NALT 28243

UN AgroVoc c_36292

A plant, the root of which is used to derive an herbal medicinal preparation with antianxiety and hypnotic activities. Valerian root contains volatile oils (sesquiterpenes and monoterpenes), valepotriates, alkaloids and lignans. This agent may inhibit the uptake and stimulate the release of [3H]GABA (gamma-aminobutyric acid), resulting in decreased central nervous system activity. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link
Reference USDA PLANTS link

**Valerianaceae**  NALT 23695

UN AgroVoc c_8146

**Valerianella locusta**  NALT 29184

UN AgroVoc c_24716

**Valine**  NALT 7810

UN AgroVoc c_8147

An aliphatic and extremely hydrophobic essential amino acid in humans related to leucine, Valine is found in many proteins, mostly in the interior of globular proteins helping to determine three-dimensional structure. A glycogenic amino acid, valine maintains mental vigor, muscle coordination, and emotional calm. Valine is obtained from soy, cheese, fish, meats and vegetables. Valine supplements are used for muscle growth, tissue repair, and energy. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Valleys**  NALT 21951

UN AgroVoc c_8149

**Valsa**  NALT 33079

UN AgroVoc c_8151

**Vanillin**  NALT 6188

UN AgroVoc c_28610

**Varieties**  NALT 28029

UN AgroVoc c_8157

**Variety trials**  NALT 5633

UN AgroVoc c_26833

1.7. Glossary
Antidiuretic hormones released by the neurohypophysis of all vertebrates (structure varies with species) to regulate water balance and osmolarity. All mammals have arginine vasopressin except the pig with a lysine at position 8. Vasopressin, a vasoconstrictor, acts on the kidney collecting ducts to increase water reabsorption, increase blood volume and blood pressure. (source: NALT)

This protein is processed from a precursor protein consisting of arginine vasopressin and two associated proteins, neurophysin II and a glycopeptide, copeptin. Arginine vasopressin is a posterior pituitary hormone which is synthesized in the supraoptic nucleus and paraventricular nucleus of the hypothalamus. Along with its carrier protein, neurophysin II, it is packaged into neurosecretory vesicles and transported axonally to the nerve endings in the neurohypophysis where it is either stored or secreted into the bloodstream. It has a direct antidiuretic action on the kidney, and also causes vasoconstriction of the peripheral vessels. This hormone can contract smooth muscle during parturition and lactation. It is also involved in cognition, tolerance, adaptation and complex sexual and maternal behaviour, as well as in the regulation of water excretion and cardiovascular functions. (LocusLink) Source: NCI thesaurus link
Vegetation  NALT 17462  
UN AgroVoc c_8176

Vegetative propagation  NALT 12896  
UN AgroVoc c_8177

Veliidae  NALT 19890  
UN AgroVoc c_30710

Veneridae  NALT 17706  
UN AgroVoc c_36330

Venoms  NALT 10560  
UN AgroVoc c_8187

Venturia (hymenoptera)  NALT 32937  
UN AgroVoc c_29918

Venturia inaequalis  NALT 11295  
UN AgroVoc c_24717

Verapamil  NALT 21101  
UN AgroVoc c_15867

A phenylalkylamine calcium channel blocking agent. Verapamil inhibits the transmembrane influx of extracellular calcium ions into myocardial and vascular smooth muscle cells, causing dilatation of the main coronary and systemic arteries and decreasing myocardial contractility. This agent also inhibits the drug efflux pump P-glycoprotein which is overexpressed in some multi-drug resistant tumors and may improve the efficacy of some antineoplastic agents. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using CAS number link

Verbenaceae  NALT 4546  
UN AgroVoc c_8193

Vermicomposting  NALT 28384  
UN AgroVoc c_24528
Library of Congress sh98005986

Vermiculites  NALT 26754  
UN AgroVoc c_8194
Library of Congress sh85142820

Vermiculture  NALT 7143  
UN AgroVoc c_24262

Vernolate  NALT 22181  
UN AgroVoc c_31531

Vernonia  NALT 13406  
UN AgroVoc c_32262

1.7. Glossary
vertebrates  NALT 8079
  UN AgroVoc c_8196
  Dbpedia vertebrates

Vertisols  NALT 11557
  UN AgroVoc c_8199

Vesicular arbuscular mycorrhizae  NALT 11831
  UN AgroVoc c_24415

Vesicular exanthema of swine virus  NALT 18935
  UN AgroVoc c_331486

Vesiculovirus  NALT 22130
  UN AgroVoc c_8200

Vespidae  NALT 34333
  UN AgroVoc c_8303

Vespula germanica  NALT 34335
  UN AgroVoc c_29962

Vespula maculifrons  NALT 35194
  UN AgroVoc c_29963

Veterinary medicine  NALT 9135
  UN AgroVoc c_8206

  The diagnosis and treatment of diseases and injuries of companion, domestic, exotic, wildlife and production animals. (source: NALT)

  The practice of medicine as applied to non-human animals. Source: NCI thesaurus link

Viability  NALT 129
  UN AgroVoc c_8210

  The ability of a cell, organism, spore, seed or other living thing to survive and continue its life processes. (source: NALT)

Vibrio anguillarum  NALT 2659
  UN AgroVoc c_34696

Vibrio cholerae  NALT 14676
  UN AgroVoc c_33919

  A species of facultatively anaerobic, Gram negative, curved rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile, oxidase and lipase positive, can use a wide variety of sugars as carbon sources, does not require salt for growth, and produces cholera toxin. V. cholerae is the causative agent of cholera. Source: NCI thesaurus link

Vibrio parahaemolyticus  NALT 16588
  UN AgroVoc c_34697
A species of facultatively anaerobic, Gram negative, curved rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile, oxidase and lysine decarboxylase positive, hemolytic, halophilic and can use a wide variety of sugars as carbon sources. *V. parahaemolyticus* is a marine organism and a pathogen that causes gastroenteritis and wound infections. Source: NCI thesaurus link

**Vibrio vulnificus** NALT 16595

A species of facultatively anaerobic, Gram negative, curved rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile, oxidase positive, hemolytic, halophilic, and can produce acid from arbutin but not from sucrose. *V. vulnificus* is a marine organism and a pathogen that causes wound infections and septicemia and has a higher rate of mortality than infections caused by other Vibrio species. Source: NCI thesaurus link

**Viburnum** NALT 22044

**Vices** NALT 1756

**Vigna mungo** NALT 17760

**Vigna subterranea** NALT 15684

**Vinclozolin** NALT 33178

**Vineyards** NALT 5375

**Viola** NALT 16445

**Viperidae** NALT 5181

**Viral antigens** NALT 10369

**Viral proteins** NALT 890

**Virgin soils** NALT 35705

**Virginiamycin** NALT 10215
A cyclic polypeptide antibiotic complex from Streptomyces virginiae, S. loidensis, S. mitakaensis, S. pristina-spiralis, S. ostreogriseus, and others. It consists of 2 major components, virginiamycin factor M1 and virginiamycin factor S1. It is used to treat infections with gram-positive organisms and as a growth promoter in cattle, swine, and poultry. (source: NALT)

A class of streptogramin-related depsipeptides isolated from the bacterium Streptomyces virginiae and other Streptomyces bacterial species. The virginiamycins consist of two major components, virginiamycin M1 and virginiamycin S1. These agents bind to and inhibit ribosome assembly, thereby preventing protein synthesis. Active against Gram-positive bacteria, these antibiotics are primarily used in veterinary practice. (NCI04)

Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Viroids NALT 9408

UN AgroVoc c_15856

A group of pathogens comprising the smallest known agents of infectious disease. They are unencapsulated and are capable of replicating autonomously in susceptible cells. Positively identified viroids composed of single-stranded RNA have been isolated from higher plants, but the existence of DNA viroids pathogenic to animals is suspected. (source: NALT)

viruses NALT 1138

UN AgroVoc c_8262

Includes common types of viruses; for taxonomic classification SEE Viruses and Viroids. (source: NALT)

Vision disorders NALT 18028

UN AgroVoc c_8267

Vitamin B12 NALT 27387

UN AgroVoc c_8269

An essential nutrient and natural water-soluble vitamin of the B-complex family that must combine with an intrinsic factor for absorption by the intestine, Vitamin B12 (cyanocobalamin) is necessary for hematopoiesis, neural metabolism, DNA and RNA production, and carbohydrate, fat, and protein metabolism. B12 improves iron functions in the metabolic cycle and assists folic acid in choline synthesis. B12 metabolism is interconnected with that of folic acid. Vitamin B12 deficiency causes pernicious anemia, megaloblastic anemia, and neurologic lesions. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Vitamin content NALT 24616

UN AgroVoc c_8270

Vitamin D NALT 1420

UN AgroVoc c_8271

A family of lipo-soluble steroids important to the absorption, metabolism, and function of calcium and phosphorus and the growth and development of bone and tooth enamel. Found naturally in animal tissues, cholecalciferol
(vitamin D3) is formed in the skin when ultraviolet light activates cholesterol conversion into vitamin D3. Ultraviolet irradiation of ergosterol (plant vitamin D) forms ergocalciferol (vitamin D2). (NCI04) Source: NCI thesaurus link

**Vitamins**  NALT 17269  
UN AgroVoc c_8274

**Viverridae**  NALT 26583  
UN AgroVoc c_15611  
Dbpedia Viverridae

**Vocalization**  NALT 9091  
UN AgroVoc c_15237  
Use for sounds from animals; For human vocalization USE speech. (source: NALT)

**Vodka**  NALT 34103  
UN AgroVoc c_23837

**volatile compounds**  NALT 259  
UN AgroVoc c_24933

**Voles**  NALT 12711  
UN AgroVoc c_15241

**Volvariella**  NALT 5007  
UN AgroVoc c_8289

**Volvocales**  NALT 25249  
UN AgroVoc c_330317  
Dbpedia Volvocales  
Library of Congress sh85144379

**Vomiting**  NALT 939  
UN AgroVoc c_15243  
Forceful ejection of the contents of the stomach through the mouth. Source: NCI thesaurus link

**Vriesea**  NALT 19959  
UN AgroVoc c_35599

**Vulpes**  NALT 21846  
UN AgroVoc c_15244

**Warfarin**  NALT 10266  
UN AgroVoc c_8299  
A synthetic anticoagulant. Warfarin inhibits the regeneration of vitamin K1 epoxide and so the synthesis of vitamin K dependent clotting factors, which include Factors II, VII, IX and X, and the anticoagulant proteins C and S. This inhibition results in a sequential depression of Factors VII, IX, X and II activities. Vitamin K is an essential cofactor for the post ribosomal synthesis of the vitamin K dependent clotting factors. The vitamin promotes the biosynthesis of gamma-carboxyglutamic acid residues in these proteins which are essential for biological activity. Source: NCI thesaurus link

1.7. Glossary
Washingtonia  NALT 12037
    UN AgroVoc c_34660
Waste disposal  NALT 20528
    UN AgroVoc c_8305
Waste incineration  NALT 20529
    UN AgroVoc c_27627
Waste management  NALT 9300
    UN AgroVoc c_34763
Waste treatment  NALT 3917
    UN AgroVoc c_35352
Waste utilization  NALT 20691
    UN AgroVoc c_16202
Wastewater  NALT 2724
    UN AgroVoc c_8308
Wastewater treatment  NALT 17527
    UN AgroVoc c_25312
good  NALT 6435
    UN AgroVoc c_8309
    H2O, a clear, colorless, odorless, tasteless liquid that freezes into ice below 0 degrees centigrade and boils above 100 degrees centigrade. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Water analysis  NALT 181
    UN AgroVoc c_16064
Water currents  NALT 30856
    UN AgroVoc c_8316
water deprivation  NALT 33355
    UN AgroVoc c_8317
Water erosion  NALT 15764
    UN AgroVoc c_8318
Water pollution  NALT 5217
    UN AgroVoc c_8321

Water quality  NALT 26766
    UN AgroVoc c_16061
    Library of Congress sh85145600

Water resources  NALT 11570
    UN AgroVoc c_8325

water supply  NALT 34624
    UN AgroVoc c_8328
    Use for the water that is available for use to a landowner, community or region through a water collection,
    storage, treatment and distribution system; for the measurement of the volume of water in a hydrological system
    USE water quantity. (source: NALT)

Waterborne diseases  NALT 331
    UN AgroVoc c_36890

waterfowl  NALT 34841
    UN AgroVoc c_8331
    Aquatic wild game birds including ducks and geese. (source: NALT)

Watermelons  NALT 26474
    UN AgroVoc c_15277

Watersheds  NALT 5500
    UN AgroVoc c_8334
    Library of Congress sh85145749
    The land area that drains water to a particular stream, river, or lake. It is a land feature that can be identified by
    tracing a line along the highest elevations between two areas on a map, often a ridge. (source: NALT)

Weaning  NALT 9187
    UN AgroVoc c_15291
    The substitution of solid food for maternal milk or milk substitutes in the diet of a child or young mammal.
    (source: NALT)

Weaning weight  NALT 18375
    UN AgroVoc c_16152

Weather  NALT 5862
    UN AgroVoc c_15292

Weed control  NALT 293
    UN AgroVoc c_8345

Weeds  NALT 9724
    UN AgroVoc c_8347
Weigela  NALT 22045
UN AgroVoc c_26745

weight gain  NALT 18377
UN AgroVoc c_8350

The amount of desired or undesired body weight increase; for body weight increase in livestock performance and production USE liveweight gain; to describe the need to increase body weight in order to achieve good nutritional/health status USE gaining weight. (source: NALT)

An increase in total body weight. Source: NCI thesaurus link

Wetland soils  NALT 35706
UN AgroVoc c_8370

Wetlands  NALT 18403
UN AgroVoc c_8371

An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions. (source: NALT)

whales  NALT 24150
UN AgroVoc c_8372

Whey protein  NALT 31642
UN AgroVoc c_28528

The glutathione (GSH) antioxidant system is foremost among the cellular protective mechanisms. Depletion of this small tripeptide molecule is a common consequence of increased formation of reactive oxygen species during increased cellular activities and oxygen radical generation is frequently a critical step in carcinogenesis. Cysteine is the crucial limiting amino acid for intracellular GSH synthesis. Whey protein concentrate represents an effective and safe cysteine donor for GSH replenishment during GSH depletion in immune deficiency states. Animal experiments have shown that the concentrates of whey proteins increase GSH concentration in relevant tissues and may have anti-tumor effect on low volume of tumor via stimulation of immunity through the GSH pathway. (from PMID 11205219) Source: NCI thesaurus link

Whole milk  NALT 634
UN AgroVoc c_15364

wild animals  NALT 9150
UN AgroVoc c_24103

Wildebeest  NALT 9890
UN AgroVoc c_32587
Dbpedia Wildebeest

Wildlife  NALT 17463
UN AgroVoc c_8389

Wilting  NALT 952
UN AgroVoc c_8390

Use for the physical drooping appearance of plants; for the plant disease of the vascular system caused by plant pathogenic agents USE vascular wilt. (source: NALT)
Wind resistance  NALT 147
    UN AgroVoc c_8396

Wind speed  NALT 4651
    UN AgroVoc c_29582

Windbreaks  NALT 28601
    UN AgroVoc c_8398

Winemaking  NALT 6140
    UN AgroVoc c_8405

Wines  NALT 6135
    UN AgroVoc c_8406

    All alcoholic beverages made from the fermentation of grape juice, other fruits or vegetative parts. Wine may
    be sparkling or carbonated, made from condensed grape must, made from agricultural products other than the
    juice of grapes, and includes products sold as wine such as imitation wine, cider and sake. (source: NALT)

Wings  NALT 18363
    UN AgroVoc c_8407

Winter hardiness  NALT 26900
    UN AgroVoc c_16067

Winter squashes  NALT 30550
    UN AgroVoc c_8411

    Any of various hard-shelled squashes that can be stored for several months. (source: NALT)

Withania somnifera  NALT 12922
    UN AgroVoc c_32344

wolves  NALT 21850
    UN AgroVoc c_8419

Wood  NALT 19272
    UN AgroVoc c_8421
    Dbpedia Wood

    The hard, fibrous substance composing most of the stem and branches of a tree or shrub, and lying beneath the
    bark; the xylem. Source: NCI thesaurus link

wood preservatives  NALT 25737
    UN AgroVoc c_8429

Wood products  NALT 24467
    UN AgroVoc c_16203

Wood pulp  NALT 24651
    UN AgroVoc c_15391

Wood residues  NALT 15841
    UN AgroVoc c_8430

1.7. Glossary  751
Xanthine dehydrogenase (1333 aa, ~146 kDa) is encoded by the human XDH gene. This protein is involved in purine degradation. Source: NCI thesaurus link

Xanthine oxidase

Xanthium

Xanthomonas albilineans

Xanthomonas campestris

Xanthomonas populi

Xanthophylls

Xanthosoma

Xenobiotics

Chemical substances that are foreign to the biological system. They include naturally occurring compounds, drugs, environmental agents, carcinogens, insecticides, etc. (source: NALT)
Xenorhabdus nematophilus  NALT 2663
  UN AgroVoc c_35461

Xerophytes  NALT 32535
  UN AgroVoc c_28202

  Plants that have adapted for life with a limited supply of water. (source: NALT)

Xestia  NALT 7405
  UN AgroVoc c_8464
  Library of Congress sh98004455

Xylazine  NALT 8459
  UN AgroVoc c_15420

Xyleborus  NALT 9610
  UN AgroVoc c_8470

Xylella fastidiosa  NALT 26573
  UN AgroVoc c_35188

Xyene  NALT 12314
  UN AgroVoc c_8472

Xylocopa  NALT 11059
  UN AgroVoc c_29826

Xylocoris  NALT 9994
  UN AgroVoc c_30643

Xylotrechus  NALT 23811
  UN AgroVoc c_8476

Yaks  NALT 18752
  UN AgroVoc c_8477

Yams  NALT 33769
  UN AgroVoc c_8478

  Yams in the U.S. are actually sweet potatoes. USDA requires that the label “yam” always be accompanied by
  “sweetpotato” for this reason. True yams are Dioscorea species. Use for the dry, starchy tubers of Dioscorea
  species which are not usually produced in the U.S.; For the moist, sweet orange varieties of Ipomoea batatas
  grown in the U.S. USE sweet potatoes. (source: NALT)

Yeast  NALT 15569
  UN AgroVoc c_8480

  A general term for single-celled rounded fungi that reproduce by budding. Brewers’ and bakers’ yeasts are
  Saccharomyces cerevisiae. (source: NALT)

Yersinia enterocolitica  NALT 15282
  UN AgroVoc c_26749

  A species of facultatively anaerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This
  species is motile, positive for urease, and ornithine decarboxylase, and negative for oxidase, and citrate. It is
able to ferment cellobiose, sucrose, and sorbose but not raffinose, melibiose, or rhamnose. Y. enterocolitica is commensal and a pathogen that causes Yersiniosis, which infects children that have ingested contaminated meat or milk. Source: NCI thesaurus link

**Yersinia pestis** NALT 14851
UN AgroVoc c_26752

A species of facultatively anaerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile, positive for coagulase and fibrinolysin and negative for urease, indole, ornithine decarboxylase, oxidase, and pyrazinamidase. Some strains are able to ferment melibiose but none can metabolize sorbose, rhamnose, cellobiose, sucrose, or sorbitol. Y. pestis is found in rodents and fleas and is a pathogen that can cause pneumonic, septicemic and bubonic plague types in humans. Source: NCI thesaurus link

Reference: FDA UNII link

Reference the NIH NCBI link

**Yersinia pseudotuberculosis** NALT 14873
UN AgroVoc c_26750

A species of facultatively anaerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile, urease positive and negative for ornithine decarboxylase, oxidase, indole, and pyrazinamidase. It is able to ferment rhamnose, and melibiose but not cellobiose, sorbitol, sorbose, sucrose, fucose, or raffinose. Y. pseudotuberculosis is found in many animal hosts and is a pathogen that can cause gastroenteritis in humans and many types of zoonotic infections. Source: NCI thesaurus link

**Yield components** NALT 30174
UN AgroVoc c_24419

Plant parts contributing to yield based on their number, size and weight. (source: NALT)

**Young animals** NALT 8964
UN AgroVoc c_8489

**Yucca** NALT 5054
UN AgroVoc c_15526

**Zabrotes** NALT 20148
UN AgroVoc c_8497

**Zabrus** NALT 22107
UN AgroVoc c_8498

**Zamiaceae** NALT 23951
UN AgroVoc c_35602
Dbpedia Zamiaceae
Library of Congress sh86003275

**Zea diploperennis** NALT 33863
UN AgroVoc c_27423

**Zea mays** NALT 29137
UN AgroVoc c_8504
Zeatin  NALT 4117
   UN AgroVoc c_8505
zeaxanthin NALT 6159
   UN AgroVoc c_35003
Zebu cattle  NALT 18754
   UN AgroVoc c_37676
Zeuzera  NALT 29559
   UN AgroVoc c_8514
       Library of Congress sh85149771
Zineb  NALT 22182
   UN AgroVoc c_31533
Zingiber officinale  NALT 8021
   UN AgroVoc c_8521
       The common cooking ginger, an herbaceous perennial with upright stems and narrow medium green leaves
       arranged in two ranks on each stem. Ginger grows from an aromatic tuberlike rhizome (underground stem)
       which is warty and branched. Ginger root is widely used around the world as a spice or food additive. It has
       been used in Asia for thousands of years for relief from arthritis, rheumatism, sprains, muscular aches and pains,
       catarrh, congestion, coughs, sinusitis, sore throats, diarrhea, colic, cramps, indigestion, loss of appetite, motion
       sickness, fever, flu, chills, and infectious disease. Source: NCI thesaurus link
       Reference: FDA UNII link
       Reference the ITIS link
       Reference the NIH NCBI link
       Reference USDA PLANTS link
Zingiberaceae  NALT 4821
   UN AgroVoc c_8522
       Dbpedia Zingiberaceae
Zingiberales  NALT 21900
   UN AgroVoc c_330120
Zinnia  NALT 13414
   UN AgroVoc c_33442
       Library of Congress sh85149881
Zizania aquatica  NALT 9726
   UN AgroVoc c_8524
Zonocerus  NALT 3042
   UN AgroVoc c_8527
Zoo animals  NALT 9151
   UN AgroVoc c_32736

1.7. Glossary  755
The branch of biology dealing with the study of animals. Source: NCI thesaurus link

Diseases of non-human animals that may be transmitted to humans or may be transmitted from humans to non-human animals. (source: NALT)

Library of Congress sh85150003

Zygina NALT 26228

Zygophyllaceae NALT 15606

Zygoptera NALT 21397

Zymomonas mobilis NALT 2647

The science of poisons and toxic substances occurring in the environment and their effects. Can be further expanded as the science of predicting effects of potentially toxic agents on natural ecosystems and nontarget species. (source: NALT)

fire ecology NALT 35718

forest ecology NALT 35719

Toxicology NALT 35791

Ectomycorrhizae NALT 35800

Mycorrhizae NALT 35802

Ectomyelois NALT 35803
**Ectromelia virus**  NALT 35820  
UN AgroVoc e_10535

**Edaphic factors**  NALT 35823  
UN AgroVoc e_15617  
A condition of the soil, whether physical, biological or chemical, that influences the organisms and processes that occur in the soil. (source: NALT)

**Edgeworthia**  NALT 35836  
UN AgroVoc e_32125

**Edible fungi**  NALT 35844  
UN AgroVoc e_2487

**Poisonous fungi**  NALT 35847  
UN AgroVoc e_6052

**Transgenic plants**  NALT 35864  
UN AgroVoc e_27619

**Edovum**  NALT 35868  
UN AgroVoc e_29881

**Edovum puttleri**  NALT 35869  
UN AgroVoc e_29882

**Effluents**  NALT 35926  
UN AgroVoc e_24455  
Any liquid waste or byproduct that enters the environment from a point source. (source: NALT)

**Egg membranes**  NALT 35937  
UN AgroVoc e_15964

**egg shell**  NALT 35939  
UN AgroVoc e_2500  
Use for the shell of reptiles, birds, or monotreme eggs; for the outermost covering of other eggs USE chorion. (source: NALT)

**Egg yolk**  NALT 35940  
UN AgroVoc e_2501

**Egg drop syndrome**  NALT 35943  
UN AgroVoc e_36719

**egg hatchability**  NALT 35944  
UN AgroVoc e_2496

**Egg production**  NALT 35951  
UN AgroVoc e_2498

**Leucinodes orbonalis**  NALT 35988  
UN AgroVoc e_30325
Solanum melongena  NALT 35996
UN AgroVoc e_7218

Sesbania sesban  NALT 36006
UN AgroVoc e_33878

Ehrlichia canis  NALT 36013
UN AgroVoc e_34490

Heartwater  NALT 36027
UN AgroVoc e_24182

A tick-borne septicemic disease of ruminants caused by Ehrlichia ruminantium of the family Rickettsiaceae. (source: NALT)

Eichhornia  NALT 36033
UN AgroVoc e_2505

Pontederiaceae  NALT 36034
UN AgroVoc e_6107

Eichhornia crassipes  NALT 36035
UN AgroVoc e_33694

Eicosanoids  NALT 36039
UN AgroVoc e_34816

Leukotrienes  NALT 36041
UN AgroVoc e_34817

Eicosapentaenoic acid  NALT 36043
UN AgroVoc e_37444

An essential, polyunsaturated, 20-carbon omega-3 fatty acid with anti-inflammatory and potential antineoplastic and chemopreventive activities. Eicosapentaenoic acid (EPA) may activate caspase 3, resulting in apoptosis in susceptible tumor cell populations. In addition, this agent may inhibit cyclooxygenase-2 (COX-2), resulting in inhibition of prostaglandin synthesis and prostaglandin-mediated inflammatory processes. Source: NCI thesaurus link

Eimeria acervulina  NALT 36048
UN AgroVoc e_31205

Eimeria adenoeides  NALT 36049
UN AgroVoc e_31206

Eimeria bovis  NALT 36050
UN AgroVoc e_31207

Eimeria brunetti  NALT 36051
UN AgroVoc e_31208

Eimeria maxima  NALT 36054
UN AgroVoc e_31209
trans fatty acids  NALT 36095

Unsaturated fatty acids that contain at least one double bond in the trans configuration, which results in a greater bond angle than the cis configuration. This results in a more extended fatty acid chain similar to saturated fatty acids, with closer packing and reduced fluidity. Hydrogenation of unsaturated fatty acids increases the trans content. (source: NALT)

Elaphostrongylus  NALT 36107

Elasmolomus  NALT 36111
Elasmopalpus  NALT 36114
    UN AgroVoc c_2510
Elasmopalpus lignosellus  NALT 36115
    UN AgroVoc c_30313

Mechanical properties  NALT 36125
    UN AgroVoc c_4683

Limonius  NALT 36128
    UN AgroVoc c_4344

Elatinaceae  NALT 36130
    UN AgroVoc c_26255

Eldana  NALT 36136
    UN AgroVoc c_2512

Eldana saccharina  NALT 36137
    UN AgroVoc c_30314

Elderly nutrition  NALT 36139
    UN AgroVoc c_34818

Electricity  NALT 36154
    UN AgroVoc c_2518
    A physical phenomenon associated with stationary or moving electrons and protons; energy made available by the flow of electric charge through a conductor. Source: NCI thesaurus link

Electric field  NALT 36156
    UN AgroVoc c_33981
    Library of Congress sh85041688

Energy resources  NALT 36169
    UN AgroVoc c_28006

Electrical resistance  NALT 36172
    UN AgroVoc c_10570

Magnetic properties  NALT 36188
    UN AgroVoc c_4518

Infrared radiation  NALT 36200
    UN AgroVoc c_3867
    Library of Congress sh85066322
    Electromagnetic radiation with wavelengths between 750 nanometers and 1 millimeter, between those of visible light and microwaves. This portion of the electromagnetic spectrum can usually be sensed as heat. Source: NCI thesaurus link
**Ionizing radiation**  NALT 36201

UN AgroVoc c_11828

Library of Congress sh85067827

High-energy radiation capable of producing ionization in substances through which it passes.  
Source: NCI thesaurus link

**Microwave radiation**  NALT 36202

UN AgroVoc c_4815

Electromagnetic radiation between the ultrahigh frequency radio and infrared (in the 10e-3 (micro) to about 0.5 X 10e-1 meter) region of the spectrum. Source: NCI thesaurus link

**Ultraviolet radiation**  NALT 36204

UN AgroVoc c_8046

The invisible ultraviolet spectrum makes up one specific portion of sunlight. This unique portion accounts for three percent of all solar radiation reaching the earth. UV radiation causes many health problems. Source: NCI thesaurus link

**ultrastructure**  NALT 36215

UN AgroVoc c_8045

The structure of an organism, substance or object that is only observable under electron microscopy.  
(source: NALT)

**electroporation**  NALT 36237

UN AgroVoc c_33983

A technique in which electric pulses of intensity in kilovolts per centimeter and of microsecond-to-millisecond duration cause a temporary loss of the semipermeability of cell membranes, thus leading to ion leakage, escape of metabolites, and increased uptake by cells of drugs, molecular probes, and DNA. (source: NALT)

**Eledone**  NALT 36241

UN AgroVoc c_2524

**Strepsiptera**  NALT 36251

UN AgroVoc c_7446

Library of Congress sh85128674

**Eleodes**  NALT 36253

UN AgroVoc c_30173

**Pennisetum purpureum**  NALT 36255

UN AgroVoc c_5677

**Elettaria**  NALT 36266

UN AgroVoc c_32977

Dbpedia Elettaria

**Eleusine**  NALT 36267

UN AgroVoc c_2530
Eleusine coracana  NALT 36268
    UN AgroVoc c_2532
Eleusine indica  NALT 36269
    UN AgroVoc c_2533
Holothuroidea  NALT 36279
    UN AgroVoc c_29220
Pyrrhalta luteola  NALT 36300
    UN AgroVoc c_30041
Ulmus  NALT 36310
    UN AgroVoc c_8043
Heracleum sphondylium  NALT 36323
    UN AgroVoc c_26522
soil transport processes  NALT 36325
    UN AgroVoc c_7202
Leaching  NALT 36326
    UN AgroVoc c_15591
Elymus lanceolatus  NALT 36394
    UN AgroVoc c_36611
Elymus trachycaulus  NALT 36440
    UN AgroVoc c_36968
Leymus chinensis  NALT 36657
    UN AgroVoc c_35555
Embellisia  NALT 36786
    UN AgroVoc c_31566
Embioptera  NALT 36788
    UN AgroVoc c_2541
        Library of Congress sh85042686
Phyllanthus emblica  NALT 36794
    UN AgroVoc c_331541
Phyllanthus  NALT 36796
    UN AgroVoc c_16278
Embolism  NALT 36798
    UN AgroVoc c_2542
        Blocking of a blood vessel by an embolus which can be a blood clot or other undissolved material in the blood stream. (source: NALT)
The blockage of a blood vessel lumen by air or solid material such as blood clot or other tissues (e.g., adipose tissue, cancer cells) that have migrated from another anatomic site. Source: NCI thesaurus link

**Thrombosis**  NALT 36800
UN AgroVoc c_7741
The formation of a blood clot in the lumen of a vessel or heart chamber; causes include coagulation disorders and vascular endothelial injury. Source: NCI thesaurus link

**Epicotyls**  NALT 36810
UN AgroVoc c_2613

**Hypocotyls**  NALT 36811
UN AgroVoc c_3770

**Plumule**  NALT 36813
UN AgroVoc c_6029

**Gynogenesis**  NALT 36830
UN AgroVoc c_26859
the development of an embryo from a fertilized egg that only involves the maternal chromosomes from the female nucleus. (source: NALT)

**Polyembryony**  NALT 36833
UN AgroVoc c_6081
Library of Congress sh85104618
Development of more than one embryo from a single ovule or seed. (source: NALT)

**Somatic embryogenesis**  NALT 36834
UN AgroVoc c_36911
The initiation of embryos from previously differentiated somatic cells of plants. In this regeneration process, all the plantlets produced have the same genetic makeup. Both sexual and somatic embryos possess a primordial root and shoot. (source: NALT)

**Placenta**  NALT 36836
UN AgroVoc c_5944
An organ present in some vertebrates during embryonic gestation that surrounds the fetus and provides it with nutrients and oxygen, facilitates gas and waste exchange between the fetus and mother, and provides parasitic cloaking from the mother’s immune system by excretion of neurokinin B. Source: NCI thesaurus link

**first aid**  NALT 36852
UN AgroVoc c_15577

**Water lilies**  NALT 36858
UN AgroVoc c_8319

**Emetics**  NALT 36862
UN AgroVoc c_10589
Meningoencephalitis  NALT 36962
    UN AgroVoc c_16779

Inflammation of the meninges and brain, generally secondary to an infectious cause. Pathogens may be bacterial, viral, fungal, or protozoan. Source: NCI thesaurus link

Encephalitozoon  NALT 36964
    UN AgroVoc c_2556

Encephalitozoon cuniculi  NALT 36965
    UN AgroVoc c_31181

Myeloencephalopathy  NALT 36970
    UN AgroVoc c_37550

Enchytraeidae  NALT 36972
    UN AgroVoc c_24996

Gyranusoidea  NALT 36979
    UN AgroVoc c_37848

Metaphycus  NALT 36983
    UN AgroVoc c_29875

Ooencyrtus  NALT 36985
    UN AgroVoc c_29876
**Psyllaephagus**  NALT 36986  
UN AgroVoc c_26654

**wildlife management**  NALT 36988  
UN AgroVoc c_49867
Includes management of plant and animal wildlife resources. (source: NALT)

**Endocarditis**  NALT 36998  
UN AgroVoc c_10597
Inflammation of the inner lining of the heart (endocardium), the continuous membrane lining the four chambers and heart valves. (source: NALT)

Inflammation of the endocardium. Source: NCI thesaurus link

**endocarp**  NALT 37000  
UN AgroVoc c_27972
A portion of plant tissue that is the innermost differentiated layer of a pericarp. (source: NALT)

**Parathyroid diseases**  NALT 37004  
UN AgroVoc c_13115

**Thyroid diseases**  NALT 37005  
UN AgroVoc c_14880

**Parathyroid gland**  NALT 37009  
UN AgroVoc c_5580
One of two small paired endocrine glands, superior and inferior, usually found embedded in the connective tissue capsule on the posterior surface of the thyroid gland; these glands secrete parathyroid hormone that regulates the metabolism of calcium and phosphorus. The parenchyma is composed of chief and oxyphilic cells arranged in anastomosing cords. Source: NCI thesaurus link

**Pineal body**  NALT 37010  
UN AgroVoc c_5888

**Thymus gland**  NALT 37012  
UN AgroVoc c_14878
A bi-lobed organ surrounded by a connective tissue capsule. It is located in the upper anterior portion of the chest, behind the sternum. It is composed predominantly of lymphocytes and fewer epithelial cells. Connective tissue septa separate the lobes into lobules. The lobules contain an outer portion (cortical zone) which is rich in lymphocytes and an inner portion (medullary zone) which is rich in epithelial cells. It is an organ essential for the development of the immune system. Its function is the maturation of the progenitor lymphoid cells to thymocytes and subsequently to mature T-cells. It reaches its greatest weight at puberty and subsequently begins to involute. Source: NCI thesaurus link

**Thyroid gland**  NALT 37013  
UN AgroVoc c_7753
An endocrine gland located at the base of the neck that produces and secretes thyroxine and other hormones. Thyroxine is important for metabolic control. Source: NCI thesaurus link
**hormonal regulation** NALT 37014  
UN AgroVoc c_29379

**Endocronartium** NALT 37019  
UN AgroVoc c_31848

**Phagocytosis** NALT 37025  
UN AgroVoc c_37222

The process by which phagocytes engulf and digest microorganisms and cellular debris; an important defense against infection. Source: NCI thesaurus link

**Endogone** NALT 37030  
UN AgroVoc c_31770

**Gigaspora** NALT 37031  
UN AgroVoc c_31771

**Glomus** NALT 37032  
UN AgroVoc c_31772

**Scutellospora** NALT 37033  
UN AgroVoc c_37102

**Endometritis** NALT 37034  
UN AgroVoc c_10600

Inflammation of the endometrium, usually caused by intrauterine infections. (source: NALT)

An acute or chronic, usually bacterial infectious process affecting the endometrium. It may extend to the myometrium and parametrial tissues. Symptoms include lower abdominal pain, vaginal discharge, and vaginal bleeding. Source: NCI thesaurus link

**Uterine diseases** NALT 37036  
UN AgroVoc c_15116

**Endometrium** NALT 37037  
UN AgroVoc c_10601

The mucous membrane comprising the inner layer of the uterine wall; it consists of a simple columnar epithelium and a lamina propria that contains simple tubular uterine glands. The structure, thickness, and state of the endometrium undergo marked change with the menstrual cycle. Source: NCI thesaurus link

**Hansenula** NALT 37040  
UN AgroVoc c_3488

**Kluyveromyces** NALT 37041  
UN AgroVoc c_16255

A genus of yeasts in the family Saccharomycetaceae and phylum Ascomycota. Source: NCI thesaurus link

**Pichia** NALT 37044  
UN AgroVoc c_16013
Saccharomyces NALT 37045
UN AgroVoc e_6723

Schizosaccharomyces NALT 37047
UN AgroVoc e_27602

Zygosaccharomyces NALT 37048
UN AgroVoc e_35185

Endomycorrhizae NALT 37050
UN AgroVoc e_16543

Endoparasites NALT 37053
UN AgroVoc e_10603

Endophytes NALT 37056
UN AgroVoc e_32439

Endoplasmic reticulum NALT 37062
UN AgroVoc e_2560

The endoplasmic reticulum is a network of tubular membranes within the cytoplasm of the cell, occurring either with a smooth surface (smooth endoplasmic reticulum) or studded with ribosomes (rough endoplasmic reticulum), involved in the transport of materials. (Infoplease Dictionary)
Source: NCI thesaurus link

Ribonucleases NALT 37070
UN AgroVoc e_13914

Endorphins NALT 37071
UN AgroVoc e_32666

Endoscopy NALT 37074
UN AgroVoc e_16180

Library of Congress sh85043097

Procedures of applying endoscopes for disease diagnosis and treatment. Endoscopy involves passing an optical instrument through a small incision in the skin i.e. percutaneous; or through a natural orifice and along natural body pathways such as the digestive tract; and/or through an incision in the wall of a tubular structure or organ, i.e. transluminal, to examine or perform surgery on the interior parts of the body. (source: NALT)

A diagnostic or therapeutic procedure in which an endoscope is inserted in a tubular organ to examine the structural architecture and/or remove abnormal tissues. Source: NCI thesaurus link

Laparoscopy NALT 37075
UN AgroVoc e_16321

A procedure in which a laparoscope is inserted through a small incision near the navel to examine the abdominal and pelvic organs in the peritoneal cavity. If appropriate, biopsy or surgery can be performed during laparoscopy. (source: NALT)

Laparoscopic examination of the abdominal cavity and its contents. Source: NCI thesaurus link
**Symbionts** NALT 37082

An organism that is associated with an organism of another species and participating in a beneficial symbiotic relationship. (source: NALT)

**energy** NALT 37097

The capacity of a physical system to do work. Source: NCI thesaurus link

**Energy conversion** NALT 37098

The change of energy from one form to another. (source: NALT)

**Energy conservation** NALT 37100

**physical activity** NALT 37116

Use to describe the movements made by animals or humans as they accomplish their routine tasks; for periodic use of specific sets of movements for the purpose of physical conditioning USE exercise. (source: NALT)

Any form of exercise or movement. Physical activity may include planned activity such as walking, running, basketball, or other sports. Physical activity may also include other daily activities such as household chores, yard work, walking the dog, etc. Source: NCI thesaurus link

**Picea engelmannii** NALT 37132

**Sitobion avenae** NALT 37160

**Ilex aquifolium** NALT 37162

**Quercus robur** NALT 37168

**Juglans regia** NALT 37170

**Taxus baccata** NALT 37172

**Festuca pratensis** NALT 37174

**Engraulis** NALT 37176

Dbpedia Engraulis
Mustelidae  NALT 37184
          UN AgroVoc e_15605
          Dbpedia Mustelidae
          Taxonomic family which includes the Ferret. Source: NCI thesaurus link

Enhydra lutris  NALT 37185
          UN AgroVoc e_48916

food enrichment  NALT 37196
          UN AgroVoc e_3018
          Use for addition of a nutrient to a processed food to replace losses of the nutrient that occurred during processing; For addition of a nutrient to a food to increase the nutrient content above natural levels USE food fortification. (source: NALT)

Ensete  NALT 37200
          UN AgroVoc e_2576

Musaceae  NALT 37201
          UN AgroVoc e_4998

Evaniidae  NALT 37208
          UN AgroVoc e_29887

Silage making  NALT 37211
          UN AgroVoc e_16036

Entada  NALT 37212
          UN AgroVoc e_32129

Entandrophragma  NALT 37214
          UN AgroVoc e_2579

Escherichia  NALT 37247
          UN AgroVoc e_2663
          A genus of Gram-negative, non-spore forming, facultatively anaerobic, rod-shaped bacteria in the phylum Proteobacteria. Source: NCI thesaurus link

Hafnia  NALT 37249
          UN AgroVoc e_3468
          A genus of facultatively anaerobic, Gram negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Enterobacteriaceae. Source: NCI thesaurus link

Klebsiella  NALT 37250
          UN AgroVoc e_4108
          A genus of Gram-negative, non-motile, rod-shaped bacteria that have a polysaccharide-based capsule and are oxidase negative. Klebsiella spp. are frequent human pathogens. Source: NCI thesaurus link

Photorhabdus  NALT 37260
          UN AgroVoc e_35457
A genus of facultatively anaerobic, Gram negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Enterobacteriaceae. Source: NCI thesaurus link

**Plesiomonas**  NALT 37261

UN AgroVoc c_27310

A genus of facultatively anaerobic gram negative rod shaped bacterium in the phylum Proteobacteria and the family Enterobacteriaceae. Source: NCI thesaurus link

**Proteus**  NALT 37263

UN AgroVoc c_6263

A genus of Gram-negative, oxidase-negative, but catalase- and nitrase-positive bacteria in the phylum Proteobacteria. Source: NCI thesaurus link

**Salmonella**  NALT 37267

UN AgroVoc c_6757

A genus of motile, rod-shaped Gram-negative enterobacteria in the phylum Proteobacteria. Source: NCI thesaurus link

**Serratia**  NALT 37269

UN AgroVoc c_14210

A genus of small motile peritrichous bacteria in the Enterobacteriaceae family consisting of Gram-negative rods. Source: NCI thesaurus link

**Shigella**  NALT 37270

UN AgroVoc c_14256

A genus of Gram-negative, non-spore forming rod-shaped bacteria in the phylum Proteobacteria. Source: NCI thesaurus link

**Xenorhabdus**  NALT 37275

UN AgroVoc c_35456

**Yersinia**  NALT 37276

UN AgroVoc c_8485

A genus of facultatively anaerobic, Gram negative, rod shaped bacterium in the phylum Proteobacteria and the family Enterobacteriaceae. Source: NCI thesaurus link

**Enterococcus**  NALT 37281

UN AgroVoc c_15967

A genus of Gram-positive, facultative anaerobic, lactic acid bacteria in the phylum Firmicutes. Source: NCI thesaurus link

**Enterococcus hirae**  NALT 37296

UN AgroVoc c_37069

A species of facultatively anaerobic, Gram-positive, cocci shaped bacteria in the phylum Firmicutes. This species is nonmotile, non-spore forming, catalase negative, and hydrolyzes esculin but not hippurate. E. hirae was isolated from chicken and pig intestines and though rare, is pathogenic in humans. Source: NCI thesaurus link

**Earpod (tree)**  NALT 37330

UN AgroVoc c_10506
Enterolobium cyclocarpum  NALT 37332
UN AgroVoc c_331157

Enteropogon  NALT 37338
UN AgroVoc c_2582

Porcine enterovirus  NALT 37345
UN AgroVoc c_16454

Porcine enterovirus is not a valid species in the 8th Report of the International Committee on the
Taxonomy of Viruses. Use for indexing only when the specific type is not known. (source: NALT)

Swine vesicular disease virus  NALT 37346
UN AgroVoc c_16470

Entolasia  NALT 37351
UN AgroVoc c_32978

Heterorhabditidae  NALT 37373
UN AgroVoc c_31049

Romanomermis culicivorax  NALT 37374
UN AgroVoc c_31077

Steinernematidae  NALT 37376
UN AgroVoc c_31121

Entomophaga  NALT 37381
UN AgroVoc c_31779

Entomophthora  NALT 37387
UN AgroVoc c_2589

Erynia  NALT 37392
UN AgroVoc c_27193

Ichthyophonus  NALT 37393
UN AgroVoc c_31780

Massospora  NALT 37394
UN AgroVoc c_31781

Neozygites  NALT 37395
UN AgroVoc c_31782

Mycoplasmatales  NALT 37404
UN AgroVoc c_5021

Mycoplasma capricolum  NALT 37406
UN AgroVoc c_27242

Mycoplasma putrefaciens  NALT 37407
UN AgroVoc c_37783

1.7. Glossary
Entyloma  NALT 37426
  UN AgroVoc e_31852

genotype environment interaction  NALT 37429
  UN AgroVoc e_24577
  Effect of different environmental conditions on the phenotype and level of performance of an individual. (source: NALT)

environmental sciences  NALT 37440
  UN AgroVoc e_331559
  Library of Congress sh92004048

Eutrophication  NALT 37441
  UN AgroVoc e_2734
  Process by which bodies of water become enriched in dissolved nutrients, e.g. phosphates, nitrates, nitrogenous compounds. The nutrients deplete the dissolved oxygen of the water by stimulating the growth of algae and other aquatic plant life. (source: NALT)

Shade  NALT 37449
  UN AgroVoc e_14232

Pesticide persistence  NALT 37451
  UN AgroVoc e_5735

Environmental monitoring  NALT 37456
  UN AgroVoc e_37876

Riverbank protection  NALT 37460
  UN AgroVoc e_37238

Enzyme activity  NALT 37473
  UN AgroVoc e_2604

Enzymatic hydrolysis  NALT 37474
  UN AgroVoc e_27512

Favism  NALT 37483
  UN AgroVoc e_24170

Human physiology  NALT 37484
  UN AgroVoc e_25188

Urease inhibitors  NALT 37491
  UN AgroVoc e_8093

Menacanthus  NALT 37506
  UN AgroVoc e_12492

Eosinophilia  NALT 37511
  UN AgroVoc e_2605
  Abnormal increase in eosinophils in the blood, tissues or organs. (source: NALT)
Abnormal high level of eosinophils in the blood. Source: NCI thesaurus link

**Eosinophils** NALT 37512
UN AgroVoc c_10633

Granular leukocytes with a nucleus that usually has two lobes connected by a slender thread of chromatin, and cytoplasm containing coarse, round granules that are uniform in size and stainable by eosin. (source: NALT)

**Eotetranychus** NALT 37513
UN AgroVoc c_8549

**Ephedra** NALT 37525
UN AgroVoc c_2607

**Ephedraceae** NALT 37526
UN AgroVoc c_2608

**Hydrellia** NALT 37550
UN AgroVoc c_3717

**Epicauta** NALT 37556
UN AgroVoc c_2611

**Epichoristodes** NALT 37558
UN AgroVoc c_2612

**Epicoccum** NALT 37559
UN AgroVoc c_31567

**Epidendrum** NALT 37570
UN AgroVoc c_2616

Dbpedia Epidendrum

**Epidermal growth factor** NALT 37571
UN AgroVoc c_36744

Epidermal growth factor affects the differentiation of specific cells in vivo and is a potent mitogenic factor for a variety of cultured cells of both ectodermal and mesodermal origin. EGF is synthesized as a large protein precursor of 1,168 amino acids. Mature EGF is a single-chain polypeptide consisting of 53 amino acids and having a molecular mass of about 6,000 daltons. (OMIM) Source: NCI thesaurus link

**Stomata** NALT 37576
UN AgroVoc c_7423

**Epidermophyton** NALT 37578
UN AgroVoc c_31568

**Epididymitis** NALT 37583
UN AgroVoc c_10636

**Epilachna varivestis** NALT 37592
UN AgroVoc c_30052
Epinephelus  NALT 37596
UN AgroVoc c_2619

Serranidae  NALT 37597
UN AgroVoc c_42305
Dbpedia Serranidae

Epinotia  NALT 37598
UN AgroVoc c_2621

Epipactis  NALT 37599
UN AgroVoc c_37123
Dbpedia Epipactis

Epiphyas  NALT 37600
UN AgroVoc c_2622

Epiphyas postvittana  NALT 37601
UN AgroVoc c_30371

Epiphytes  NALT 37606
UN AgroVoc c_2623
Nonparasitic plants that grow on other plants for support, rather than rooting in the soil. (source: NALT)

gene interaction  NALT 37623
UN AgroVoc c_32461
The involvement of genes at different loci in the production of a phenotype. (source: NALT)

Haptens  NALT 37635
UN AgroVoc c_27539
Small antigenic determinants capable of eliciting an immune response only when coupled to a carrier. Haptens bind to antibodies but by themselves cannot elicit an antibody response. (source: NALT)

A substance that can act as an epitope for an antibody but that lacks immunogenicity unless coupled to a larger carrier molecule. Source: NCI thesaurus link

Epitrimerus  NALT 37636
UN AgroVoc c_2625

Universal soil loss equation  NALT 37669
UN AgroVoc c_32619

horses  NALT 37683
UN AgroVoc c_3668

Zebras  NALT 37684
UN AgroVoc c_8506
Orthomyxoviridae NALT 37703

UN AgroVoc e_12976

A family of negative-strand single-strand RNA viruses which includes Influenza viruses. Source: NCI thesaurus link

surra NALT 37710

UN AgroVoc e_14708

Equisetales NALT 37762

UN AgroVoc e_10649

Equisetum NALT 37763

UN AgroVoc e_35542

Dbpedia Equisetum

Equisetum arvense NALT 37766

UN AgroVoc e_35543

Eragrostis NALT 37784

UN AgroVoc e_2632

Dbpedia Eragrostis

Eragrostis curvula NALT 37786

UN AgroVoc e_2633

Eragrostis lehmanniana NALT 37788

UN AgroVoc e_36626

Eragrostis tef NALT 37791

UN AgroVoc e_2635

Erannis NALT 37804

UN AgroVoc e_26487

Eremochloa NALT 37810

UN AgroVoc e_24632

Eretmochelys imbricata NALT 37831

UN AgroVoc e_49085

Ergosterol NALT 37835

UN AgroVoc e_2639

Eria NALT 37844

UN AgroVoc e_26488

Saccharum NALT 37846

UN AgroVoc e_6725

Erica NALT 37850

UN AgroVoc e_10659
Gaultheria  NALT 37860
    UN AgroVoc e_37126
    Dbpedia Gaultheria
Kalmia  NALT 37862
    UN AgroVoc e_37131
Pieris (ericaceae)  NALT 37869
    UN AgroVoc e_33813
Erinnyis  NALT 37877
    UN AgroVoc e_2644
Erinnyis ello  NALT 37878
    UN AgroVoc e_30349
Eriobotrya  NALT 37880
    UN AgroVoc e_2645
    Dbpedia Eriobotrya
Eriobotrya japonica  NALT 37881
    UN AgroVoc e_2646
Loquats  NALT 37882
    UN AgroVoc e_12246
Eriocaulaceae  NALT 37883
    UN AgroVoc e_26299
Eriochloa  NALT 37886
    UN AgroVoc e_2647
Eriogonum  NALT 37898
    UN AgroVoc e_35575
    Dbpedia Eriogonum
Eriophyes  NALT 37905
    UN AgroVoc e_2648
Phyllocoptes  NALT 37908
    UN AgroVoc e_5817
Phyllocoptruta  NALT 37909
    UN AgroVoc e_5818
    Library of Congress sh85101475
Vasates  NALT 37910
    UN AgroVoc e_15128
Eriosoma lanigerum  NALT 37912
    UN AgroVoc e_30795
Yponomeutidae  NALT 37923
    UN AgroVoc c_30385
    Library of Congress sh85149400

Geraniaceae  NALT 37927
    UN AgroVoc c_3240
    Dbpedia Geraniaceae

Erynia radicans  NALT 38011
    UN AgroVoc c_35183

Erysipelothrix  NALT 38021
    UN AgroVoc c_2656
    A genus of gram-positive, facultatively anaerobic, rod-shaped bacteria that has a tendency to form long filaments. Its organisms are widely distributed in nature and are found in mammals, birds, and fishes. (source: NALT)
    A genus of aerobic, Gram positive, rod shaped bacterium assigned to the phylum Firmicutes and the family Erysipelotrichaceae. Source: NCI thesaurus link

Erysiphe  NALT 38035
    UN AgroVoc c_2657

Leveillula  NALT 38036
    UN AgroVoc c_26550

Podosphaera  NALT 38038
    UN AgroVoc c_4565

Sphaerotheca  NALT 38039
    UN AgroVoc c_7292

Uncinula  NALT 38040
    UN AgroVoc c_8056

Erysiphe betae  NALT 38041
    UN AgroVoc c_27194

Erysiphe cichoracearum  NALT 38042
    UN AgroVoc c_27195

Erysiphe pisi  NALT 38044
    UN AgroVoc c_27197

Erysiphe polygoni  NALT 38045
    UN AgroVoc c_27198

Uncinula nectar  NALT 38051
    UN AgroVoc c_34581

1.7. Glossary
Erythrina  NALT 38056
    UN AgroVoc c_2658
    Dbpedia Erythrina
Erythrina poeppigiana  NALT 38059
    UN AgroVoc c_27199
Erythromycin  NALT 38103
    UN AgroVoc c_10665
    A bacteriostatic antibiotic macrolide produced by Streptomyces erythreus. Erythromycin A is considered its major active component. In sensitive organisms, it inhibits protein synthesis by binding to 50S ribosomal subunits. This binding process inhibits peptidyl transferase activity and interferes with translocation of amino acids during translation and assembly of proteins. (source: NALT)
    A broad-spectrum, macrolide antibiotic with antibacterial activity. Erythromycin diffuses through the bacterial cell membrane and reversibly binds to the 50S subunit of the bacterial ribosome. This prevents bacterial protein synthesis. Erythromycin may be bacteriostatic or bactericidal in action, depending on the concentration of the drug at the site of infection and the susceptibility of the organism involved. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link
Erythropoiesis  NALT 38116
    UN AgroVoc c_10666
    A hematopoietic process that refers to the production of erythrocytes. Source: NCI thesaurus link
Erythroxylaceae  NALT 38119
    UN AgroVoc c_2661
Erythroxylum  NALT 38121
    UN AgroVoc c_2662
    Library of Congress sh85044760
Erythroxylum coca  NALT 38122
    UN AgroVoc c_331128
Esocidae  NALT 38147
    UN AgroVoc c_39463
Salmoniformes  NALT 38148
    UN AgroVoc c_39269
    Library of Congress sh85116836
Esox  NALT 38149
    UN AgroVoc c_2666
Dbpedia Esox

**Esox lucius**  NALT 38162
UN AgroVoc c_33701

**Stipa tenacissima**  NALT 38166
UN AgroVoc c_7418

**Linolenic acid**  NALT 38167
UN AgroVoc c_15993

**essential oil crops**  NALT 38168
UN AgroVoc c_2668

**Eugenol**  NALT 38173
UN AgroVoc c_10688

**Menthol**  NALT 38178
UN AgroVoc c_25486

An organic compound made synthetically or obtained from peppermint or mint oils with flavoring and local anesthetic properties. When added to pharmaceuticals and foods, menthol functions as a fortifier for peppermint flavors. It also has a counterirritant effect on skin and mucous membranes, thereby producing a local analgesic or anesthetic effect. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using CAS number link

**Thymol**  NALT 38186
UN AgroVoc c_36458

**Methyl jasmonate**  NALT 38195
UN AgroVoc c_36638

**propyl gallate**  NALT 38198
UN AgroVoc c_28395

**Sinapine**  NALT 38199
UN AgroVoc c_24083

**Standing reflex**  NALT 38222
UN AgroVoc c_14562

response of a female animal that is willing to be served by a male. (source: NALT)

**Estuaries**  NALT 38226
UN AgroVoc c_2673
Library of Congress sh85045018

**Surface water**  NALT 38228
UN AgroVoc c_25317

All water naturally open to the atmosphere, such as rivers, lakes, ponds, streams, estuaries, impoundments, seas, etc. (source: NALT)
Ethalfuralin  NALT 38235
  UN AgroVoc c_31355

Percidae  NALT 38241
  UN AgroVoc c_42618

Ethers  NALT 38243
  UN AgroVoc c_35739

Methoxyflurane  NALT 38245
  UN AgroVoc c_34973

Ethion  NALT 38249
  UN AgroVoc c_31356

Ethionine  NALT 38250
  UN AgroVoc c_36896

Solanum aethiopicum  NALT 38252
  UN AgroVoc c_32249

Indigenous knowledge  NALT 38257
  UN AgroVoc c_35704

Ethofumesate  NALT 38260
  UN AgroVoc c_31359

Ethoprophos  NALT 38262
  UN AgroVoc c_31360

Ethoxyquin  NALT 38263
  UN AgroVoc c_28362

Ethylene dibromide  NALT 38265
  UN AgroVoc c_26778

  A clear, colorless, volatile liquid brominated hydrocarbon with a mild, sweet, chloroform-like odor that emits corrosive and toxic fumes when heated to decomposition. Ethylene dibromide is used as a chemical intermediate in the synthesis of resins, waxes, gums, dyes and pharmaceuticals and is used to produce vinyl bromide. Exposure to ethylene dibromide severely irritates the skin and causes depression and collapse. Ethylene dibromide affects DNA integrity by alkylation and is reasonably anticipated to be a human carcinogen. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Ethylene glycol  NALT 38267
  UN AgroVoc c_36547
Etiella  NALT 38270
    UN AgroVoc e_2680
Etiella zinckenella  NALT 38271
    UN AgroVoc e_30318
Etiolation  NALT 38273
    UN AgroVoc e_16123
    Plant growth exhibiting pale or bleached color due to the deprivation of light. (source: NALT)
Eucalyptus  NALT 38345
    UN AgroVoc e_2683
    Dbpedia Eucalyptus
Eucalyptus blakelyi  NALT 38347
    UN AgroVoc e_27200
Eucalyptus camaldulensis  NALT 38349
    UN AgroVoc e_2685
Eucalyptus dalrympleana  NALT 38351
    UN AgroVoc e_32316
Eucalyptus deglupta  NALT 38352
    UN AgroVoc e_2687
Eucalyptus delegatensis  NALT 38353
    UN AgroVoc e_32134
Eucalyptus diversicolor  NALT 38354
    UN AgroVoc e_2688
Broadleaved peppermint (tree)  NALT 38355
    UN AgroVoc e_13224
Eucalyptus grandis  NALT 38358
    UN AgroVoc e_2693
Eucalyptus gunnii  NALT 38359
    UN AgroVoc e_32133
Eucalyptus marginata  NALT 38361
    UN AgroVoc e_2695
Eucalyptus meliodora  NALT 38362
    UN AgroVoc e_32318
Eucalyptus microtheca  NALT 38363
    UN AgroVoc e_26490
Eucalyptus nitens  NALT 38365
    UN AgroVoc e_32319
Eucalyptus obliqua  NALT 38366
   UN AgroVoc c_2696
Eucalyptus ovata  NALT 38367
   UN AgroVoc c_32320
Eucalyptus pauciflora  NALT 38368
   UN AgroVoc c_32321
Eucalyptus pellita  NALT 38369
   UN AgroVoc c_34736
Eucalyptus radiata  NALT 38371
   UN AgroVoc c_2698
Eucalyptus regnans  NALT 38372
   UN AgroVoc c_2699
Eucalyptus robusta  NALT 38373
   UN AgroVoc c_32137
Eucalyptus saligna  NALT 38375
   UN AgroVoc c_2700
Eucalyptus tereticornis  NALT 38378
   UN AgroVoc c_26491
Eucalyptus urophylla  NALT 38380
   UN AgroVoc c_26492
Eucalyptus viminalis  NALT 38381
   UN AgroVoc c_32138
Eucalyptus wandoo  NALT 38382
   UN AgroVoc c_2703
Eucelatoria  NALT 38400
   UN AgroVoc c_30609
Mesocestoididae  NALT 38403
   UN AgroVoc c_31959
   Library of Congress sh85083934
Eucheuma  NALT 38407
   UN AgroVoc c_24750
Zea  NALT 38410
   UN AgroVoc c_27440
   Library of Congress sh88023194
Euchresta  NALT 38412
   UN AgroVoc c_33702
Eucoilidae  NALT 38413
      UN AgroVoc e_29877
Leptopilina  NALT 38414
      UN AgroVoc e_29878
Eucommia  NALT 38417
      UN AgroVoc e_16239
Eucommiaceae  NALT 38418
      UN AgroVoc e_16241
Eucommia ulmoides  NALT 38419
      UN AgroVoc e_16240
Eucosma  NALT 38421
      UN AgroVoc e_2707
Eudrilus  NALT 38433
      UN AgroVoc e_34443
Spheniscidae  NALT 38436
      UN AgroVoc e_49183
pomerac  NALT 38438
      UN AgroVoc e_13507
Eugenia uniflora  NALT 38439
      UN AgroVoc e_2715
Syzygium cumini  NALT 38444
      UN AgroVoc e_37371
Syzygium jambos  NALT 38447
      UN AgroVoc e_14763
Euglena  NALT 38449
      UN AgroVoc e_37021
Euglena gracilis  NALT 38450
      UN AgroVoc e_37022
Eulaliopsis  NALT 38476
      UN AgroVoc e_24338
Pediobius  NALT 38488
      UN AgroVoc e_27281
Tetrastichus  NALT 38492
      UN AgroVoc e_16050
Euphausiidae  NALT 38540
      UN AgroVoc e_46234
Euphausia superba  NALT 38541  
UN AgroVoc c_46241
Euphausiacea  NALT 38542  
UN AgroVoc c_46233
Euphorbia  NALT 38543  
UN AgroVoc c_2717  
Dbpedia Euphorbia
Euphorbia characias  NALT 38545  
UN AgroVoc c_27519
Euphorbia esula  NALT 38549  
UN AgroVoc c_27201
Euphorbia lathyris  NALT 38552  
UN AgroVoc c_27202
Euphorbia pulcherrima  NALT 38557  
UN AgroVoc c_2719
Hevea  NALT 38577  
UN AgroVoc c_3588
Jatropha  NALT 38579  
UN AgroVoc c_16253
Mallotus (euphorbiaceae)  NALT 38581  
UN AgroVoc c_33764
Manihot  NALT 38582  
UN AgroVoc c_4578
Mercurialis  NALT 38583  
UN AgroVoc c_37137
Ricinus  NALT 38585  
UN AgroVoc c_29054
Sapium  NALT 38586  
UN AgroVoc c_35580
Sauropus  NALT 38587  
UN AgroVoc c_6823
Pandaceae  NALT 38592  
UN AgroVoc c_26252  
Dbpedia Pandaceae
Simmondsiaceae  NALT 38593  
UN AgroVoc c_7073
Litchi  NALT 38595
    UN AgroVoc c_32903
Euphyllura  NALT 38602
    UN AgroVoc c_30832
Eupodidae  NALT 38606
    UN AgroVoc c_10694
Eupomatiaceae  NALT 38612
    UN AgroVoc c_26272
Euproctis  NALT 38613
    UN AgroVoc c_2722
Trichomalopsis  NALT 38616
    UN AgroVoc c_34482
Salvia sclarea  NALT 38640
    UN AgroVoc c_33869
Fraxinus excelsior  NALT 38644
    UN AgroVoc c_35545
Populus tremula  NALT 38646
    UN AgroVoc c_23967
Prunus padus  NALT 38652
    UN AgroVoc c_6288
Ostrinia nubilalis  NALT 38657
    UN AgroVoc c_24778
Tipula paludosa  NALT 38661
    UN AgroVoc c_30624
Forficula auricularia  NALT 38665
    UN AgroVoc c_31918
Scolytus multistriatus  NALT 38672
    UN AgroVoc c_30155
Vitis vinifera  NALT 38684
    UN AgroVoc c_8283
Lymantria dispar  NALT 38686
    UN AgroVoc c_30232
Larix decidua  NALT 38690
    UN AgroVoc c_4196
Viscum album  NALT 38694
    UN AgroVoc c_26739
Sorbus aucuparia  NALT 38696
   UN AgroVoc e_27378
Ostrea edulis   NALT 38698
   UN AgroVoc e_31158
Rhyacionia buoliana  NALT 38701
   UN AgroVoc e_30378
Pleuronectes platessa  NALT 38703
   UN AgroVoc e_45598
Prunus domestica  NALT 38705
   UN AgroVoc e_6285
Panonychus ulmi  NALT 38710
   UN AgroVoc e_24672
Lygus rugulipennis  NALT 38716
   UN AgroVoc e_30676
Quercus cerris  NALT 38718
   UN AgroVoc e_24686
Furoviruses  NALT 38722
   UN AgroVoc e_32858
Lupinus luteus  NALT 38724
   UN AgroVoc e_4466
Eurosta  NALT 38726
   UN AgroVoc e_30615
Eurotium  NALT 38734
   UN AgroVoc e_31785
Monascus  NALT 38735
   UN AgroVoc e_26575
Talaromyces  NALT 38737
   UN AgroVoc e_31786
Eurygaster  NALT 38749
   UN AgroVoc e_2727
Eurygaster integriceps  NALT 38751
   UN AgroVoc e_30688
Eurytoma  NALT 38757
   UN AgroVoc e_24634
Euschistus  NALT 38764
   UN AgroVoc e_30689
Euseius  NALT 38772
    UN AgroVoc c_30901

Eustachys  NALT 38775
    UN AgroVoc c_2730

Eustoma  NALT 38777
    UN AgroVoc c_32140

Euterpe edulis  NALT 38783
    UN AgroVoc c_33709

Euterpe oleracea  NALT 38784
    UN AgroVoc c_33710

Eutetranychus  NALT 38786
    UN AgroVoc c_8550

Eutetranychus orientalis  NALT 38787
    UN AgroVoc c_26493

Euthynnus  NALT 38789
    UN AgroVoc c_2731
    Library of Congress sh85045913

Scombridae  NALT 38790
    UN AgroVoc c_44750
    Dbpedia Scombridae

Eutreta  NALT 38801
    UN AgroVoc c_37804

Euxesta  NALT 38813
    UN AgroVoc c_30573

Evaporation  NALT 38816
    UN AgroVoc c_2739

    The process of a liquid changing into a vapor or gas, usually water in meteorology. (source: NALT)

Evapotranspiration  NALT 38819
    UN AgroVoc c_2741

    Combination of evaporation from free water surfaces and transpiration of water from plant surfaces to the atmosphere. (source: NALT)

Even aged stands  NALT 38822
    UN AgroVoc c_28081

    A class of forest or stand composed of trees of about the same age. The maximum age difference admissible is generally 10 to 20 years. Compare uneven-aged stands. (source: NALT)

Oenothera biennis  NALT 38824
    UN AgroVoc c_32189
Fragaria  NALT 38825  
UN AgroVoc c_3076

Strawberries  NALT 38826  
UN AgroVoc c_7443

Evisceration  NALT 38829  
UN AgroVoc c_2744

Natural selection  NALT 38836  
UN AgroVoc c_32698

Phylogeny  NALT 38838  
UN AgroVoc c_13325

The relationships of groups of organisms as reflected by their genetic makeup. (source: NALT)

Ewes  NALT 38842  
UN AgroVoc c_2746

Female sheep of any age. (source: NALT)

Ewe milk  NALT 38845  
UN AgroVoc c_16081

Sheep  NALT 38846  
UN AgroVoc c_7030

Any one of several species of ruminants of the genus Ovis, native of the higher mountains of both hemispheres, but most numerous in Asia; the domestic sheep, Ovis aries. Source: NCI thesaurus link

Exanthema  NALT 38851  
UN AgroVoc c_16730

Excision  NALT 38863  
UN AgroVoc c_2747

The act of cutting out; the surgical removal of part or all of a structure or organ. Source: NCI thesaurus link

honeydew  NALT 38867  
UN AgroVoc c_32684

Urine  NALT 38868  
UN AgroVoc c_8103

The fluid that is excreted by the kidneys. It is stored in the bladder and discharged through the urethra. Source: NCI thesaurus link

Urination  NALT 38869  
UN AgroVoc c_8101

The discharge of urine. Source: NCI thesaurus link
**Malpighian tubules** NALT 38871
  UN AgroVoc c_16568

**Pterophoridae** NALT 38876
  UN AgroVoc c_30297

**Heart rate** NALT 38887
  UN AgroVoc c_13669

  The number of heartbeats per unit of time, usually expressed as beats per minute. Source: NCI thesaurus link

**Exobasidium** NALT 38904
  UN AgroVoc c_2751

**exocarp** NALT 38905
  UN AgroVoc c_27974

  A portion of plant tissue that is the outer layer of a pericarp. (source: NALT)

**pearl bush** NALT 38907
  UN AgroVoc c_26984

**Sebaceous glands** NALT 38913
  UN AgroVoc c_14155

**Sweat glands** NALT 38914
  UN AgroVoc c_14720

**exons** NALT 38919
  UN AgroVoc c_331005

**Exophiala** NALT 38920
  UN AgroVoc c_16242

**Exorista** NALT 38926
  UN AgroVoc c_33711

**Exoskeleton** NALT 38928
  UN AgroVoc c_2754

**Expectorants** NALT 38936
  UN AgroVoc c_10712

**gene expression** NALT 38951
  UN AgroVoc c_27527

  The phenotypic manifestation of a gene or genes by the processes of genetic transcription and genetic translation. (source: NALT)

  Typically involves transcription of genetically encoded information into an intermediary message (messenger RNA) and subsequent translation into a functional protein. Source: NCI thesaurus link
**Protein synthesis**  NALT 38953

UN AgroVoc c_6258

Protein synthesis is the group of processes that are involved in generation of mature protein molecules. Although protein synthesis may involve translation alone in many cases, in others, it involves also protein folding, integration of prosthetic groups, glycosylation, methylation, phosphorylation, lipidation and any other process that may be involved in maturation of the polypeptide to the biologically active form. Source: NCI thesaurus link

**Plant extracts**  NALT 38974

UN AgroVoc c_8166

**Exudation**  NALT 38979

UN AgroVoc c_24101

**Staphylococcus hyicus**  NALT 38982

UN AgroVoc c_34405

A species of facultatively anaerobic, Gram positive, coccic shaped bacteria in the phylum Firmicutes. This species is positive for catalase, caseinase, hyaluronidase, and alkaline phosphatase, and negative for coagulase, oxidase, and urease. It can ferment sucrose, mannose, ribose, lactose and trehalose but not arabinose, celllobiose, maltose, glycerol, mannitol, turanose, xylitol or xylose. S. hyicus is a zoonotic pathogen. Source: NCI thesaurus link

**Glaucoma**  NALT 38985

UN AgroVoc c_11166

Library of Congress sh85055227

Increased pressure in the eyeball due to obstruction of the outflow of aqueous humor. Source: NCI thesaurus link

**Xerophthalmia**  NALT 38986

UN AgroVoc c_32627

Library of Congress sh85148810

Dryness of the eye due to inadequate production of tears. Causes include vitamin A deficiency, Sjogren syndrome, rheumatoid arthritis, systemic lupus erythematosus, and scleroderma. Source: NCI thesaurus link

**Vision**  NALT 38987

UN AgroVoc c_8266

**Eye lens**  NALT 38989

UN AgroVoc c_12137

**Eyelids**  NALT 38991

UN AgroVoc c_10720

**Retinoids**  NALT 38995

UN AgroVoc c_36229

**Vicia faba**  NALT 39008

UN AgroVoc c_8220
Fabales  NALT 39017
    UN  AgroVoc  c_330209
Flemingia  NALT 39029
    UN  AgroVoc  c_33190
Galactia  NALT 39031
    UN  AgroVoc  c_3165
Galega  NALT 39032
    UN  AgroVoc  c_24641
Genista  NALT 39035
    UN  AgroVoc  c_26501
Gliricidia  NALT 39038
    UN  AgroVoc  c_3277
Glycyrrhiza  NALT 39040
    UN  AgroVoc  c_3312
    Dbpedia  Glycyrrhiza
Hedysarum  NALT 39053
    UN  AgroVoc  c_3532
Indigofera  NALT 39067
    UN  AgroVoc  c_3831
    Dbpedia  Indigofera
Lubia  NALT 39076
    UN  AgroVoc  c_12260
Lathyrus  NALT 39081
    UN  AgroVoc  c_4216
Lens  NALT 39086
    UN  AgroVoc  c_24043
Kummerowia  NALT 39090
    UN  AgroVoc  c_16566
    Dbpedia  Kummerowia
Lonchocarpus  NALT 39094
    UN  AgroVoc  c_4427
Lotonois  NALT 39095
    UN  AgroVoc  c_4440
sacred lotus  NALT 39096
    UN  AgroVoc  c_12250
Lupinus  NALT 39098
    UN AgroVoc e_4463
Macropilium  NALT 39103
    UN AgroVoc e_4500
Macrotyloma  NALT 39104
    UN AgroVoc e_4506
Medicago  NALT 39109
    UN AgroVoc e_4687
Melilotus  NALT 39111
    UN AgroVoc e_4719
Milletia  NALT 39116
    UN AgroVoc e_4839
Myroxylon  NALT 39124
    UN AgroVoc e_5049
    Dbpedia Myroxylon
Neonotonia  NALT 39129
    UN AgroVoc e_33776
Onobrychis  NALT 39138
    UN AgroVoc e_5356
Ornithopus  NALT 39146
    UN AgroVoc e_5423
Oxytropis  NALT 39153
    UN AgroVoc e_35567
Pachyrhizus  NALT 39154
    UN AgroVoc e_5486
Pisum  NALT 39177
    UN AgroVoc e_5932
Psophocarpus  NALT 39198
    UN AgroVoc e_6320
prairie potatoes  NALT 39199
    UN AgroVoc e_13560
Pterocarpus  NALT 39202
    UN AgroVoc e_6333
tropical kudzu  NALT 39206
    UN AgroVoc e_15007
Rhynchosia  NALT 39216
        UN AgroVoc e_6583
Scorpiurus  NALT 39227
        UN AgroVoc e_33419
Spartium  NALT 39236
        UN AgroVoc e_26688
Sphenostylis  NALT 39241
        UN AgroVoc e_7294
Stylosanthes  NALT 39251
        UN AgroVoc e_7477
Tephrosia  NALT 39262
        UN AgroVoc e_33433
Teramnus  NALT 39263
        UN AgroVoc e_7670
False lupine  NALT 39265
        UN AgroVoc e_33435
Tipa  NALT 39266
        UN AgroVoc e_14903
Trifolium  NALT 39268
        UN AgroVoc e_7910
Trigonella  NALT 39269
        UN AgroVoc e_7928
        Dbpedia Trigonella
Ulex  NALT 39272
        UN AgroVoc e_8040
Vicia  NALT 39283
        UN AgroVoc e_8214
Wisteria  NALT 39288
        UN AgroVoc e_26746
Zornia  NALT 39293
        UN AgroVoc e_8534
Musca autumnalis  NALT 39314
        UN AgroVoc e_30565
Fagus  NALT 39332
        UN AgroVoc e_2779
Nothofagus  NALT 39334
  UN AgroVoc c_5239
  Dbpedia Nothofagus
Quercus  NALT 39335
  UN AgroVoc c_6409
Zanthoxylum  NALT 39337
  UN AgroVoc c_8502
Fagopyrum  NALT 39338
  UN AgroVoc c_2775
  Dbpedia Fagopyrum
Siberian buckwheat  NALT 39339
  UN AgroVoc c_14270
Fagus crenata  NALT 39348
  UN AgroVoc c_24635
Fagus sylvatica  NALT 39349
  UN AgroVoc c_24637
Faidherbia  NALT 39354
  UN AgroVoc c_37347
Syncope  NALT 39357
  UN AgroVoc c_14750
  A spontaneous loss of consciousness caused by insufficient blood supply to the brain. Source: NCI thesaurus link
Plasmodium falciparum  NALT 39363
  UN AgroVoc c_31217
Spodoptera frugiperda  NALT 39372
  UN AgroVoc c_25452
Panicum dichotomiflorum  NALT 39374
  UN AgroVoc c_37152
Hyphantria cunea  NALT 39376
  UN AgroVoc c_30180
Starvation  NALT 39452
  UN AgroVoc c_7375
  Use for the physiological state of animals, insects and humans that have undergone continuous and prolonged deprivation of food. (source: NALT)
Fannia  NALT 39458
  UN AgroVoc c_10742
Fannia canicularis  NALT 39459
UN AgroVoc c_30553

Ponds  NALT 39513
UN AgroVoc c_6105

Land management  NALT 39546
UN AgroVoc c_24866

Farrowing pens  NALT 39557
UN AgroVoc c_2812

Farrowing rate  NALT 39558
UN AgroVoc c_35811

The number of sows that farrow divided by the number of sows mated, usually pertaining to the herd and not the number of matings for an individual. (source: NALT)

Fasciola  NALT 39559
UN AgroVoc c_2813

Fasciola gigantica  NALT 39560
UN AgroVoc c_31986

Fasciola hepatica  NALT 39561
UN AgroVoc c_31985

Trematode infections  NALT 39564
UN AgroVoc c_14977

Fascioloides  NALT 39565
UN AgroVoc c_31987

Fascioloides magna  NALT 39568
UN AgroVoc c_31988

lipid content  NALT 39577
UN AgroVoc c_4360

Fat globules  NALT 39579
UN AgroVoc c_24025

sucrose polyester  NALT 39588
UN AgroVoc c_37475

Vitamin E  NALT 39590
UN AgroVoc c_15230

A natural fat-soluble antioxidant with potential chemopreventive activity. Also known as tocopherol, vitamin E ameliorates free-radical damage to biological membranes, protecting polyunsaturated fatty acids (PUFA) within membrane phospholipids and within circulating lipoproteins. Peroxyl radicals react 1000-fold faster with vitamin E than with PUFA. In the case of oxygen free radical-mediated tumorigenesis, vitamin E may be chemopreventive. (NCI04) Source: NCI thesaurus link
Vitamin K  NALT 39591
    UN AgroVoc c_8273
    The term “vitamin K” refers to a group of chemically similar fat-soluble compounds called naphthoquinones: vitamin K1 (phytonadione) is found in plants and is the primary source of vitamin K for humans through dietary consumption, vitamin K2 compounds (menaquinones) are made by bacteria in the human gut, and vitamin K3 (menadione) is a water-soluble preparation available for adults only. Vitamin K is necessary for the liver to produce the coagulation factors II, VII, IX, and X, as well as the clotting factors protein C, protein S, and protein Z; vitamin K deficiency can result in deficiencies of these coagulation factors and excess bleeding. An injection of vitamin K is routinely given to newborn infants to prevent vitamin K deficiency bleeding, also known as hemorrhagic disease of the newborn. Vitamin K deficiency is rare in adults but may result from chronic malnutrition or an inability to absorb dietary vitamins. Source: NCI thesaurus link

Pimephales promelas  NALT 39595
    UN AgroVoc c_40258

Volatile fatty acids  NALT 39617
    UN AgroVoc c_24928

Free fatty acids  NALT 39618
    UN AgroVoc c_16183

Fatty liver  NALT 39620
    UN AgroVoc c_16421
    Library of Congress sh85047473
    Lipid infiltration of the hepatic parenchymal cells resulting in a yellow-colored liver. The abnormal lipid accumulation is usually in the form of triglycerides, either as a single large droplet or multiple small droplets. Fatty liver is caused by an imbalance in the metabolism of fatty acids. (source: NALT)

Fawns  NALT 39627
    UN AgroVoc c_24458

Feather pecking  NALT 39635
    UN AgroVoc c_10764

Fedia  NALT 39655
    UN AgroVoc c_330112

nutrient utilization  NALT 39668
    UN AgroVoc c_36245

Feed meals  NALT 39683
    UN AgroVoc c_2835

Pelleted feeds  NALT 39689
    UN AgroVoc c_32509

Palatability  NALT 39691
    UN AgroVoc c_13032
Use for the acceptance of a food as fit to eat by animals and humans, based solely upon sensory properties; For the acceptance of a food by humans as fit to eat, based upon a variety of sensory, cultural, and emotional factors USE food acceptability. (source: NALT)

**Feed requirements** NALT 39692
UN AgroVoc e_27930

**Restricted feeding** NALT 39694
UN AgroVoc e_6535

Use for the reduction of the amount of food to animals; for the complete withholding of feed to animals USE feed deprivation. (source: NALT)

**Feeding frequency** NALT 39710
UN AgroVoc e_16106

**Foraging** NALT 39711
UN AgroVoc e_3037

**Parenteral feeding** NALT 39720
UN AgroVoc e_5584

The administering of nutrients for assimilation and utilization by a patient who cannot maintain adequate nutrition by enteral feeding alone. Nutrients are administered by a route other than the alimentary canal (e.g., intravenously, subcutaneously). (source: NALT)

**Hay** NALT 39727
UN AgroVoc e_3508

Grasses, clover, alfalfa and other legumes, or any other leafy plant material that is cut and dried to be used for animal feeding. (source: NALT)

**Medicated feeds** NALT 39729
UN AgroVoc e_4696

**Milk replacers** NALT 39730
UN AgroVoc e_16192

Use for feeding of young animals separated from their dams; For milk-like products for human consumption USE milk substitutes. (source: NALT)

**Pet foods** NALT 39731
UN AgroVoc e_5743
Dbpedia Pet foods

**Middlings** NALT 39734
UN AgroVoc e_4818

The coarse particles containing the wheat germ and the fine particles of wheat bran separated during milling. Valuable for feed, middlings contain a large proportion of protein and digestible nutrients. (source: NALT)

**Feet** NALT 39735
UN AgroVoc e_2845
Legs  NALT 39736
    UN AgroVoc e_12129

Leopards  NALT 39745
    UN AgroVoc e_4264
    Dbpedia Leopards

Panthers  NALT 39748
    UN AgroVoc e_5541

Feline calicivirus  NALT 39757
    UN AgroVoc e_16422

Leukopenia  NALT 39763
    UN AgroVoc e_4299
    Condition in which the number of leukocytes in the circulating blood is below normal levels. (source: NALT)
    A laboratory test result indicating a decreased number of white blood cells in the peripheral blood. Source: NCI thesaurus link

Feline panleukopenia virus  NALT 39764
    UN AgroVoc e_10781

Feltia  NALT 39774
    UN AgroVoc e_2848

Kidding rate  NALT 39781
    UN AgroVoc e_35216
    The number of nannygoats that kid divided by the number mated, as pertaining to the flock and not the number of matings for an individual. (source: NALT)

Lambing rate  NALT 39782
    UN AgroVoc e_35217
    The number of ewes that lamb divided by the number of ewes mated, usually pertaining to the flock and not the number of matings for an individual. (source: NALT)

Pseudopregnancy  NALT 39787
    UN AgroVoc e_6309

Vaginal diseases  NALT 39789
    UN AgroVoc e_15124

Oviducts  NALT 39792
    UN AgroVoc e_5461

Womb  NALT 39795
    UN AgroVoc e_15386

Vagina  NALT 39796
    UN AgroVoc e_8142
The female genital canal, extending from the uterus to the vulva. Source: NCI thesaurus link

**Vulva**  NALT 39797

UN AgroVoc c_8292

The external, visible part of the female genitalia surrounding the urethral and vaginal opening. The vulva includes the clitoris and inner as well as outer labia. Source: NCI thesaurus link

**gender**  NALT 39799

UN AgroVoc c_34835

The assemblage of properties that distinguish people on the basis of the societal roles expected for the two sexes. Source: NCI thesaurus link

**gilts**  NALT 39800

UN AgroVoc c_11152

Young female swine, up to and including primiparous (first litter females) typically less than 15 months of age. (source: NALT)

**Seas**  NALT 39802

UN AgroVoc c_14148

**Nannygoats**  NALT 39803

UN AgroVoc c_5066

**Sows**  NALT 39804

UN AgroVoc c_7271

Any breeding female swine that has farrowed at least one litter or has reached 12 months of age. (source: NALT)

**Femur**  NALT 39808

UN AgroVoc c_10785

The upper leg bone positioned between the pelvis and the knee. Source: NCI thesaurus link

**Fenamiphos**  NALT 39812

UN AgroVoc c_31364

**Fenarimol**  NALT 39813

UN AgroVoc c_31366

**Fenitrothion**  NALT 39817

UN AgroVoc c_31369

**fennel**  NALT 39819

UN AgroVoc c_10789

**Foeniculum vulgare**  NALT 39820

UN AgroVoc c_3004

**Fenoprop**  NALT 39828

UN AgroVoc c_31370
Fenoxaprop  NALT 39829  
UN AgroVoc c_34824

Fenoxycarb  NALT 39830  
UN AgroVoc c_34278

Juvenile hormone analogues  NALT 39831  
UN AgroVoc c_25144

Fenpropathrin  NALT 39833  
UN AgroVoc c_31374

Fenpropimorph  NALT 39834  
UN AgroVoc c_36915

Fensulfothion  NALT 39837  
UN AgroVoc c_31375

Trigonella foenum graecum  NALT 39841  
UN AgroVoc c_7930

Fenvalerate  NALT 39846  
UN AgroVoc c_31378

Lactic fermentation  NALT 39851  
UN AgroVoc c_27566

Fermentation carried out by lactic acid bacteria in which sugar is converted either entirely, or almost entirely, to lactic acid or to a mixture of lactic acid and other products. (source: NALT)

Malolactic fermentation  NALT 39852  
UN AgroVoc c_27569

Solid state fermentation  NALT 39853  
UN AgroVoc c_34905

Industrial microbiology  NALT 39856  
UN AgroVoc c_25246

Vinasse  NALT 39859  
UN AgroVoc c_27624

Miso  NALT 39863  
UN AgroVoc c_15552

A fermented soybean paste that may also contain rice, barley or wheat. (source: NALT)

Soy sauce  NALT 39866  
UN AgroVoc c_24246

Tempeh  NALT 39867  
UN AgroVoc c_15569
**Kefir**  NALT 39869
UN AgroVoc c_23849
A sour brew of fermented milk with the consistency of liquid yogurt, which may contain 2 1/2 percent alcohol. (source: NALT)

**Ferrets**  NALT 39893
UN AgroVoc c_2859

**Ferrisia**  NALT 39908
UN AgroVoc c_2860

**Ferrisia virgata**  NALT 39911
UN AgroVoc c_31233

**Steel**  NALT 39919
UN AgroVoc c_7384

**Fertilizer injury**  NALT 39933
UN AgroVoc c_10797

**Sexual reproduction**  NALT 39946
UN AgroVoc c_26876

**Liquid fertilizers**  NALT 39959
UN AgroVoc c_4372

**Ferula communis**  NALT 39961
UN AgroVoc c_33715

**Festuca**  NALT 39976
UN AgroVoc c_2868

**Festuca arundinacea**  NALT 39977
UN AgroVoc c_2869

**Festuca ovina**  NALT 39984
UN AgroVoc c_2870

**Festuca rubra**  NALT 39985
UN AgroVoc c_2872

**Festulolium**  NALT 40018
UN AgroVoc c_50129

**Pregnancy complications**  NALT 40022
UN AgroVoc c_6167

**Yolk sac**  NALT 40026
UN AgroVoc c_15464
Membranous sac on the ventral aspect of the developing embryo that acts as a primitive circulatory system as well as providing nourishment. Source: NCI thesaurus link

1.7. Glossary
Sclerenchyma  NALT 40030
  UN AgroVoc c_6861

Histosols  NALT 40066
  UN AgroVoc c_3636

Root systems  NALT 40078
  UN AgroVoc c_16034

Fibula  NALT 40079
  UN AgroVoc c_10829
  The small, lateral calf bone extending from the knee to the ankle. Source: NCI thesaurus link

Ficus  NALT 40081
  UN AgroVoc c_2883

Ficus benghalensis  NALT 40082
  UN AgroVoc c_2884

Ceylon willow  NALT 40083
  UN AgroVoc c_9723

Ficus carica  NALT 40084
  UN AgroVoc c_2886

Ficus elastica  NALT 40085
  UN AgroVoc c_2887

Ficus religiosa  NALT 40091
  UN AgroVoc c_2890

Figs  NALT 40096
  UN AgroVoc c_10840

Field capacity  NALT 40100
  UN AgroVoc c_32445

Water holding capacity  NALT 40101
  UN AgroVoc c_25304

oil crops  NALT 40103
  UN AgroVoc c_5328

Starch crops  NALT 40104
  UN AgroVoc c_7370
  Library of Congress sh96006723

Sugar crops  NALT 40105
  UN AgroVoc c_7503
  Library of Congress sh87005326
**Soil water balance**  NALT 40115
  UN AgroVoc c_7206

**Onchocerciasis**  NALT 40133
  UN AgroVoc c_16448

**Stephanofilaria**  NALT 40134
  UN AgroVoc c_7393

**Filaroides**  NALT 40135
  UN AgroVoc c_31029

**Tylenchida**  NALT 40141
  UN AgroVoc c_15056

**Fillets**  NALT 40160
  UN AgroVoc c_2897

**Fish processing**  NALT 40162
  UN AgroVoc c_29020

**Fish fillets**  NALT 40163
  UN AgroVoc c_29019

**Fins**  NALT 40238
  UN AgroVoc c_15902

**Scolytus ventralis**  NALT 40244
  UN AgroVoc c_30157

**Solenopsis**  NALT 40247
  UN AgroVoc c_27377

**Fire detection**  NALT 40252
  UN AgroVoc c_2909

  The act of discovering, locating and reporting wildfires. (source: NALT)

**forest fire management**  NALT 40260
  UN AgroVoc c_49863

**Forest fires**  NALT 40278
  UN AgroVoc c_3045

  Dbpedia Forest fires
  Library of Congress sh85050582

**Wildfires**  NALT 40279
  UN AgroVoc c_34150

**Peptococcaceae**  NALT 40285
  UN AgroVoc c_5692
A taxonomic family of bacterium in the phylum Firmicutes that includes the genera Dehalobacter, Peptococcus and Thermincola, among others. Source: NCI thesaurus link

**Firmness** NALT 40286
UN AgroVoc c_25422

**Fish larvae** NALT 40296
UN AgroVoc c_2924
The developmental stage of fish which have hatched from the egg and receive nutrients from the yolk sac until the yolk is completely absorbed. (source: NALT)

**Freshwater fishes** NALT 40298
UN AgroVoc c_3105

**Haddock** NALT 40300
UN AgroVoc c_3458

**Mackerel** NALT 40304
UN AgroVoc c_4498

**Menhaden** NALT 40306
UN AgroVoc c_4736

**Ornamental fishes** NALT 40309
UN AgroVoc c_5413

**Pike** NALT 40311
UN AgroVoc c_5876

**Salmon** NALT 40314
UN AgroVoc c_6756
Dbpedia Salmon

**Trout** NALT 40321
UN AgroVoc c_7983

**Tuna** NALT 40322
UN AgroVoc c_8003
Dbpedia Tuna

**Furunculosis** NALT 40335
UN AgroVoc c_11052
A skin condition that is characterized by recurring furuncles, lesions primarily caused by *staphylococcus aureus* infection of the hair follicles and surrounding skin. Furunculosis occurs more frequently in persons with immune systems disorders than in the general population. Source: NCI thesaurus link

**fish inspection** NALT 40343
UN AgroVoc c_10877

**food inspection** NALT 40344
UN AgroVoc c_3021
Fish pastes  NALT 40355
    UN AgroVoc c_2927
Fish protein concentrate  NALT 40358
    UN AgroVoc c_2931
Frozen fish  NALT 40361
    UN AgroVoc c_3115
Salted fish  NALT 40363
    UN AgroVoc c_6762
Smoked fish  NALT 40364
    UN AgroVoc c_7115
    Library of Congress sh85048613
Surimi  NALT 40365
    UN AgroVoc c_33271
    A processed seafood product that is typically made from Alaskan pollack that is flavored, pre-cooked, and reformed into shapes that resemble shellfish. Imitation crabmeat is an example of surimi. (source: NALT)
Fish wastes  NALT 40372
    UN AgroVoc c_2933
Steaks  NALT 40375
    UN AgroVoc c_7380
Ryania  NALT 40402
    UN AgroVoc c_6718
Flammability  NALT 40411
    UN AgroVoc c_28426
Lathyrus sylvestris  NALT 40418
    UN AgroVoc c_4219
Platycephalidae  NALT 40420
    UN AgroVoc c_45336
Flatidae  NALT 40422
    UN AgroVoc c_37778
Metcalfa  NALT 40423
    UN AgroVoc c_37779
Flaviviridae  NALT 40434
    UN AgroVoc c_37854
    A family of enveloped viruses with a genome consisting of a single molecule of linear positive-sense single-stranded RNA. They infect molluscs, mammals, and birds and some are transmitted by arthropod vectors. The family includes the hepatitis C and hepatitis G viruses. Source: NCI thesaurus link

1.7. Glossary
Japanese encephalitis virus  NALT 40437
  UN AgroVoc c_16437
Wesselsbron virus  NALT 40441
  UN AgroVoc c_15306
Flavobacterium  NALT 40445
  UN AgroVoc c_24340
  Flavobacterium is at the rank of genus; Do not confuse with the class Flavobacteria. (source: NALT)
  A species of Gram-negative, aerobic, rod-shaped, bacterium in the phylum Bacteroidetes that are motile by gliding. Source: NCI thesaurus link
Ornithobacterium  NALT 40448
  UN AgroVoc c_37073
Luteolin  NALT 40495
  UN AgroVoc c_12280
Kaempferol  NALT 40500
  UN AgroVoc c_36792
Rutin  NALT 40501
  UN AgroVoc c_6716
Flax  NALT 40523
  UN AgroVoc c_2970
Linum usitatissimum  NALT 40524
  UN AgroVoc c_4355
Linseed  NALT 40527
  UN AgroVoc c_12192
Flemingia macrophylla  NALT 40539
  UN AgroVoc c_36288
Flexibacter  NALT 40546
  UN AgroVoc c_2972
  Library of Congress sh88023258
Flight  NALT 40570
  UN AgroVoc c_24948
  Use for animals other than insects; for insects USE insect flight; for the transport of people or goods by aircraft USE air transportation; for the use of aircraft in agricultural operations USE agricultural aviation. (source: NALT)
Flindersia  NALT 40573
  UN AgroVoc c_26497
  Dbpedia Flindersia
**Flindersia brayleyana**  NALT 40574  
UN AgroVoc c_26498

**Flood irrigation**  NALT 40582  
UN AgroVoc c_35248

An irrigation system in which a field is flooded to a depth of a few inches. (source: NALT)

**Floodplains**  NALT 40585  
UN AgroVoc c_29777

Lowland and relatively flat areas adjoining inland and coastal waters, including flood prone areas of islands. This land includes, at a minimum, those areas that are subject to a 1 percent or greater chance of flooding in any given year. (source: NALT)

**Wine yeast**  NALT 40597  
UN AgroVoc c_28444

**Rubus**  NALT 40607  
UN AgroVoc c_6682

**Hydrilla verticillata**  NALT 40619  
UN AgroVoc c_32160

**Oatmeal**  NALT 40631  
UN AgroVoc c_25489

**Potato flour**  NALT 40633  
UN AgroVoc c_35681

**Rice flour**  NALT 40634  
UN AgroVoc c_25500

**Rye flour**  NALT 40635  
UN AgroVoc c_25501

**Sweet potato flour**  NALT 40637  
UN AgroVoc c_35682

**Wheat flour**  NALT 40638  
UN AgroVoc c_25511

**Hibiscus trionum**  NALT 40648  
UN AgroVoc c_26525

**Heading**  NALT 40654  
UN AgroVoc c_3510

**Nectaries**  NALT 40665  
UN AgroVoc c_5099

**Uridine**  NALT 40670  
UN AgroVoc c_8098
A nucleoside consisting of uracil and D-ribose and a component of RNA. Uridine has been studied as a rescue agent to reduce the toxicities associated with 5-fluorouracil (5-FU), thereby allowing the administration of higher doses of 5-FU in chemotherapy regimens. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Fluchloralin**  NALT 40673
UN AgroVoc e_31380

**Gas exchange**  NALT 40685
UN AgroVoc e_11098

**Hydrodynamics**  NALT 40686
UN AgroVoc e_3723
The branch of the science of mechanics that deals with the motion of fluids and the forces acting on solids immersed in fluids. (source: NALT)

**Mass transfer**  NALT 40687
UN AgroVoc e_28601

**fluid therapy**  NALT 40688
UN AgroVoc e_10932
Library of Congress sh85049386

**Fluometuron**  NALT 40701
UN AgroVoc e_31381

**Fluorescence**  NALT 40702
UN AgroVoc e_10935
Fluorescence is a luminescence (i.e., optical phenomenon) in cold bodies, in which a molecule absorbs a high-energy photon, and re-emits it as a lower-energy (longer-wavelength) photon. The energy difference between the absorbed and emitted photons ends up as molecular vibrations (heat). Source: NCI thesaurus link

**Fluorine**  NALT 40726
UN AgroVoc e_2996
An element with atomic symbol F, atomic number 9, and atomic weight 19.0. Source: NCI thesaurus link

**Uracil derivatives**  NALT 40731
UN AgroVoc e_8083

**Fluridone**  NALT 40734
UN AgroVoc e_31382
Fluroxypyr  NALT 40735  
UN AgroVoc c_34828

Fluvalinate  NALT 40738  
UN AgroVoc c_34829

Myiasis  NALT 40750  
UN AgroVoc c_5029  
Library of Congress sh85089232  
The invasion of living tissues of man and other mammals by dipterous larvae. (source: NALT)

Foals  NALT 40757  
UN AgroVoc c_3002  
The young of members of the horse family, usually under one year old. (source: NALT)

Macrophages  NALT 40760  
UN AgroVoc c_12316  
Library of Congress sh85079451

foaming  NALT 40763  
UN AgroVoc c_24841

Pisum sativum  NALT 40770  
UN AgroVoc c_5933

Meat pastes  NALT 40774  
UN AgroVoc c_4678

Folic acid  NALT 40776  
UN AgroVoc c_3009  
A collective term for pteroylglutamic acids and their oligoglutamic acid conjugates. As a natural water-soluble substance, folic acid is involved in carbon transfer reactions of amino acid metabolism, in addition to purine and pyrimidine synthesis, and is essential for hematopoiesis and red blood cell production. (NCI05) Source: NCI thesaurus link

Reference: FDA UNII link  
Look-up using Google link  
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Foliar diseases  NALT 40782  
UN AgroVoc c_25240

Heterobasidion annosum  NALT 40806  
UN AgroVoc c_23934

Rigidoporus lignosus  NALT 40812  
UN AgroVoc c_33859
Ganoderma lucidum  NALT 40814
  UN AgroVoc c_24753

Fonofos  NALT 40825
  UN AgroVoc c_31383

food science  NALT 40829
  UN AgroVoc c_3027
  Dbpedia food science

food storage  NALT 40831
  UN AgroVoc c_49990
  Dbpedia food storage
  Use for farm, industry and food service storage of food products; For storage of foods at home USE home food storage. (source: NALT)

Food technology  NALT 40859
  UN AgroVoc c_3030
  Dbpedia Food technology
  The application of food science to the preservation, processing and preparation of foods, and to their packaging, storage and transportation. (source: NALT)

Food chains  NALT 40864
  UN AgroVoc c_3014
  Dbpedia Food chains

Nanophyetus  NALT 40962
  UN AgroVoc c_5067

Norwalk virus  NALT 40963
  UN AgroVoc c_35644
  A species of non-enveloped and spherical viruses with a capsid with T=3 icosahedral symmetry in the Caliciviridae family and Norovirus genus. The genome is composed of single-stranded, positive-sense RNA. Norwalk viruses are found in humans and causes acute viral gastroenteritis. Norwalk viruses are transmitted via oral ingestion or fecal-oral contamination. Source: NCI thesaurus link

Prions  NALT 40965
  UN AgroVoc c_36165
  Small proteinaceous infectious particles which resist inactivation by procedures that modify nucleic acids and contain an abnormal isoform of a cellular protein which is a major and necessary component. The abnormal (scrapie) isoform is PrPSc; the cellular isoform is PrPC. The primary amino acid sequence of the two isoforms is identical. Among diseases caused by prions are scrapie, bovine spongiform encephalopathy, and Creuzfeldt-Jakob Syndrome. (source: NALT)

Staphylococcus aureus  NALT 40966
  UN AgroVoc c_16429
  A common bacterial species found especially on nasal mucous membrane and skin (hair follicles); bacterial species that produces exotoxins including those that cause toxic shock syndrome, with
resulting skin rash, and renal, hepatic, and central nervous system disease, and an enterotoxin associated with food poisoning; it causes furunculosis, cellulitis, pyemia, pneumonia, osteomyelitis, endocarditis, suppuration of wounds, other infections; also a cause of infection in burn patients; humans are the chief reservoir. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the ITIS link
Reference the NIH NCBI link

Streptococcus NALT 40967
UN AgroVoc c_7449
A genus of Gram-positive bacteria in the phylum Firmicutes and the lactic acid bacteria group. Source: NCI thesaurus link

Vibrio NALT 40969
UN AgroVoc c_8212
A genus of Gram-negative bacteria with a curved rod shape in the phylum Proteobacteria. Source: NCI thesaurus link

Host plants NALT 40972
UN AgroVoc c_11621
Plants which provide shelter, habitat, breeding sites or serve as a food source as part of the life cycle of another organism. (source: NALT)

Marinating NALT 40985
UN AgroVoc c_4605

Scalding NALT 40990
UN AgroVoc c_6837

Tenderizing NALT 40992
UN AgroVoc c_7662

Food wastes NALT 41000
UN AgroVoc c_3031
Food waste is a component of food loss and occurs when an edible item goes unconsumed, as in food discarded by retailers due to color or appearance and plate waste by consumers. Use for edible but unconsumed food found anywhere along the food chain; for food wastes from home or food service kitchens USE kitchen waste; for food wastes from food processing plants USE food processing wastes. (source: NALT)

Juiciness NALT 41013
UN AgroVoc c_34302

paralytic shellfish poisoning NALT 41070
UN AgroVoc c_36618

Giardiasis NALT 41074
UN AgroVoc c_16739
Laminitis  NALT 41080
UN AgroVoc c_12063

Weather forecasting  NALT 41115
UN AgroVoc c_8340

forest stands  NALT 41125
UN AgroVoc c_28080
A community of forest trees which are generally uniform in species composition, size, age or condition and are managed as a single unit. (source: NALT)

forest health  NALT 41128
UN AgroVoc c_36676

forest trees  NALT 41131
UN AgroVoc c_3052

Forest litter  NALT 41135
UN AgroVoc c_3047

Forest pests  NALT 41137
UN AgroVoc c_35703
Pests of forest trees. (source: NALT)

plant genetics  NALT 41145
UN AgroVoc c_49985
The branch of genetics focusing on plant heredity. Source: NCI thesaurus link

plant litter  NALT 41163
UN AgroVoc c_24064
the accumulation of leaves, twigs, bark, needles, stems, fruits, branches and other plant parts on the surface of the soil. (source: NALT)

Forest resources  NALT 41177
UN AgroVoc c_3050

Forest reserves  NALT 41193
UN AgroVoc c_28136

state forests  NALT 41195
UN AgroVoc c_14569
Dbpedia state forests

Malacosoma disstria  NALT 41207
UN AgroVoc c_30226

Omasum  NALT 41229
UN AgroVoc c_5346
The third compartment of the forestomach of ruminants with many long folds of mucosa (resembling a book). Source: NCI thesaurus link
Reticulum  NALT 41230
UN  AgroVoc  e_6538
Smallest forestomach of ruminants with complex honeycomb folding of mucosa. Source: NCI thesaurus link

Rumen  NALT 41231
UN  AgroVoc  e_6693
Largest forestomach of ruminants where bacterial fermentation occurs. Source: NCI thesaurus link

Mixed forests  NALT 41239
UN  AgroVoc  e_4874

Rain forests  NALT 41242
UN  AgroVoc  e_35654
Dbpedia Rain forests

Secondary forests  NALT 41244
UN  AgroVoc  e_28144
Dbpedia Secondary forests
The first forest regenerated on land that was originally covered by primary forest which was drastically altered in structure by selective cutting or clearcutting for agricultural use. (source: NALT)

Temperate forests  NALT 41245
UN  AgroVoc  e_35649
Dbpedia Temperate forests

Tropical forests  NALT 41246
UN  AgroVoc  e_24904
Dbpedia Tropical forests

Forficula  NALT 41247
UN  AgroVoc  e_3063

Formic acid  NALT 41248
UN  AgroVoc  e_3065

Formica  NALT 41249
UN  AgroVoc  e_3066

Formica polyctena  NALT 41251
UN  AgroVoc  e_29895

Formica rufa  NALT 41252
UN  AgroVoc  e_29896

Iridomyrmex  NALT 41256
UN  AgroVoc  e_3945

Lasius  NALT 41257
UN  AgroVoc  e_4212
Linepithema NALT 41259
  UN AgroVoc e_37389
Monomorium NALT 41261
  UN AgroVoc e_29898
Myrmica NALT 41263
  UN AgroVoc e_5048
Oecophylla NALT 41264
  UN AgroVoc e_29899
Pheidole NALT 41265
  UN AgroVoc e_5770
Pogonomyrmex NALT 41266
  UN AgroVoc e_6047
Tetramorium NALT 41270
  UN AgroVoc e_29904
Forsythia NALT 41281
  UN AgroVoc e_16243
  Dbpedia Forsythia
Fortified wines NALT 41293
  UN AgroVoc e_29691
  A wine to which additional alcohol has been added, often in the form of brandy. (source: NALT)
Sherry NALT 41294
  UN AgroVoc e_14254
Fortunella NALT 41296
  UN AgroVoc e_3069
Fortunella japonica NALT 41297
  UN AgroVoc e_3070
Fortunella margarita NALT 41298
  UN AgroVoc e_3071
Fosamine NALT 41302
  UN AgroVoc e_31384
Fothergilla NALT 41310
  UN AgroVoc e_3072
Population genetics NALT 41316
  UN AgroVoc e_34326
  The branch of genetics that focuses on gene distribution and transmission through populations.
  Source: NCI thesaurus link
Fouquieriaceae  NALT 41320
  UN AgroVoc c_26256

Poa palustris  NALT 41342
  UN AgroVoc c_6037

fowl cholera  NALT 41343
  UN AgroVoc c_16427

Hordeum jubatum  NALT 41361
  UN AgroVoc c_24343

Setaria italica  NALT 41363
  UN AgroVoc c_7002

Fragaria ananassa  NALT 41371
  UN AgroVoc c_33356

Fragaria moschata  NALT 41372
  UN AgroVoc c_3078

Fragaria vesca  NALT 41373
  UN AgroVoc c_3079

Fragaria virginiana  NALT 41374
  UN AgroVoc c_3080

Francisella  NALT 41416
  UN AgroVoc c_3083

  A genus of aerobic, Gram negative, rod and cocci shaped bacterium assigned to the phylum Proteobacteria and the family Franciscellaceae. Source: NCI thesaurus link

Frankia  NALT 41445
  UN AgroVoc c_23923

Frankliniella  NALT 41460
  UN AgroVoc c_3085

Frankliniella fusca  NALT 41461
  UN AgroVoc c_30391

Frankliniella occidentalis  NALT 41463
  UN AgroVoc c_30392

Fraxinus pennsylvanica  NALT 41477
  UN AgroVoc c_34737

Free living nematodes  NALT 41500
  UN AgroVoc c_36731

Free radicals  NALT 41501
  UN AgroVoc c_33488
Molecules having one or more unpaired electrons which are highly reactive with other chemical molecules. (source: NALT)

Molecules or atoms with at least one unpaired or ‘free’ electron in the outermost electron shell. Chemically unstable, free radicals stabilize themselves by appropriating an electron from a nearby molecule, thereby damaging that molecule by altering the electron number in its outermost electron shell. By-products of both normal cell processes and environmental toxin exposure, oxygen free-radicals in high concentrations may damage DNA, proteins, and lipids, thereby increasing the risk for various diseases including cancer. (NCI04) Source: NCI thesaurus link

**reactive oxygen species** NALT 41502

UN AgroVoc c_92379

Reactive oxygen species are molecules containing oxygen with unpaired and unstable electron configurations which are highly reactive with other molecules. (source: NALT)

Organic or inorganic chemicals that contain an oxygen atom with an unpaired electron. This unstable electron configuration causes these chemicals to be highly reactive with other molecules. Source: NCI thesaurus link

**Sex differentiation disorders** NALT 41512

UN AgroVoc c_7012

**Twins** NALT 41513

UN AgroVoc c_15054

**Freesia** NALT 41514

UN AgroVoc c_3089

**Freezing point** NALT 41523

UN AgroVoc c_3092

**Populus fremontii** NALT 41525

UN AgroVoc c_26639

**Potato products** NALT 41534

UN AgroVoc c_16500

**Tagetes patula** NALT 41539

UN AgroVoc c_331515

**Freons** NALT 41552

UN AgroVoc c_3096

**Freshwater** NALT 41568

UN AgroVoc c_3102

**Pandanaceae** NALT 41580

UN AgroVoc c_5529

**Friction** NALT 41582

UN AgroVoc c_33494

**Oscinella frit** NALT 41598

UN AgroVoc c_30481
Inulin  NALT 41638

A naturally occurring, indigestible and non-absorbable oligosaccharide produced by certain plants with prebiotic and potential anticancer activity. Inulin stimulates the growth of beneficial bacteria in the colon, including Bifidobacteria and Lactobacilli, thereby modulating the composition of microflora. This creates an environment that protects against pathogens, toxins and carcinogens, which can cause inflammation and cancer. In addition, fermentation of inulin leads to an increase in short-chain fatty acids and lactic acid production, thereby reducing colonic pH, which may further control pathogenic bacteria growth and may contribute to inulin’s cancer protective properties. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using CAS number link

Fructose  NALT 41645

Sugar phosphates  NALT 41648

Fruit crops  NALT 41656

Fruit trees  NALT 41657

Fruit growing  NALT 41659

Fruit extracts  NALT 41661
Viticulture  NALT 41668  
UN AgroVoc e_8277

Grape juice  NALT 41672  
UN AgroVoc e_25533

Orange juice  NALT 41675  
UN AgroVoc e_25492

Pineapple juice  NALT 41676  
UN AgroVoc e_25496

Fruit syrups  NALT 41677  
UN AgroVoc e_3127

Parthenocarpy  NALT 41681  
UN AgroVoc e_16010

Grapes  NALT 41690  
UN AgroVoc e_3359

Rhubarb  NALT 41691  
UN AgroVoc e_11089

Rose hips  NALT 41692  
UN AgroVoc e_50142

Temperate fruits  NALT 41693  
UN AgroVoc e_7655

pods  NALT 41694  
UN AgroVoc e_13475

Fucaceae  NALT 41700  
UN AgroVoc e_49763

Fucus  NALT 41702  
UN AgroVoc e_35547

Sargassaceae  NALT 41703  
UN AgroVoc e_49767

Fuchsia  NALT 41706  
UN AgroVoc e_3134

Fucus serratus  NALT 41710  
UN AgroVoc e_49605

Fucus vesiculosus  NALT 41712  
UN AgroVoc e_35548
Natural gas  NALT 41716
  UN AgroVoc e_5087
Lophopidae  NALT 41730
  UN AgroVoc e_30747
Tropiduchidae  NALT 41731
  UN AgroVoc e_30750
Fulvic acids  NALT 41735
  UN AgroVoc e_15972
Fumaria  NALT 41739
  UN AgroVoc e_33716
Soil fumigation  NALT 41750
  UN AgroVoc e_34236
Fumonisins  NALT 41753
  UN AgroVoc e_36148
Health foods  NALT 41763
  UN AgroVoc e_25396
Dbpedia Health foods
  Foods that are considered by the public as having superior health benefits, such as those produced with little or no preservatives, processing or pesticides. (source: NALT)
Water binding capacity  NALT 41767
  UN AgroVoc e_8312
Rheological properties  NALT 41768
  UN AgroVoc e_6553
Spawn (fungi)  NALT 41781
  UN AgroVoc e_25272
Sclerotia  NALT 41783
  UN AgroVoc e_35192
  Use for the hardened, resting mass of fungal hyphae; for the genus USE Sclerotium. (source: NALT)
Sporangia  NALT 41786
  UN AgroVoc e_35193
Powdery mildews  NALT 41792
  UN AgroVoc e_13557
  A fungus forming a white powdery coating on leaves and stems. (source: NALT)
Oospores  NALT 41808
  UN AgroVoc e_35123
Soil fungi  NALT 41821
      UN AgroVoc c_33550
Rumen fungi  NALT 41835
      UN AgroVoc c_34097
Guazatine  NALT 41849
      UN AgroVoc c_31385
Metalaxy1  NALT 41854
      UN AgroVoc c_31414
Methyl bromide  NALT 41855
      UN AgroVoc c_24049
Oxycarboxin  NALT 41859
      UN AgroVoc c_31448
Pentachlorophenol  NALT 41861
      UN AgroVoc c_36652
      Library of Congress sh85099614
Pyrazophos  NALT 41866
      UN AgroVoc c_31483
Quintozene  NALT 41868
      UN AgroVoc c_31487
Thiram  NALT 41870
      UN AgroVoc c_31514
Tricyclazole  NALT 41872
      UN AgroVoc c_31526
Triforine  NALT 41873
      UN AgroVoc c_31529
Furans  NALT 41883
      UN AgroVoc c_32036
      Library of Congress sh85052502
Furcellariaceae  NALT 41885
      UN AgroVoc c_49778
Fusarins  NALT 41902
      UN AgroVoc c_28388
Fusarium chlamydosporum  NALT 41903
      UN AgroVoc c_33718
Fusarium culmorum  NALT 41906
      UN AgroVoc c_33719
Fusarium equiseti  NALT 41907
   UN AgroVoc c_33720
Fusarium oxysporum  NALT 41908
   UN AgroVoc c_16244
Fusarium proliferatum  NALT 41911
   UN AgroVoc c_33721
Fusarium roseum  NALT 41913
   UN AgroVoc c_35488
Fusarium solani  NALT 41914
   UN AgroVoc c_32144
Fusarium sporotrichioides  NALT 41915
   UN AgroVoc c_37580
T-2 toxin  NALT 41918
   UN AgroVoc c_35335
Gibberella avenacea  NALT 41922
   UN AgroVoc c_35487
Gibberella zeae  NALT 41931
   UN AgroVoc c_35494
Gibberella fujikuroi  NALT 41940
   UN AgroVoc c_16511
Gibberella pulicaris  NALT 41988
   UN AgroVoc c_35489
Fusobacterium  NALT 42006
   UN AgroVoc c_3157
   Fusobacterium is at the rank of genus; do not confuse with the higher classification group of Fu-
   sobacteria. (source: NALT)
   A genus of filamentous, anaerobic, Gram-negative bacteria in the phylum Fusobacteria. Source:
   NCI thesaurus link
Streptobacillus  NALT 42046
   UN AgroVoc c_7447
   A genus of facultatively anaerobic, Gram negative, rod shaped bacterium in the phylum Fusobacteria
   and the family Fusobacteriaceae. Source: NCI thesaurus link
Gadiformes  NALT 42101
   UN AgroVoc c_3162
   Dbpedia Gadiformes
Gadus  NALT 42102
   UN AgroVoc c_3163
Lota NALT 42103
    UN AgroVoc e_4439

Melanogrammus NALT 42104
    UN AgroVoc e_4712

Merlangius NALT 42105
    UN AgroVoc e_4755

Microgadus NALT 42106
    UN AgroVoc e_4804
    Library of Congress sh95001667

Molva NALT 42108
    UN AgroVoc e_4900

Pollachius NALT 42109
    UN AgroVoc e_32769
    Library of Congress sh85104505

Theragra NALT 42110
    UN AgroVoc e_36126
    Library of Congress sh90005751

Trisopterus NALT 42111
    UN AgroVoc e_33128

Urophycis NALT 42112
    UN AgroVoc e_8110

Merlucciidae NALT 42113
    UN AgroVoc e_41525
    Dbpedia Merlucciidae

Gadus morhua NALT 42116
    UN AgroVoc e_37023

Merlangius merlangus NALT 42118
    UN AgroVoc e_41523

Pollachius virens NALT 42120
    UN AgroVoc e_6066

Walking NALT 42148
    UN AgroVoc e_15251
    The act of traveling by foot. Source: NCI thesaurus link

Galactomannans NALT 42153
    UN AgroVoc e_35358
Mannans  NALT 42154
   UN AgroVoc c_4587
galactosamine  NALT 42155
   UN AgroVoc c_11064
Galanthus  NALT 42164
   UN AgroVoc c_3168
   Dbpedia Galanthus
Galega orientalis  NALT 42178
   UN AgroVoc c_24642
Typhlodromus  NALT 42184
   UN AgroVoc c_15059
Galeopsis  NALT 42187
   UN AgroVoc c_26499
Galium  NALT 42193
   UN AgroVoc c_11069
Galium aparine  NALT 42194
   UN AgroVoc c_36045
Galleria  NALT 42202
   UN AgroVoc c_223
Galleria mellonella  NALT 42203
   UN AgroVoc c_30319
Gallus  NALT 42223
   UN AgroVoc c_26953
Quercus gambelii  NALT 42238
   UN AgroVoc c_24688
Gambusia  NALT 42241
   UN AgroVoc c_24644
Gambusia affinis  NALT 42242
   UN AgroVoc c_26500
   Dbpedia Gambusia affinis
grouse  NALT 42247
   UN AgroVoc c_11373
partridges  NALT 42248
   UN AgroVoc c_13124
pheasants  NALT 42249
   UN AgroVoc c_5769

1.7. Glossary
**Gametogenesis** NALT 42261

The process of germ cell development from the primordial germ cells to the mature haploid gametes.

(source: NALT)

Gametogenesis is the phase of sexual reproduction in which certain cells of a female or male individual (parent) are transformed into specialized reproductive cells (gametes) that will initiate development of a progeny individual (offspring) upon fertilization. Source: NCI thesaurus link

**Spermatogenesis** NALT 42264

The maturation and propagation of spermatozoa. The process consists of three phases, mitosis, meiosis, and spermiogenesis. This results in a specialized cell that is capable of traversing the male and female reproductive tracts, and has the capability of fertilizing an egg. Source: NCI thesaurus link

**Gamma radiation** NALT 42267

High-energy, short wavelength, ionizing electromagnetic radiation emitted from the nucleus. Gamma radiation frequently accompanies alpha and beta emissions and always accompanies fission. Gamma rays are very penetrating and are best stopped or shielded by dense materials, such as lead or depleted uranium. Gamma rays are identical to x-rays and are only differentiated by their origin. (from NRC Glossary) Source: NCI thesaurus link

**Globulins** NALT 42271

**Gammarus** NALT 42308

**Gammarus pulex** NALT 42309

**Ganders** NALT 42313

**Gangliosides** NALT 42318
Garcinia mangostana  NALT 42325
    UN AgroVoc c_3192
Mangosteen  NALT 42329
    UN AgroVoc c_12368
Lactuca sativa  NALT 42337
    UN AgroVoc c_4149
Lepidium sativum  NALT 42354
    UN AgroVoc c_4267
Gardenia  NALT 42355
    UN AgroVoc c_3194
Public gardens  NALT 42367
    UN AgroVoc c_6348
Gasterophilus  NALT 42393
    UN AgroVoc c_11101
Gasterophilus intestinalis  NALT 42394
    UN AgroVoc c_30554
Gasterosteiformes  NALT 42400
    UN AgroVoc c_32146
    Dbpedia Gasterosteiformes
Gasterosteus  NALT 42401
    UN AgroVoc c_32147
Gasterosteus aculeatus  NALT 42402
    UN AgroVoc c_41673
gastric acid  NALT 42404
    UN AgroVoc c_33498
Stomach ulcer  NALT 42405
    UN AgroVoc c_16471
laxatives  NALT 42427
    UN AgroVoc c_12108
    An agent that acts to promote evacuation of the bowel, a cathartic or purgative. (source: NALT)
intestines  NALT 42441
    UN AgroVoc c_3924
Haliotidae  NALT 42445
    UN AgroVoc c_47361
Littorinidae  NALT 42448
    UN AgroVoc c_47290

1.7. Glossary
Gastrothylax  NALT 42454
  UN AgroVoc c_3202
Gekkonidae  NALT 42485
  UN AgroVoc c_32562
Goslings  NALT 42488
  UN AgroVoc c_15540
  Baby geese. (source: NALT)
Gelasinospora  NALT 42497
  UN AgroVoc c_31836
Gelatin  NALT 42500
  UN AgroVoc c_3209
geldings  NALT 42507
  UN AgroVoc c_3211
  Castrated male horses. (source: NALT)
Keiferia  NALT 42510
  UN AgroVoc c_4083
Pectinophora  NALT 42512
  UN AgroVoc c_5650
Phthorimaea  NALT 42513
  UN AgroVoc c_5815
Scrobipalpa  NALT 42514
  UN AgroVoc c_6883
Scrobipalpula  NALT 42515
  UN AgroVoc c_30203
Sitotroga  NALT 42516
  UN AgroVoc c_7092
Gelidiaceae  NALT 42518
  UN AgroVoc c_49791
Gelidium  NALT 42521
  UN AgroVoc c_33723
Gelidiella  NALT 42524
  UN AgroVoc c_29218
Gelsemium  NALT 42529
  UN AgroVoc c_33357
Dbpedia Gelsemium
**Gelsemium sempervirens**  NALT 42530  
UN AgroVoc c_33725

**sex ratio**  NALT 42551  
UN AgroVoc c_7014

**gene dosage**  NALT 42563  
UN AgroVoc c_36909

The number of copies of a given gene present in a cell or nucleus. (source: NALT)

**gene duplication**  NALT 42565  
UN AgroVoc c_35736

Processes occurring in various organisms by which new genes are copied. Gene duplication may result in a multigene family; supergenes or pseudogenes. Use for a chromosomal structural change resulting in the doubling of a section of the genome of prokaryotes and eukaryotes; For genes which give the same phenotypic result, USE duplicate genes. (source: NALT)

Any DNA sequence rearrangement that results in the gain of copies of a genomic region, typically in the form of long interspersed sequences, short interspersed sequences, satellite sequences and retrotransposons. The appearance of duplications of DNA within the genome plays an important role in the diversification of genomes. Source: NCI thesaurus link

**gene flow**  NALT 42575  
UN AgroVoc c_37331

The movement of genes from one population to another of the same species. (source: NALT)

**transfection**  NALT 42585  
UN AgroVoc c_27831

The uptake of naked or purified DNA by cells, usually meaning the process as it occurs in eukaryotic cells. It is analogous to bacterial transformation and both are routinely employed in gene transfer techniques. (source: NALT)

The process of introduction of DNA into a recipient eukaryote cell and its subsequent integration into the recipient cell’s chromosomal DNA, so that the cells or progeny may express the integrated donor gene. Source: NCI thesaurus link

**homeotic genes**  NALT 42595  
UN AgroVoc c_27542

Genes that encode highly conserved transcription factors that control positional identity of cells (body patterning) and morphogenesis throughout development. Their sequences contain a 180 nucleotide sequence designated the homeobox, so called because mutations of these genes often results in homeotic transformations, in which one body structure replaces another. The proteins encoded by homeobox genes are called homeodomain proteins. (source: NALT)

**lethal genes**  NALT 42597  
UN AgroVoc c_4289

Genes whose loss of function or gain of function mutation leads to the death of the carrier prior to maturity. They may be essential genes required for viability, or genes which cause a block of function of an essential gene at a time when the essential gene function is required for viability. (source: NALT)
Major histocompatibility complex  NALT 42599

UN AgroVoc c_27568

The genetic region which contains the loci of genes which determine the structure of the serologically defined (SD) and lymphocyte-defined (LD) transplantation antigens, genes which control the structure of the immune response-associated (Ia) antigens, the immune response (Ir) genes which control the ability of an animal to respond immunologically to antigenic stimuli, and genes which determine the structure and/or level of the first four components of complement. (source: NALT)

operons  NALT 42601

UN AgroVoc c_50137

In bacteria, a group of metabolically related genes, with a common promoter, whose transcription into a single polycistronic messenger RNA is under the control of an operator region. (source: NALT)

pseudogenes  NALT 42602

UN AgroVoc c_27593

Genes bearing close resemblance to known genes at different loci, but rendered non-functional by additions or deletions in structure that prevent normal transcription or translation. When lacking introns and containing a poly-A segment near the downstream end (as a result of reverse copying from processed nuclear RNA into double-stranded DNA), they are called processed genes. (source: NALT)

recessive genes  NALT 42603

UN AgroVoc c_6470

transgenes  NALT 42607

UN AgroVoc c_331012

genetic code  NALT 42610

UN AgroVoc c_3215

Genetic correlation  NALT 42614

UN AgroVoc c_29796

the portion of a phenotypic correlation between two traits in a population that can be attributed to additive genetic effects. (source: NALT)

Genetic covariance  NALT 42615

UN AgroVoc c_29797

genetic distance  NALT 42623

UN AgroVoc c_27530

The genetic divergence between two individuals, populations or species. It is commonly a statistic based on the differences in allele frequencies in separated populations, but can use other data such as the number of tandem repeats in microsatellites, DNA sequences, or even the number of mutations required to bring about the observed differences. (source: NALT)

generic drift  NALT 42625

UN AgroVoc c_37333

The fluctuation of the allele frequency from one generation to the next. (source: NALT)
The random change of the occurrence of a particular gene in a population, genetic drift is thought to be one cause of speciation when a group of organisms is separated from its parent population. (NCI)
Source: NCI thesaurus link

**Genetic stability** NALT 42632

UN AgroVoc c_16045

The tendency of a population to maintain its genotypes over generations. (source: NALT)

**Genetic markers** NALT 42636

UN AgroVoc c_24030

A phenotypically recognizable genetic trait which can be used to identify a genetic locus, a linkage group, or a recombination event. (source: NALT)

**Genetic transformation** NALT 42644

UN AgroVoc c_3220

Change brought about to an organism's genetic composition by unidirectional transfer (transfection, transduction, conjugation, etc.) and incorporation of foreign DNA into prokaryotic or eukaryotic cells by recombination of part or all of that DNA into the cell's genome. (source: NALT)

**Genomes** NALT 42648

UN AgroVoc c_3224

Library of Congress sh85053924

The complete set of genetic material in the chromosomes of an organism with its associated genes. (source: NALT)

**Germplasm** NALT 42649

UN AgroVoc c_3249

The cells or tissues from which a new organism can be generated. (source: NALT)

**Plant genetic resources** NALT 42651

UN AgroVoc c_37419

**Hydromorphic soils** NALT 42655

UN AgroVoc c_25315

**Genetic transduction** NALT 42661

UN AgroVoc c_27830

Transfer of bacterial DNA by phages from an infected bacterium to another bacterium. This also refers to the transfer of genes into eukaryotic cells by viruses. This naturally occurring process is routinely employed as a gene transfer technique. (source: NALT)

**Somaclonal variation** NALT 42666

UN AgroVoc c_34127

Genetic variation arising from the break-up and reassembly of DNA in dividing vegetative plant cells grown in culture. (source: NALT)

**Genistein** NALT 42700

UN AgroVoc c_37219
A soy-derived isoflavone and phytoestrogen with antineoplastic activity. Genistein binds to and inhibits protein-tyrosine kinase, thereby disrupting signal transduction and inducing cell differentiation. This agent also inhibits topoisomerase-II, leading to DNA fragmentation and apoptosis, and induces G2/M cell cycle arrest. Genistein exhibits antioxidant, antiangiogenic, and immunosuppressive activities. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

**Gentiana** NALT 42719

UN AgroVoc e_16245

**Swertia** NALT 42729

UN AgroVoc e_35589

**Genyonemus** NALT 42730

UN AgroVoc e_3227

**Testudinidae** NALT 42744

UN AgroVoc e_32577

Library of Congress sh85134161

**Geocoris punctipes** NALT 42750

UN AgroVoc e_30663

**Geophysics** NALT 42756

UN AgroVoc e_3235

**Spatial distribution** NALT 42763

UN AgroVoc e_36230

**Geomorphology** NALT 42769

UN AgroVoc e_3233

The study of the surface of the earth and how it has changed over time. (source: NALT)

**soil parent materials** NALT 42771

UN AgroVoc e_7181

**Stratigraphy** NALT 42772

UN AgroVoc e_7440

The branch of geology concerned with the formation, composition, ordering in time, and arrangement in space of sedimentary rocks. (source: NALT)

**tectonics** NALT 42773

UN AgroVoc e_31904

**Gophers** NALT 42784

UN AgroVoc e_15598
Geothermal energy  NALT 42803
  UN AgroVoc e_3238

Geotrichum  NALT 42808
  UN AgroVoc e_3239

Geotrichum candidum  NALT 42809
  UN AgroVoc e_27205

Geranium  NALT 42816
  UN AgroVoc e_3242

Pelargonium  NALT 42817
  UN AgroVoc e_5660

Limnanthaceae  NALT 42818
  UN AgroVoc e_26285

Tropaeolaceae  NALT 42819
  UN AgroVoc e_7965

Pelargonium peltatum  NALT 42824
  UN AgroVoc e_27285

Gerbils  NALT 42829
  UN AgroVoc e_15596

Wheat germ  NALT 42837
  UN AgroVoc e_11131

Germination  NALT 42878
  UN AgroVoc e_3247

Pollen germination  NALT 42879
  UN AgroVoc e_35046

spore germination  NALT 42880
  UN AgroVoc e_36514

Seed storage  NALT 42886
  UN AgroVoc e_6938

Gerridae  NALT 42890
  UN AgroVoc e_35397

Gloxinia  NALT 42892
  UN AgroVoc e_3283

Saintpaulia  NALT 42897
  UN AgroVoc e_6737
  Dbpedia Saintpaulia
Sinningia  NALT 42898
      UN AgroVoc e_7079

Streptocarpus  NALT 42899
      UN AgroVoc e_35588
      Dbpedia Streptocarpus

Hepialidae  NALT 42918
      UN AgroVoc e_30214

Srih (somatostatin)  NALT 42920
      UN AgroVoc e_36319

Sequoiadendron giganteum  NALT 42930
      UN AgroVoc e_330340

Gibberella  NALT 42940
      UN AgroVoc e_3255

Gibberellic acid  NALT 42941
      UN AgroVoc e_3160

Gibberellins  NALT 42942
      UN AgroVoc e_11148

Gigantochloa  NALT 42952
      UN AgroVoc e_3259

Hypneaceae  NALT 42956
      UN AgroVoc e_49769

Plocamiaceae  NALT 42958
      UN AgroVoc e_49775

Sphaerococcaceae  NALT 42961
      UN AgroVoc e_49779

Gigaspora margarita  NALT 42963
      UN AgroVoc e_37089

Gilmaniella  NALT 42970
      UN AgroVoc e_31572

Sparus aurata  NALT 42973
      UN AgroVoc e_36080

Ginger  NALT 42974
      UN AgroVoc e_11157

An extract of the rhizome of the perennial plant Zingiber officinale with potential antineoplastic activity. Ginger extract contains a number of different phenolic compounds, some of which have displayed antineoplastic, anti-inflammatory, and antioxidant activities. This agent also exhibits antiemetic properties. Source: NCI thesaurus link
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<td>A disorder involving inflammation of the gums; may affect surrounding and supporting structures of the teeth. Source: NCI thesaurus link</td>
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Globodera  NALT 43070
    UN AgroVoc c_15803
Globodera pallida  NALT 43071
    UN AgroVoc c_31039
Globodera rostochiensis  NALT 43072
    UN AgroVoc c_31040
Globodera solanacearum  NALT 43073
    UN AgroVoc c_31041
Myoglobin  NALT 43080
    UN AgroVoc c_5031
Gloeocercospora  NALT 43084
    UN AgroVoc c_31573
Gloeophyllum trabeum  NALT 43092
    UN AgroVoc c_33726
Glomerella  NALT 43111
    UN AgroVoc c_3281
Library of Congress sh88021958
Glomerulonephritis  NALT 43119
    UN AgroVoc c_16430

A renal disorder characterized by damage in the glomeruli. It may be acute or chronic, focal or diffuse, and it may lead to renal failure. Causes include autoimmune disorders, infections, diabetes, and malignancies. Source: NCI thesaurus link
Nephritis  NALT 43120
    UN AgroVoc c_16447

Inflammation of the kidney. It is a focal or diffuse proliferative or destructive process which may involve the glomerulus, tubule, or interstitial renal tissue. Source: NCI thesaurus link
Glomus aggregatum  NALT 43123
    UN AgroVoc c_35501
Glomus etunicatum  NALT 43127
    UN AgroVoc c_35502
Glomus fasciculatum  NALT 43128
    UN AgroVoc c_35498
Glomus intraradices  NALT 43129  
UN AgroVoc c_35499

Glomus mosseae  NALT 43132  
UN AgroVoc c_35500

Glomus versiforme  NALT 43133  
UN AgroVoc c_35503

Glossina  NALT 43140  
UN AgroVoc c_11174

Glossina austeni  NALT 43141  
UN AgroVoc c_30555

Glossina morsitans  NALT 43146  
UN AgroVoc c_30556

Glossina pallidipes  NALT 43147  
UN AgroVoc c_30557

Glossina palpalis  NALT 43148  
UN AgroVoc c_30558

Glossina tachinoides  NALT 43149  
UN AgroVoc c_30559

Glucagon  NALT 43166  
UN AgroVoc c_3284  
A pancreatic hormone consisting of 29 amino acids that causes increases in blood sugar levels by stimulating hepatic glycogenolysis and gluconeogenesis. Source: NCI thesaurus link

Glycogen  NALT 43169  
UN AgroVoc c_3303

glucobrassicin  NALT 43172  
UN AgroVoc c_36862

Glucosinolates  NALT 43173  
UN AgroVoc c_24114

Glucomannans  NALT 43179  
UN AgroVoc c_11176

glucosamine  NALT 43198  
UN AgroVoc c_11179

Glufosinate  NALT 43205  
UN AgroVoc c_34289

Glugea  NALT 43206  
UN AgroVoc c_11182
Glutamates  NALT 43208  
UN AgroVoc e_11183

Glutathione  NALT 43210  
UN AgroVoc e_11184

A tripeptide comprised of three amino acids (cysteine, glutamic acid, and glycine) present in most mammalian tissue. Glutathione acts as an antioxidant, a free radical scavenger and a detoxifying agent. Glutathione is also important as a cofactor for the enzyme glutathione peroxidase, in the uptake of amino acids, and in the synthesis of leukotrienes. As a substrate for glutathione S-transferase, this agent reacts with a number of harmful chemical species, such as halides, epoxides and free radicals, to form harmless inactive products. In erythrocytes, these reactions prevent oxidative damage through the reduction of methemoglobin and peroxides. Glutathione is also involved in the formation and maintenance of disulfide bonds in proteins and in the transport of amino acids across cell membranes. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Glutenins  NALT 43219  
UN AgroVoc e_24033

Glyceria  NALT 43233  
UN AgroVoc e_26506

Glycine soja  NALT 43245  
UN AgroVoc e_23607

Neonotonia wightii  NALT 43254  
UN AgroVoc e_33777

Soybean products  NALT 43258  
UN AgroVoc e_16506

Soybeans  NALT 43259  
UN AgroVoc e_14477

Glycinin  NALT 43265  
UN AgroVoc e_36682

Solanine  NALT 43267  
UN AgroVoc e_16041

glycopeptides  NALT 43281  
UN AgroVoc e_36756

Phospholipids  NALT 43282  
UN AgroVoc e_5803
Hyaluronic acid  NALT 43288
UN AgroVoc e_24855
A glucosaminoglycan consisting of D-glucuronic acid and N-acetyl-D-glucosamine disaccharide units that is a component of connective tissue, skin, vitreous humour, umbilical cord, synovial fluid and the capsule of certain microorganisms contributing to adhesion, elasticity, and viscosity of extracellular substances. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Saponins  NALT 43289
UN AgroVoc e_6795
A type of glycoside widely distributed in plants. Each consists of a sapogenin as the aglycone moiety, and a sugar. The sapogenin may be a steroid or a triterpene and the sugar may be glucose, galactose, a pentose, or a methylpentose. (source: NALT)

Sphingolipids  NALT 43292
UN AgroVoc e_36865

Glycyphagus  NALT 43294
UN AgroVoc e_11193

Glycyrrhiza glabra  NALT 43299
UN AgroVoc e_3313

Glycophagidae  NALT 43309
UN AgroVoc e_30210

Glyphosate  NALT 43310
UN AgroVoc e_24849

Glypta  NALT 43311
UN AgroVoc e_29914

Glyptocephalus  NALT 43313
UN AgroVoc e_3315
Library of Congress sh85034436

Grey teak  NALT 43316
UN AgroVoc e_11360

Gmelina arborea  NALT 43317
UN AgroVoc e_3317

Gnathostoma  NALT 43320
UN AgroVoc e_16247

Gnathotrichus  NALT 43322
UN AgroVoc e_30142

Gnetaceae  NALT 43325
UN AgroVoc e_3318
Bulso  NALT 43326  
    UN AgroVoc c_9491
Gnetum gnemon  NALT 43328  
    UN AgroVoc c_3321
Phthorimaea operculella  NALT 43334  
    UN AgroVoc c_30202
Goat meat  NALT 43354  
    UN AgroVoc c_15978
Goat milk  NALT 43355  
    UN AgroVoc c_16083
Salix caprea  NALT 43359  
    UN AgroVoc c_24366
Mullidae  NALT 43361  
    UN AgroVoc c_43345
Kids  NALT 43363  
    UN AgroVoc c_4100
    Use for a young goat; For human children USE children. (source: NALT)
Gobiidae  NALT 43364  
    UN AgroVoc c_44428  
    Library of Congress sh85055506
Goethite  NALT 43368  
    UN AgroVoc c_15842
Iodine  NALT 43370  
    UN AgroVoc c_3932
    An element with atomic symbol I, atomic number 53, and atomic weight of 126.90. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link
Thyroid antagonists  NALT 43372  
    UN AgroVoc c_7752
Gold  NALT 43373  
    UN AgroVoc c_33067
    An element with atomic symbol Au, atomic number 79, and atomic weight 197. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Gonadotropin release**  NALT 43412
  UN AgroVoc c_35152

**Testes**  NALT 43422
  UN AgroVoc c_7682

**Gonia**  NALT 43426
  UN AgroVoc c_30610

**Goniodes**  NALT 43431
  UN AgroVoc c_11213

**Gonipterus scutellatus**  NALT 43447
  UN AgroVoc c_24648

**Neisseria**  NALT 43451
  UN AgroVoc c_12787
  A genus of Gram-negative, aerobic, strongly oxidase-positive diplococci bacteria in the phylum Proteobacteria. Source: NCI thesaurus link

**Gonystylus**  NALT 43457
  UN AgroVoc c_3332
  Dbpedia Gonystylus

**Gooseberries**  NALT 43464
  UN AgroVoc c_3333

**Ribes uva crispa**  NALT 43465
  UN AgroVoc c_37421

**Gopherus**  NALT 43471
  UN AgroVoc c_1512
  Library of Congress sh85055923

**Gossypium**  NALT 43529
  UN AgroVoc c_3335
  Dbpedia Gossypium

**Gossypium tomentosum**  NALT 43530
  UN AgroVoc c_3340

**Gossypol**  NALT 43548
  UN AgroVoc c_16371
An orally-active polyphenolic aldehyde with potential antineoplastic activity. Derived primarily from unrefined cottonseed oil, gossypol induces cell cycle arrest at the G0/G1 phase, thereby inhibiting DNA replication and inducing apoptosis. This agent also inhibits cell-signaling enzymes, resulting in inhibition of cell growth, and may act as a male contraceptive. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using CAS number link

**Raffinose** NALT 43550
UN AgroVoc c_6432

**Graafian follicles** NALT 43565
UN AgroVoc c_32466
Library of Congress sh85056147

In mammals, the mature ovarian follicle that secretes estrogen and is the final stage of follicular development. (source: NALT)

**Paratylenchidae** NALT 43567
UN AgroVoc c_31104

**Gracilaria** NALT 43568
UN AgroVoc c_24754

**Phyllocnistis** NALT 43574
UN AgroVoc c_30291

**Phyllonorycter** NALT 43575
UN AgroVoc c_5819

**Plant propagation** NALT 43596
UN AgroVoc c_5977

Includes asexual and sexual methods of propagation such as cuttings, grafting, air layering, seed treatments, and micropropagation. (source: NALT)

**Rootstocks** NALT 43597
UN AgroVoc c_6653

**Scions** NALT 43598
UN AgroVoc c_6857

**Skin grafting** NALT 43607
UN AgroVoc c_7100

The grafting of skin in humans or animals from one site to another to replace a lost portion of the body surface skin. (source: NALT)

**Malt** NALT 43618
UN AgroVoc c_4547

Product made by wetting grain (commonly barley) and allowing it to germinate long enough to produce adequate amounts of enzymes, and used especially in brewing and distilling. (source: NALT)
Granular leukocytes having a nucleus with three to five lobes connected by slender threads of chromatin, and cytoplasm containing fine inconspicuous granules and stainable by neutral dyes. (source: NALT)

A mixture of grape juice, grape pulp, and grape skin that is fermented into wine. (source: NALT)

Characterized by fertile soil, a mesic climate, and covered originally with coarse grasses, a prairie is an extensive, level or rolling, predominantly treeless grassland. (source: NALT)
Gravity  NALT 43766
UN AgroVoc c_24586

Zero gravity  NALT 43768
UN AgroVoc c_24581

Populus canescens  NALT 43771
UN AgroVoc c_26636

Mixed grazing  NALT 43778
UN AgroVoc c_4875

Rotational grazing  NALT 43779
UN AgroVoc c_6663

Grazing intensity  NALT 43782
UN AgroVoc c_3368

Overgrazing  NALT 43783
UN AgroVoc c_24945

Hypena scabra  NALT 43820
UN AgroVoc c_37409

Spinach  NALT 43830
UN AgroVoc c_14508

Watercress  NALT 43832
UN AgroVoc c_15275

Panicum maximum  NALT 43835
UN AgroVoc c_5537

Myzus persicae  NALT 43837
UN AgroVoc c_24772

Schizaphis graminum  NALT 43850
UN AgroVoc c_30787

Nitrous oxide  NALT 43853
UN AgroVoc c_12838

A naturally occurring gas that is colorless and non flammable. It can be manufactured and used for a variety of things such as a pharmacologic agent to produce anesthesia, a food additive as a propellant, and an additive to fuels to increase available oxygen in combustion. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
**Trialeurodes vaporariorum** NALT 43859
- UN AgroVoc e_30756

**Gregarina** NALT 43862
- UN AgroVoc e_3383

**Grevillea** NALT 43869
- UN AgroVoc e_24755
- Dbpedia Grevillea

**Grevillea robusta** NALT 43870
- UN AgroVoc e_33728

**Grewia** NALT 43871
- UN AgroVoc e_23927

**Mugilidae** NALT 43873
- UN AgroVoc e_42206

**Turkey meat** NALT 43913
- UN AgroVoc e_24096

**Landfill leachates** NALT 43954
- UN AgroVoc e_35794

**Mechanical pulp** NALT 43964
- UN AgroVoc e_4684
  - Pulp that has not been cooked or chemically treated. (source: NALT)

**Streptococcus agalactiae** NALT 43966
- UN AgroVoc e_26700
  - A species of facultatively anaerobic, Gram positive, coccoid shaped bacteria in the phylum Firmicutes. This species is positive for beta hemolysis, CAMP test, Lancefield group B and arginine deamination and negative for esculin hydrolysis, pyrrolidonylarylaminidase and catalase. It can ferment trehalose and ribose but not mannitol or sorbitol. S. agalactiae is a commensal organism of the human gastrointestinal and female genital tracts and is a pathogen in humans causing opportunistic infections and neonatal sepsis. Source: NCI thesaurus link

**group size** NALT 43976
- UN AgroVoc e_24852

**Sowing date** NALT 43987
- UN AgroVoc e_16208

**Regrowth** NALT 43989
- UN AgroVoc e_32532

**Interleukins** NALT 43993
- UN AgroVoc e_34031

**latewood** NALT 44012
- UN AgroVoc e_35930
Gryllus  NALT 44023
   UN AgroVoc c_3405
   Library of Congress sh97004374

Oecanthus  NALT 44024
   UN AgroVoc c_31936

Teleogryllus  NALT 44025
   UN AgroVoc c_31937

Grylloblattodea  NALT 44027
   UN AgroVoc c_3403

Gryllotalpa  NALT 44032
   UN AgroVoc c_3404

Gryllotalpidae  NALT 44033
   UN AgroVoc c_31939

Scapteriscus  NALT 44037
   UN AgroVoc c_27365

Gryllus bimaculatus  NALT 44038
   UN AgroVoc c_31935

Gryon  NALT 44040
   UN AgroVoc c_29938

Scelionidae  NALT 44041
   UN AgroVoc c_29937

Guadua  NALT 44047
   UN AgroVoc c_33068

Guanine  NALT 44057
   UN AgroVoc c_3413
   A purine base that is a constituent of nucleotides occurring in nucleic acids. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link

Guanosine  NALT 44059
   UN AgroVoc c_3415
   A purine nucleoside formed from a beta-N9-glycosidic bond between guanine and a ribose ring and is essential for metabolism. Source: NCI thesaurus link
   Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Paullinia cupana**  NALT 44064
UN AgroVoc c_5633

**Guavas**  NALT 44068
UN AgroVoc c_11392

**Psidium guajava**  NALT 44069
UN AgroVoc c_6315

**Parthenium argentatum**  NALT 44072
UN AgroVoc c_5597

**Moringa oleifera**  NALT 44081
UN AgroVoc c_24664

**Niger seed**  NALT 44098
UN AgroVoc c_12827

**gully erosion**  NALT 44106
UN AgroVoc c_25010

**Gum arabic**  NALT 44111
UN AgroVoc c_3438

**Gum tragacanth**  NALT 44112
UN AgroVoc c_28399

**Gummosis**  NALT 44114
UN AgroVoc c_34010
The exudation of gum, latex or sap from some fruit trees and sugar cane, which may be caused by insects, mechanical damage, disease microorganisms or unfavorable weather. (source: NALT)

**Xanthan gum**  NALT 44116
UN AgroVoc c_16204
A polysaccharide that is derived from the fermentation of corn sugar. It is used as a thickening agent, emulsifier and stabilizer in a variety of food and nonfood products. (source: NALT)

**Triglidae**  NALT 44118
UN AgroVoc c_45270

**Transpiration**  NALT 44123
UN AgroVoc c_7871
Water discharged into the atmosphere from plant surfaces. (source: NALT)

**Nannizzia**  NALT 44126
UN AgroVoc c_5065
Gymnodinium  NALT 44134
    UN AgroVoc e_36617
Gymnosporangium  NALT 44137
    UN AgroVoc e_3448
Stigma  NALT 44143
    UN AgroVoc e_14591
Gypsiferous soils  NALT 44151
    UN AgroVoc e_3452
Gypsum  NALT 44152
    UN AgroVoc e_3453
Gypsophila paniculata  NALT 44156
    UN AgroVoc e_23929
Gyranusoidea tebygi  NALT 44162
    UN AgroVoc e_37849
Hernandiaceae  NALT 44167
    UN AgroVoc e_26274
Gyrodactylidae  NALT 44169
    UN AgroVoc e_32010
Gyrodactylus  NALT 44170
    UN AgroVoc e_26510
Gyrodactylus salaris  NALT 44171
    UN AgroVoc e_26511
    Dbpedia Gyrodactylus salaris
Gyromitra  NALT 44172
    UN AgroVoc e_16084
Microhabitat  NALT 44185
    UN AgroVoc e_12542
Habronema  NALT 44192
    UN AgroVoc e_3457
Haemanthus  NALT 44204
    UN AgroVoc e_26513
Haemaphysalis longicornis  NALT 44208
    UN AgroVoc e_30956
Haemaphysalis punctata  NALT 44209
    UN AgroVoc e_30957
Haematobia NALT 44211
    UN AgroVoc c_11422
Haematobia irritans NALT 44213
    UN AgroVoc c_30563
haematoma NALT 44231
    UN AgroVoc c_11426
    A collection of blood outside the blood vessels. Hematoma can be localized in an organ, space, or tissue. (source: NALT)
Haematopinus NALT 44235
    UN AgroVoc c_11427
Haematopinus suis NALT 44237
    UN AgroVoc c_30841
Haematopota NALT 44241
    UN AgroVoc c_11429
Haemonchus NALT 44256
    UN AgroVoc c_3464
Haemonchus contortus NALT 44257
    UN AgroVoc c_27207
Haemonchus placei NALT 44258
    UN AgroVoc c_34682
Haemophilus NALT 44260
    UN AgroVoc c_3465
    A genus of Gram-negative, pleomorphic, coccobacilli bacteria belonging to the Proteobacteria phylum. Source: NCI thesaurus link
Haemophilus paragallinarum NALT 44266
    UN AgroVoc c_23931
Haemophilus somnus NALT 44275
    UN AgroVoc c_33359
    Nomenclature is somewhat confused; searchers may consider searching “Histophilus ovis” in addition to “Haemophilus somnus.” (source: NALT)
Haemulon NALT 44293
    UN AgroVoc c_3467
Pomadasys NALT 44294
    UN AgroVoc c_6099
Hail NALT 44297
    UN AgroVoc c_3469
precipitation  NALT 44298
    UN AgroVoc c_6161

Trichomes  NALT 44304
    UN AgroVoc c_36190

Root hairs  NALT 44306
    UN AgroVoc c_6642

Lycaenidae  NALT 44308
    UN AgroVoc c_30229
    Dbpedia Lycaenidae

Vicia villosa  NALT 44317
    UN AgroVoc c_8223

Vigna luteola  NALT 44320
    UN AgroVoc c_8237

Halichoerus  NALT 44382
    UN AgroVoc c_11444

Halichoerus grypus  NALT 44383
    UN AgroVoc c_48911

Halictus  NALT 44387
    UN AgroVoc c_29819

Nomia  NALT 44389
    UN AgroVoc c_29823

Halichrysis  NALT 44394
    UN AgroVoc c_3931

Haliotis asinina  NALT 44395
    UN AgroVoc c_47369

Haliotis discus  NALT 44396
    UN AgroVoc c_31165

Haliotis diversicolor  NALT 44397
    UN AgroVoc c_47377

Haliotis fulgens  NALT 44398
    UN AgroVoc c_47365

Haliotis rufescens  NALT 44400
    UN AgroVoc c_47366

Haliotis tuberculata  NALT 44401
    UN AgroVoc c_47376
Organic halogen compounds  NALT 44429
    UN AgroVoc c_5386

dibrominated biphenyls  NALT 44430
    UN AgroVoc c_50141

Halophytes  NALT 44457
    UN AgroVoc c_25112

Soil salinity  NALT 44460
    UN AgroVoc c_35317
    The amount of soluble salts in a soil. (source: NALT)

Myriophyllum  NALT 44465
    UN AgroVoc c_32184
    Dbpedia Myriophyllum

Halopyrop  NALT 44476
    UN AgroVoc c_34845

Hamamelis  NALT 44489
    UN AgroVoc c_3479

Liquidambar  NALT 44490
    UN AgroVoc c_4376

Platanaceae  NALT 44495
    UN AgroVoc c_6000

Manual harvesting  NALT 44515
    UN AgroVoc c_330801

Mortierella  NALT 44572
    UN AgroVoc c_4947

Haplosporidium  NALT 44573
    UN AgroVoc c_11453

Haplothrips  NALT 44575
    UN AgroVoc c_3491

Phalaris aquatica  NALT 44624
    UN AgroVoc c_36597

Hardwood  NALT 44627
    UN AgroVoc c_3495

    Generally one of the botanical groups of trees that have vessels or pores and broad leaves, in contrast to the conifers or softwoods. The term has no reference to the actual hardness of the wood. (source: NALT)
A glued wood panel made up of relatively thin layers of veneer with the grain of adjacent layers at right angles or of veneer in combination with a core of lumber or of reconstituted wood. The usual constructions have an odd number of layers. (source: NALT)

Grain weight as a percentage of total above-ground dry weight at maturity. (source: NALT)

Disorders of the special senses (i.e., vision, hearing, taste, and smell) or somatosensory system (i.e., afferent components of the peripheral nervous system). (source: NALT)
**heart ventricles**  NALT 44758  
UN AgroVoc e_37346

**Pericarditis**  NALT 44762  
UN AgroVoc e_13241  
An inflammatory process affecting the pericardium. Source: NCI thesaurus link

**Heartwood**  NALT 44775  
UN AgroVoc e_3518

**Heat**  NALT 44778  
UN AgroVoc e_3519

**Heat transfer**  NALT 44780  
UN AgroVoc e_3521

**Specific heat**  NALT 44781  
UN AgroVoc e_7282  
The ratio of the amount of heat required to raise the temperature of a substance 1 degree Celsius to the heat required to raise the temperature of an equal mass of water 1 degree Celsius. (source: NALT)

**Heat shock proteins**  NALT 44798  
UN AgroVoc e_36493

**Thermal properties**  NALT 44804  
UN AgroVoc e_7718

**Lead**  NALT 44817  
UN AgroVoc e_4235  
Be in charge of; a position of leadership. Source: NCI thesaurus link

**Mercury**  NALT 44818  
UN AgroVoc e_4751  
An element with atomic symbol Hg, atomic number 80, and atomic weight 200.59; a heavy, silvery-white metal, liquid at room temperature, a rather poor conductor of heat and a fair conductor of electricity. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link

**Thallium**  NALT 44819  
UN AgroVoc e_7702  
An element with atomic symbol Tl, atomic number 81, and atomic weight 204.383. Source: NCI thesaurus link  
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Tin  NALT 44820
    UN AgroVoc c_7782

Hebe  NALT 44821
    UN AgroVoc c_33360

Hedera helix  NALT 44827
    UN AgroVoc c_36046

Hedysarum coronarium  NALT 44838
    UN AgroVoc c_3533

Onobrychis viciifolia  NALT 44841
    UN AgroVoc c_5357

Helianthus tuberosus  NALT 44864
    UN AgroVoc c_3540

Tithonia rotundifolia  NALT 44880
    UN AgroVoc c_32259

Helix  NALT 44885
    UN AgroVoc c_11495

A twisted curved structure such as a coil spring or corkscrew. Source: NCI thesaurus link

Helicobacter  NALT 44887
    UN AgroVoc c_36048

A genus of gram-negative helical, curved, or straight microaerophilic bacteria with rounded ends and multiple sheathed flagella (unipolar or bipolar and lateral) with terminal bulbs. Form nonpigmented, translucent colonies, 1-2 mm in diameter. Catalase and oxidase positive. Found in gastric mucosa of primates, including human beings and ferrets. Some species are associated with gastric and peptic ulcers and gastric cancer. The type species is Helicobacter pylori. Source: NCI thesaurus link

Heliconia  NALT 44915
    UN AgroVoc c_36050
    Dbpedia Heliconia

Heliconiaceae  NALT 44916
    UN AgroVoc c_11494

Helicotylenchus  NALT 44920
    UN AgroVoc c_31052

Helicotylenchus dihystera  NALT 44921
    UN AgroVoc c_31053
**Helicotylenchus multicinctus**  NALT 44922  
UN AgroVoc c_31054

**Helicoverpa**  NALT 44924  
UN AgroVoc c_30254

**Helicoverpa armigera**  NALT 44925  
UN AgroVoc c_30255

**Heliothis virescens**  NALT 44933  
UN AgroVoc c_30258

**Nippostrongylus**  NALT 44939  
UN AgroVoc c_23952

**Heligmosomoides**  NALT 44940  
UN AgroVoc c_26516

**Heligmosomoides polygyrus**  NALT 44941  
UN AgroVoc c_31035

**Peptococcus**  NALT 44958  
UN AgroVoc c_13232

A genus of anaerobic, Gram positive, cocci shaped bacterium assigned to the phylum Firmicutes and the family Peptococcaceae. Source: NCI thesaurus link

**Heliothis subflexa**  NALT 44974  
UN AgroVoc c_30257

**Heliothrips**  NALT 44977  
UN AgroVoc c_3544

**Helix aspersa**  NALT 44988  
UN AgroVoc c_26517

**Helix pomatia**  NALT 44989  
UN AgroVoc c_26518

**Helleborus**  NALT 44991  
UN AgroVoc c_3545

**Hellula phidilealis**  NALT 44997  
UN AgroVoc c_32153

**Helminthosporium**  NALT 45008  
UN AgroVoc c_3548

Library of Congress sh88022063

**Helminthosporium solani**  NALT 45009  
UN AgroVoc c_34537

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1.7. Glossary
Helopeltis  NALT 45019  
  UN AgroVoc c_24341

Helopeltis antonii  NALT 45020  
  UN AgroVoc c_24756

Lachnellula  NALT 45028  
  UN AgroVoc c_24651

Leptotrochila  NALT 45029  
  UN AgroVoc c_31795

Monilinia  NALT 45031  
  UN AgroVoc c_31796

Ovulinia  NALT 45033  
  UN AgroVoc c_31797

Pezicula  NALT 45034  
  UN AgroVoc c_26609

Phacidium  NALT 45035  
  UN AgroVoc c_23957

Pseudopeziza  NALT 45036  
  UN AgroVoc c_6306

Pyrenopeziza  NALT 45037  
  UN AgroVoc c_31798

Sclerotinia  NALT 45038  
  UN AgroVoc c_6864

Stromatinia  NALT 45039  
  UN AgroVoc c_31799

Helvella  NALT 45042  
  UN AgroVoc c_31821

Hemarthria  NALT 45045  
  UN AgroVoc c_3551

Polyvidone  NALT 45048  
  UN AgroVoc c_13501

medical sciences  NALT 45052  
  UN AgroVoc c_4695

Hemerobius  NALT 45062  
  UN AgroVoc c_30839

Micromus  NALT 45063  
  UN AgroVoc c_30840
**HemeroCallis**  NALT 45065  
UN AgroVoc e_3552

**Orgyia**  NALT 45069  
UN AgroVoc e_5404  
Library of Congress sh85095598

**Hemicellulose**  NALT 45073  
UN AgroVoc e_3554

**Hemileia**  NALT 45075  
UN AgroVoc e_3555

**Hemileia vastatrix**  NALT 45076  
UN AgroVoc e_32323

**Hemileuca**  NALT 45077  
UN AgroVoc e_30333

**Saissetia coffeae**  NALT 45082  
UN AgroVoc e_30806

**haemoglobinuria**  NALT 45099  
UN AgroVoc e_11433

The presence of free hemoglobin in the urine, indicating hemolysis of erythrocytes within the vascular system. (source: NALT)

**Orobanche ramosa**  NALT 45105  
UN AgroVoc e_35566

**Hepatitis**  NALT 45132  
UN AgroVoc e_11527

Inflammation of the liver. (source: NALT)

Inflammation of the liver; usually from a viral infection, but sometimes from toxic agents. Source: NCI thesaurus link

**Wiseana**  NALT 45154  
UN AgroVoc e_30215

**Heracleum sosnowskyi**  NALT 45157  
UN AgroVoc e_26521

**Herbaceous plants**  NALT 45162  
UN AgroVoc e_27977

**Herbal teas**  NALT 45167  
UN AgroVoc e_35743

**Herbicidal properties**  NALT 45181  
UN AgroVoc e_36814
Ioxynil  NALT 45204
  UN AgroVoc c_31397

Lenacil  NALT 45213
  UN AgroVoc c_31400

Mefluidide  NALT 45216
  UN AgroVoc c_31412

Metoxuron  NALT 45226
  UN AgroVoc c_31425

Nitralin  NALT 45230
  UN AgroVoc c_31439

Nitrofen  NALT 45232
  UN AgroVoc c_31441
  A white, crystalline, solid, combustible, chlorinated compound. Nitrofen was used as an herbicide, but is no longer used or manufactured in the United States. Exposure to nitrofen irritates the skin, eyes and respiratory tract and affects the blood and central nervous system. This substance is teratogenic and carcinogenic in animals and is reasonably anticipated to be a human carcinogen. (NCI05)
  Source: NCI thesaurus link
  Reference: FDA UNII link

Oryzalin  NALT 45235
  UN AgroVoc c_31445

Oxadiazon  NALT 45237
  UN AgroVoc c_31446

Oxyfluorfen  NALT 45238
  UN AgroVoc c_31450

Paraquat  NALT 45239
  UN AgroVoc c_31452

Pendimethalin  NALT 45242
  UN AgroVoc c_31455
  Library of Congress sh85099382

Perfluidone  NALT 45243
  UN AgroVoc c_31457

Pyridate  NALT 45258
  UN AgroVoc c_31484
Terbacil NALT 45270
   UN AgroVoc c_31500
Trifluralin NALT 45282
   UN AgroVoc c_31528
mint NALT 45297
   UN AgroVoc c_12606
Oregano NALT 45298
   UN AgroVoc c_34066
Parsley NALT 45299
   UN AgroVoc c_13120
Rosemary NALT 45300
   UN AgroVoc c_13963
Sage NALT 45301
   UN AgroVoc c_14025
Savory NALT 45302
   UN AgroVoc c_14100
tarragon NALT 45303
   UN AgroVoc c_14793
Thyme NALT 45304
   UN AgroVoc c_14877
Heritability NALT 45312
   UN AgroVoc c_3570
   The degree of variation in a trait that is genetically transmissible from parent to offspring. (source: NALT)
hermaphroditism NALT 45315
   UN AgroVoc c_3571
Pseudohermaphroditism NALT 45316
   UN AgroVoc c_13643
   Congenital condition in which a person has internal gonads (testes or ovaries) of one sex and external physical characteristics of the other sex. (source: NALT)
Thymelicus NALT 45354
   UN AgroVoc c_7748
Mayetiola destructor NALT 45367
   UN AgroVoc c_30462
Heterakidae NALT 45368
   UN AgroVoc c_31036

1.7. Glossary
Heterakis  NALT 45369
  UN AgroVoc e_3577

Heterocampa  NALT 45372
  UN AgroVoc e_3578

Notodontidae  NALT 45373
  UN AgroVoc e_30282

Piperonyl butoxide  NALT 45396
  UN AgroVoc e_5924
  A synthetic derivative of benzodioxole and used as an insecticide synergist, Piperonyl Butoxide enhances the active properties of pyrethrin, pyrethroid, rotenone, and carbamate pesticide ingredients by inhibiting insect microsomal enzyme detoxification activity. It is toxic and suspected of causing anorexia, carcinogenesis, convulsions, and dermal irritation, as well as hepatic and renal damage. (NCI04) Source: NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Heterodera  NALT 45400
  UN AgroVoc e_3580

Heterodera avenae  NALT 45401
  UN AgroVoc e_31042

Heterodera carotae  NALT 45402
  UN AgroVoc e_31043

Heterodera glycines  NALT 45403
  UN AgroVoc e_31045

Heterodera goettingiana  NALT 45404
  UN AgroVoc e_31046

Heterodera schachtii  NALT 45405
  UN AgroVoc e_31047

Heterodera trifolii  NALT 45406
  UN AgroVoc e_31048

Heteronychus  NALT 45426
  UN AgroVoc e_3581

Heteronychus arator  NALT 45427
  UN AgroVoc e_30129
**Metagonimus**  NALT 45433
  UN AgroVoc c_4771

**Heteropneustes**  NALT 45434
  UN AgroVoc c_36326

**Heteropneustidae**  NALT 45435
  UN AgroVoc c_41093

**Heteropneustes fossilis**  NALT 45436
  UN AgroVoc c_41094

**Heteropogon**  NALT 45437
  UN AgroVoc c_3583

**Heteropsylla**  NALT 45440
  UN AgroVoc c_33361

**Heteropsylla cubana**  NALT 45441
  UN AgroVoc c_33362

**Heterorhabditis**  NALT 45455
  UN AgroVoc c_31050

**Heterorhabditis bacteriophora**  NALT 45456
  UN AgroVoc c_35460

**Heterorhabditis heliothidis**  NALT 45457
  UN AgroVoc c_31051

**Hybrid vigour**  NALT 45461
  UN AgroVoc c_11543

The adaptive superiority of the heterozygous genotype with respect to one or more characters in comparison with the corresponding homozygote. (source: NALT)

**Insectivores**  NALT 45469
  UN AgroVoc c_11795

**Omnivores**  NALT 45470
  UN AgroVoc c_5348

**Saprophytes**  NALT 45471
  UN AgroVoc c_14083

Use for plants, fungi or other microorganisms living on dead or decaying organic matter; for fauna that feed on dead or decaying organic matter USE detritivores; for insects feeding on dead animals USE carrion insects. (source: NALT)

**Hevea brasiliensis**  NALT 45477
  UN AgroVoc c_3589

**hexaploids**  NALT 45483
  UN AgroVoc c_33075

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1.7. **Glossary**
Insecta  NALT 45487
    UN AgroVoc c_3890
    Includes taxonomic classification of Insecta; For common types SEE insects. (source: NALT)
Hexazinone  NALT 45488
    UN AgroVoc c_31393
Sorbose  NALT 45490
    UN AgroVoc c_7241
Hibernation  NALT 45494
    UN AgroVoc c_3592
Hibiscus  NALT 45495
    UN AgroVoc c_3593
Hibiscus rosa sinensis  NALT 45497
    UN AgroVoc c_3602
Hibiscus sabdariffa  NALT 45498
    UN AgroVoc c_3604
Hibiscus syriacus  NALT 45499
    UN AgroVoc c_26524
Deccan hemp  NALT 45500
    UN AgroVoc c_10304
Hides and skins  NALT 45515
    UN AgroVoc c_3609
Vaccinium corymbosum  NALT 45549
    UN AgroVoc c_8135
Upland soils  NALT 45552
    UN AgroVoc c_8077
Paspalum conjugatum  NALT 45565
    UN AgroVoc c_5609
Hippeastrum  NALT 45572
    UN AgroVoc c_3620
Hippobosca  NALT 45575
    UN AgroVoc c_11560
Lipoptena  NALT 45578
    UN AgroVoc c_23844
Melophagus  NALT 45579
    UN AgroVoc c_12489
Syngnathidae  NALT 45582
    UN AgroVoc e_41716

Hippoglossoides  NALT 45586
    UN AgroVoc e_3623

Hippoglossus  NALT 45588
    UN AgroVoc e_3624

Hippopotamuses  NALT 45592
    UN AgroVoc e_15612

Hirschmanniella  NALT 45607
    UN AgroVoc e_16249

Pratylenchidae  NALT 45608
    UN AgroVoc e_31106

Hirschmanniella oryzae  NALT 45609
    UN AgroVoc e_31107

Hirsutella  NALT 45611
    UN AgroVoc e_3628

Hirsutella thompsonii  NALT 45613
    UN AgroVoc e_27210

Teretriosoma  NALT 45631
    UN AgroVoc e_33898

Histomonas  NALT 45644
    UN AgroVoc e_3632

Histomoniasis  NALT 45646
    UN AgroVoc e_16751

Histones  NALT 45647
    UN AgroVoc e_3633
    Library of Congress sh85061087

Histoplasma  NALT 45648
    UN AgroVoc e_3634

A genus of microscopic fungus that causes the disease histoplasmosis. Source: NCI thesaurus link

Histoplasmosis  NALT 45650
    UN AgroVoc e_16752

A disease caused by the fungus Histoplasma capsulatum. It primarily affects the lungs but can also occur as a disseminated disease that affects additional organs. The acute respiratory disease has symptoms similar to those of a cold or flu and it usually resolves without treatment in healthy individuals. The disseminated form is generally fatal if untreated. Source: NCI thesaurus link

1.7. Glossary
Hodoterms NALT 45664
UN AgroVoc e_3641

Isoptera NALT 45666
UN AgroVoc e_3969

Hoeing NALT 45669
UN AgroVoc e_3642

Macruronus novaezelandiae NALT 45679
UN AgroVoc e_41547

Holcus NALT 45685
UN AgroVoc e_15984

Quercus ilex NALT 45690
UN AgroVoc e_24689

Stratigraphic soil types NALT 45699
UN AgroVoc e_7439

Holotrichia (coleoptera) NALT 45707
UN AgroVoc e_3644

Homarus NALT 45716
UN AgroVoc e_3646

Homarus americanus NALT 45717
UN AgroVoc e_46941

Homarus gammarus NALT 45718
UN AgroVoc e_46943

Vegetable growing NALT 45732
UN AgroVoc e_16509

homeostasis NALT 45754
UN AgroVoc e_33930

The body’s maintenance of a consistent internal environment within a narrow range of variation. It is important to the continuation of life. Source: NCI thesaurus link

Physiological regulation NALT 45755
UN AgroVoc e_32719

Homocysteine NALT 45766
UN AgroVoc e_35948

An amino acid derivative and homolog of cysteine containing an additional methylene bridge. Homocysteine is a product of methionine metabolism and elevated plasma levels are associated with cardiovascular disease, Alzheimer disease and several metabolic diseases. Source: NCI thesaurus link
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<thead>
<tr>
<th>Term</th>
<th>NALT</th>
<th>UN AgroVoc c_ code</th>
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<td>Homoeosoma</td>
<td>45769</td>
<td>c_27211</td>
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<tr>
<td>Homoeosoma electellum</td>
<td>45770</td>
<td>c_27212</td>
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<tr>
<td>Homona</td>
<td>45778</td>
<td>c_30373</td>
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<tr>
<td>Homosexuality</td>
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<td>Mead</td>
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<tr>
<td>Hooves</td>
<td>45820</td>
<td>c_3658</td>
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<tr>
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<tr>
<td>Hoplocampa</td>
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<td>Hoplolaimus</td>
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<td>Humulus lupulus</td>
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<tr>
<td>Hordein</td>
<td>45841</td>
<td>c_11599</td>
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</tbody>
</table>

### Glossary

- **Homoeosoma**
  - NALT 45769
  - UN AgroVoc c_27211

- **Homoeosoma electellum**
  - NALT 45770
  - UN AgroVoc c_27212

- **Homona**
  - NALT 45778
  - UN AgroVoc c_30373

- **Homosexuality**
  - NALT 45781
  - UN AgroVoc c_35212

  A sexual attraction to members of the same sex. Source: NCI thesaurus link

- **Mead**
  - NALT 45784
  - UN AgroVoc c_35218

  A fermented beverage made of honey, water and yeast. (source: NALT)

- **Hooves**
  - NALT 45820
  - UN AgroVoc c_3658

- **Phorodon humuli**
  - NALT 45823
  - UN AgroVoc c_30784

- **Hoplocampa**
  - NALT 45829
  - UN AgroVoc c_27214

- **Hoplolaimus**
  - NALT 45830
  - UN AgroVoc c_26526

- **Rotylenchulus**
  - NALT 45831
  - UN AgroVoc c_6669

- **Rotylenchus**
  - NALT 45832
  - UN AgroVoc c_31059

- **Scutellonema**
  - NALT 45833
  - UN AgroVoc c_32242

- **Hoplolaimus galeatus**
  - NALT 45834
  - UN AgroVoc c_31056

- **Hoplostethus atlanticus**
  - NALT 45839
  - UN AgroVoc c_42069

- **Humulus lupulus**
  - NALT 45840
  - UN AgroVoc c_3692

- **Hordein**
  - NALT 45841
  - UN AgroVoc c_11599
**Hordeum**  NALT 45848  
UN AgroVoc c_3660

**Hordeum chilense**  NALT 45851  
UN AgroVoc c_35551

**Juvenile hormones**  NALT 45930  
UN AgroVoc c_16188

**Siricidae**  NALT 45952  
UN AgroVoc c_29940

**Horse meat**  NALT 45964  
UN AgroVoc c_15983

**Racehorses**  NALT 45974  
UN AgroVoc c_6419

**Stallions**  NALT 45975  
UN AgroVoc c_7362

**Nut crops**  NALT 45979  
UN AgroVoc c_5266

**Insect control**  NALT 45983  
UN AgroVoc c_3885

**Parasitism**  NALT 46000  
UN AgroVoc c_5577

**Hosta**  NALT 46003  
UN AgroVoc c_3672

**Intermediate hosts**  NALT 46007  
UN AgroVoc c_15589

**Warm season**  NALT 46013  
UN AgroVoc c_29577

**Musca domestica**  NALT 46019  
UN AgroVoc c_30566

**Hovenia**  NALT 46038  
UN AgroVoc c_32156

**HT-2 toxin**  NALT 46045  
UN AgroVoc c_35378

**Hucho**  NALT 46046  
UN AgroVoc c_3680

**Nut products**  NALT 46058  
UN AgroVoc c_5267
**Roses**  NALT 46060  
UN AgroVoc c_13964  
Library of Congress sh85115443

**hygiene**  NALT 46088  
UN AgroVoc c_3739  
The science concerned with the prevention of illness and maintenance of health. Source: NCI thesaurus link

**Human immunodeficiency virus**  NALT 46096  
UN AgroVoc c_37855  
The virus isolated and recognized as the etiologic agent of AIDS. HIV-1 is classified as a lentivirus, a subtype of retroviruses. Source: NCI thesaurus link

**Leadership**  NALT 46112  
UN AgroVoc c_4236

**Enterovirus**  NALT 46118  
UN AgroVoc c_6559  
A genus of single-stranded positive sense RNA viruses containing a single RNA molecule. The viral particles are not enveloped and are icosahedral in structure. Source: NCI thesaurus link

**Humic acids**  NALT 46139  
UN AgroVoc c_3685

**Humerus**  NALT 46140  
UN AgroVoc c_11637  
The upper arm bone between the shoulder and elbow. Source: NCI thesaurus link

**Humicola**  NALT 46143  
UN AgroVoc c_31577

**Humid tropics**  NALT 46146  
UN AgroVoc c_3687

**humidity**  NALT 46148  
UN AgroVoc c_3689

Library of Congress sh85062931  
A measure of the water vapor content of air. Source: NCI thesaurus link

**relative humidity**  NALT 46149  
UN AgroVoc c_6496

**hummingbirds**  NALT 46152  
UN AgroVoc c_3690

**Megaptera novaeangliae**  NALT 46156  
UN AgroVoc c_49019
**Lumbricus rubellus** NALT 46166
   UN AgroVoc e_30868

**hurricanes** NALT 46181
   UN AgroVoc e_11650

**Lablab purpureus** NALT 46183
   UN AgroVoc e_4125

**Hyacinthus** NALT 46193
   UN AgroVoc e_3701

**Lipaphis erysimi** NALT 46195
   UN AgroVoc e_30775

**Hyalomma** NALT 46206
   UN AgroVoc e_3703

**Hyalomma anatolicum** NALT 46207
   UN AgroVoc e_30958

**Hyalomma dromedarii** NALT 46209
   UN AgroVoc e_30959

**Peronospora parasitica** NALT 46217
   UN AgroVoc e_34552

**Hyalophora** NALT 46218
   UN AgroVoc e_30335

**Violaceae** NALT 46227
   UN AgroVoc e_8255
   Dbpedia Violaceae

**Hyblaea** NALT 46228
   UN AgroVoc e_24761

**Hyblaenidae** NALT 46229
   UN AgroVoc e_30221

**Hyblaea puera** NALT 46230
   UN AgroVoc e_24762

**Hybomitra** NALT 46231
   UN AgroVoc e_30606

**Intergeneric hybridization** NALT 46232
   UN AgroVoc e_26792

**Interspecific hybridization** NALT 46233
   UN AgroVoc e_26794
**Introgression**  NALT 46234

UN AgroVoc e_24863

The incorporation of genes of one species, which is not completely reproductively isolated, into the gene pool of another by interspecific hybridization and backcrossing to the parental species. Natural introgression is rare and hybrids are less well adapted than the parental species. (source: NALT)

**Somatic hybridization**  NALT 46235

UN AgroVoc e_27608

**Hydrangea**  NALT 46254

UN AgroVoc e_3710

Dbpedia Hydrangea

**Philadelphus**  NALT 46272

UN AgroVoc e_5780

**Root hydraulic conductivity**  NALT 46276

UN AgroVoc e_37237

**Hydraulic conductivity**  NALT 46277

UN AgroVoc e_25579

**water management**  NALT 46285

UN AgroVoc e_8320

**Weirs**  NALT 46286

UN AgroVoc e_8352

Library of Congress sh85145985

**Wells**  NALT 46287

UN AgroVoc e_8354

**Phosphine**  NALT 46291

UN AgroVoc e_34073

**Hydrilla**  NALT 46292

UN AgroVoc e_32159

**Hydrochaeridae**  NALT 46299

UN AgroVoc e_331509

**Hydrochloric acid**  NALT 46309

UN AgroVoc e_3720

**Tritium**  NALT 46326

UN AgroVoc e_24912

Tritium is the radioactive isotope of hydrogen (H) that has a mass number of 3, having one proton and two neutrons. (source: NALT)
Hydrogen peroxide  NALT 46330
    UN AgroVoc c_3725
    Library of Congress sh85063431

water balance  NALT 46365
    UN AgroVoc c_8311

Hydrophobicity  NALT 46401
    UN AgroVoc c_33502
    Having a strong tendency to repel water. (source: NALT)

Phacelia  NALT 46407
    UN AgroVoc c_16277

hydroponics  NALT 46409
    UN AgroVoc c_3734
    The growing of plants in a soilless environment where nutrients are provided by the application of nutrient solutions. (source: NALT)

Soilless culture  NALT 46411
    UN AgroVoc c_14407

Salviniaeae  NALT 46417
    UN AgroVoc c_16287

Hydrotrea  NALT 46426
    UN AgroVoc c_11671

Hydrotropism  NALT 46430
    UN AgroVoc c_11672

Sodium hydroxide  NALT 46433
    UN AgroVoc c_16040

Hylastes  NALT 46448
    UN AgroVoc c_3741
    Library of Congress sh85063564

Hylesia  NALT 46451
    UN AgroVoc c_3743

Hylobius abietis  NALT 46463
    UN AgroVoc c_26527

Hylobius pales  NALT 46464
    UN AgroVoc c_26528

Sphinx  NALT 46470
    UN AgroVoc c_30351
Hylotrupes bajulus  NALT 46479
    UN AgroVoc c_30018
Hylurgopinus  NALT 46481
    UN AgroVoc c_30143
Hylurgopinus rufipes  NALT 46482
    UN AgroVoc c_30144
Hymenachne  NALT 46489
    UN AgroVoc c_3746
Hymenocallis  NALT 46495
    UN AgroVoc c_3748
Rhizopogon  NALT 46499
    UN AgroVoc c_31800
Hymenolepis  NALT 46501
    UN AgroVoc c_3749
Hymenolepis diminuta  NALT 46505
    UN AgroVoc c_31957
Hymenolepis nana  NALT 46507
    UN AgroVoc c_31958
Ibaliiidae  NALT 46512
    UN AgroVoc c_29905
Leucospidae  NALT 46513
    UN AgroVoc c_29920
Perilampidae  NALT 46518
    UN AgroVoc c_29925
Pompilidae  NALT 46519
    UN AgroVoc c_29928
Torymidae  NALT 46526
    UN AgroVoc c_29947
Trichogrammatidae  NALT 46527
    UN AgroVoc c_29949
Xiphydiidae  NALT 46530
    UN AgroVoc c_29965
Hyoscyamus  NALT 46536
    UN AgroVoc c_3753
Hyostrongylus  NALT 46540
    UN AgroVoc c_3755
**Hyostrongylus rubidus** NALT 46541

UN AgroVoc e_31140

**Hyparrhenia** NALT 46542

UN AgroVoc e_3756

**thatching grass** NALT 46544

UN AgroVoc e_14844

**Hypena** NALT 46548

UN AgroVoc e_37408

**Hypericum perforatum** NALT 46556

UN AgroVoc e_16252

An herbal extract prepared from the plant Hypericum perforatum (St. John’s wort) with photodynamic, antineoplastic, and antidepressant activities. Hypericin, one of the active compounds found in Hypericum perforatum, is a photosensitizer that, when exposed to a particular wavelength and intensity of light, may induce tumor cell apoptosis. Another compound, hyperforin, induces caspase-dependent apoptosis in certain tumor cell lines. Hypericum perforatum preparations may also stimulate the activity of cytochrome P450 enzymes and P-glycoprotein drug transporters, resulting in increased metabolism and decreased efficacy of various chemotherapeutic agents and other drugs. Source: NCI thesaurus link

Reference: FDA UNII link

Reference the ITIS link

Reference the NIH NCBI link

Reference USDA PLANTS link

Look-up using CAS number link

**Water uptake** NALT 46559

UN AgroVoc e_8329

**Hypermastigida** NALT 46587

UN AgroVoc e_11681

**Hyperparasitism** NALT 46592

UN AgroVoc e_32673

Parasitism in which a secondary parasite parasitizes a previously existing (primary) parasite in a host. (source: NALT)

**Hyperthyroidism** NALT 46610

UN AgroVoc e_35156

Hypersecretion of thyroid hormones from the thyroid gland. Elevated levels of thyroid hormones increase basal metabolic rate. (source: NALT)

Overactivity of the thyroid gland resulting in overproduction of thyroid hormone and increased metabolic rate. Causes include diffuse hyperplasia of the thyroid gland (Graves’ disease), single nodule in the thyroid gland, and thyroiditis. The symptoms are related to the increased metabolic rate and include weight loss, fatigue, heat intolerance, excessive sweating, diarrhea, tachycardia, insomnia, muscle weakness, and tremor. Source: NCI thesaurus link
Kabatiella  NALT 46642  UN AgroVoc e_4067

Malassezia  NALT 46643  UN AgroVoc e_31582

Genus of fungi which causes skin disease. (source: NALT)

Metarhizium  NALT 46645  UN AgroVoc e_4777

Microdochium  NALT 46646  UN AgroVoc e_31583

Microsporum  NALT 46647  UN AgroVoc e_4813

Genus of fungi which causes mycoses in humans and animals. (source: NALT)

Monilia  NALT 46648  UN AgroVoc e_32182

Mycocentrospora  NALT 46650  UN AgroVoc e_23950

Mycogene  NALT 46651  UN AgroVoc e_27238

Genus of fungus that is pathogenic on cultivated mushroom. (source: NALT)

Mycovellosiella  NALT 46652  UN AgroVoc e_31585

Myrothecium  NALT 46653  UN AgroVoc e_26580

Nigrospora  NALT 46654  UN AgroVoc e_26586

Library of Congress sh85091918

Nomurea  NALT 46655  UN AgroVoc e_31587

Oidiopsis  NALT 46656  UN AgroVoc e_31588

Oidium  NALT 46657  UN AgroVoc e_5327

Ozonium  NALT 46658  UN AgroVoc e_31589

Paecilomyces  NALT 46659  UN AgroVoc e_5499
Paracoccidioides NALT 46660
  UN AgroVoc c_31590
Periconia NALT 46662
  UN AgroVoc c_31591
  Library of Congress sh85099861
Periconiella NALT 46663
  UN AgroVoc c_31592
Phaeoisariopsis NALT 46664
  UN AgroVoc c_31595
Phaeoramularia NALT 46665
  UN AgroVoc c_31596
Phaeotrichoconis NALT 46666
  UN AgroVoc c_31597
Phialophora NALT 46667
  UN AgroVoc c_24675
  Library of Congress sh85100714
Phymatotrichopsis NALT 46668
  UN AgroVoc c_31598
Pithomyces NALT 46669
  UN AgroVoc c_5936
Pleiochaeta NALT 46670
  UN AgroVoc c_26627
Polyscytalum NALT 46671
  UN AgroVoc c_23964
Pseudocercospora NALT 46672
  UN AgroVoc c_31600
Pseudocercosporella NALT 46673
  UN AgroVoc c_16023
Pyricularia NALT 46674
  UN AgroVoc c_16024
Ramularia NALT 46676
  UN AgroVoc c_6444
Ramulispora NALT 46677
  UN AgroVoc c_31602
Rhodotorula  NALT 46678
  UN AgroVoc c_26662
  Library of Congress sh85113782
Rhynchosporium  NALT 46679
  UN AgroVoc c_16030
Sarocladium  NALT 46680
  UN AgroVoc c_31605
Scopulariopsis  NALT 46682
  UN AgroVoc c_24703
Scytalidium  NALT 46683
  UN AgroVoc c_31607
Spilocaea  NALT 46684
  UN AgroVoc c_31611
Sporidesmins  NALT 46685
  UN AgroVoc c_36171
Sporobolomyces  NALT 46686
  UN AgroVoc c_31842
Sporothrix  NALT 46687
  UN AgroVoc c_31612
Sporotrichum  NALT 46688
  UN AgroVoc c_27613
Stachybotrys  NALT 46689
  UN AgroVoc c_7357
Stachylidium  NALT 46690
  UN AgroVoc c_31613
Stemphyllum  NALT 46691
  UN AgroVoc c_23977
Thielaviopsis  NALT 46693
  UN AgroVoc c_7727
  Library of Congress sh85134852
Tolypocladium  NALT 46694
  UN AgroVoc c_31617
Torula  NALT 46695
  UN AgroVoc c_31618
  Library of Congress sh88022096
Trichoderma  NALT 46697
    UN AgroVoc c_15814
Trichosporon  NALT 46698
    UN AgroVoc c_31620
    A genus of yeasts in the family Trichosporonaceae and phylum Basidiomycota. Source: NCI thesaurus link
Trichothecium  NALT 46699
    UN AgroVoc c_7907
Tritirachium  NALT 46700
    UN AgroVoc c_31621
Ustilaginoidea  NALT 46702
    UN AgroVoc c_31622
Verticillium  NALT 46703
    UN AgroVoc c_8198
Nectria  NALT 46716
    UN AgroVoc c_5101
Neocosmospora  NALT 46717
    UN AgroVoc c_31802
Sphaerostilbe  NALT 46718
    UN AgroVoc c_31803
Hypoderma  NALT 46719
    UN AgroVoc c_11684
Yponomeuta  NALT 46740
    UN AgroVoc c_8492
Hypophthalmichthys molitrix  NALT 46745
    UN AgroVoc c_35400
Hyposoter  NALT 46749
    UN AgroVoc c_29915
Hyposoter exiguae  NALT 46750
    UN AgroVoc c_29916
Hypotension  NALT 46757
    UN AgroVoc c_11690
    Abnormally low blood pressure that can result in inadequate blood flow to the brain and other vital organs. (source: NALT)
    Blood pressure that is abnormally low. Source: NCI thesaurus link
Hypothemenus  NALT 46762
    UN AgroVoc c_26532
**Hypothyroidism** NALT 46765
UN AgroVoc c_35157
Library of Congress sh85063828
Abnormally low levels of thyroid hormone. Source: NCI thesaurus link

**virulence** NALT 46767
UN AgroVoc c_8261
The degree of pathogenicity within a group or species of microorganisms or viruses as indicated by case fatality rates and/or the ability of the organism to invade the tissues of the host. The pathogenic capacity of an organism is determined by its virulence factors. (source: NALT)

**Hypoxanthine** NALT 46770
UN AgroVoc c_36360
A purine-based organic compound in human muscle tissues, Hypoxanthine is formed during purine catabolism as a product of xanthine oxidase action on xanthine, and occasionally is found as a constituent of nucleic acids. The potent anti-inflammatory and cytoprotective effects of purines may be mediated by cell surface adenosine receptors. Hypoxanthine protects against oxidant-induced cell injury by inhibiting activation of nuclear poly(ADP-ribose) polymerase (PARP). (NCI04) Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Hypoxis** NALT 46774
UN AgroVoc c_27219

**Hypoxylon** NALT 46775
UN AgroVoc c_24650

**Hypoxylon mammatum** NALT 46776
UN AgroVoc c_24763

**Hypsipyla** NALT 46778
UN AgroVoc c_25449

**Hypsipyla grandella** NALT 46779
UN AgroVoc c_30323

**Hyptis** NALT 46780
UN AgroVoc c_3774

**Hysterectomy** NALT 46790
UN AgroVoc c_3777
A surgical procedure to remove the uterine body (partial hysterectomy) or the uterine body and cervix (total hysterectomy). Source: NCI thesaurus link
**Ictaluridae**  NALT 46850

UN AgroVoc c_40795

Library of Congress sh85064099

**Ictalurus**  NALT 46851

UN AgroVoc c_3789

Dbpedia Ictalurus

**Immunoglobulins**  NALT 46873

UN AgroVoc c_3805

**Iguanas**  NALT 46888

UN AgroVoc c_22414

**Ileum**  NALT 46899

UN AgroVoc c_11704

The final section of the small intestine. Source: NCI thesaurus link

**Ilex crenata**  NALT 46902

UN AgroVoc c_35552

**Ilex paraguariensis**  NALT 46907

UN AgroVoc c_3795

**Illex**  NALT 46922

UN AgroVoc c_33732

**Illex argentinus**  NALT 46923

UN AgroVoc c_33733

**Illex illecebrosus**  NALT 46924

UN AgroVoc c_48721

**Illicium**  NALT 46927

UN AgroVoc c_28245

**Illicium verum**  NALT 46929

UN AgroVoc c_34400

**Illitic soils**  NALT 46933

UN AgroVoc c_3797

**Imazapyr**  NALT 46943

UN AgroVoc c_34855

**Imidacloprid**  NALT 46948

UN AgroVoc c_37736

**Pilocarpine**  NALT 46949

UN AgroVoc c_13367
The hydrochloride salt of a natural alkaloid extracted from plants of the genus Pilocarpus with cholinergic agonist activity. As a cholinergic parasympathomimetic agent, pilocarpine predominantly binds to muscarinic receptors, thereby inducing exocrine gland secretion and stimulating smooth muscle in the bronchi, urinary tract, biliary tract, and intestinal tract. When applied topically to the eye, this agent stimulates the sphincter pupillae to contract, resulting in miosis; stimulates the ciliary muscle to contract, resulting in spasm of accommodation; and may cause a transitory rise in intraocular pressure followed by a more persistent fall due to opening of the trabecular meshwork and an increase in the outflow of aqueous humor. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

**Radioimmunoassay**  NALT 46982

UN AgroVoc e_6429

Radioimmunoassay (RIA) is an immunological technique, which quantitatively determines antigen and antibody concentrations, using a radioactively labeled substance (radioligand), either directly or indirectly. Source: NCI thesaurus link

**Immunoblotting**  NALT 46983

UN AgroVoc e_32817

**Immunchemistry**  NALT 46984

UN AgroVoc e_29612

The field of chemistry concerned with chemical processes in immunology (such as chemical studies of antigens and antibodies). Source: NCI thesaurus link

**Immunocytes**  NALT 46988

UN AgroVoc e_29615

**Immunodiffusion tests**  NALT 46993

UN AgroVoc e_29616

**Interferons**  NALT 46998

UN AgroVoc e_3914

Proteins secreted by vertebrate cells in response to a wide variety of inducers. They confer resistance against many different viruses, inhibit proliferation of normal and malignant cells, impede multiplication of intracellular parasites, enhance macrophage and granulocyte phagocytosis, augment natural killer cell activity, and show several other immunomodulatory functions. (source: NALT)

**Neutralization tests**  NALT 47005

UN AgroVoc e_5152

**Immunostimulants**  NALT 47012

UN AgroVoc e_27557

**Impatiens walleriana**  NALT 47020

UN AgroVoc e_37129
Imperata NALT 47026
UN AgroVoc e_11715

In vitro regeneration NALT 47060
UN AgroVoc e_34114

Inactivated vaccines NALT 47070
UN AgroVoc e_24553

Vaccines in which the infectious microbial nucleic acid components have been destroyed by chemical or physical treatment (e.g., formalin, beta-propiolactone, gamma radiation) without affecting the antigenicity or immunogenicity of the viral coat or bacterial outer membrane proteins. (source: NALT)

Recilia dorsalis NALT 47077
UN AgroVoc e_30734

Inbred lines NALT 47079
UN AgroVoc e_24039

Inbreeding depression NALT 47080
UN AgroVoc e_34858

Incurvariidae NALT 47095
UN AgroVoc e_30222

Ziziphus mauritiana NALT 47124
UN AgroVoc e_331539

Plodia interpunctella NALT 47126
UN AgroVoc e_30328

Indium NALT 47156
UN AgroVoc e_32485

An element with atomic symbol In, atomic number 49, and atomic weight 114.8; a very soft, silvery-white metal with a brilliant lustre. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Strychnine NALT 47165
UN AgroVoc e_7470

Yohimbine NALT 47166
UN AgroVoc e_34153

Skatole NALT 47171
UN AgroVoc e_34107
**Industrial wastes** NALT 47215
UN AgroVoc c_11763

**Infarction** NALT 47227
UN AgroVoc c_11765
Formation of an infarct, which is necrosis in tissue due to local ischemia resulting from obstruction of blood circulation, most commonly by a thrombus or embolus. (source: NALT)
A localized pathological necrosis of tissue resulting from obstruction of the blood supply usually by a thrombus, an embolus, or vascular torsion. Source: NCI thesaurus link

**Influenzavirus** NALT 47245
UN AgroVoc c_3859
Use for the genus Influenzavirus A; do not confuse with species Influenza A virus. (source: NALT)
Any of the viruses capable of causing the respiratory tract infection commonly called the flu. Source: NCI thesaurus link

**Mineral metabolism** NALT 47279
UN AgroVoc c_4850

**Nitrification inhibitors** NALT 47283
UN AgroVoc c_5189

**Soil injection** NALT 47289
UN AgroVoc c_7175

**Nitric acid** NALT 47317
UN AgroVoc c_5188

**Ozone** NALT 47324
UN AgroVoc c_5485

**Molybdates** NALT 47339
UN AgroVoc c_33123

**Permanganates** NALT 47341
UN AgroVoc c_24883

**Swarming** NALT 47360
UN AgroVoc c_7546

**swarms** NALT 47376
UN AgroVoc c_14719

**Sex pheromones** NALT 47393
UN AgroVoc c_34336

**Metamorphosis** NALT 47395
UN AgroVoc c_4775

**Mass rearing** NALT 47402
UN AgroVoc c_16137
Iridovirus  NALT 47418
UN AgroVoc e_35627
A genus of Iridoviridae comprising small iridescent insect viruses. The infected larvae and purified virus pellets exhibit a blue to purple iridescence. (source: NALT)

Insecticidal properties  NALT 47422
UN AgroVoc e_36815

Vamidothion  NALT 47433
UN AgroVoc e_31530

Talpidae  NALT 47434
UN AgroVoc e_14779

Predatory insects  NALT 47438
UN AgroVoc e_36311

Orius insidiosus  NALT 47445
UN AgroVoc e_30641

Solar radiation  NALT 47447
UN AgroVoc e_14415

integrated land management  NALT 47464
UN AgroVoc e_36562

Pest monitoring  NALT 47465
UN AgroVoc e_37663

sweating  NALT 47476
UN AgroVoc e_14721
A watery secretion by the sweat glands that is primarily composed of salt, urea and minerals. Source: NCI thesaurus link

Plasmodesmata  NALT 47483
UN AgroVoc e_13450
Cytoplasmic bridges between neighboring cells in plant tissues. (source: NALT)

Quercus wislizenii  NALT 47493
UN AgroVoc e_33855

Soil water movement  NALT 47524
UN AgroVoc e_7209

Internodes  NALT 47540
UN AgroVoc e_3920

Nutrient uptake  NALT 47552
UN AgroVoc e_5273

introns  NALT 47584
UN AgroVoc e_50132
**Organoiodine compounds**  NALT 47602
  UN AgroVoc e_5398

**Ipomoea batatas**  NALT 47629
  UN AgroVoc e_3937

**Ipomoea carnea**  NALT 47630
  UN AgroVoc e_33734

**Ipomoea lacunosa**  NALT 47633
  UN AgroVoc e_33736

**Ipomoea pes caprae**  NALT 47636
  UN AgroVoc e_34620

**Sweet potatoes**  NALT 47647
  UN AgroVoc e_14729

**Ipomopsis**  NALT 47660
  UN AgroVoc e_37130

**Ips**  NALT 47664
  UN AgroVoc e_3939

**Ips acuminatus**  NALT 47665
  UN AgroVoc e_30145

**Ips avulsus**  NALT 47666
  UN AgroVoc e_30146

**Ips calligraphus**  NALT 47667
  UN AgroVoc e_30147

**Ips pini**  NALT 47669
  UN AgroVoc e_30151

**Ips sexdentatus**  NALT 47670
  UN AgroVoc e_30152

**Ips typographus**  NALT 47671
  UN AgroVoc e_30153

**Pityogenes chalcographus**  NALT 47675
  UN AgroVoc e_31171

**Orthotomicus erosus**  NALT 47679
  UN AgroVoc e_34468

**Ixia**  NALT 47695
  UN AgroVoc e_34622

**Tigridia**  NALT 47702
  UN AgroVoc e_7767
Iridoids  NALT 47707  
UN AgroVoc e_36400

Seoiridoids  NALT 47710  
UN AgroVoc e_36401

Soil conditioners  NALT 47753  
UN AgroVoc e_7164

Irrigation water  NALT 47762  
UN AgroVoc e_3958

Irrigation rates  NALT 47771  
UN AgroVoc e_25319

Irrigation scheduling  NALT 47773  
UN AgroVoc e_3956

Water requirements  NALT 47776  
UN AgroVoc e_8323

Mist irrigation  NALT 47779  
UN AgroVoc e_4865

Overhead irrigation  NALT 47780  
UN AgroVoc e_35247

Runoff irrigation  NALT 47781  
UN AgroVoc e_6698

Subsurface irrigation  NALT 47782  
UN AgroVoc e_7487

Surface irrigation  NALT 47783  
UN AgroVoc e_7530

Wastewater irrigation  NALT 47784  
UN AgroVoc e_25323

Irvingia  NALT 47787  
UN AgroVoc e_331360

Iryanthera  NALT 47789  
UN AgroVoc e_33737

Myristicaceae  NALT 47790  
UN AgroVoc e_5046

Phaeoisariopsis griseola  NALT 47796  
UN AgroVoc e_34709

Ischaemum  NALT 47802  
UN AgroVoc e_3959
Ischnopsyllidae  NALT 47813
  UN AgroVoc c_30399

Iseilema  NALT 47818
  UN AgroVoc c_3961

Islands  NALT 47822
  UN AgroVoc c_3962

Isoelectric point  NALT 47859
  UN AgroVoc c_28503
  The pH in solutions of proteins and related compounds at which the dipolar ions are at a maximum. (source: NALT)
  The pH at which a molecule in solution has no net charge and does not migrate in an electric field.
  Source: NCI thesaurus link

Isophenphos  NALT 47866
  UN AgroVoc c_31398

Pisatin  NALT 47869
  UN AgroVoc c_37324

Isoprenoids  NALT 47889
  UN AgroVoc c_36399

Isoproturon  NALT 47891
  UN AgroVoc c_31399

Isospora suis  NALT 47899
  UN AgroVoc c_31215

Istiophoridae  NALT 47918
  UN AgroVoc c_44815

Makaira  NALT 47920
  UN AgroVoc c_4526

Isurus  NALT 47921
  UN AgroVoc c_4025

Pinus pinea  NALT 47930
  UN AgroVoc c_5905

Rottboellia cochinchinensis  NALT 47942
  UN AgroVoc c_35176

Sarcoptes scabiei  NALT 47944
  UN AgroVoc c_30924

Ixodes holocyclus  NALT 47958
  UN AgroVoc c_30961
Ixodes ricinus  NALT 47961
UN AgroVoc e_30962

Rhipicephalus  NALT 47968
UN AgroVoc e_6560

Ixora  NALT 47971
UN AgroVoc e_4030

Pinus banksiana  NALT 47983
UN AgroVoc e_5891

Jaggery  NALT 47998
UN AgroVoc e_24474

Jams  NALT 48005
UN AgroVoc e_4037

Seriola quinqueradiata  NALT 48017
UN AgroVoc e_42772

Popillia japonica  NALT 48020
UN AgroVoc e_36067

Pinus thunbergii  NALT 48023
UN AgroVoc e_5914

Lonicera japonica  NALT 48035
UN AgroVoc e_33372

Prunus salicina  NALT 48047
UN AgroVoc e_24363

Pinus densiflora  NALT 48052
UN AgroVoc e_5896

Lateolabrax japonicus  NALT 48054
UN AgroVoc e_42552

Nicotiana alata  NALT 48077
UN AgroVoc e_35558

Jasminum  NALT 48078
UN AgroVoc e_15506

Jasmonic acid  NALT 48084
UN AgroVoc e_36637

Jasus  NALT 48085
UN AgroVoc e_4042

Jasus edwardsii  NALT 48086
UN AgroVoc e_46779
**Pinus jeffreyi** NALT 48096  
UN AgroVoc c_32327

**Jejunum** NALT 48097  
UN AgroVoc c_11900  
The portion of the small intestine that extends from the duodenum to the ileum. Source: NCI thesaurus link

**Paratuberculosis** NALT 48119  
UN AgroVoc c_16452

**Sorghum halepense** NALT 48123  
UN AgroVoc c_7248

**Synovitis** NALT 48127  
UN AgroVoc c_14752  
Inflammation of a synovial membrane. Source: NCI thesaurus link

**Jojoba** NALT 48133  
UN AgroVoc c_11913

**Juglans** NALT 48148  
UN AgroVoc c_4057

**Walnuts** NALT 48152  
UN AgroVoc c_15254

**Pumping** NALT 48166  
UN AgroVoc c_28514

**Juncaceae** NALT 48170  
UN AgroVoc c_26308  
Dbpedia Juncaceae

**Juncus** NALT 48172  
UN AgroVoc c_35553

**Juniperus virginiana** NALT 48199  
UN AgroVoc c_4064

**Ludwigia** NALT 48214  
UN AgroVoc c_34627

**Juvenile wood** NALT 48217  
UN AgroVoc c_4066  
Inner core of xylem surrounding the pith. The cells are smaller and less structurally developed than those of the outer xylem. The time during which juvenile wood is formed is termed the juvenile phase. (source: NALT)

**Methoprene** NALT 48223  
UN AgroVoc c_31422
Precocenes  NALT 48224  
UN AgroVoc e_35272

Kaempferia  NALT 48234  
UN AgroVoc e_4068

Kairomones  NALT 48238  
UN AgroVoc e_32487

Melaleuca leucadendron  NALT 48240  
UN AgroVoc e_4708
Use for Melaleuca leucadendra L. or for no author designation ; For Melaleuca leucadendra auct. USE Melaleuca cajuputi. (source: NALT)

Kalanchoe blossfeldiana  NALT 48243  
UN AgroVoc e_33367

Kalotermes  NALT 48263  
UN AgroVoc e_4072

Piper methysticum  NALT 48296  
UN AgroVoc e_5918

Keiferia lycopersicella  NALT 48303  
UN AgroVoc e_30200

Poa pratensis  NALT 48313  
UN AgroVoc e_6038

Trifolium semipilosum  NALT 48315  
UN AgroVoc e_7921

Kermes  NALT 48320  
UN AgroVoc e_30820

Kerria lacca  NALT 48326  
UN AgroVoc e_4089

Levulinic acid  NALT 48333  
UN AgroVoc e_4302

Pyruvic acid  NALT 48335  
UN AgroVoc e_6393

Ketosis  NALT 48343  
UN AgroVoc e_4094
A metabolic disease characterized by an elevated concentration of ketone bodies in body tissues and fluids. (source: NALT)

Trogoderma granarium  NALT 48350  
UN AgroVoc e_30104
Khaya  NALT 48352
    UN AgroVoc c_4097

Khuskia  NALT 48358
    UN AgroVoc c_31839

Nephrosis  NALT 48376
    UN AgroVoc c_35226
    Pathological processes of the kidney without inflammatory or neoplastic components. Nephrosis may be a primary disorder or secondary complication of other diseases. (source: NALT)

Pennisetum clandestinum  NALT 48399
    UN AgroVoc c_5675

Protein kinase  NALT 48407
    UN AgroVoc c_29531
    A class of phosphotransferase proteins that posttranslationally modify protein substrates through the addition of phosphate groups. Source: NCI thesaurus link

Kinematics  NALT 48408
    UN AgroVoc c_35219
    A branch of mechanics that deals with motion (of an object) without concern for mass or the forces that cause the motion. (source: NALT)

Salvia officinalis  NALT 48490
    UN AgroVoc c_33867

Kluyveromyces fragilis  NALT 48514
    UN AgroVoc c_23936

Kluyveromyces marxianus  NALT 48515
    UN AgroVoc c_23937
    A dimorphic, homothallic and hemiascomycetous yeast in the phylum Ascomycota. This species is respiro-fermentative, Crabtree negative, thermotolerant, and assimilate lactose and insulin. This species also has a characteristically high growth rate and secretory capacity. K. marxianus is a biocatalyst and used industrially to produce beta-galactosidase, beta-glucosidase, inulinase, and polygalacturonases. It is also used as baker’s yeast and an anticholesterolemic agent. Source: NCI thesaurus link

Red hot pokers  NALT 48524
    UN AgroVoc c_13792
    Dbpedia Red hot pokers

Mice  NALT 48531
    UN AgroVoc c_4795
    Library of Congress sh85084671

Paspalum distichum  NALT 48535
    UN AgroVoc c_32199
**Paspalum scrobiculatum** NALT 48553
  UN AgroVoc c_5613

**Koeleria** NALT 48554
  UN AgroVoc c_12005

**Pinus koraiensis** NALT 48568
  UN AgroVoc c_16280

**Zoysia japonica** NALT 48570
  UN AgroVoc c_24720

**Kraft paper** NALT 48575
  UN AgroVoc c_12010

**Krill** NALT 48589
  UN AgroVoc c_4118

**Kwashiorkor** NALT 48620
  UN AgroVoc c_34303

A syndrome produced by severe protein deficiency, usually in children, characterized by retarded growth, changes in skin and hair pigment, edema, and pathologic changes in the liver. (source: NALT)

**Protein deficiencies** NALT 48624
  UN AgroVoc c_6252

**Pennisetum pedicellatum** NALT 48628
  UN AgroVoc c_5676

**Labeo rohita** NALT 48651
  UN AgroVoc c_34683

**Labidura** NALT 48654
  UN AgroVoc c_30627

**Labidura riparia** NALT 48655
  UN AgroVoc c_30628

**Labridae** NALT 48684
  UN AgroVoc c_43842

**Pinus bungeana** NALT 48705
  UN AgroVoc c_26622

**Lacertidae** NALT 48707
  UN AgroVoc c_32564
  Dbpedia Lacertidae

**Varanidae** NALT 48709
  UN AgroVoc c_32565
  Dbpedia Varanidae
Lizards  NALT 48710
  UN AgroVoc e_4404
Phyllophaga anxia  NALT 48725
  UN AgroVoc e_30133
Malacosoma neustria  NALT 48729
  UN AgroVoc e_30227
Lactalbumin  NALT 48732
  UN AgroVoc e_12036
Lactic acid  NALT 48736
  UN AgroVoc e_4142
Lactation duration  NALT 48738
  UN AgroVoc e_26854
Lactation number  NALT 48743
  UN AgroVoc e_26869
Lactobacillus  NALT 48746
  UN AgroVoc e_4144
  A genus of Gram-positive facultative anaerobic or microaerophilic bacteria in the phylum Firmi-
  cutes. Source: NCI thesaurus link
Lactococcus  NALT 48747
  UN AgroVoc e_33369
  A genus of Gram positive, cocci shaped, lactic acid bacterium assigned to the phylum Firmicutes
  and the family Streptococcaceae. Source: NCI thesaurus link
Leuconostoc  NALT 48748
  UN AgroVoc e_12154
  A genus of gram-positive, nonmotile cocci in the phylum Firmicutes. Source: NCI thesaurus link
Pediococcus  NALT 48749
  UN AgroVoc e_5654
  A genus of Gram positive, cocci shaped, lactic acid bacterium assigned to the phylum Firmicutes
  and the family Lactobacillaceae. Source: NCI thesaurus link
Oenococcus  NALT 48754
  UN AgroVoc e_36291
Lactobacillus acidophilus  NALT 48762
  UN AgroVoc e_23938
  A species of facultatively anaerobic, Gram positive, rod shaped bacteria in the phylum Firmicutes.
  This species is nonmotile, homofermentative, indole negative, produces vitamin K, lactase and amy-
  lase and does not ferment mannitol. L. acidophilus is a commensal organism of the gastrointestinal
  tract, mouth and vagina with probiotic activity. Source: NCI thesaurus link

1.7. Glossary
**Lactobacillus fermentum** NALT 48781  
UN AgroVoc e_33751  
A species of facultatively anaerobic, Gram positive, rod shaped bacteria in the phylum Firmicutes. This species is nonmotile, ferments L arabinose, esculin and sucrose, catalase negative and alpha galactosidase positive. L. fermentum is a commensal organism of the urogenital tract with probiotic activity. Source: NCI thesaurus link

**Lactobacillus helveticus** NALT 48790  
UN AgroVoc e_33752

**Lactobacillus plantarum** NALT 48820  
UN AgroVoc e_33753

**Lactobacillus sake** NALT 48826  
UN AgroVoc e_37071

**Lactoferrin** NALT 48941  
UN AgroVoc e_12040

**Prolactin** NALT 48945  
UN AgroVoc e_6221

**Lactoglobulins** NALT 48946  
UN AgroVoc e_12043

**limonin** NALT 48947  
UN AgroVoc e_28447

**Zearalenone** NALT 48951  
UN AgroVoc e_16069

**Zeranol** NALT 48952  
UN AgroVoc e_15481

**Lactoperoxidase** NALT 48953  
UN AgroVoc e_37891

**Lactuca indica** NALT 48959  
UN AgroVoc e_4148

**Lactuca serriola** NALT 48961  
UN AgroVoc e_26542

**Lakes** NALT 48975  
UN AgroVoc e_4160

**Tropilaelaps** NALT 48976  
UN AgroVoc e_30896

**Lagenidiales** NALT 48983  
UN AgroVoc e_35505
Oomycetes NALT 48984
  UN AgroVoc c_35506
  Formerly classed in the Mastigomycotina with the Hyphochytridiomycota and Chytridiomycetes in the Kingdom Fungi, the Oomycetes are eukaryotes whose classification is under review. (source: NALT)

Lagenidium NALT 48985
  UN AgroVoc c_35504

Lagerstroemia NALT 48989
  UN AgroVoc c_15507
  Library of Congress sh85073944

Lagopus NALT 48999
  UN AgroVoc c_36977

Salvelinus namaycush NALT 49013
  UN AgroVoc c_33862

Vicunas NALT 49017
  UN AgroVoc c_8225

Lamb meat NALT 49019
  UN AgroVoc c_4162

Lambs NALT 49024
  UN AgroVoc c_4163

Lambda-cyhalothrin NALT 49027
  UN AgroVoc c_35077

Lamium NALT 49033
  UN AgroVoc c_37132

Lavandula NALT 49034
  UN AgroVoc c_4228

Melissa NALT 49041
  UN AgroVoc c_25463

Mentha NALT 49042
  UN AgroVoc c_4741

Nepeta NALT 49046
  UN AgroVoc c_37142

Ocimum NALT 49047
  UN AgroVoc c_5304

Origanum NALT 49048
  UN AgroVoc c_5408
Perilla  NALT 49051
  UN AgroVoc c_16273
Pogostemon  NALT 49054
  UN AgroVoc c_6049
  Dbpedia Pogostemon
Rosmarinus  NALT 49058
  UN AgroVoc c_6659
  Dbpedia Rosmarinus
Salvia  NALT 49059
  UN AgroVoc c_6767
Satureja  NALT 49060
  UN AgroVoc c_6820
Scutellaria  NALT 49062
  UN AgroVoc c_37149
  Dbpedia Scutellaria
Sideritis  NALT 49063
  UN AgroVoc c_24705
Solenostemon  NALT 49064
  UN AgroVoc c_7226
Teucrium  NALT 49065
  UN AgroVoc c_26724
Laminaria  NALT 49075
  UN AgroVoc c_4164
Undaria  NALT 49077
  UN AgroVoc c_16297
Odontaspididae  NALT 49091
  UN AgroVoc c_38043
Scyliorhinidae  NALT 49092
  UN AgroVoc c_38112
Lampetra  NALT 49093
  UN AgroVoc c_4167
Petromyzontidae  NALT 49094
  UN AgroVoc c_38002
Salvia reflexa  NALT 49116
  UN AgroVoc c_33868
**Land classification**  NALT 49123
  UN AgroVoc c_15991

**Land evaluation**  NALT 49128
  UN AgroVoc c_36776

**Land productivity**  NALT 49132
  UN AgroVoc c_4176

**Land suitability**  NALT 49133
  UN AgroVoc c_15992

**Watershed management**  NALT 49134
  UN AgroVoc c_25301

**Rural areas**  NALT 49143
  UN AgroVoc c_6699

**Suburban areas**  NALT 49144
  UN AgroVoc c_7488

**Land use planning**  NALT 49161
  UN AgroVoc c_37899

**Zoning**  NALT 49162
  UN AgroVoc c_36936

**National parks**  NALT 49163
  UN AgroVoc c_5079

  An area of land and/or sea usually owned and administered by a national government and is protected from human exploitation and development. The area is intended to provide environmentally and culturally sensitive scientific, educational and recreational opportunities. (source: NALT)

**Landfills**  NALT 49165
  UN AgroVoc c_35171

**Foothills**  NALT 49168
  UN AgroVoc c_10978

  Land area at or near the base of a mountain or mountain range. (source: NALT)

**Reefs**  NALT 49170
  UN AgroVoc c_92343

  Long ridges of rock or sand at or near the water’s surface. (source: NALT)

**Steppes**  NALT 49171
  UN AgroVoc c_7395

**terraces**  NALT 49172
  UN AgroVoc c_28166

  Natural or manmade landforms which run perpendicular to the slope and are bordered on one side by a steep ascending slope and on the other side by a steep descending slope. (source: NALT)
Volcanoes  NALT 49173  
UN AgroVoc e_15240

Landslides  NALT 49184  
UN AgroVoc e_4187  
Library of Congress sh85074477

Lantana  NALT 49197  
UN AgroVoc e_12075

Lantana camara  NALT 49198  
UN AgroVoc e_34741

Laparotomy  NALT 49216  
UN AgroVoc e_4191

  technique of surgical incision of abdominal wall at any point; usually exploratory (source: NALT)
  Creation of a surgical opening into the abdominal cavity. Source: NCI thesaurus link

Spodoptera  NALT 49218  
UN AgroVoc e_7317

Pristiphora erichsonii  NALT 49223  
UN AgroVoc e_29946

Rendering  NALT 49224  
UN AgroVoc e_28382

  The process of subjecting animal carcasses and parts, especially fatty tissues, to grinding, extraction,  
  heat or other treatments to melt out the fats and convert them into meat byproducts. (source: NALT)

Oncopeltus fasciatus  NALT 49231  
UN AgroVoc e_30667

Prostephanus truncatus  NALT 49238  
UN AgroVoc e_30002

Larix  NALT 49248  
UN AgroVoc e_4195

Larix eurolepis  NALT 49249  
UN AgroVoc e_4197

Larix laricina  NALT 49250  
UN AgroVoc e_4199

Larix occidentalis  NALT 49251  
UN AgroVoc e_4201

Larix sibirica  NALT 49252  
UN AgroVoc e_4202
Larrea  NALT 49271
    UN AgroVoc c_35578
    Library of Congress sh85074725

Syrinx  NALT 49283
    UN AgroVoc c_14757
    The vocal organ of a bird that is located in the lower portion of the larynx. Source: NCI thesaurus link

Malacosoma  NALT 49284
    UN AgroVoc c_4529

Lateolabrax  NALT 49293
    UN AgroVoc c_4213

Lates calcarifer  NALT 49294
    UN AgroVoc c_24349

Lates niloticus  NALT 49295
    UN AgroVoc c_32324

Latheticus  NALT 49297
    UN AgroVoc c_23940

Lathraea  NALT 49298
    UN AgroVoc c_4215

Lathyrus ochrus  NALT 49305
    UN AgroVoc c_4217

Lathyrus tingitanus  NALT 49308
    UN AgroVoc c_4220

Latoia  NALT 49320
    UN AgroVoc c_33755

Limacodidae  NALT 49321
    UN AgroVoc c_30228

Latrodectus  NALT 49322
    UN AgroVoc c_30889

Laurus  NALT 49328
    UN AgroVoc c_32900

Ocotea  NALT 49334
    UN AgroVoc c_5306

Persea  NALT 49335
    UN AgroVoc c_5722
Sassafras  NALT 49337
  UN AgroVoc e_14092
  Dbpedia Sassafras

Salix pentandra  NALT 49344
  UN AgroVoc e_24370

Thatch  NALT 49377
  UN AgroVoc e_7704
  A layer of dead grass in a stand of grass. (source: NALT)

Lawsonia (Lythraceae)  NALT 49386
  UN AgroVoc e_16256

Lawsonia inermis  NALT 49387
  UN AgroVoc e_16257

Layered soils  NALT 49395
  UN AgroVoc e_4232

Losses from soil  NALT 49405
  UN AgroVoc e_36778

Leaf area index  NALT 49411
  UN AgroVoc e_35196
  The total area of the upper surface of leaves per unit area of ground that is directly below the plant.
  (source: NALT)

Leaf conductance  NALT 49416
  UN AgroVoc e_37241

leaf primordia  NALT 49427
  UN AgroVoc e_37327

Leaf protein  NALT 49431
  UN AgroVoc e_24867

Leaf protein concentrate  NALT 49432
  UN AgroVoc e_26796

Leaf water potential  NALT 49435
  UN AgroVoc e_37242

Water potential  NALT 49436
  UN AgroVoc e_24418
  The physical property predicting the direction in which water will flow, which is dependent of solute concentration and applied pressure. (source: NALT)

Petioles  NALT 49460
  UN AgroVoc e_5744
Phyllosphere  NALT 49463
UN AgroVoc c_36822
The three-dimensional microenvironment surrounding a leaf. (source: NALT)

Poecilia reticulata  NALT 49466
UN AgroVoc c_41908

Ricin  NALT 49480
UN AgroVoc c_35973
A highly toxic protein phytotoxin lectin and hemagglutin from the seeds of Ricinus communis, the castor oil plant. It agglutinates cells, is proteolytic, and causes lethal inflammation and hemorrhage if taken internally. It has N-glycosidase activity that cleaves 28S rRNA, halting protein synthesis; extreme cytotoxicity makes ricin an attractive candidate for artificial fusion with binding proteins to create cell-type-specific toxins. Source: NCI thesaurus link

Lecythis  NALT 49482
UN AgroVoc c_4248

Leersia  NALT 49490
UN AgroVoc c_4250

Legionella  NALT 49502
UN AgroVoc c_26543
A genus of Gram-negative aerobic, motile, nonacid fast, nonencapsulated, gram-negative bacilli that have a nonfermentative metabolism in the phylum Proteobacteria. Source: NCI thesaurus link

Legionella pneumophila  NALT 49532
UN AgroVoc c_37072
A species of aerobic, gram negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile by flagella, nonacid fast, pleomorphic, nonencapsulated, nonfermentative, urease negative and oxidase and catalase positive. L. pneumophila is pathogenic, being the causative agent of legionellosis or Legionnaires disease. Source: NCI thesaurus link

Soy protein  NALT 49563
UN AgroVoc c_14474

Lentils  NALT 49567
UN AgroVoc c_12140

Legumin  NALT 49568
UN AgroVoc c_12130

Leguminivora  NALT 49569
UN AgroVoc c_32166

Leishmania  NALT 49578
UN AgroVoc c_24350

Leishmania donovani  NALT 49579
UN AgroVoc c_31174
Leishmania infantum  NALT 49581
    UN AgroVoc c_34684

Lemma  NALT 49601
    UN AgroVoc c_12131

Lemma gibba  NALT 49602
    UN AgroVoc c_37133

Spirodela  NALT 49609
    UN AgroVoc c_35585
    Dbpedia Spirodela

Wolffia  NALT 49610
    UN AgroVoc c_15384

lemurs  NALT 49615
    UN AgroVoc c_15653
    Library of Congress sh85075968

Lens culinaris  NALT 49620
    UN AgroVoc c_4261

Lentibulariaceae  NALT 49623
    UN AgroVoc c_26296
    Dbpedia Lentibulariaceae

Lentinula edodes  NALT 49626
    UN AgroVoc c_33757

Lentinus lepideus  NALT 49629
    UN AgroVoc c_33758

Visna maedi virus  NALT 49632
    UN AgroVoc c_16473

Lepeophtheirus salmonis  NALT 49642
    UN AgroVoc c_26545

Lepidium meyenii  NALT 49647
    UN AgroVoc c_4266

Micropterygidae  NALT 49665
    UN AgroVoc c_30241

Nepticulidae  NALT 49667
    UN AgroVoc c_30242

Papilionidae  NALT 49669
    UN AgroVoc c_30287
Leptin (167 aa, ~16 kDa) is encoded by the human LEP gene. This protein is secreted by adipocytes and plays a role in the regulation of both appetite and body fat stores. Source: NCI thesaurus link
**Leptospira** NALT 49786
UN AgroVoc c_4280
A genus of Gram-negative, aerobic, flexible, spiral-shaped, spirochete with internal flagella in the phylum Spirochaetes. Source: NCI thesaurus link

**Leptothrium** NALT 49815
UN AgroVoc c_4282

**Leptotrombidium** NALT 49824
UN AgroVoc c_30943

**Rhyzopertha dominica** NALT 49842
UN AgroVoc c_26664

**Lethrinidae** NALT 49856
UN AgroVoc c_43209

**Lethrinus** NALT 49857
UN AgroVoc c_23942

**Leucaena** NALT 49864
UN AgroVoc c_4290

**Leucaena leucocephala** NALT 49866
UN AgroVoc c_15843

**Mythimna** NALT 49871
UN AgroVoc c_5054

**Mythimna separata** NALT 49875
UN AgroVoc c_30262

**Leucojum** NALT 49892
UN AgroVoc c_26546

**Leucojum aestivum** NALT 49893
UN AgroVoc c_26547

**Leucoma** NALT 49894
UN AgroVoc c_4295

**Leuconostoc lactis** NALT 49908
UN AgroVoc c_34491
A species of facultatively anaerobic, gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is nonmotile, catalase and oxidase negative, produces acid from lactose and does not hydrolyze esculin. L. lactis is not a normal colonizer of humans and may be an opportunistic pathogenic. Source: NCI thesaurus link

**Leuconostoc mesenteroides** NALT 49909
UN AgroVoc c_34492
A species of facultatively anaerobic, gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is nonmotile, catalase and oxidase negative, produces acid from arabinose, raffinose
and trehalose and hydrolyzes esculin. L. mesenteroides is usually nonpathogenic and is used as a
starter culture for the fermentation of cabbage during sauerkraut production. Source: NCI thesaurus
link

**Oenococcus oeni**  NALT 49913

UN AgroVoc e_36373

**Perileucoptera coffeella**  NALT 49927

UN AgroVoc e_30239

**Leucospermum**  NALT 49929

UN AgroVoc e_26548

**Leucospermum cordifolium**  NALT 49931

UN AgroVoc e_26549

**Monocytes**  NALT 49956

UN AgroVoc e_4916

**Thiazoles**  NALT 49963

UN AgroVoc e_7725

**Lewisia**  NALT 49976

UN AgroVoc e_12158

**Leymus**  NALT 49979

UN AgroVoc e_35554

**Libido**  NALT 49998

UN AgroVoc e_4309

Sexual urge or desire. Source: NCI thesaurus link

**Life tables**  NALT 50017

UN AgroVoc e_33510

**Phototoxicity**  NALT 50029

UN AgroVoc e_34076

The adverse condition due to overexposure to light. (source: NALT)

A nonimmunologic, chemically induced type of photosensitivity. Source: NCI thesaurus link

**Light requirements**  NALT 50038

UN AgroVoc e_25196

**Lignans**  NALT 50046

UN AgroVoc e_36421

**Lignification**  NALT 50047

UN AgroVoc e_4328

**Polyphenols**  NALT 50049

UN AgroVoc e_15881
Ligninolytic microorganisms  NALT 50053
   UN AgroVoc e_37245
Syringa  NALT 50059
   UN AgroVoc e_7577
Ligustrum  NALT 50060
   UN AgroVoc e_4331
   Dbpedia Ligustrum
Lilium  NALT 50101
   UN AgroVoc e_4334
Nerine  NALT 50105
   UN AgroVoc e_5134
Pancratium  NALT 50108
   UN AgroVoc e_33784
Polygonatum  NALT 50110
   UN AgroVoc e_33399
Scilla  NALT 50115
   UN AgroVoc e_6856
Trillium  NALT 50118
   UN AgroVoc e_33913
Tulipa  NALT 50121
   UN AgroVoc e_8002
Veratrum  NALT 50126
   UN AgroVoc e_36433
Zephyranthes  NALT 50127
   UN AgroVoc e_16302
Stemonaceae  NALT 50129
   UN AgroVoc e_26307
Taccaceae  NALT 50130
   UN AgroVoc e_7586
Velloziaceae  NALT 50131
   UN AgroVoc e_26310
Pandanales  NALT 50136
   UN AgroVoc e_5530
   Dbpedia Pandanales
Civet beans  NALT 50158
   UN AgroVoc e_9882
Parasa  NALT 50161
    UN AgroVoc c_27280

Limanda  NALT 50162
    UN AgroVoc c_4335

Metacarpus  NALT 50163
    UN AgroVoc c_12514

Metatarsus  NALT 50164
    UN AgroVoc c_12517

Phalanges  NALT 50165
    UN AgroVoc c_13275
    The bones of the fingers or toes. (source: NALT)

Radius (bone)  NALT 50166
    UN AgroVoc c_13736

Tibia  NALT 50167
    UN AgroVoc c_14885
    A bone located between the femur and the tarsus, being part of the lower leg. Source: NCI thesaurus link

Ulna  NALT 50168
    UN AgroVoc c_15073
    One of the bones that comprise the forearm. The largest aspect articulates with the humerus at the elbow joint and the smallest portion of the ulna articulates with the carpal bones in the wrist. Source: NCI thesaurus link

Liming  NALT 50175
    UN AgroVoc c_25206

Limnanthes  NALT 50178
    UN AgroVoc c_27222

Limnanthes alba  NALT 50180
    UN AgroVoc c_27223

Limonium  NALT 50192
    UN AgroVoc c_26551

Limonium sinuatum  NALT 50195
    UN AgroVoc c_26552

Limonius californicus  NALT 50200
    UN AgroVoc c_30107

Limulidae  NALT 50205
    UN AgroVoc c_49352
Limulus  NALT 50206
    UN AgroVoc e_4346
Linaceae  NALT 50207
    UN AgroVoc e_4347
Linum  NALT 50208
    UN AgroVoc e_4354
Linognathus  NALT 50238
    UN AgroVoc e_12191
Solenopotes  NALT 50239
    UN AgroVoc e_14419
Linognathus vituli  NALT 50240
    UN AgroVoc e_30842
Linuron  NALT 50256
    UN AgroVoc e_31405
Lipeurus  NALT 50277
    UN AgroVoc e_12195
Lipolysis  NALT 50285
    UN AgroVoc e_4365
Lipopolysaccharides  NALT 50287
    UN AgroVoc e_24045
Ornithonyssus  NALT 50291
    UN AgroVoc e_12975
Ornithonyssus sylviarum  NALT 50293
    UN AgroVoc e_30900
Lippia  NALT 50307
    UN AgroVoc e_37446
Liquidambar styraciflua  NALT 50317
    UN AgroVoc e_4377
Liriodendron  NALT 50324
    UN AgroVoc e_4378
Magnoliaceae  NALT 50325
    UN AgroVoc e_4520
    Dbpedia Magnoliaceae
Liriodendron tulipifera  NALT 50326
    UN AgroVoc e_4379
Liriomyza bryoniae  NALT 50329
    UN AgroVoc c_30429
Liriomyza huidobrensis  NALT 50330
    UN AgroVoc c_30430
Liriomyza sativae  NALT 50331
    UN AgroVoc c_30431
Liriomyza trifolii  NALT 50332
    UN AgroVoc c_30432
Lissorhoptrus oryzophilus  NALT 50336
    UN AgroVoc c_30077
Litchi chinensis  NALT 50368
    UN AgroVoc c_4384
Paralithodes  NALT 50382
    UN AgroVoc c_5564
Loess soils  NALT 50384
    UN AgroVoc c_4418
Serpentine soils  NALT 50387
    UN AgroVoc c_6986
Volcanic soils  NALT 50389
    UN AgroVoc c_8287
Lithospermum erythrorhizon  NALT 50390
    UN AgroVoc c_24658
Litomosoides  NALT 50394
    UN AgroVoc c_31092
Litomosoides carinii  NALT 50395
    UN AgroVoc c_31093
Tilia cordata  NALT 50410
    UN AgroVoc c_35590
Plantaginaceae  NALT 50418
    UN AgroVoc c_5986
Littorina  NALT 50420
    UN AgroVoc c_4393
Littorina littorea  NALT 50421
    UN AgroVoc c_47292
Quercus virginiana  NALT 50428
    UN AgroVoc c_24699

1.7. Glossary
Artifactual vesicles formed from the endoplasmic reticulum when cells are disrupted. They are isolated by differential centrifugation and are composed of three structural features: rough vesicles, smooth vesicles, and ribosomes. (source: NALT)

Lixophaga NALT 50470
UN AgroVoc e_4401

Lixophaga diatraeae NALT 50471
UN AgroVoc e_30611

Loam soils NALT 50479
UN AgroVoc e_4408

Loasaceae NALT 50481
UN AgroVoc e_26260

Lobesia NALT 50487
UN AgroVoc e_4410

Lobesia botrana NALT 50488
UN AgroVoc e_30374

Pinus taeda NALT 50493
UN AgroVoc e_5913

Locomotion NALT 50499
UN AgroVoc e_4413

Use for the movement of an organism from place to place; for the manner or style of walking/running of humans and animals USE gait. (source: NALT)

Locusta migratoria NALT 50503
UN AgroVoc e_26554

Lodging NALT 50508
UN AgroVoc e_15592

The condition of a plant, especially a cereal, that has been flattened in the field or damaged so that it cannot stand upright by weather conditions or because the stem is not strong enough to support the plant. (source: NALT)

Logs NALT 50512
UN AgroVoc e_4420

individual pieces of roundwood. (source: NALT)

Strychnos NALT 50516
UN AgroVoc e_7471
Dbpedia Strychnos
Roundwood  NALT 50522
UN AgroVoc c_6672

Solid wood that is in the round state. This term is also used for the volume of logs required to produce a given quantity of lumber, panels, pulp, paper or other wood products. (source: NALT)

Sawlogs  NALT 50523
UN AgroVoc c_6829

A log large enough to be sawed economically into boards on a sawmill. Sawlogs are usually at least 8 inches in diameter at the small end. (source: NALT)

Veneer logs  NALT 50524
UN AgroVoc c_8183

Loligo  NALT 50528
UN AgroVoc c_4422

Lolium  NALT 50529
UN AgroVoc c_4423

Lolium perenne  NALT 50531
UN AgroVoc c_4425

Lolium rigidum  NALT 50532
UN AgroVoc c_36593

Oleic acid  NALT 50550
UN AgroVoc c_5341

Do not confuse octadecenoic acid (oleic acid) with octadecanoic acid (stearic acid). (source: NALT)

Palmitic acid  NALT 50551
UN AgroVoc c_5517

A saturated long-chain fatty acid with a 16-carbon backbone. Palmitic acid is found naturally in palm oil and palm kernel oil, as well as in butter, cheese, milk and meat. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Stearic acid  NALT 50553
UN AgroVoc c_7382

Do not confuse octadecanoic acid (stearic acid) with octadecenoic acid (oleic acid). (source: NALT)
A saturated long-chain fatty acid with an 18-carbon backbone. Stearic acid is found in various animal and plant fats, and is a major component of cocoa butter and shea butter. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Piper longum**  NALT 50560
  UN AgroVoc c_5917

**Longidoridae**  NALT 50574
  UN AgroVoc c_31060

**Longidorus**  NALT 50575
  UN AgroVoc c_31061

**Xiphinema**  NALT 50577
  UN AgroVoc c_8467

**Longidorus elongatus**  NALT 50578
  UN AgroVoc c_31062

**Oryza longistaminata**  NALT 50585
  UN AgroVoc c_24352

**Lophiidae**  NALT 50619
  UN AgroVoc c_46040

**Lophiiformes**  NALT 50620
  UN AgroVoc c_46039

**Lophius**  NALT 50621
  UN AgroVoc c_4432

**Lophira**  NALT 50622
  UN AgroVoc c_32906

**Ochnacea**  NALT 50623
  UN AgroVoc c_5301
  Dbpedia Ochnacea

**Lophodermium**  NALT 50627
  UN AgroVoc c_4433

**Pyrilla**  NALT 50631
  UN AgroVoc c_24683

**Lophotrichus**  NALT 50634
  UN AgroVoc c_31807

**Lotononis bainesii**  NALT 50645
  UN AgroVoc c_4441

**Procambarus clarkii**  NALT 50664
  UN AgroVoc c_46824
Lovoa  NALT 50668
    UN AgroVoc c_4448

Vaccinium angustifolium  NALT 50690
    UN AgroVoc c_8132

Loxosceles  NALT 50695
    UN AgroVoc c_30878

Lucilia cuprina  NALT 50703
    UN AgroVoc c_30454

Lucilia sericata  NALT 50705
    UN AgroVoc c_30455

Luffa acutangula  NALT 50710
    UN AgroVoc c_4458

Lumbricus  NALT 50726
    UN AgroVoc c_30867
    Dbpedia Lumbricus

Phosphorescence  NALT 50730
    UN AgroVoc c_13316

Muellerius capillaris  NALT 50744
    UN AgroVoc c_31114

Lupinus albus  NALT 50746
    UN AgroVoc c_4464

Lupinus angustifolius  NALT 50747
    UN AgroVoc c_4465

Lupinus mutabilis  NALT 50750
    UN AgroVoc c_4467

Lutein  NALT 50766
    UN AgroVoc c_35001
Lutein (LOO-teen) is a oxygenated carotenoid found in vegetables and fruits. Lutein is found in
    the macula of the eye, where it is believed to act as a yellow filter. Lutein acts as an antioxidant,
    protecting cells against the damaging effects of free radicals. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

Luteoviruses  NALT 50772
    UN AgroVoc c_32862
Lutjanidae  NALT 50779
    UN AgroVoc e_42875
Lutjanus  NALT 50780
    UN AgroVoc e_4469
Ocyurus  NALT 50781
    UN AgroVoc e_5309
Lutjanus campechanus  NALT 50782
    UN AgroVoc e_42895
Lutzomyia  NALT 50786
    UN AgroVoc e_30581
Phlebotominae  NALT 50789
    UN AgroVoc e_5784
Lutzomyia longipalpis  NALT 50791
    UN AgroVoc e_30582
Lycium  NALT 50812
    UN AgroVoc e_27224
Lycium chinense  NALT 50813
    UN AgroVoc e_27225
Lycoperdon  NALT 50822
    UN AgroVoc e_31806
Tomatoes  NALT 50832
    UN AgroVoc e_7805
Lycopodiales  NALT 50845
    UN AgroVoc e_12286
Lycoriella  NALT 50852
    UN AgroVoc e_30594
Lycoriella mali  NALT 50854
    UN AgroVoc e_30595
Lycosa  NALT 50859
    UN AgroVoc e_30881
Lycosa pseudoannulata  NALT 50860
    UN AgroVoc e_30882
Lycus  NALT 50865
    UN AgroVoc e_4477
Lycus brunneus  NALT 50867
    UN AgroVoc e_30114
Lydella NALT 50869
    UN AgroVoc c_33373
Lydella thompsoni NALT 50870
    UN AgroVoc c_33374
Lygaeus NALT 50873
    UN AgroVoc c_30664
Oncopeltus NALT 50874
    UN AgroVoc c_30666
Lygocoris NALT 50877
    UN AgroVoc c_4478
Lygus NALT 50889
    UN AgroVoc c_4479
Lygus hesperus NALT 50891
    UN AgroVoc c_30674
Lygus lineolaris NALT 50892
    UN AgroVoc c_30675
Lymantria NALT 50900
    UN AgroVoc c_4480
Lymantria monacha NALT 50902
    UN AgroVoc c_30233
Lymnaea NALT 50911
    UN AgroVoc c_31166
Lymph nodes NALT 50915
    UN AgroVoc c_12287
Lymphangitis NALT 50917
    UN AgroVoc c_12289
    Inflammation of lymphatic vessels. (source: NALT)
Splenic diseases NALT 50920
    UN AgroVoc c_14518
Thoracic duct NALT 50922
    UN AgroVoc c_14867
Lymphosarcoma NALT 50932
    UN AgroVoc c_12292
    An antiquated term referring to non-Hodgkin lymphomas composed of small and medium sized
    lymphocytes. Source: NCI thesaurus link
Lyometia  NALT 50943  
UN AgroVoc c_16259

**Perileucoptera**  NALT 50945  
UN AgroVoc c_30238

**Lysiloma**  NALT 50946  
UN AgroVoc c_34629

**proviruses**  NALT 50954  
UN AgroVoc c_37442

Duplex DNA sequences in eukaryotic chromosomes, corresponding to the genome of a virus, that are transmitted from one cell generation to the next without causing lysis of the host. Proviruses are often associated with neoplastic cell transformation and are key features of retrovirus biology. (source: NALT)

**Rabies virus**  NALT 50959  
UN AgroVoc c_6417

A species of enveloped, rod- or bullet-shaped viruses in the Rhabdoviridae family and Lyssavirus genus. The genome is composed of single-stranded, negative-sense RNA. Rabies viruses are neurotropic and zoonotic. They are found in mammals and humans and causes acute infection of the central nervous system, neural degeneration, and fatal encephalitis in humans. Rabies viruses are transmitted via direct contact with saliva from infected animal or human bites. Source: NCI thesaurus link

**Punica**  NALT 50963  
UN AgroVoc c_32772

**Macadamia**  NALT 50983  
UN AgroVoc c_4490
Dbpedia Macadamia

**Macadamia ternifolia**  NALT 50985  
UN AgroVoc c_4491

**Macadamia tetraphylla**  NALT 50986  
UN AgroVoc c_4492

**Macadamia nuts**  NALT 50987  
UN AgroVoc c_12296

**Mace**  NALT 50994  
UN AgroVoc c_25484

**Myristica fragrans**  NALT 50995  
UN AgroVoc c_5044

**Mechanical weed control**  NALT 51009  
UN AgroVoc c_24200

**Maconellicoccus**  NALT 51027  
UN AgroVoc c_37775
Seaweed products  NALT 51034
    UN AgroVoc e_6915
Macrobrachium  NALT 51035
    UN AgroVoc e_16260
Macrobrachium rosenbergii  NALT 51036
    UN AgroVoc e_23943
Macrocheles  NALT 51038
    UN AgroVoc e_12313
Macrochelidae  NALT 51039
    UN AgroVoc e_30898
Tylosin  NALT 51058
    UN AgroVoc e_16056
    Macrolide antibiotic obtained from cultures of Streptomyces fradiae. The drug is effective against many microorganisms in animals but not in humans. (source: NALT)
Macrolophus  NALT 51059
    UN AgroVoc e_37776
Macronyssidae  NALT 51063
    UN AgroVoc e_30899
Macrophomina phaseolina  NALT 51068
    UN AgroVoc e_23945
    Library of Congress sh85079453
Piper  NALT 51074
    UN AgroVoc e_5915
Macropus  NALT 51076
    UN AgroVoc e_12317
Soil pore system  NALT 51081
    UN AgroVoc e_7184
Siratro  NALT 51083
    UN AgroVoc e_15760
Macropolium lathyroides  NALT 51084
    UN AgroVoc e_4502
Macrosiphum euphorbiae  NALT 51095
    UN AgroVoc e_30776
Macrosiphum rosae  NALT 51096
    UN AgroVoc e_30777
Macrotermes  NALT 51105
          UN AgroVoc c_4505
Macrozamia  NALT 51107
          UN AgroVoc c_35605
          Dbpedia Macrozamia
Spisula    NALT 51110
          UN AgroVoc c_7313
Madhuca    NALT 51114
          UN AgroVoc c_24351
Magicicada septendecim  NALT 51134
          UN AgroVoc c_30741
Magnaporthe  NALT 51135
          UN AgroVoc c_31827
Michelia    NALT 51192
          UN AgroVoc c_26573
Plumbaginales  NALT 51196
          UN AgroVoc c_26264
          Library of Congress sh88023008
Polygonales  NALT 51197
          UN AgroVoc c_6085
          Library of Congress sh85104635
Prunus mahaleb  NALT 51205
          UN AgroVoc c_24362
Sitophilus zeamais  NALT 51232
          UN AgroVoc c_26683
Origanum majorana  NALT 51238
          UN AgroVoc c_34636
Pterocarpus marsupium  NALT 51241
          UN AgroVoc c_6339
Myristica  NALT 51244
          UN AgroVoc c_5042
Mysidacea  NALT 51252
          UN AgroVoc c_30862
          Dbpedia Mysidacea
Malathion  NALT 51269
UN AgroVoc c_31406
A synthetic phosphorous compound and cholinesterase inhibitor that is strictly used as a topical pediculicide. Malathion exerts its action on the nervous system of the lice by irreversibly inhibiting the activity of cholinesterase, thereby allowing acetylcholine to accumulate at cholinergic synapses and enhancing cholinergic receptor stimulation. This eventually leads to the head lice’s death. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using CAS number link

Orchitis  NALT 51282
UN AgroVoc c_12964
Inflammation of one or both testes due to viral or bacterial infections. Signs and symptoms include enlargement or tenderness of the affected testis, inguinal lymphadenopathy, blood in the semen, and pain during urination, intercourse, or ejaculation. Source: NCI thesaurus link

Penis  NALT 51284
UN AgroVoc c_5673
The male organ of urination and copulation. Source: NCI thesaurus link

Scrotum  NALT 51285
UN AgroVoc c_6885
The musculocutaneous pouch that encloses the testicles. Source: NCI thesaurus link

Spermatic cord  NALT 51286
UN AgroVoc c_7284
A tube-like structure composed of the vas deferens and surrounding tissue layers, that runs from the abdomen to each of the testicles. Source: NCI thesaurus link

Maleic acid  NALT 51287
UN AgroVoc c_4539

Rams  NALT 51289
UN AgroVoc c_6443

stags  NALT 51290
UN AgroVoc c_24515

Maliarpha  NALT 51293
UN AgroVoc c_33763

Osmeridae  NALT 51301
UN AgroVoc c_39320

Malpighia  NALT 51307
UN AgroVoc c_4544
Dbpedia Malpighia
Malpighia glabra  NALT 51308
         UN AgroVoc c_4545
Malotriose  NALT 51314
         UN AgroVoc c_4551
Malus  NALT 51315
         UN AgroVoc c_4553
Malus baccata  NALT 51316
         UN AgroVoc c_4554
Malva  NALT 51326
         UN AgroVoc c_33378
Pavonia  NALT 51336
         UN AgroVoc c_5636
Sida  NALT 51337
         UN AgroVoc c_7054
Thespesia  NALT 51339
         UN AgroVoc c_7723
         Dbpedia Thespesia
Urena  NALT 51340
         UN AgroVoc c_32730
Wissadula  NALT 51341
         UN AgroVoc c_8415
moles  NALT 51352
         UN AgroVoc c_4893
Shrews  NALT 51353
         UN AgroVoc c_7048
Skunks  NALT 51354
         UN AgroVoc c_15606
Mammomonogamus  NALT 51359
         UN AgroVoc c_31129
Trichechus  NALT 51365
         UN AgroVoc c_14980
Manduca  NALT 51375
         UN AgroVoc c_4569
Manduca sexta  NALT 51376
         UN AgroVoc c_30350
Mange  NALT 51384
      UN AgroVoc e_4572
Psoroptic mange  NALT 51385
      UN AgroVoc e_13652
Mangifera indica  NALT 51389
      UN AgroVoc e_4575
Mangoes  NALT 51390
      UN AgroVoc e_12367
Rastrococcus invadens  NALT 51392
      UN AgroVoc e_34477
Swamps  NALT 51394
      UN AgroVoc e_7544
      Wetlands dominated by woody vegetation but without appreciable peat deposits. Swamps may be fresh or salt water and tidal or non-tidal. (source: NALT)
Rhizophora  NALT 51395
      UN AgroVoc e_6566
Manilkara  NALT 51398
      UN AgroVoc e_4581
      Dbpedia Manilkara
Mansonia (sterculiaceae)  NALT 51421
      UN AgroVoc e_33766
Maranta  NALT 51448
      UN AgroVoc e_4594
Mare milk  NALT 51463
      UN AgroVoc e_16087
Matsucoccus  NALT 51468
      UN AgroVoc e_4654
Seals  NALT 51487
      UN AgroVoc e_6906
Pinus pinaster  NALT 51519
      UN AgroVoc e_5904
Marmalades  NALT 51550
      UN AgroVoc e_12412
Marshes  NALT 51560
      UN AgroVoc e_4631
      Wetlands that do not accumulate appreciable peat deposits and are dominated by herbaceous vegetation. (source: NALT)
Rhynchosporium secalis  NALT 51575
    UN AgroVoc e_23971
Solifluxion  NALT 51610
    UN AgroVoc e_14420
Subsidence  NALT 51611
    UN AgroVoc e_14650
Nardus stricta  NALT 51639
    UN AgroVoc e_33775
Weathering  NALT 51645
    UN AgroVoc e_8343
    The natural exposure of a material to atmospheric and climatic factors such as wind, rain, temperature changes, solar or ultraviolet light, oxygen, humidity, or airborne biological and chemical agents. Use for materials; For soils USE soil weathering; For organisms USE environmental exposure. (source: NALT)
Outbreeding  NALT 51660
    UN AgroVoc e_16007
Random mating  NALT 51661
    UN AgroVoc e_6446
Matsucoccus feytaudi  NALT 51673
    UN AgroVoc e_30825
maximum residue limits  NALT 51693
    UN AgroVoc e_36571
Mayonnaise  NALT 51697
    UN AgroVoc e_12442
    Library of Congress sh85082435
Philaeus spumarius  NALT 51711
    UN AgroVoc e_30714
Meat meal  NALT 51717
    UN AgroVoc e_4677
Soybean meal  NALT 51719
    UN AgroVoc e_16043
Mutton  NALT 51747
    UN AgroVoc e_5015
    Meat from sheep that are over one year old. (source: NALT)
Rabbit meat  NALT 51748
    UN AgroVoc e_16026
Meat extracts  NALT 51761
UN AgroVoc c_4673

Minced meat  NALT 51770
UN AgroVoc c_24873

Smoked meat  NALT 51772
UN AgroVoc c_7116

Velocity  NALT 51791
UN AgroVoc c_24098

Vibration  NALT 51792
UN AgroVoc c_8211

Medicago polymorpha  NALT 51804
UN AgroVoc c_26568

Medicago scutellata  NALT 51807
UN AgroVoc c_26569

Salvia aethiopis  NALT 51871
UN AgroVoc c_33863

Myristic acid  NALT 51872
UN AgroVoc c_5041
A saturated long-chain fatty acid with a 14-carbon backbone. Myristic acid is found naturally in palm oil, coconut oil and butter fat. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Mespilus germanica  NALT 51880
UN AgroVoc c_4764

medroxyprogesterone  NALT 51881
UN AgroVoc c_12475
A synthetic progestational hormone used in veterinary practice as an estrus regulator. (source: NALT)

A synthetic derivative of progesterone administered as an acetate salt (medroxyprogesterone acetate) with antiestrogenic activity. As a do all progestins, medroxyprogesterone binds to and activates nuclear receptors which subsequently bind to and activate target genes for transcription. As an antiestrogen, this agent may inhibit the growth-stimulating effects of estrogen on estrogen-sensitive tumor cells. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
myelin sheath  NALT 51883
UN AgroVoc c_50135
The lipid-rich sheath surrounding axons in both the central and peripheral nervous systems. The myelin sheath is an electrical insulator and allows faster and more energetically efficient conduction of impulses. The sheath is formed by the cell membranes of glial cells (Schwann cells in the peripheral and oligodendroglia in the central nervous system). (source: NALT)

A layer of phospholipids and protein found on neuronal axons. This structure acts as an electrical insulator that allows nerve impulses to travel faster by increasing the resistance and decreasing the capacitance over that found in unmyelinated nerve fibers. Source: NCI thesaurus link

Megaselia  NALT 51896
UN AgroVoc c_4703

Megaselia halterata  NALT 51897
UN AgroVoc c_30576

Megasphaera  NALT 51899
UN AgroVoc c_24661
A genus of anaerobic, Gram negative, cocci shaped bacterium assigned to the phylum Firmicutes and the family Veillonellaceae. Source: NCI thesaurus link

Megastigmus  NALT 51905
UN AgroVoc c_4704

Megoura viciae  NALT 51914
UN AgroVoc c_30779

Melaleuca  NALT 51931
UN AgroVoc c_4707
Dbpedia Melaleuca

Melaleuca alternifolia  NALT 51932
UN AgroVoc c_37134

Melampsora  NALT 51943
UN AgroVoc c_4709

Melampsoridium  NALT 51951
UN AgroVoc c_31849

Melanogrammus aeglefinus  NALT 51966
UN AgroVoc c_41494

Melanoplus sanguinipes  NALT 51970
UN AgroVoc c_31928
Melatonin  NALT 51983
UN AgroVoc c_24871
A hormone involved in sleep regulatory activity, and a tryptophan-derived neurotransmitter, which inhibits the synthesis and secretion of other neurotransmitters such as dopamine and GABA. Melatonin is synthesized from serotonin intermediate in the pineal gland and the retina where the enzyme 5-hydroxyindole-O-methyltransferase, that catalyzes the last step of synthesis, is found. This hormone binds to and activates melatonin receptors and is involved in regulating the sleep and wake cycles. In addition, melatonin possesses antioxidative and immunoregulatory properties via regulating other neurotransmitters. Source: NCI thesaurus link

Meleagris  NALT 51985
UN AgroVoc c_12483
turkeys  NALT 51987
UN AgroVoc c_8016
Melia  NALT 51991
UN AgroVoc c_33768
Melia azedarach  NALT 51992
UN AgroVoc c_15756
Swietenia  NALT 51994
UN AgroVoc c_7553
Dbpedia Swietenia
Toona  NALT 51995
UN AgroVoc c_36114
Meligethes  NALT 52001
UN AgroVoc c_4718
Meligethes aeneus  NALT 52002
UN AgroVoc c_30119
Melilotus alba  NALT 52003
UN AgroVoc c_4720
Melilotus indica  NALT 52004
UN AgroVoc c_4721
Melilotus officinalis  NALT 52005
UN AgroVoc c_4722
Melinis  NALT 52023
UN AgroVoc c_4723
Molasses grass  NALT 52024
UN AgroVoc c_12625
Melocanna  NALT 52042
UN AgroVoc c_4727
Dbpedia Melocanna

**Meloidogyne**  NALT 52045
  UN AgroVoc c_4729

**Meloidogyini**  NALT 52046
  UN AgroVoc c_31066

**Meloidogyne arenaria**  NALT 52047
  UN AgroVoc c_31067

**Meloidogyne chitwoodi**  NALT 52048
  UN AgroVoc c_31068

**Meloidogyne graminicola**  NALT 52049
  UN AgroVoc c_31070

**Meloidogyne hapla**  NALT 52050
  UN AgroVoc c_31071

**Meloidogyne incognita**  NALT 52051
  UN AgroVoc c_31072

**Meloidogyne javanica**  NALT 52052
  UN AgroVoc c_31073

**Meloidogyne naasi**  NALT 52054
  UN AgroVoc c_31074
  Dbpedia Meloidogyne naasi

**Melolontha**  NALT 52056
  UN AgroVoc c_4730
  Dbpedia Melolontha

**Melolontha melolontha**  NALT 52057
  UN AgroVoc c_30130

**Melophagus ovinus**  NALT 52060
  UN AgroVoc c_30560

**Melopsittacus**  NALT 52062
  UN AgroVoc c_12490

**Melting**  NALT 52069
  UN AgroVoc c_4731
  The process of going from a solid to a liquid state. (source: NALT)

**Melting point**  NALT 52070
  UN AgroVoc c_4732
  The temperature at which a crystalline solid changes state from solid to liquid. Source: NCI thesaurus link
Membracidae  NALT 52074  
UN AgroVoc c_30736

Spissistilus  NALT 52076  
UN AgroVoc c_30737

Permeability  NALT 52082  
UN AgroVoc c_5718

A measure of the rate at which a substrate can pass water. Source: NCI thesaurus link

Osmosis  NALT 52083  
UN AgroVoc c_5442

Diffusion of molecules through a semipermeable membrane from a place of higher concentration to a place of lower concentration until the concentration on both sides is equal. Source: NCI thesaurus link

Memory  NALT 52089  
UN AgroVoc c_36912

The power of retaining and recalling past experience, something that is remembered. Source: NCI thesaurus link

Pachygone  NALT 52101  
UN AgroVoc c_26598

Stephania  NALT 52102  
UN AgroVoc c_35587

Tinospora  NALT 52105  
UN AgroVoc c_35591

Menopon  NALT 52109  
UN AgroVoc c_12497

Mentha aquatica  NALT 52115  
UN AgroVoc c_4742

Mentha arvensis  NALT 52116  
UN AgroVoc c_4743

Mentha longifolia  NALT 52117  
UN AgroVoc c_4745

Mentha piperita  NALT 52118  
UN AgroVoc c_4746

Mentha pulegium  NALT 52119  
UN AgroVoc c_16263

Mentha spicata  NALT 52120  
UN AgroVoc c_4747
Peritoneum NALT 52180
UN AgroVoc e_5712

The tissue that lines the wall of the abdominal cavity, intestine, and mesentery. It consists of the parietal peritoneum that covers the inside of the abdominal wall and the visceral peritoneum that covers the surface of the intestine and mesentery. Source: NCI thesaurus link

mesocarp NALT 52181
UN AgroVoc e_27979

A portion of plant tissue that is the middle layer of a pericarp. (source: NALT)
Mespilus  NALT 52213
 UN AgroVoc e_32924

**messenger RNA**  NALT 52217
 UN AgroVoc e_4765

A class of RNA molecule containing protein-coding information in its nucleotide sequence that can be translated into the amino acid sequence of a protein. Source: NCI thesaurus link

Phytochelatins  NALT 52225
 UN AgroVoc e_36310

**Nitrogen metabolism**  NALT 52233
 UN AgroVoc e_5197

**Steroid metabolism**  NALT 52234
 UN AgroVoc e_7406

Steroid Metabolism consists of diverse biochemical reactions that convert steroid compounds, lipids containing a hydrogenated cyclopentanoperhydrophenanthrene ring system, to metabolic derivatives for assorted uses, such as steroid hormone production and biosynthesis of cell membrane constituents. Source: NCI thesaurus link

**Water metabolism**  NALT 52236
 UN AgroVoc e_26866

**Metaldehyde**  NALT 52241
 UN AgroVoc e_4772

**Metallothionein**  NALT 52244
 UN AgroVoc e_25156

Enzymes that use cysteine residues to transport metals such as copper and zinc throughout the body. The native polypeptide is found in abundant levels in the kidney cortex and liver. Source: NCI thesaurus link

**Metamitron**  NALT 52248
 UN AgroVoc e_31415

**Metapenaeus**  NALT 52254
 UN AgroVoc e_4776

**Metapenaeus monoceros**  NALT 52255
 UN AgroVoc e_35402

**Paramyxoviridae**  NALT 52259
 UN AgroVoc e_5567

A family of negative-strand single-strand RNA viruses which includes Mumps and Measles viruses. Source: NCI thesaurus link

**Metarhizium anisopliae**  NALT 52260
 UN AgroVoc e_27229
Metaseiulus  NALT 52263  
UN AgroVoc e_12516

Metaseiulus occidentalis  NALT 52264  
UN AgroVoc e_30902

Metasequoia  NALT 52266  
UN AgroVoc e_4778

Metastrongylus  NALT 52270  
UN AgroVoc e_31079

Metastrongylus apri  NALT 52271  
UN AgroVoc e_31080

Panonychus  NALT 52273  
UN AgroVoc e_8553

Macroclimate  NALT 52294  
UN AgroVoc e_4499

Paleoclimatology  NALT 52295  
UN AgroVoc e_13034

Methabenzthiazuron  NALT 52301  
UN AgroVoc e_36654

Methamidophos  NALT 52302  
UN AgroVoc e_31416

Methanogens  NALT 52309  
UN AgroVoc e_27572  
Microorganisms, especially of the group Archaea, that can grow and produce methane under anaerobic conditions. (source: NALT)

Methanobacteriaceae  NALT 52311  
UN AgroVoc e_4786

Methanobacterium  NALT 52312  
UN AgroVoc e_12519

Methanococcus  NALT 52318  
UN AgroVoc e_12520

Methidathion  NALT 52330  
UN AgroVoc e_31417

Methiocarb  NALT 52331  
UN AgroVoc e_31418

Methoxychlor  NALT 52341  
UN AgroVoc e_31421
Salicylates NALT 52352
  UN AgroVoc c_6747
methylamines NALT 52355
  UN AgroVoc c_36157
Metobromuron NALT 52484
  UN AgroVoc c_31423
Metribuzin NALT 52485
  UN AgroVoc c_31426
Metrosideros NALT 52496
  UN AgroVoc c_35556
          Dbpedia Metrosideros
Metsulfuron NALT 52503
  UN AgroVoc c_34863
Mevinphos NALT 52507
  UN AgroVoc c_31427
Zabrotes subfasciatus NALT 52510
  UN AgroVoc c_30009
Physalis ixocarpa NALT 52516
  UN AgroVoc c_26614
Virology NALT 52565
  UN AgroVoc c_8259
          The science that deals with the study of viruses. Source: NCI thesaurus link
Ustilago violacea NALT 52588
  UN AgroVoc c_27413
Microceroterms NALT 52589
  UN AgroVoc c_4801
Micrococcus NALT 52596
  UN AgroVoc c_12538
          A genus of spherical, Gram-positive bacteria in the phylum Actinobacteria. Source: NCI thesaurus link
Renibacterium NALT 52598
  UN AgroVoc c_26658
Paracoccus denitrificans NALT 52614
  UN AgroVoc c_36985
Microctonus aethiopoides NALT 52658
  UN AgroVoc c_29845
Microcyclus ulei  NALT 52659
   UN AgroVoc e_24769

Microcystis aeruginosa  NALT 52661
   UN AgroVoc e_27231

Microplitis demolitor  NALT 52685
   UN AgroVoc e_37395

Rhizosphere  NALT 52688
   UN AgroVoc e_6569
   The soil surrounding and directly influenced by plant roots. (source: NALT)

Micromesistius poutassou  NALT 52702
   UN AgroVoc e_41521

Rumen microorganisms  NALT 52767
   UN AgroVoc e_34094

Soil microorganisms  NALT 52768
   UN AgroVoc e_36167

Thermophilic microorganisms  NALT 52769
   UN AgroVoc e_24092

Xylanolytic microorganisms  NALT 52770
   UN AgroVoc e_36323

Micropterus salmoides  NALT 52789
   UN AgroVoc e_37035

Nosema  NALT 52842
   UN AgroVoc e_5238

Pleistophora  NALT 52845
   UN AgroVoc e_31187

Thelohania  NALT 52846
   UN AgroVoc e_31188

Vairimorpha  NALT 52848
   UN AgroVoc e_31189

Microsporidiosis  NALT 52850
   UN AgroVoc e_36160
   Microsporidians were considered as Protozoa, but are classed as a Phylum in the Kingdom Fungi. Previous indexing may use microsporidiosis as a protozoal infection. (source: NALT)
   A protozoal parasitic infection caused by Microsporidia. It occurs in immunocompromised patients, causing diarrhea and wasting. Source: NCI thesaurus link

Microtermes  NALT 52861
   UN AgroVoc e_4814
milk fat yield  NALT 52951
    UN AgroVoc c_331328
milk protein yield  NALT 52958
    UN AgroVoc c_331327
Somatic cell count  NALT 52963
    UN AgroVoc c_33554
Panicum  NALT 52988
    UN AgroVoc c_5534
Paspalum  NALT 52989
    UN AgroVoc c_5608
Pennisetum  NALT 52990
    UN AgroVoc c_5674
    Dbpedia Pennisetum
Urochloa  NALT 52992
    UN AgroVoc c_8104
milt  NALT 53006
    UN AgroVoc c_50134
Mimosa  NALT 53013
    UN AgroVoc c_4844
Mimosa pudica  NALT 53016
    UN AgroVoc c_37138
Mimosa scabrella  NALT 53017
    UN AgroVoc c_4845
Mimosine  NALT 53025
    UN AgroVoc c_12595
Paraserianthes  NALT 53032
    UN AgroVoc c_35700
Parkia  NALT 53033
    UN AgroVoc c_5587
Pithecellobium  NALT 53038
    UN AgroVoc c_24788
Prosopis  NALT 53041
    UN AgroVoc c_6229
Samanea  NALT 53045
    UN AgroVoc c_6769
Mimulus  NALT 53056
    UN AgroVoc c_37139

Minced fish  NALT 53061
    UN AgroVoc c_26801

Mineral resources  NALT 53076
    UN AgroVoc c_4852

Nitrogen  NALT 53079
    UN AgroVoc c_5192
    An element with atomic symbol N, atomic number 7, and atomic weight 14.01. Source: NCI thesaurus link
    Reference: FDA UNII link
    Look-up using Google link
    Rotate the 3-D representation
    Look-up synonyms
    Look-up using CAS number link

Montmorillonitic soils  NALT 53085
    UN AgroVoc c_4926

Minimum tillage  NALT 53097
    UN AgroVoc c_32734
    Library of Congress sh88002044

Trichogramma minutum  NALT 53112
    UN AgroVoc c_29954

Orius tristicolor  NALT 53114
    UN AgroVoc c_30642

Psallus  NALT 53124
    UN AgroVoc c_6294

Pseudatomoscelis  NALT 53125
    UN AgroVoc c_33821

Sahlbergella  NALT 53127
    UN AgroVoc c_6735

Miscanthus  NALT 53136
    UN AgroVoc c_26574
    Dbpedia Miscanthus

Mite control  NALT 53148
    UN AgroVoc c_4868
Mitella NALT 53149
UN AgroVoc e_331262

Predatory mites NALT 53150
UN AgroVoc e_13564

Mitochondria NALT 53154
UN AgroVoc e_4869

multiple strain starters NALT 53171
UN AgroVoc e_35073

Mocis NALT 53183
UN AgroVoc e_4880

Modified starches NALT 53197
UN AgroVoc e_4883

Tensile strength NALT 53202
UN AgroVoc e_14824

The maximum stress a material subjected to a stretching load can withstand without tearing. (source: NALT)

Moina NALT 53212
UN AgroVoc e_25378

Water activity NALT 53219
UN AgroVoc e_24929

Mola NALT 53220
UN AgroVoc e_4887

Molidae NALT 53221
UN AgroVoc e_45918

Tyrophagus putrescentiae NALT 53224
UN AgroVoc e_30912

Reverse transcription NALT 53241
UN AgroVoc e_35129

The biosynthesis of DNA from an RNA template. (source: NALT)
The action of copying RNA into DNA by reverse transcriptase. Source: NCI thesaurus link

RNA probes NALT 53242
UN AgroVoc e_27817

RNA usually prepared by transcription from cloned DNA, which complements a specific mRNA or DNA and is generally used for studies of virus genes, distribution of specific RNA in tissues and cells, integration of viral DNA into genomes, transcription, etc. Whereas DNA probes are preferred for use at a more macroscopic level for detection of the presence of DNA/RNA from specific species or subspecies, RNA probes are preferred for genetic studies. (source: NALT)
Molecular weight  NALT 53248  
UN AgroVoc c_4892

The sum of the relative atomic masses of the constituent atoms of a molecule. Source: NCI thesaurus link

Molineidae  NALT 53249  
UN AgroVoc c_31081

Nematodirus  NALT 53251  
UN AgroVoc c_5113

Ollulanus  NALT 53252  
UN AgroVoc c_31083

Mollusc control  NALT 53264  
UN AgroVoc c_4895

Slugs  NALT 53265  
UN AgroVoc c_7111

snails  NALT 53266  
UN AgroVoc c_7121

Oysters  NALT 53275  
UN AgroVoc c_5484

Scallops  NALT 53276  
UN AgroVoc c_6839

Sodium molybdate  NALT 53285  
UN AgroVoc c_7147

A crystalline powder essential for the metabolism and development of plants and animals as a cofactor for enzymes. (NCI) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Molybdenum  NALT 53287  
UN AgroVoc c_4901

Library of Congress sh85086637

An element with atomic symbol Mo, atomic number 42, and atomic weight 95.94. Source: NCI thesaurus link
Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms

Look-up using CAS number link

**Monascus purpureus**  NALT 53309
  UN AgroVoc c_26576

**Monelliopsis pecanis**  NALT 53313
  UN AgroVoc c_30783

**Moniezia benedeni**  NALT 53321
  UN AgroVoc c_31946

**Moniezia expansa**  NALT 53322
  UN AgroVoc c_31947

**Orotic acid**  NALT 53346
  UN AgroVoc c_5428

**Monochamus alternatus**  NALT 53353
  UN AgroVoc c_30019

**Monocrotophos**  NALT 53365
  UN AgroVoc c_31430

**Monodon**  NALT 53369
  UN AgroVoc c_331183

**Monographella**  NALT 53379
  UN AgroVoc c_27234

**Monolinuron**  NALT 53382
  UN AgroVoc c_31431

**Mononychellus**  NALT 53387
  UN AgroVoc c_26577

**Mononychellus tanajoa**  NALT 53388
  UN AgroVoc c_26578

**Synbranchidae**  NALT 53394
  UN AgroVoc c_42253

**Xylose**  NALT 53398
  UN AgroVoc c_8474

**Pyrethrins**  NALT 53410
  UN AgroVoc c_6383

**Trichodoridae**  NALT 53414
  UN AgroVoc c_31136
  Library of Congress sh88021672
**Wet season**  NALT 53417  
UN AgroVoc e_8368

**Monstera deliciosa**  NALT 53418  
UN AgroVoc e_4924

**Morus**  NALT 53431  
UN AgroVoc e_4948

**Treculia**  NALT 53433  
UN AgroVoc e_7882

**Moraine soils**  NALT 53434  
UN AgroVoc e_4933

**Rinderpest virus**  NALT 53457  
UN AgroVoc e_13928

**Morchella**  NALT 53458  
UN AgroVoc e_4938

**Morinda**  NALT 53476  
UN AgroVoc e_63325

**Morinda citrifolia**  NALT 53477  
UN AgroVoc e_63326

An extract prepared from the fruit of Morinda citrifolia, a plant that yields various herbal preparations. Morinda citrifolia fruit juice has antioxidant properties and may prevent tumorigenesis via inhibition of DNA-carcinogen adduct formation. Source: NCI thesaurus link

**Moringa**  NALT 53480  
UN AgroVoc e_24663

**Morone**  NALT 53493  
UN AgroVoc e_4941

Library of Congress sh85087337

**Percichthyidae**  NALT 53494  
UN AgroVoc e_42537

**Morone saxatilis**  NALT 53495  
UN AgroVoc e_42517

**Organogenesis**  NALT 53498  
UN AgroVoc e_27791

Formation of differentiated cells and complicated tissue organization to provide specialized functions. (source: NALT)

Formation of organs during development. Source: NCI thesaurus link

**Tridemorph**  NALT 53499  
UN AgroVoc e_31527
Morus alba  NALT 53504
       UN AgroVoc c_4949
Morus nigra  NALT 53507
       UN AgroVoc c_4950
Mulberries  NALT 53510
       UN AgroVoc c_25487
Vigna aconitifolia  NALT 53521
       UN AgroVoc c_8229
Mouflon  NALT 53537
       UN AgroVoc c_24122
Mountain soils  NALT 53550
       UN AgroVoc c_4959
Tongue  NALT 53559
       UN AgroVoc c_7809
       The muscular organ located in the floor of the mouth and serving as the principal organ of taste and modification of the voice in speech. Source: NCI thesaurus link
Mowing  NALT 53565
       UN AgroVoc c_12679
Mucilages  NALT 53574
       UN AgroVoc c_32027
Mucor  NALT 53575
       UN AgroVoc c_4966
Mucor hiemalis  NALT 53576
       UN AgroVoc c_34543
Mucor racemosus  NALT 53579
       UN AgroVoc c_34544
Rhizomucor miehei  NALT 53581
       UN AgroVoc c_34570
Phycomyces  NALT 53584
       UN AgroVoc c_31812
Pilobolus  NALT 53585
       UN AgroVoc c_31813
Rhizomucor  NALT 53586
       UN AgroVoc c_31814
Rhizopus  NALT 53587
       UN AgroVoc c_6568

1.7. Glossary
A genus of filamentous fungi in the phylum Zygomycota. Source: NCI thesaurus link

**Thamnidium** NALT 53589
  UN AgroVoc c_31815

**Mucuna pruriens** NALT 53610
  UN AgroVoc c_4971

**Muellerius** NALT 53666
  UN AgroVoc c_4974

**Mugil** NALT 53667
  UN AgroVoc c_4975

**Muhlenbergia** NALT 53669
  UN AgroVoc c_33772

**Straw mulches** NALT 53676
  UN AgroVoc c_7442

**Soil solarization** NALT 53677
  UN AgroVoc c_33263

**Wallago attu** NALT 53684
  UN AgroVoc c_40740

**Mullus** NALT 53686
  UN AgroVoc c_4981

**Multiple births** NALT 53700
  UN AgroVoc c_4985
  Multiple fetuses birthed live or dead in a single pregnancy regardless of gestational age, and regardless of whether the fetuses were birthed on different dates. Source: NCI thesaurus link

**Myeloma** NALT 53703
  UN AgroVoc c_5028
  A malignancy of mature plasma cells engaging in monoclonal immunoglobulin production. It is characterized by hyperglobulinemia, excess Bence-Jones proteins (free monoclonal immunoglobin light chains) in the urine, skeletal destruction, bone pain, and fractures. (source: NALT)

**Mus** NALT 53724
  UN AgroVoc c_15662

**Rats** NALT 53727
  UN AgroVoc c_6464

**Murraya** NALT 53734
  UN AgroVoc c_4990

**Murraya paniculata** NALT 53735
  UN AgroVoc c_4992
Musa balbisiana  NALT 53740
UN AgroVoc e_4995

Musa paradisiaca  NALT 53741
UN AgroVoc e_12705

Interspecific hybrid between Musa acuminata x Musa balbisiana. (source: NALT)

Musca  NALT 53749
UN AgroVoc e_4999

Muscina  NALT 53758
UN AgroVoc e_12711

Stomoxys  NALT 53760
UN AgroVoc e_14614

Muscidifurax  NALT 53761
UN AgroVoc e_29930

Muscidifurax raptor  NALT 53762
UN AgroVoc e_29931

Suxamethonium  NALT 53773
UN AgroVoc e_14717

Rhabdomyolysis  NALT 53779
UN AgroVoc e_36995

Tendinitis  NALT 53780
UN AgroVoc e_14822

Tenosynovitis  NALT 53781
UN AgroVoc e_14823

Mussaenda  NALT 53809
UN AgroVoc e_5009

Mustard  NALT 53814
UN AgroVoc e_25488

A flavoring that comes from the ground seeds of the mustard (Brassica) plant available as a powder or a paste. Use for the ground mustard seed available as a powder or paste; For the whole mustard seed used as a flavoring USE mustard seed; For the mustard plant USE Brassica or one of its narrower species. (source: NALT)

Sinapis alba  NALT 53818
UN AgroVoc e_1061

Mustela putorius  NALT 53821
UN AgroVoc e_331501

Mutagenicity  NALT 53830
UN AgroVoc e_34866

1.7. Glossary
Mya  NALT 53836  
UN AgroVoc e_5016

Mya arenaria  NALT 53837  
UN AgroVoc e_31153

Mycobacterium  NALT 53842  
UN AgroVoc e_5018

A genus of acid-fast Gram-positive, aerobic and nonmotile bacteria in the phylum Actinobacteria.  
Source: NCI thesaurus link

Mycobacterium bovis  NALT 53955  
UN AgroVoc e_12732

A species of Mycobacterium that is a member of the Mycobacterium tuberculosis complex. It is the  
causative agent of tuberculosis in cattle.  
Source: NCI thesaurus link  
Reference: FDA UNII link  
Reference the NIH NCBI link

Mycoplasmataceae  NALT 53998  
UN AgroVoc e_35454

A taxonomic family of parasitic and pathogenic bacterium, which require sterols to grow, in the  
phylum Tenericutes that includes the genera Mycoplasma and Ureaplasma.  
Source: NCI thesaurus link

Mycoplasma arginini  NALT 54005  
UN AgroVoc e_27239

Mycoplasma bovis  NALT 54008  
UN AgroVoc e_27241

Mycoplasma dispar  NALT 54023  
UN AgroVoc e_27243

Mycoplasma gallisepticum  NALT 54037  
UN AgroVoc e_27244

Mycoplasma hyopneumoniae  NALT 54043  
UN AgroVoc e_27245

Mycoplasma hyosynoviae  NALT 54044  
UN AgroVoc e_27247

Mycoplasma meleagris  NALT 54053  
UN AgroVoc e_27248

Mycoplasma ovipneumoniae  NALT 54060  
UN AgroVoc e_27249

Mycoplasma synoviae  NALT 54075  
UN AgroVoc e_27251
Ureaplasma  NALT 54123
  UN AgroVoc e_15106
   A genus of irregularly shaped bacterium that do not contain a cell wall in the phylum Tenericutes and the family Mycoplasmataceae. Source: NCI thesaurus link

Spiroplasmataceae  NALT 54124
  UN AgroVoc e_35453

Mycosphaerella arachidis  NALT 54126
  UN AgroVoc e_27252

Mycosphaerella berkeleyi  NALT 54127
  UN AgroVoc e_27255

Mycosphaerella citri  NALT 54128
  UN AgroVoc e_27258

Mycosphaerella fragariae  NALT 54131
  UN AgroVoc e_27260

Mycosphaerella graminicola  NALT 54132
  UN AgroVoc e_27261

Mycosphaerella musicola  NALT 54135
  UN AgroVoc e_27262

Mycosphaerella pinodes  NALT 54137
  UN AgroVoc e_27263

Ochratoxicosis  NALT 54145
  UN AgroVoc e_36780

Ochratoxins  NALT 54146
  UN AgroVoc e_12891

Patulin  NALT 54147
  UN AgroVoc e_24882
   Library of Congress sh85026836

Myobiidae  NALT 54152
  UN AgroVoc e_30935

Myocarditis  NALT 54154
  UN AgroVoc e_12744

   Inflammatory processes of the muscular walls of the heart (myocardium) which result in injury to the cardiac muscle cells. (source: NALT)

   Inflammation of the muscle tissue of the heart. Source: NCI thesaurus link

Myometrium  NALT 54164
  UN AgroVoc e_12748
   The smooth muscle lining the uterus. Source: NCI thesaurus link
Myrciaria  NALT 54175
     UN AgroVoc e_5035
Symphyla   NALT 54176
     UN AgroVoc e_7564
Myrica     NALT 54177
     UN AgroVoc e_5038
nutmegs    NALT 54184
     UN AgroVoc e_23169
Virola     NALT 54185
     UN AgroVoc e_36113
Myrtus     NALT 54198
     UN AgroVoc e_27270
Pepper     NALT 54199
     UN AgroVoc e_25495
Psidium    NALT 54200
     UN AgroVoc e_6314
Syzygium   NALT 54201
     UN AgroVoc e_14760
Tristania  NALT 54202
     UN AgroVoc e_26730
     Dbpedia Tristania
Myrtus communis  NALT 54205
     UN AgroVoc e_27271
Mytilus    NALT 54212
     UN AgroVoc e_5055
Mytilus edulis  NALT 54213
     UN AgroVoc e_31154
Mytilus galloprovincialis  NALT 54214
     UN AgroVoc e_31155
Myxobolus  NALT 54218
     UN AgroVoc e_12756
Myxomatosis NALT 54232
     UN AgroVoc e_5056
Myxomycetes NALT 54233
     UN AgroVoc e_5057
Formerly considered as fungi, the plasmodial slime molds are now classified as Protozoa. (source: NALT)

**Plasmodiophoromycetes**  NALT 54235

**Sphaerospora**  NALT 54237

**Myzus nicotianae**  NALT 54240

**Nitrosamines**  NALT 54249

Any of a class of organic compounds with the general formula R2NNO or RNHNO, present in various foods and other products and found to be carcinogenic in laboratory animals. (dictionary.com)  
Source: NCI thesaurus link

**Nacobbus**  NALT 54272

**Nacobbus aberrans**  NALT 54273

**Naegleria**  NALT 54283

**Naemacyclus**  NALT 54286

Rank of Genus, Helotiales genera incertae sedis. (source: NALT)

**Nairobi sheep disease**  NALT 54294

An arbovirus infection of sheep and goats transmitted by ticks. It is characterized by high fever and hemorrhagic gastroenteritis. (source: NALT)

**Potamogetonaceae**  NALT 54298

**Zosteraceae**  NALT 54299

**Naled**  NALT 54302

**Nalepellidae**  NALT 54304

**Phytoptus**  NALT 54305
Trisetacus  NALT 54306
  UN AgroVoc e_7944
Prunus tomentosa  NALT 54309
  UN AgroVoc e_32223
Nannochloris  NALT 54310
  UN AgroVoc e_330315
Rhyacionia frustrana  NALT 54323
  UN AgroVoc e_30379
Solanum quitoense  NALT 54332
  UN AgroVoc e_7220
Narcissus pseudonarcissus  NALT 54333
  UN AgroVoc e_37141
Narcissus tazetta  NALT 54334
  UN AgroVoc e_37140
Nardostachys  NALT 54339
  UN AgroVoc e_330113
Nardus  NALT 54343
  UN AgroVoc e_26582
Nasal cavity  NALT 54350
  UN AgroVoc e_12772
  The proximal portion of the respiratory passages on either side of the nasal septum lying between
  the floor of the cranium and the roof of the mouth and extending from the face to the pharynx. The
  nasal cavity is lined with ciliated mucosa, extending from the nares to the pharynx. Source: NCI
  thesaurus link
nose  NALT 54351
  UN AgroVoc e_5237
  Library of Congress sh85092748
  A structure of special sense serving as an organ of the sense of smell and as an entrance to the
  respiratory tract. Source: NCI thesaurus link
Nasonia  NALT 54352
  UN AgroVoc e_29932
Nasonia vitripennis  NALT 54353
  UN AgroVoc e_29933
Nasonovia ribisnigri  NALT 54354
  UN AgroVoc e_31232
Nastic movement  NALT 54365
  UN AgroVoc e_12773
The movement of plant parts in response to non-directional stimuli. The stimulus may be external, such as the movement of Mimosa leaves when touch (thigmonasty), or internal, such as the sudden movement of plant parts due to changes in turgor pressure (seismonasty). Nyctinasty is the movement of organs, such as the opening of flowers during the day and closing at night, in response to the diurnal cycle. (source: NALT)

**Tropaeolum majus** NALT 54378
UN AgroVoc e_7967

**Nasutitermes** NALT 54379
UN AgroVoc e_5075

**Nasutitermes exitiosus** NALT 54380
UN AgroVoc e_30636

**Nonrenewable resources** NALT 54414
UN AgroVoc e_24056

**Renewable resources** NALT 54415
UN AgroVoc e_6502

**Neburon** NALT 54447
UN AgroVoc e_31435

**Nectarines** NALT 54460
UN AgroVoc e_5100

**Nectria haematococca** NALT 54462
UN AgroVoc e_34545

**Neem seed extract** NALT 54464
UN AgroVoc e_34062

**Neem oil** NALT 54467
UN AgroVoc e_34063

**Simonsiella** NALT 54495
UN AgroVoc e_14301

**Nelumbo** NALT 54500
UN AgroVoc e_32759

**Nelumbonaceae** NALT 54501
UN AgroVoc e_5107

**Nelumbo nucifera** NALT 54502
UN AgroVoc e_5106

**Panagrolaimidae** NALT 54520
UN AgroVoc e_35419

**Tylenchulidae** NALT 54523
UN AgroVoc e_31149
Trichinosis  NALT 54529  
UN AgroVoc c_24312  
A parasitic disease of mammals caused by the nematode parasite Trichinella, whose larvae migrate from the digestive tract and form cysts in various muscles of the body. Human trichinosis is caused by eating undercooked meat, usually pork. (source: NALT)  
A parasitic infection caused by larvae of worms of the genus Trichinella. It is transmitted to humans by ingesting raw or undercooked meat from infected animals. Signs and symptoms include abdominal discomfort, nausea, vomiting, fever, diarrhea, headache, coughing, myalgias, arthralgias, and eye swelling. Source: NCI thesaurus link

Trichuriasis  NALT 54530  
UN AgroVoc c_22556  
Nematodirus battus  NALT 54534  
UN AgroVoc c_31082  
Nematus  NALT 54539  
UN AgroVoc c_5114  
Steinernema  NALT 54548  
UN AgroVoc c_31123  
Steinernema carpocapsae  NALT 54550  
UN AgroVoc c_34481  
Steinernema feltiae  NALT 54552  
UN AgroVoc c_31124  
Toxocara vitulorum  NALT 54556  
UN AgroVoc c_33115  
Sarcophaga bullata  NALT 54559  
UN AgroVoc c_30589  
Neochetina eichhorniae  NALT 54561  
UN AgroVoc c_30080  
Neodiprion lecontei  NALT 54567  
UN AgroVoc c_29868  
Neogobius melanostomus  NALT 54572  
UN AgroVoc c_49573  
Polyps  NALT 54591  
UN AgroVoc c_37412  
Discrete abnormal tissue masses that protrude into the lumen of the digestive tract or the respiratory tract. Polyps can be spheroidal, hemispheroidal, or irregular mound-shaped structures attached to the mucous membrane of the lumen wall either by a stalk, pedunculus, or by a broad base. (source: NALT)
Neorickettsia  NALT 54593
   UN AgroVoc c_12795
   A genus of bacteria that causes disease in humans, horses, dogs and other canids. (source: NALT)
Neosciulus  NALT 54598
   UN AgroVoc c_12796
Neosolaniol  NALT 54599
   UN AgroVoc c_28475
Neospora caninum  NALT 54600
   UN AgroVoc c_33385
Neovossia  NALT 54607
   UN AgroVoc c_36058
Tilletia indica  NALT 54612
   UN AgroVoc c_24377
neoxanthin  NALT 54613
   UN AgroVoc c_37201
Nepa  NALT 54614
   UN AgroVoc c_30681
Nepenthaceae  NALT 54616
   UN AgroVoc c_26292
Sarraceniaceae  NALT 54618
   UN AgroVoc c_26291
   Dbpedia Sarraceniaceae
   Library of Congress sh85117585
Opisina  NALT 54622
   UN AgroVoc c_5125
Nephelium  NALT 54625
   UN AgroVoc c_5126
   Dbpedia Nephelium
Nephelium lappaceum  NALT 54626
   UN AgroVoc c_5127
Rambutans  NALT 54627
   UN AgroVoc c_13754
Nephotettix cincticeps  NALT 54631
   UN AgroVoc c_30730
Nephotettix nigropictus  NALT 54632
   UN AgroVoc c_30731
Nephotettix virescens  NALT 54633
  UN AgroVoc c_30732

Pyelonephritis  NALT 54636
  UN AgroVoc c_23875
  An inflammatory process affecting the kidney. The cause is most often bacterial, but may also be fungal in nature. Signs and symptoms may include fever, chills, flank pain, painful and frequent urination, cloudy or bloody urine, and confusion. Source: NCI thesaurus link

Nephrolepis  NALT 54639
  UN AgroVoc c_35662

Nephrops  NALT 54644
  UN AgroVoc c_30854

Nephrops norvegicus  NALT 54645
  UN AgroVoc c_5131

Stigmella  NALT 54665
  UN AgroVoc c_7411

Nerium oleander  NALT 54670
  UN AgroVoc c_5136

Peripheral nerves  NALT 54679
  UN AgroVoc c_13244
  The nerves outside of the brain and spinal cord, including the autonomic, cranial, and spinal nerves. Peripheral nerves contain non-neuronal cells and connective tissue as well as axons. The connective tissue layers include, from the outside to the inside, the epineurium, the perineurium, and the endoneurium. (source: NALT)

neuropeptides  NALT 54733
  UN AgroVoc c_36757

Sleep  NALT 54738
  UN AgroVoc c_7108
  A natural and periodic state of rest during which consciousness of the world is suspended. Source: NCI thesaurus link

Neurospora  NALT 54746
  UN AgroVoc c_31837

Neurospora crassa  NALT 54747
  UN AgroVoc c_34547

Neurotoxicity  NALT 54749
  UN AgroVoc c_34316
  A group of neurologic disorders caused by damage to the nervous system following exposure to pharmacologic, biologic, and chemical agents. Examples of neurotoxins include chemotherapy agents, radiation treatment, heavy metals, pesticides, and food additives. Source: NCI thesaurus link
**Nitric oxide**  NALT 54750

UN AgroVoc c_36996

An unstable free-radical gas which reacts rapidly with oxygen to form nitrogen oxides. Water soluble, NO is produced normally in numerous tissues and is considered to be a mediator of cell-to-cell communication; it functions in numerous processes including vasodilation, inflammation, and neurotransmission. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**new species**  NALT 54775

UN AgroVoc c_15733

**Phormium tenax**  NALT 54785

UN AgroVoc c_5797

**Newcastle disease**  NALT 54788

UN AgroVoc c_5165

A highly infectious viral disease of poultry. Symptoms include reduced yield of often soft and misshapen eggs, lack of appetite, troubled breathing, nasal discharges and diarrhea. High mortality amongst young birds is common. (source: NALT)

**Newsprint**  NALT 54790

UN AgroVoc c_5169

**Nezara**  NALT 54791

UN AgroVoc c_5170

**Nezara viridula**  NALT 54793

UN AgroVoc c_30690

**Nickel**  NALT 54803

UN AgroVoc c_5172

An element with atomic symbol Ni, atomic number 28, and atomic weight 58.69. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Nicosulfuron**  NALT 54804

UN AgroVoc c_36651
Nicotiana  NALT 54805
UN AgroVoc e_5175
Dbpedia Nicotiana

Nicotiana plumbaginifolia  NALT 54810
UN AgroVoc e_35560

Nicotiana sylvestris  NALT 54812
UN AgroVoc e_35561

Nicotine  NALT 54822
UN AgroVoc e_5179

A plant alkaloid, found in the tobacco plant, and addictive central nervous system (CNS) stimulant that causes either ganglionic stimulation in low doses or ganglionic blockage in high doses. Nicotine acts as an agonist at the nicotinic cholinergic receptors in the autonomic ganglia, at neuromuscular junctions, and in the adrenal medulla and the brain. Nicotine’s CNS-stimulating activities may be mediated through the release of several neurotransmitters, including acetylcholine, beta-endorphin, dopamine, norepinephrine, serotonin, and ACTH. As a result, peripheral vasoconstriction, tachycardia, and elevated blood pressure may be observed with nicotine intake. This agent may also stimulate the chemoreceptor trigger zone, thereby inducing nausea and vomiting. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Nigella  NALT 54832
UN AgroVoc e_26584

Pseudoperichaeta  NALT 54838
UN AgroVoc e_37815

Nippostrongylus brasiliensis  NALT 54844
UN AgroVoc e_31033

Reduction  NALT 54859
UN AgroVoc e_6483

Potassium nitrate  NALT 54860
UN AgroVoc e_6141

A crystalline salt, KNO3; a strong oxidizer used especially in making gunpowder, as a fertilizer, and in medicine. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link
Sodium nitrate  NALT 54862  
UN AgroVoc c_7148

Nitrobacter  NALT 54865  
UN AgroVoc c_36430

Nitrogen dioxide  NALT 54874  
UN AgroVoc c_5194

Found in the atmosphere as a key ingredient in photochemical formation of smog and acid rain, Nitrogen Dioxide is a poisonous gas that forms during combustion. Toxic at high concentrations, it reacts with moisture in the air to form nitric acid, highly corrosive and hazardous to plants and animals. (NCI04) Source: NCI thesaurus link

Nitrophenols  NALT 54902  
UN AgroVoc c_36306

Nitrophosphates  NALT 54904  
UN AgroVoc c_5201

Nitrosopyrrolidine  NALT 54906  
UN AgroVoc c_28471

Nivalenol  NALT 54936  
UN AgroVoc c_28479

Radon  NALT 54947  
UN AgroVoc c_32529

An element with atomic symbol Rn, atomic number 86, and 222.0. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link

Nocardia  NALT 54949  
UN AgroVoc c_5203

A genus of Gram-positive, catalase-positive, rod-shaped bacteria in the phylum Actinobacteria. Source: NCI thesaurus link

Rhodococcus (bacteria)  NALT 55024  
UN AgroVoc c_34498

Noctua  NALT 55069  
UN AgroVoc c_30264

Orthosia  NALT 55074  
UN AgroVoc c_30265
**Panolis** NALT 55076
   UN AgroVoc c_30266

**Peridroma** NALT 55078
   UN AgroVoc c_5705

**Plusia** NALT 55080
   UN AgroVoc c_6030

**Rachiplusia** NALT 55083
   UN AgroVoc c_30271

**Sesamia** NALT 55086
   UN AgroVoc c_6990

**Thysanoplusia** NALT 55089
   UN AgroVoc c_33901

**Trichoplusia** NALT 55090
   UN AgroVoc c_7902

**Root nodules** NALT 55104
   UN AgroVoc c_27601

**Pearls** NALT 55159
   UN AgroVoc c_5644
   Library of Congress sh85099037

**Rubber** NALT 55160
   UN AgroVoc c_6678
   Library of Congress sh85115631

**Turpentine** NALT 55161
   UN AgroVoc c_8020

**Silicon** NALT 55167
   UN AgroVoc c_7061

**Tellurium** NALT 55169
   UN AgroVoc c_7653
   An element with atomic symbol Te, atomic number 52, and atomic weight 127.6. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using Google link
   Rotate the 3-D representation
   Look-up synonyms
   Look-up using CAS number link
**Ornithine** NALT 55199  
UN AgroVoc c_5421  
A naturally occurring amino acid found in meat, fish, dairy and eggs. Ornithine is one of the key reactants in the urea cycle that is responsible for 80% of the nitrogen excretion in the body. Ornithine enhances liver function and helps detoxify harmful substances. Source: NCI thesaurus link

Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link

**Taurine** NALT 55201  
UN AgroVoc c_33562  

**Stachyose** NALT 55204  
UN AgroVoc c_7358

**Rosin** NALT 55211  
UN AgroVoc c_13972  

**nordihydroguaiaretic acid** NALT 55220  
UN AgroVoc c_28473  
A naturally occurring antioxidant dicatechol originally derived from the creosote bush Larrea divaricatta with antipromoter, anti-inflammatory, and antineoplastic activities. Masoprocol directly inhibits activation of two receptor tyrosine kinases (RTKs), the insulin-like growth factor receptor (IGF-1R) and the c-erbB2/HER2/neu receptor, resulting in decreased proliferation of susceptible tumor cell populations. This agent may induce apoptosis in susceptible tumor cell populations as a result of disruption of the actin cytoskeleton in association with the activation of stress activated protein kinases (SAPKs). In addition, masoprocol inhibits arachidonic acid 5-lipoxygenase (5LOX), resulting in diminished synthesis of inflammatory mediators such as prostaglandins and leukotrienes. It may prevent leukocyte infiltration into tissues and the release of reactive oxygen species. Source: NCI thesaurus link

Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link

**Norflurazon** NALT 55221  
UN AgroVoc c_31443

**Quercus rubra** NALT 55244  
UN AgroVoc c_24696

**Nosema algerae** NALT 55258  
UN AgroVoc c_31182
Nosema apis  NALT 55259  
    UN AgroVoc c_31183  
Nosema bombycis  NALT 55260  
    UN AgroVoc c_31184  
Nosema locustae  NALT 55262  
    UN AgroVoc c_31185  
Nosema pyrausta  NALT 55263  
    UN AgroVoc c_31186  
Nostoc  NALT 55266  
    UN AgroVoc c_16266  
Nostoc flagelliforme  NALT 55268  
    UN AgroVoc c_35563  
Nostoc muscorum  NALT 55270  
    UN AgroVoc c_35564  
Nothofagus dombeyi  NALT 55279  
    UN AgroVoc c_34631  
Nothofagus fusca  NALT 55280  
    UN AgroVoc c_34632  
Nothofagus pumilio  NALT 55283  
    UN AgroVoc c_34634  
Nothofagus solandri  NALT 55284  
    UN AgroVoc c_34633  
Notonecta  NALT 55296  
    UN AgroVoc c_30683  
Orobanche  NALT 55316  
    UN AgroVoc c_5427  
Oryza punctata  NALT 55317  
    UN AgroVoc c_24354  
Saccharum spontaneum  NALT 55341  
    UN AgroVoc c_6729  
witchweed  NALT 55350  
    UN AgroVoc c_15381  
Nuarimol  NALT 55357  
    UN AgroVoc c_31444
Nucleoproteins  NALT 55381
  UN AgroVoc e_5256
  Library of Congress sh85093155
  Use for proteins which are conjugated with nucleic acids; for proteins found in the cell nucleus USE nuclear proteins. (source: NALT)

open reading frames  NALT 55390
  UN AgroVoc e_37476

Numerical taxonomy  NALT 55402
  UN AgroVoc e_5263

Nuphar  NALT 55404
  UN AgroVoc e_5264

Nymphaeaceae  NALT 55405
  UN AgroVoc e_5280

Peanut butter  NALT 55414
  UN AgroVoc e_5640

Nutation  NALT 55418
  UN AgroVoc e_12863
  Movement of plant parts caused by irregular growth, such as the circular movement detected in growing seedlings and the “searching” movement of growing young tendrils. (source: NALT)

Spodoptera exempta  NALT 55420
  UN AgroVoc e_30276

Vitamin deficiencies  NALT 55428
  UN AgroVoc e_8272

Nutrient film technique  NALT 55434
  UN AgroVoc e_32655

nutrient solutions  NALT 55446
  UN AgroVoc e_5271

Nutrient transport  NALT 55447
  UN AgroVoc e_5272

Pistachios  NALT 55473
  UN AgroVoc e_13413

Nymphaea  NALT 55485
  UN AgroVoc e_5279

Nypa fruticans  NALT 55494
  UN AgroVoc e_5283

Nysius  NALT 55495
  UN AgroVoc e_30665
oat straw  NALT 55527
        UN AgroVoc c_34065
Oceanography  NALT 55558
        UN AgroVoc c_12889
Oceans  NALT 55578
        UN AgroVoc c_12890
Library of Congress sh85093871
Ochroma pyramidale  NALT 55593
        UN AgroVoc c_5303
Ocimum tenuiflorum  NALT 55605
        UN AgroVoc c_331533
Octopus (genus)  NALT 55627
        UN AgroVoc c_5307
Octopus vulgaris  NALT 55628
        UN AgroVoc c_31163
Odobenidae  NALT 55639
        UN AgroVoc c_48891
Odobenus  NALT 55640
        UN AgroVoc c_5311
Odobenus rosmarus  NALT 55641
        UN AgroVoc c_48892
Odontoglossum  NALT 55649
        UN AgroVoc c_37143
Odontotermes  NALT 55659
        UN AgroVoc c_5314
Smell  NALT 55677
        UN AgroVoc c_14344
        Use for the physiological act or sensation of smelling; for the description of the characteristics of a product USE odors. (source: NALT)
        Smell; the faculty of smell, the sensation that results when olfactory receptors in the nose are stimulated by particular chemicals in gaseous form. Source: NCI thesaurus link
Oebalus  NALT 55678
        UN AgroVoc c_30691
Oebalus pugnax  NALT 55680
        UN AgroVoc c_30692
Oedaleus senegalensis  NALT 55690
        UN AgroVoc c_26588
Oenothera  NALT 55696
    UN AgroVoc c_32188
Dbpedia Oenothera

Oesophagostomum dentatum  NALT 55718
    UN AgroVoc c_27273

Oesophagostomum radiatum  NALT 55720
    UN AgroVoc c_27274

Oestrus ovis  NALT 55724
    UN AgroVoc c_30570

Palm kernels  NALT 55738
    UN AgroVoc c_25493

Oilseed cakes  NALT 55750
    UN AgroVoc c_5336

    The solid byproduct or residue obtained after extracting oil from oilseeds. (source: NALT)

Sunflower meal  NALT 55754
    UN AgroVoc c_35709

Sesamum indicum  NALT 55757
    UN AgroVoc c_6992

    Use for the sesame plant as a whole; For products of the sesame plant, such as oil or seed, consult
the “sesame products” hierarchy. (source: NALT)

Shorea robusta  NALT 55758
    UN AgroVoc c_26677

Safflower seed  NALT 55766
    UN AgroVoc c_25503

Sunflower seed  NALT 55768
    UN AgroVoc c_25507

Olacaceae  NALT 55770
    UN AgroVoc c_26283

Olaquindox  NALT 55772
    UN AgroVoc c_35834

Olea  NALT 55779
    UN AgroVoc c_5338

Olea europaea  NALT 55780
    UN AgroVoc c_5339

Olfactory organs  NALT 55792
    UN AgroVoc c_5344
Oligonychus  NALT 55799
  UN AgroVoc e_8552

Oligonychus ununguis  NALT 55802
  UN AgroVoc e_26591

Postia placenta  NALT 55806
  UN AgroVoc e_35514

Olpidium brassicae  NALT 55816
  UN AgroVoc e_33778

Omentum  NALT 55821
  UN AgroVoc e_12927

  A fold of peritoneum originating at the stomach and supporting the viscera. Source: NCI thesaurus link

Ommastrephes  NALT 55824
  UN AgroVoc e_5347

Ommastrephes bartrami  NALT 55825
  UN AgroVoc e_48714

Todarodes  NALT 55826
  UN AgroVoc e_7799

Onchocerca  NALT 55832
  UN AgroVoc e_5351

  Library of Congress sh88021643

Onchocerca cervicalis  NALT 55833
  UN AgroVoc e_31094

Onchocerca gutturosa  NALT 55834
  UN AgroVoc e_31095

Onchocerca lienalis  NALT 55835
  UN AgroVoc e_31096

Onchocerca volvulus  NALT 55837
  UN AgroVoc e_31097

Wuchereria  NALT 55840
  UN AgroVoc e_31099

Oncorhynchus mykiss  NALT 55842
  UN AgroVoc e_33779

Oncidium  NALT 55843
  UN AgroVoc e_5353
Oncobasidium NALT 55844
   UN AgroVoc c_24668

Oncobasidium theobromae NALT 55845
   UN AgroVoc c_24669

Oncorhynchus gorbuscha NALT 55851
   UN AgroVoc c_37039

Masu salmon NALT 55852
   UN AgroVoc c_12426
   Dbpedia Masu salmon

Oncorhynchus nerka NALT 55853
   UN AgroVoc c_39288

Thrips tabaci NALT 55872
   UN AgroVoc c_30396

Onthophagus NALT 55893
   UN AgroVoc c_30131

Onychiurus NALT 55897
   UN AgroVoc c_33782

vitellogenesis NALT 55918
   UN AgroVoc c_36322

Open pollination NALT 55929
   UN AgroVoc c_5363

Ophiostoma NALT 55946
   UN AgroVoc c_26593

Ophrys NALT 55953
   UN AgroVoc c_37145

Opiliaceae NALT 55955
   UN AgroVoc c_26282

Opisthorchis NALT 55957
   UN AgroVoc c_5369

Opius concolor NALT 55960
   UN AgroVoc c_29848

Opogona NALT 55965
   UN AgroVoc c_30219

Refractive index NALT 55970
   UN AgroVoc c_28412
Turbidity  NALT 55972
  UN AgroVoc c_15043
Opuntia polyacantha  NALT 55984
  UN AgroVoc c_26595
Orchis  NALT 56018
  UN AgroVoc c_37146
Paphiopedilum  NALT 56020
  UN AgroVoc c_15788
  Dbpedia Paphiopedilum
Phalaenopsis  NALT 56021
  UN AgroVoc c_5758
Renanthera  NALT 56030
  UN AgroVoc c_6500
  Dbpedia Renanthera
Vanda  NALT 56041
  UN AgroVoc c_8155
Origanum vulgare  NALT 56045
  UN AgroVoc c_34635
Quercus garryana  NALT 56047
  UN AgroVoc c_33841
Oreochromis aureus  NALT 56051
  UN AgroVoc c_35409
Oreochromis mossambicus  NALT 56052
  UN AgroVoc c_35412
Oreochromis niloticus  NALT 56053
  UN AgroVoc c_34687
Sweetbreads  NALT 56065
  UN AgroVoc c_7551
  The thymus glands of veal, young beef, lamb and pork used as food. (source: NALT)
Ribosomes  NALT 56075
  UN AgroVoc c_6597
Vacuoles  NALT 56077
  UN AgroVoc c_8140
Organomineral complexes  NALT 56085
  UN AgroVoc c_5391
Organobromine compounds  NALT 56094
    UN AgroVoc e_5394
Sewage  NALT 56103
    UN AgroVoc e_7007
Waste paper  NALT 56104
    UN AgroVoc e_28186
Parathion  NALT 56120
    UN AgroVoc e_31453
Phosalone  NALT 56121
    UN AgroVoc e_31463
Phosmet  NALT 56122
    UN AgroVoc e_31464
Tetrachlorvinphos  NALT 56124
    UN AgroVoc e_31504
Triazophos  NALT 56125
    UN AgroVoc e_31519
Phosphamidon  NALT 56130
    UN AgroVoc e_31465
Phorate  NALT 56131
    UN AgroVoc e_31462
Terbufos  NALT 56132
    UN AgroVoc e_31501
Oxydemeton methyl  NALT 56135
    UN AgroVoc e_31449
Profenofos  NALT 56137
    UN AgroVoc e_31473
Quinalphos  NALT 56138
    UN AgroVoc e_31485
Temephos  NALT 56140
    UN AgroVoc e_31499
Orgyia pseudotsugata  NALT 56145
    UN AgroVoc e_30234
replication origin  NALT 56147
    UN AgroVoc e_35807

A unique DNA sequence of a replicon at which DNA replication is initiated and proceeds bidirectionally or unidirectionally. It contains the sites where the first separation of the complementary
strands occurs, a primer RNA is synthesized, and the switch from primer RNA to DNA synthesis takes place. (source: NALT)

**Xenopsylla cheopis** NALT 56159
  UN AgroVoc e_30409

**Orius laevigatus** NALT 56183
  UN AgroVoc e_37787

**parrots** NALT 56193
  UN AgroVoc e_5594

**peafowl** NALT 56194
  UN AgroVoc e_5639

**Ornamental woody plants** NALT 56199
  UN AgroVoc e_34067

**woody plants** NALT 56206
  UN AgroVoc e_26837

**Ornithobacterium rhinotracheale** NALT 56211
  UN AgroVoc e_37074

**Ornithodoros coriaceus** NALT 56213
  UN AgroVoc e_30947

**Ornithodoros moubata** NALT 56215
  UN AgroVoc e_30948

**Ornithorhynchus** NALT 56229
  UN AgroVoc e_5424

**Orseolia oryzae** NALT 56237
  UN AgroVoc e_30463

**Orthotomicus** NALT 56265
  UN AgroVoc e_34467

**Tydeidae** NALT 56267
  UN AgroVoc e_15055

**Oryctes** NALT 56268
  UN AgroVoc e_5434

**Oryctes rhinoceros** NALT 56269
  UN AgroVoc e_24775

**Oryza** NALT 56271
  UN AgroVoc e_5435

**Oryza sativa** NALT 56277
  UN AgroVoc e_5438
Rice  NALT 56293
    UN AgroVoc c_6599
    Library of Congress sh85113862

Oryzaephilus  NALT 56294
    UN AgroVoc c_5439
    Library of Congress sh85095848

Oryzaephilus surinamensis  NALT 56295
    UN AgroVoc c_30164

Rice ragged stunt virus  NALT 56298
    UN AgroVoc c_16031

Oryzopsis  NALT 56302
    UN AgroVoc c_12980
    Dbpedia Oryzopsis

Spirulina  NALT 56326
    UN AgroVoc c_14516

Osmerus  NALT 56334
    UN AgroVoc c_5441

Osmotic pressure  NALT 56337
    UN AgroVoc c_5443
    The pressure required to prevent osmosis through a semipermeable membrane separating two solutions of differing solute concentrations. (source: NALT)

Osmoregulation  NALT 56341
    UN AgroVoc c_33521
    Library of Congress sh85095932

Percopsiformes  NALT 56352
    UN AgroVoc c_42025

Synbranchiformes  NALT 56353
    UN AgroVoc c_42252
    Dbpedia Synbranchiformes

Syngnathiformes  NALT 56354
    UN AgroVoc c_24711
    Dbpedia Syngnathiformes

Zeiformes  NALT 56355
    UN AgroVoc c_8509
    Dbpedia Zeiformes
Ostertagia  NALT 56360
    UN AgroVoc c_5445
Ostertagia ostertagi  NALT 56362
    UN AgroVoc c_31142
Teladorsagia circumcincta  NALT 56364
    UN AgroVoc c_35417
Ostrea  NALT 56365
    UN AgroVoc c_5447
Ostrinia furnacalis  NALT 56371
    UN AgroVoc c_24777
Tetanops  NALT 56379
    UN AgroVoc c_30574
Otodectes  NALT 56380
    UN AgroVoc c_23955
Otodectes cynotis  NALT 56381
    UN AgroVoc c_30916
zona pellucida  NALT 56390
    UN AgroVoc c_37308
Ovariectomy  NALT 56395
    UN AgroVoc c_5455
Ovarioles  NALT 56397
    UN AgroVoc c_35246
Oviposition deterrents  NALT 56413
    UN AgroVoc c_34873
Oxalis  NALT 56424
    UN AgroVoc c_5470
Oxalis tuberosa  NALT 56428
    UN AgroVoc c_5471
Photooxidation  NALT 56436
    UN AgroVoc c_34321
Redox potential  NALT 56439
    UN AgroVoc c_6482
Oxidative stability  NALT 56440
    UN AgroVoc c_35879
Quartz  NALT 56443
    UN AgroVoc c_36852
Silica

UN AgroVoc c_14283

A natural compound of silicon and oxygen found mostly in sand, Silica has three main crystalline varieties: quartz, tridymite, and cristobalite. Fine particulate silica dust from quartz rock causes over a long-term progressive lung injury, silicosis. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

Titanium dioxide

UN AgroVoc c_331330

Pralidoxime

UN AgroVoc c_37226

Oxycarenus

UN AgroVoc c_33387

Oxycarenus hyalinipennis

UN AgroVoc c_33388

Vaccinium oxycoccus

UN AgroVoc c_8138

Oxyopes

UN AgroVoc c_30885

Oxytenanthera

UN AgroVoc c_5480

Oxytocin

UN AgroVoc c_16193

Oxytocin (125 aa, ~13kDa) is encoded by the human OXT gene. This protein plays a role in smooth muscle contraction in both the mammary gland and uterus. Oxytocin also is involved in maternal-newborn bonding, cognition and many other psychological and physiological processes. Source: NCI thesaurus link

threadworms

UN AgroVoc c_14871

Passalurus

UN AgroVoc c_5615

Syphacia

UN AgroVoc c_31102

Pachynematus

UN AgroVoc c_32193
Pachyrhizus erosus  NALT 56495
   UN AgroVoc e_331163
Tetranychus pacificus  NALT 56515
   UN AgroVoc e_26720
Paclorbutrazol  NALT 56530
   UN AgroVoc e_24880
Paecilomyces fumosoroseus  NALT 56536
   UN AgroVoc e_37788
Paederus  NALT 56539
   UN AgroVoc e_30168
Paeonia  NALT 56556
   UN AgroVoc e_5500
Paeonia suffruticosa  NALT 56559
   UN AgroVoc e_35568
Pagrus  NALT 56564
   UN AgroVoc e_26600
Palaemon  NALT 56577
   UN AgroVoc e_5506
Palaemon serratus  NALT 56578
   UN AgroVoc e_46540
Palaemonetes  NALT 56579
   UN AgroVoc e_5507
Palaquium  NALT 56582
   UN AgroVoc e_5512
Panulirus  NALT 56600
   UN AgroVoc e_5543
Palometa (common name)  NALT 56615
   UN AgroVoc e_13068
Pammene  NALT 56618
   UN AgroVoc e_5521
Pampus  NALT 56622
   UN AgroVoc e_5523
Stromateidae  NALT 56623
   UN AgroVoc e_44878
Pan  NALT 56624
   UN AgroVoc e_331502


Panagrellus  NALT 56625  
UN AgroVoc c_35420

Panagrolaimus  NALT 56627  
UN AgroVoc c_35421

Pancreatitis  NALT 56642  
UN AgroVoc c_13073

Inflammation of the pancreas. Source: NCI thesaurus link

Pandalus  NALT 56644  
UN AgroVoc c_5528

Pandalus borealis  NALT 56645  
UN AgroVoc c_23956

Pandalus jordani  NALT 56646  
UN AgroVoc c_46424

Pandanus  NALT 56647  
UN AgroVoc c_5531

Pandemis  NALT 56650  
UN AgroVoc c_5532

Pandemis heparana  NALT 56651  
UN AgroVoc c_30375

Panicum antidotale  NALT 56664  
UN AgroVoc c_5535

Panicum miliaceum  NALT 56668  
UN AgroVoc c_5538

Panicum repens  NALT 56670  
UN AgroVoc c_5540

Panicum virgatum  NALT 56672  
UN AgroVoc c_37153

Panolis flammea  NALT 56691  
UN AgroVoc c_30267

Panulirus argus  NALT 56719  
UN AgroVoc c_46761

Panulirus cygnus  NALT 56720  
UN AgroVoc c_46767

Panulirus interruptus  NALT 56721  
UN AgroVoc c_46756

1.7. Glossary 965
Papaver  NALT 56726
         UN AgroVoc e_5545
Papaver bracteatum  NALT 56728
         UN AgroVoc e_26601
Toxotrypana curvicauda  NALT 56743
         UN AgroVoc e_30621
Papilio  NALT 56763
         UN AgroVoc e_5551
Pimiento  NALT 56770
         UN AgroVoc e_13370
Paragonimus  NALT 56803
         UN AgroVoc e_5559
Paragonimus kellicotti  NALT 56804
         UN AgroVoc e_31994
Paragonimus westermani  NALT 56807
         UN AgroVoc e_31995
Paralabrax  NALT 56812
         UN AgroVoc e_5562
Paralichthyidae  NALT 56814
         UN AgroVoc e_45775
Paralichthys  NALT 56815
         UN AgroVoc e_5563
Paralichthys dentatus  NALT 56816
         UN AgroVoc e_45802
Paramphistomum  NALT 56823
         UN AgroVoc e_5566
Paranasal sinuses  NALT 56825
         UN AgroVoc e_13109
Paranthrene  NALT 56830
         UN AgroVoc e_30339
         Library of Congress sh85097875
Paranthrene tabaniformis  NALT 56832
         UN AgroVoc e_32197
Parascaris equorum  NALT 56843
         UN AgroVoc e_31002
Superparasitism NALT 56857
    UN AgroVoc c_36327
Parasitism of a host by more parasites of the same species than can survive to maturity. It can be caused by one ovipositional event, or by subsequent ovipositions by the same female or by conspecific females. (source: NALT)
Paratrichodorus NALT 56868
    UN AgroVoc c_24673
Paratylrenchus NALT 56874
    UN AgroVoc c_31105
Vesula NALT 56879
    UN AgroVoc c_8202
Parelaphostrongylus NALT 56883
    UN AgroVoc c_24674
Parkia biglobosa NALT 56903
    UN AgroVoc c_33786
Parsnips NALT 56916
    UN AgroVoc c_13122
Pastinaca sativa NALT 56917
    UN AgroVoc c_5625
Porcine parvovirus NALT 56957
    UN AgroVoc c_16455
Pascopyrum NALT 56962
    UN AgroVoc c_35572
    Dbpedia Pascopyrum
Paspalum urvillei NALT 56965
    UN AgroVoc c_32203
Paspalum vaginatum NALT 56966
    UN AgroVoc c_5614
Passiflora NALT 56979
    UN AgroVoc c_5617
Passiflora edulis NALT 56983
    UN AgroVoc c_5618
Passiflora quadrangularis NALT 56988
    UN AgroVoc c_5619
Passion fruits NALT 56994
    UN AgroVoc c_13127

1.7. Glossary
Pasteurella  NALT 57010
  UN AgroVoc e_5622
  A genus of facultatively anaerobic, Gram negative, rod shaped bacterium in the phylum Proteobacteria and the family Pasteurellaceae. Source: NCI thesaurus link

Pasteurella gallinarum  NALT 57016
  UN AgroVoc e_34496

Viscosity  NALT 57054
  UN AgroVoc e_15219
  The resistance of a liquid to sheer forces and flow. Source: NCI thesaurus link

Sown pastures  NALT 57058
  UN AgroVoc e_7270

Patrinia  NALT 57073
  UN AgroVoc e_330114

Paullinia  NALT 57077
  UN AgroVoc e_5632
  Dbpedia Paullinia

Paulownia  NALT 57078
  UN AgroVoc e_13138
  Dbpedia Paulownia

Pavo  NALT 57087
  UN AgroVoc e_13139

Tobraviruses  NALT 57097
  UN AgroVoc e_32870

Sitona lineatus  NALT 57100
  UN AgroVoc e_30091

Peaches  NALT 57107
  UN AgroVoc e_5638

Pears  NALT 57125
  UN AgroVoc e_5645

Peat  NALT 57128
  UN AgroVoc e_5647
  Partially decomposed organic matter of a vegetative nature formed under wet conditions. (source: NALT)

Pecten  NALT 57134
  UN AgroVoc e_5649

Pecten maximus  NALT 57135
  UN AgroVoc e_31159
Pectinophora gossypiella  NALT 57146
  UN AgroVoc c_30201
Pectins  NALT 57150
  UN AgroVoc c_5651
Proboscidea (martyniaceae)  NALT 57159
  UN AgroVoc c_33820
Sesamum  NALT 57160
  UN AgroVoc c_6991
Pediculus  NALT 57163
  UN AgroVoc c_30843
Pediobius foveolatus  NALT 57168
  UN AgroVoc c_29883
Pediococcus acidilactici  NALT 57169
  UN AgroVoc c_37576
Pediococcus pentosaceus  NALT 57175
  UN AgroVoc c_37577
Peganum  NALT 57201
  UN AgroVoc c_37809
Peganum harmala  NALT 57202
  UN AgroVoc c_37810
Pelargonium capitatum  NALT 57205
  UN AgroVoc c_27282
Pelargonium graveolens  NALT 57206
  UN AgroVoc c_27284
Pelargonium hortorum  NALT 57207
  UN AgroVoc c_33788
Pelargonium roseum  NALT 57208
  UN AgroVoc c_27286
Pelargonium zonale  NALT 57209
  UN AgroVoc c_27288
Phalacrocoracidae  NALT 57218
  UN AgroVoc c_49193
Pellionia  NALT 57224
  UN AgroVoc c_5665
Penaeus  NALT 57241
  UN AgroVoc c_5668
Penaeus esculentus  NALT 57242  
UN AgroVoc e_46286

Penaeus monodon  NALT 57243  
UN AgroVoc e_24786

Penaeus semisulcatus  NALT 57244  
UN AgroVoc e_30855

Penicillamine  NALT 57251  
UN AgroVoc e_13197

3-Mercapto-D-valine. The most characteristic degradation product of the penicillin antibiotics. It is used as an antirheumatic and as a chelating agent in Wilson’s disease. (source: NALT)

A beta dimethyl analog of the amino acid cysteine. As a degradation product of penicillin antibiotics, penicillamine chelates with heavy metals and increases their urinary excretion. Possessing antineoplastic properties, penicillamine induces apoptosis by a p53-mediated mechanism and inhibits angiogenesis by chelating with copper, a cofactor for angiogenesis. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Penicillium brevicompactum  NALT 57253  
UN AgroVoc e_34549

Penicillium camembertii  NALT 57254  
UN AgroVoc e_36060

Penicillium chrysogenum  NALT 57255  
UN AgroVoc e_35990

Penicillium citrinum  NALT 57256  
UN AgroVoc e_33789

Penicillium digitatum  NALT 57259  
UN AgroVoc e_33790

Penicillium expansum  NALT 57260  
UN AgroVoc e_33791

Penicillium funiculosum  NALT 57262  
UN AgroVoc e_34548

Penicillium italicum  NALT 57265  
UN AgroVoc e_33792

Penicillium oxalicum  NALT 57268  
UN AgroVoc e_33793
Penicillium roquefortii NALT 57270
    UN AgroVoc c_33794

Penstemon NALT 57311
    UN AgroVoc c_35573
    Dbpedia Penstemon

Terminalia arjuna NALT 57320
    UN AgroVoc c_37820

Pentas NALT 57322
    UN AgroVoc c_5683

Piezodorus NALT 57327
    UN AgroVoc c_5869

Plautia NALT 57328
    UN AgroVoc c_30694

Podisus NALT 57329
    UN AgroVoc c_30696

Scotinophara NALT 57331
    UN AgroVoc c_6880

Pentatrichomonas NALT 57339
    UN AgroVoc c_13202

Pentosans NALT 57341
    UN AgroVoc c_5685

Peperomia NALT 57345
    UN AgroVoc c_5688
    Dbpedia Peperomia

Piperaceae NALT 57346
    UN AgroVoc c_5921
    Dbpedia Piperaceae

Solanum muricatum NALT 57351
    UN AgroVoc c_7219

synthetic peptides NALT 57374
    UN AgroVoc c_35979

Perch NALT 57410
    UN AgroVoc c_5694
    Dbpedia Perch

Perca fluviatilis NALT 57411
    UN AgroVoc c_33795
Polynemidae  NALT 57416  
UN AgroVoc c_44005  
Pomacentridae  NALT 57417  
UN AgroVoc c_43800  
Pomatomidae  NALT 57418  
UN AgroVoc c_42681  
Sillaginidae  NALT 57419  
UN AgroVoc c_42642  
Trachinidae  NALT 57420  
UN AgroVoc c_44367  
Xiphiidae  NALT 57421  
UN AgroVoc c_44827  
Percophidae  NALT 57422  
UN AgroVoc c_44341  
Zea perennis  NALT 57431  
UN AgroVoc c_27424  
Perennial weeds  NALT 57433  
UN AgroVoc c_5697  
Pericardium  NALT 57445  
UN AgroVoc c_5702  
Library of Congress sh85099851  
A conical membranous sac filled with serous fluid in which the heart as well as the roots of the aorta and other large blood vessels are contained. Source: NCI thesaurus link  
Periderm  NALT 57447  
UN AgroVoc c_5704  
Peridinium  NALT 57454  
UN AgroVoc c_33797  
Perineum  NALT 57466  
UN AgroVoc c_5706  
The area located between the anus and vulva in females, and anus and scrotum in males. Source: NCI thesaurus link  
Seasonal variation  NALT 57468  
UN AgroVoc c_24894  
Perlite  NALT 57483  
UN AgroVoc c_24125  
Wilting point  NALT 57491  
UN AgroVoc c_32626
Potassium permanganate NALT 57492
   UN AgroVoc e_24885

Permethrin NALT 57493
   UN AgroVoc e_31458
   A synthetic pyrethroid and neurotoxin. Permethrin affects the neuronal membrane by blocking the movement of sodium ions from outside to inside the neuronal cell membrane thereby disrupting the sodium channel current that regulates the polarization of the membrane. This leads to delayed repolarization and subsequent paralysis of the nervous system. Permethrin is used to eradicate parasites such as head lice, ticks and scabies from humans and animals. Source: NCI thesaurus link
   Reference: FDA UNII link
   Look-up using CAS number link

Peronophthora NALT 57498
   UN AgroVoc e_31816

Peronosclerospora NALT 57499
   UN AgroVoc e_31817

Peronosclerospora sorghi NALT 57500
   UN AgroVoc e_37713

Downy mildews NALT 57502
   UN AgroVoc e_10450

Peronospora destructor NALT 57503
   UN AgroVoc e_34551

Peronospora tabacina NALT 57505
   UN AgroVoc e_34550

Peronospora viciae NALT 57507
   UN AgroVoc e_34707

Phytophthora NALT 57515
   UN AgroVoc e_5844

Plasmopara NALT 57516
   UN AgroVoc e_16015

Pseudoperonospora NALT 57517
   UN AgroVoc e_6305

Pythium NALT 57518
   UN AgroVoc e_6394

Sclerophthora NALT 57519
   UN AgroVoc e_31819

Sclerospora NALT 57520
   UN AgroVoc e_6863
Trifolium resupinatum  NALT 57528  
UN AgroVoc c_7919

Rodent control  NALT 57549  
UN AgroVoc c_6631

Rodenticidal properties  NALT 57562  
UN AgroVoc c_36816

Petasites hybridus  NALT 57573  
UN AgroVoc c_16276

Procellariidae  NALT 57584  
UN AgroVoc c_49141  
Dbpedia Procellariidae  
Library of Congress sh85107131

Petromyzon  NALT 57588  
UN AgroVoc c_5749

Petromyzon marinus  NALT 57589  
UN AgroVoc c_38003

Petrova  NALT 57597  
UN AgroVoc c_30376

Petunia  NALT 57599  
UN AgroVoc c_5752

Peziza  NALT 57615  
UN AgroVoc c_31822

Rhizina  NALT 57616  
UN AgroVoc c_31823

Tirmania  NALT 57619  
UN AgroVoc c_31825

Phacelia tanacetifolia  NALT 57626  
UN AgroVoc c_33798

Phakopsora  NALT 57661  
UN AgroVoc c_5757

Phakopsora pachyrhizi  NALT 57662  
UN AgroVoc c_34554  
Fungal causal agent of soybean rust disease in Glycine max. (source: NALT)

Phalaris  NALT 57667  
UN AgroVoc c_5759
**Phalaris arundinacea**  NALT 57668  
UN AgroVoc c_16011

**Phanerochaete chrysosporium**  NALT 57672  
UN AgroVoc c_33799

**Sublimation**  NALT 57685  
UN AgroVoc c_28575

**Volatilization**  NALT 57686  
UN AgroVoc c_32705

**Phaseolin**  NALT 57687  
UN AgroVoc c_13282

Use for the plant storage protein produced by Phaseolus vulgaris; for the isoflavonoid synthesized in response to injury USE phaseollin. (source: NALT)

**Pseudomonas syringae**  NALT 57688  
UN AgroVoc c_26650

**Phaseolus acutifolius**  NALT 57689  
UN AgroVoc c_5764

**Phaseolus coccineus**  NALT 57690  
UN AgroVoc c_5765

**Vigna umbellata**  NALT 57697  
UN AgroVoc c_8246

**Tetrao**  NALT 57712  
UN AgroVoc c_27084  
Dbpedia Tetrao

**Phenacoccus**  NALT 57732  
UN AgroVoc c_5771

**Phenacoccus manihoti**  NALT 57736  
UN AgroVoc c_30827

**Tannins**  NALT 57744  
UN AgroVoc c_7606

**Vanillic acid**  NALT 57745  
UN AgroVoc c_34141

**Phenothrin**  NALT 57749  
UN AgroVoc c_31460

**Phenylbutazone**  NALT 57755  
UN AgroVoc c_13302
Philanthus  NALT 57774
    UN AgroVoc c_29942
Philanthus  NALT 57785
    UN AgroVoc c_30169
Philosamia  NALT 57788
    UN AgroVoc c_30337
Phlebotomus  NALT 57798
    UN AgroVoc c_13307
Phlebotomus papatasi  NALT 57803
    UN AgroVoc c_30583
Phleum  NALT 57810
    UN AgroVoc c_5785
Phleum pratense  NALT 57812
    UN AgroVoc c_5786
Phloem  NALT 57815
    UN AgroVoc c_5787
Vascular tissues  NALT 57816
    UN AgroVoc c_8161
Phloeosinus  NALT 57821
    UN AgroVoc c_30154
Phlox  NALT 57822
    UN AgroVoc c_34638
Phoca  NALT 57826
    UN AgroVoc c_13308
Phoca vitulina  NALT 57827
    UN AgroVoc c_48902
Phocoena  NALT 57830
    UN AgroVoc c_5788
Phoma sorghina  NALT 57841
    UN AgroVoc c_33804
Phoracantha semipunctata  NALT 57857
    UN AgroVoc c_24359
Polyphosphates  NALT 57878
    UN AgroVoc c_28511
Pyrophosphates  NALT 57879
    UN AgroVoc c_33261
**Phosphatidylinositol**  NALT 57885  
UN AgroVoc e_37285

**Phosphatidylserines**  NALT 57886  
UN AgroVoc e_35392

**Zinc phosphide**  NALT 57887  
UN AgroVoc e_8518

**Phosphoproteins**  NALT 57895  
UN AgroVoc e_26871

**Photoinhibition**  NALT 57947  
UN AgroVoc e_34074

The reduction in photosynthesis rate at high light intensities when the light energy exceeds the saturation point (maximum photosynthetic rate) and the normal electron flow is interrupted. (source: NALT)

**Phytochrome**  NALT 57950  
UN AgroVoc e_24063

A bluish conjugated plant pigment protein that exists in two forms, Pr and Pfr, that absorbs red light and then initiates physiological responses such as germination, growth and flowering. (source: NALT)

**photophosphorylation**  NALT 57951  
UN AgroVoc e_37461

ATP formation from ADP and phosphate in chloroplasts using light energy during photosynthesis. (source: NALT)

**Photoreceptors**  NALT 57953  
UN AgroVoc e_35258

**Photorhabdus luminescens**  NALT 57955  
UN AgroVoc e_35458

A species of facultatively anaerobic, Gram-negative, rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile using peritrichous flagella, non-spore forming, utilizes ribose and tyrosine, bioluminescent, catalase and lecinthinase positive, produces a red, pink or yellow pigment, utilizes citrate as its sole carbon and energy source, oxidase and Voges-Proskauer test negative, and does not reduce nitrate. P. luminescens is found in the intestinal lumen of entomogenous nematodes and is pathogenic to insects and humans. Source: NCI thesaurus link

**Phototoxins**  NALT 57970  
UN AgroVoc e_36466

Photosensitive agents, chemical substances that cause extreme skin sensitivity to the ultraviolet rays of the sun. (source: NALT)

**phytotoxins**  NALT 57971  
UN AgroVoc e_34323

Use for any toxins or poisons that are produced by a plant; For any substances that are toxic or poisonous to a plant USE phytotoxicity. (source: NALT)
Poisonous plants  NALT 57972
  UN AgroVoc c_6053
  Library of Congress sh85103946
Phototropism  NALT 57974
  UN AgroVoc c_13320
Phoxinus phoxinus  NALT 57975
  UN AgroVoc c_40455
Phragmidium  NALT 57976
  UN AgroVoc c_5813
Phragmites  NALT 57979
  UN AgroVoc c_23958
  Dbpedia Phragmites
Phyllonorycter blancardella  NALT 58006
  UN AgroVoc c_30212
Phyllophaga  NALT 58009
  UN AgroVoc c_5820
Phyllostachys  NALT 58016
  UN AgroVoc c_5821
  Dbpedia Phyllostachys
Phyllotreta cruciferae  NALT 58028
  UN AgroVoc c_30038
Phylloxera  NALT 58030
  UN AgroVoc c_13324
  Dbpedia Phylloxera
Viteus  NALT 58031
  UN AgroVoc c_8276
Physalis  NALT 58036
  UN AgroVoc c_5825
Physalis minima  NALT 58039
  UN AgroVoc c_26615
Physalospora  NALT 58048
  UN AgroVoc c_5826
Physarum  NALT 58049
  UN AgroVoc c_37097
Physarum polycephalum  NALT 58050
  UN AgroVoc c_37098
Physeter  NALT 58052
    UN AgroVoc c_5827
Porosity  NALT 58056
    UN AgroVoc c_13520
Shrinkage  NALT 58058
    UN AgroVoc c_25209
Salinity  NALT 58067
    UN AgroVoc c_6751
Solubility  NALT 58068
    UN AgroVoc c_7233
    The ability of a particular substance to dissolve in a particular solvent (yielding a saturated solution).
    Source: NCI thesaurus link
Specific gravity  NALT 58069
    UN AgroVoc c_7281
    The density (mass per unit volume) of any material divided by that of water at a standard temperature.
    Source: NCI thesaurus link
Stickiness  NALT 58070
    UN AgroVoc c_7409
Thermal conductivity  NALT 58071
    UN AgroVoc c_14852
rheology  NALT 58073
    UN AgroVoc c_28543
    Library of Congress sh85113619
    The branch of physics dealing with the deformation and flow of matter, and is particularly concerned
    with the properties of matter that determine its behavior when a mechanical force is exerted upon it.
    (source: NALT)
Ultrasonics  NALT 58074
    UN AgroVoc c_8044
Plant response  NALT 58082
    UN AgroVoc c_25446
tissue distribution  NALT 58087
    UN AgroVoc c_36639
Physocarpus  NALT 58089
    UN AgroVoc c_26617
Physocephalus  NALT 58093
    UN AgroVoc c_5840
Phytolacca  NALT 58110
    UN AgroVoc c_36302
Phytolacca americana  NALT 58112
    UN AgroVoc c_37620
Phytomonas  NALT 58117
    UN AgroVoc c_26618
Pseudomonas viridiflava  NALT 58127
    UN AgroVoc c_33834
Rhizobium lupini  NALT 58131
    UN AgroVoc c_27353
Phytophthora cactorum  NALT 58138
    UN AgroVoc c_27295
Phytophthora cambivora  NALT 58139
    UN AgroVoc c_33810
Phytophthora capsici  NALT 58140
    UN AgroVoc c_27296
Phytophthora cinnamomi  NALT 58141
    UN AgroVoc c_27297
Phytophthora citricola  NALT 58142
    UN AgroVoc c_27298
Phytophthora citrophthora  NALT 58143
    UN AgroVoc c_27299
Phytophthora cryptogea  NALT 58145
    UN AgroVoc c_27300
Phytophthora drechsleri  NALT 58146
    UN AgroVoc c_27301
Phytophthora erythroseptica  NALT 58147
    UN AgroVoc c_27302
Phytophthora fragariae  NALT 58148
    UN AgroVoc c_27303
Phytophthora megasperma  NALT 58152
    UN AgroVoc c_27305
Phytophthora nicotianae  NALT 58153
    UN AgroVoc c_27306
Phytophthora palmivora  NALT 58154
    UN AgroVoc c_27307
**Phytophthora porri** NALT 58155
  UN AgroVoc c_33811

**Phytophthora syringae** NALT 58158
  UN AgroVoc c_27308

**Phytoreovirus** NALT 58173
  UN AgroVoc c_35624

**Phytoseiulus** NALT 58180
  UN AgroVoc c_13346

**Phytoseiulus persimilis** NALT 58182
  UN AgroVoc c_30903

**Stigmasterol** NALT 58187
  UN AgroVoc c_7410

  A steroid derivative characterized by the hydroxyl group in position C-3 of the steroid skeleton, and unsaturated bonds in position 5-6 of the B ring, and position 22-23 in the alkyl substituent. Stigmasterol is found in the fats and oils of soybean, calabar bean and rape seed, as well as several other vegetables, legumes, nuts, seeds, and unpasteurized milk. Source: NCI thesaurus link

  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

**Phytotoxicity** NALT 58189
  UN AgroVoc c_5848

  Use for any substances that are toxic or poisonous to a plant; for any toxins or poisons that are produced by a plant USE phytotoxins. (source: NALT)

**Picea** NALT 58191
  UN AgroVoc c_5851

**Picea jezoensis** NALT 58194
  UN AgroVoc c_5855

**Picea obovata** NALT 58197
  UN AgroVoc c_5857

**Picea omorika** NALT 58198
  UN AgroVoc c_5858

**Picea rubens** NALT 58200
  UN AgroVoc c_5860

**Picea sitchensis** NALT 58201
  UN AgroVoc c_5861
Pichia pastoris  NALT 58238
   UN AgroVoc c_37093

Picidae  NALT 58239
   UN AgroVoc c_31913

woodpeckers  NALT 58241
   UN AgroVoc c_8434
   Dbpedia woodpeckers

Pieris brassicae  NALT 58253
   UN AgroVoc c_30294

Piezodorus guildinii  NALT 58261
   UN AgroVoc c_30693

Pikonema  NALT 58288
   UN AgroVoc c_29944

Pikonema alaskensis  NALT 58289
   UN AgroVoc c_29945

Pilea  NALT 58291
   UN AgroVoc c_5878

Pimelodidae  NALT 58303
   UN AgroVoc c_40915

Quercus palustris  NALT 58309
   UN AgroVoc c_24691

Pinus  NALT 58310
   UN AgroVoc c_5890

Pseudotsuga  NALT 58312
   UN AgroVoc c_6311
   Library of Congress sh85108310

Tsuga  NALT 58313
   UN AgroVoc c_7991
   Library of Congress sh85138338

Thaumetopoea pityocampa  NALT 58317
   UN AgroVoc c_30354

Pinus albicaulis  NALT 58324
   UN AgroVoc c_33391

Pinus brutia  NALT 58326
   UN AgroVoc c_5892
<table>
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<tr>
<th>Species</th>
<th>Code</th>
<th>UN AgroVoc</th>
<th>UN AgroVoc Code</th>
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<tbody>
<tr>
<td>Pinus canariensis</td>
<td>NALT 58327</td>
<td>c_33814</td>
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<tr>
<td>Pinus contorta</td>
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<td>c_5895</td>
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<td>Pinus mugo</td>
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<td>Pinus muricata</td>
<td>NALT 58340</td>
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<td>Pinus nigra</td>
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<td>Pinus oocarpa</td>
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<td>Pinus palustris</td>
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<td>Pinus radiata</td>
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<td>Pinus resinosa</td>
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<td>Pinus rigida</td>
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<td>c_23960</td>
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<td>Pinus roxburghii</td>
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<td>Pinus sibirica</td>
<td>NALT 58350</td>
<td>c_5910</td>
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Pinus sylvestris  NALT 58351
    UN AgroVoc c_5912

Pinus uncinata  NALT 58352
    UN AgroVoc c_33393

Pinus virginiana  NALT 58353
    UN AgroVoc c_32332

Woodlands  NALT 58391
    UN AgroVoc c_8433

Piper cubeba  NALT 58397
    UN AgroVoc c_24678

Piper nigrum  NALT 58401
    UN AgroVoc c_5919

Theileria  NALT 58412
    UN AgroVoc c_7708

Pisolithus  NALT 58418
    UN AgroVoc c_23961

Pisolithus tinctorius  NALT 58419
    UN AgroVoc c_23962

Pissodes strobi  NALT 58421
    UN AgroVoc c_30085

Pistacia vera  NALT 58424
    UN AgroVoc c_5930

Pistacia atlantica  NALT 58425
    UN AgroVoc c_33395

Pistacia lentiscus  NALT 58428
    UN AgroVoc c_23963

Wyeomyia smithii  NALT 58446
    UN AgroVoc c_30536

Pith  NALT 58448
    UN AgroVoc c_5935

Stele  NALT 58449
    UN AgroVoc c_7386

Madras thorn  NALT 58450
    UN AgroVoc c_25223

Pittosporaceae  NALT 58454
    UN AgroVoc c_26276
Pittosporum NALT 58455
   UN AgroVoc e_33396

Pityogenes NALT 58461
   UN AgroVoc e_5941

Pityophthorus NALT 58466
   UN AgroVoc e_5942

Placopecten magellanicus NALT 58469
   UN AgroVoc e_48010

Plagiorchis NALT 58474
   UN AgroVoc e_5946

Zooplankton NALT 58488
   UN AgroVoc e_15490

Free-floating, minute, often microscopic, animals of aquatic systems. They include protozoa, rotifers, crustaceans, and larvae of larger animals, such as annelids and fish, that feed on other plankton. (source: NALT)

Plant vascular system NALT 58527
   UN AgroVoc e_5984

Underground parts NALT 58529
   UN AgroVoc e_32357

wood anatomy NALT 58530
   UN AgroVoc e_8422

Seedless varieties NALT 58538
   UN AgroVoc e_33543

Stand characteristics NALT 58542
   UN AgroVoc e_34910

plant establishment NALT 58545
   UN AgroVoc e_5965

Planting NALT 58546
   UN AgroVoc e_5992

Pollarding NALT 58547
   UN AgroVoc e_6069

Seed treatment NALT 58549
   UN AgroVoc e_6940

Vernalization NALT 58551
   UN AgroVoc e_16059

The treatment of seeds, seedlings, bulbs, or other parts of a plant to cold conditions in order to shorten the vegetative period and promote flowering. (source: NALT)
**population density**  NALT 58556  
UN AgroVoc e_6112

**Ripening**  NALT 58557  
UN AgroVoc e_13933

Use for fruit, vegetables and grains; for cheese USE cheese ripening. (source: NALT)

**Rooting**  NALT 58558  
UN AgroVoc e_6649

**Sprouting**  NALT 58559  
UN AgroVoc e_15923

**Suckering**  NALT 58560  
UN AgroVoc e_7490

**Tillering**  NALT 58561  
UN AgroVoc e_7773

**Plant viruses**  NALT 58572  
UN AgroVoc e_5985

viruses that infect plant hosts. (source: NALT)

**Vegetable extracts**  NALT 58575  
UN AgroVoc e_14487

**Root exudates**  NALT 58577  
UN AgroVoc e_25070

**Shea butter**  NALT 58579  
UN AgroVoc e_37951

**Stem elongation**  NALT 58591  
UN AgroVoc e_7387

**plant pathology**  NALT 58596  
UN AgroVoc e_5974

**Storage organs**  NALT 58606  
UN AgroVoc e_7430

**Seed pathology**  NALT 58608  
UN AgroVoc e_24897

**Postharvest physiology**  NALT 58609  
UN AgroVoc e_24406

**Water use efficiency**  NALT 58615  
UN AgroVoc e_36790

A characteristic of plants which is measured by the amount of dry matter or harvestable product produced per unit of water used by the plant. (source: NALT)
Vicilin  NALT 58624
    UN AgroVoc c_35347
Stumps  NALT 58628
    UN AgroVoc c_24412
Root rots  NALT 58631
    UN AgroVoc c_16033
Root pressure  NALT 58656
    UN AgroVoc c_6644
Root water potential  NALT 58657
    UN AgroVoc c_37236
turgor  NALT 58658
    UN AgroVoc c_8012
Xylem water potential  NALT 58659
    UN AgroVoc c_37235
Plantago  NALT 58661
    UN AgroVoc c_5988
Plantago lanceolata  NALT 58665
    UN AgroVoc c_34743
Plantago media  NALT 58668
    UN AgroVoc c_92348
Plantago ovata  NALT 58670
    UN AgroVoc c_34642
Planting date  NALT 58680
    UN AgroVoc c_24065
Shrubs  NALT 58689
    UN AgroVoc c_26823
Wild plants  NALT 58692
    UN AgroVoc c_24126
Plasmodiophora  NALT 58699
    UN AgroVoc c_5994
Plasmodiophorales  NALT 58700
    UN AgroVoc c_31672
Plasmodiophora brassicae  NALT 58701
    UN AgroVoc c_34712
Polymyxa  NALT 58702
    UN AgroVoc c_24681
Spongospora  NALT 58703  
UN AgroVoc c_7323

Plasmodium berghei  NALT 58707  
UN AgroVoc c_31216

Plasmodium knowlesi  NALT 58717  
UN AgroVoc c_31218

Plasmodium vivax  NALT 58721  
UN AgroVoc c_31219

Plasmopara halstedii  NALT 58725  
UN AgroVoc c_34555

Plasmopara viticola  NALT 58726  
UN AgroVoc c_34557

Platanus  NALT 58736  
UN AgroVoc c_6001

Platichthys  NALT 58750  
UN AgroVoc c_6005

Platichthys flesus  NALT 58751  
UN AgroVoc c_45640

Platinum  NALT 58752  
UN AgroVoc c_33116  
Library of Congress sh85103305
An element with atomic symbol Pt, atomic number 78, and atomic weight 195.09. Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation

Look-up synonyms

Look-up using CAS number link

Platygaster  NALT 58762  
UN AgroVoc c_26626

Platynota  NALT 58766  
UN AgroVoc c_6008

Platynota idaeusalis  NALT 58767  
UN AgroVoc c_30377

Platyptilia  NALT 58773  
UN AgroVoc c_30298
**Plecoglossidae** NALT 58781
- UN AgroVoc c_39318

**Plecoglossus** NALT 58782
- UN AgroVoc c_35423

**Pleospora** NALT 58800
- UN AgroVoc c_31756

**Pleospora betae** NALT 58801
- UN AgroVoc c_34558

**Pleospora herbarum** NALT 58802
- UN AgroVoc c_34560

**Pleura** NALT 58808
- UN AgroVoc c_6014
  - Library of Congress sh85103493

**Pleuronectes** NALT 58817
- UN AgroVoc c_6015

**Psetta maxima** NALT 58819
- UN AgroVoc c_13640

**Pseudopleuronectes** NALT 58820
- UN AgroVoc c_6307

**Reinhardtius** NALT 58821
- UN AgroVoc c_6495

**Scophthalmidae** NALT 58822
- UN AgroVoc c_45751

**Soleidae** NALT 58823
- UN AgroVoc c_45667

**Pleurotus florida** NALT 58827
- UN AgroVoc c_37099

**Pleurotus ostreatus** NALT 58828
- UN AgroVoc c_34562

**Pleurotus sajor caju** NALT 58830
- UN AgroVoc c_34563

**Quelea** NALT 58840
- UN AgroVoc c_6407

**Plodia** NALT 58841
- UN AgroVoc c_6020
- Dbpedia Plodia
Plumeria rubra  NALT 58855
    UN AgroVoc e_6027

Plums  NALT 58858
    UN AgroVoc e_6028

Plutella  NALT 58859
    UN AgroVoc e_6031
    Library of Congress sh85103575

Pneumocystis  NALT 58865
    UN AgroVoc c_13470

Pneumocystis carinii  NALT 58866
    UN AgroVoc c_37005
    Previously indexed as a protozoan but it is now classified as a fungus. (source: NALT)

Poa  NALT 58870
    UN AgroVoc e_6035

Poa trivialis  NALT 58937
    UN AgroVoc e_6039

Pseudoroegneria  NALT 58950
    UN AgroVoc c_36437

Rottboellia  NALT 58953
    UN AgroVoc e_6668

Sasa  NALT 58954
    UN AgroVoc c_6817

Schizachyrium  NALT 58956
    UN AgroVoc c_34648

Secale  NALT 58958
    UN AgroVoc c_6918

Sehima  NALT 58959
    UN AgroVoc c_6948

Sorghastrum  NALT 58962
    UN AgroVoc c_7243

Spartina  NALT 58964
    UN AgroVoc c_7347

Sporobolus  NALT 58965
    UN AgroVoc e_7325

Stenotaphrum  NALT 58966
    UN AgroVoc c_7392
Stipa  NALT 58967
    UN AgroVoc c_7416

Stipagrostis  NALT 58968
    UN AgroVoc c_26699

Themeda  NALT 58970
    UN AgroVoc c_7710

Trachypogon  NALT 58971
    UN AgroVoc c_7843

Tripsacum  NALT 58974
    UN AgroVoc c_7940

Trisetum  NALT 58975
    UN AgroVoc c_7945

Triticosecale  NALT 58977
    UN AgroVoc c_33914
    Intergeneric hybrid of Triticum x Secale (wheat and rye). (source: NALT)

Triticum  NALT 58978
    UN AgroVoc c_7950

Vulpia  NALT 58981
    UN AgroVoc c_26744

Zizania  NALT 58982
    UN AgroVoc c_8523

Zoysia  NALT 58983
    UN AgroVoc c_24719

Podisus maculiventris  NALT 58990
    UN AgroVoc c_30697

Podocarpus  NALT 58997
    UN AgroVoc c_6043
    Dbpedia Podocarpus

Podosesia  NALT 58999
    UN AgroVoc c_30340

Podosphaera leucotricha  NALT 59000
    UN AgroVoc c_24680

Podospora  NALT 59001
    UN AgroVoc c_35992

Poecilia  NALT 59004
    UN AgroVoc c_35426
Poekilocerus pictus NALT 59007
    UN AgroVoc e_33398
Pogonias NALT 59008
    UN AgroVoc e_6046
Trichosanthes dioica NALT 59019
    UN AgroVoc e_331530
Ursus maritimus NALT 59025
    UN AgroVoc e_48919
Polianthes tuberosa NALT 59038
    UN AgroVoc e_331097
Polistes NALT 59042
    UN AgroVoc e_29960
Scent glands NALT 59050
    UN AgroVoc e_14116
Pollachius pollachius NALT 59051
    UN AgroVoc e_6065
Pollen tubes NALT 59057
    UN AgroVoc e_35047
Polyacrylamide NALT 59073
    UN AgroVoc e_28505
Spermidine NALT 59078
    UN AgroVoc e_33555
Primula NALT 59090
    UN AgroVoc e_13576
Polydactylus NALT 59098
    UN AgroVoc e_6079
Polyesters NALT 59104
    UN AgroVoc e_6082
Polyethylene NALT 59105
    UN AgroVoc e_28510
Polygalaceae NALT 59108
    UN AgroVoc e_26242
Polygonum NALT 59116
    UN AgroVoc e_13492
Dbpedia Polygonum
**Rheum**  NALT 59117  
UN AgroVoc c_6554

**Rumex**  NALT 59118  
UN AgroVoc c_13993

**Polypropylene**  NALT 59141  
UN AgroVoc c_24221

**Polyurethane**  NALT 59142  
UN AgroVoc c_28513

**silicones**  NALT 59143  
UN AgroVoc c_28561

**Polyphagotarsonemus**  NALT 59157  
UN AgroVoc c_6092

**Tarsonemidae**  NALT 59158  
UN AgroVoc c_7618

**Procyanidins**  NALT 59159  
UN AgroVoc c_15882

**Polyphylla**  NALT 59163  
UN AgroVoc c_31170

**Polypax**  NALT 59164  
UN AgroVoc c_30844

**tetraploids**  NALT 59168  
UN AgroVoc c_33113

**triploidy**  NALT 59169  
UN AgroVoc c_7939

A numerical chromosomal abnormality characterized by the presence of three complete sets of chromosomes. Source: NCI thesaurus link

**Polypodium**  NALT 59170  
UN AgroVoc c_35663  
Dbpedia Polypodium

**Proteoglycans**  NALT 59177  
UN AgroVoc c_26809

**Zymosan**  NALT 59180  
UN AgroVoc c_16619

**Polystigma**  NALT 59188  
UN AgroVoc c_31828
Pomacea canaliculata  NALT 59196
    UN AgroVoc e_33400
Pomatomus    NALT 59197
    UN AgroVoc e_6100
Pomegranates NALT 59198
    UN AgroVoc e_13505
Punica granatum NALT 59199
    UN AgroVoc e_6371
Pometia        NALT 59201
    UN AgroVoc e_26628
Poncirus       NALT 59205
    UN AgroVoc e_32770
Taxodium distichum NALT 59208
    UN AgroVoc e_37150
Popilia        NALT 59218
    UN AgroVoc e_6109
Population distribution  NALT 59220
    UN AgroVoc e_6113
population dynamics  NALT 59221
    UN AgroVoc e_6111
population growth  NALT 59222
    UN AgroVoc e_13513
Populus        NALT 59225
    UN AgroVoc e_6116
Salicaceae     NALT 59226
    UN AgroVoc e_6745
    Dbpedia Salicaceae
Populus alba    NALT 59228
    UN AgroVoc e_26632
Populus balsamifera  NALT 59229
    UN AgroVoc e_26633
Populus ciliata  NALT 59230
    UN AgroVoc e_26637
Populus deltoides NALT 59231
    UN AgroVoc e_6117
**Populus maximowiczii**  NALT 59234  
UN AgroVoc c_23965

**Populus simonii**  NALT 59235  
UN AgroVoc c_26642

**Populus tremuloides**  NALT 59236  
UN AgroVoc c_6118

**Porcellio**  NALT 59289  
UN AgroVoc c_30861

**Portlandia**  NALT 59340  
UN AgroVoc c_6123

**Portulaca**  NALT 59342  
UN AgroVoc c_13531

**Portulaca oleracea**  NALT 59344  
UN AgroVoc c_24682

**Portunus**  NALT 59348  
UN AgroVoc c_6127

**Portunus pelagicus**  NALT 59349  
UN AgroVoc c_47148

**Quercus stellata**  NALT 59356  
UN AgroVoc c_33854

**Rigor mortis**  NALT 59366  
UN AgroVoc c_29237

**Potamogeton**  NALT 59371  
UN AgroVoc c_13541

**Potato starch**  NALT 59403  
UN AgroVoc c_15512

**Potatoes**  NALT 59404  
UN AgroVoc c_13551

**Solanum tuberosum**  NALT 59405  
UN AgroVoc c_7221

**Potebniamyces**  NALT 59420  
UN AgroVoc c_31832

Rank of Genus, Cryptomycetaceae genera incertae sedis. (source: NALT)
Potentilla  NALT 59424
  UN AgroVoc c_13552
  Dbpedia Potentilla

Sanguisorba  NALT 59439
  UN AgroVoc c_35579
  Dbpedia Sanguisorba

Pullorum disease  NALT 59476
  UN AgroVoc c_16459

Pourouma  NALT 59485
  UN AgroVoc c_32771

Suipoxvirus  NALT 59494
  UN AgroVoc c_16610

Pratylenchus  NALT 59508
  UN AgroVoc c_6155

Radopholus  NALT 59509
  UN AgroVoc c_24798

Pratylenchus brachyurus  NALT 59511
  UN AgroVoc c_24791

Pratylenchus coffeae  NALT 59512
  UN AgroVoc c_24792

Pratylenchus crenatus  NALT 59513
  UN AgroVoc c_31110

Pratylenchus penetrans  NALT 59516
  UN AgroVoc c_24793

Pratylenchus scribneri  NALT 59517
  UN AgroVoc c_31111

Pratylenchus vulnus  NALT 59519
  UN AgroVoc c_24794

Pratylenchus zeae  NALT 59520
  UN AgroVoc c_24795

Prays  NALT 59528
  UN AgroVoc c_6157

Prays oleae  NALT 59529
  UN AgroVoc c_27315

Rain  NALT 59536
  UN AgroVoc c_6435
**Snow**  NALT 59537  
UN AgroVoc e_7124  

**Prednisolone**  NALT 59555  
UN AgroVoc e_34889  
A synthetic glucocorticoid with anti-inflammatory and immunomodulating properties. After cell surface receptor attachment and cell entry, prednisolone enters the nucleus where it binds to and activates specific nuclear receptors, resulting in an altered gene expression and inhibition of proinflammatory cytokine production. This agent also decreases the number of circulating lymphocytes, induces cell differentiation, and stimulates apoptosis in sensitive tumor cell populations. (NCI04)  
Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link  

**Prednisone**  NALT 59556  
UN AgroVoc e_13565  
A synthetic glucocorticoid with anti-inflammatory and immunomodulating properties. After cell surface receptor attachment and cell entry, prednisone enters the nucleus where it binds to and activates specific nuclear receptors, resulting in an altered gene expression and inhibition of proinflammatory cytokine production. This agent also decreases the number of circulating lymphocytes, induces cell differentiation, and stimulates apoptosis in sensitive tumor cell populations. Source: NCI thesaurus link  
Reference: FDA UNII link  
Look-up using Google link  
Rotate the 3-D representation  
Look-up synonyms  
Look-up using CAS number link  

**Prepared foods**  NALT 59574  
UN AgroVoc e_6170  
Food products that have been manufactured, often with the intention of making food preparation and meal delivery easier for food industry and private consumers. (source: NALT)  

**Primisulfuron**  NALT 59620  
UN AgroVoc e_36650  

**Prionoxystus robiniae**  NALT 59648  
UN AgroVoc e_30194  

**Pristidae**  NALT 59651  
UN AgroVoc e_38505  

**Pristiophoridae**  NALT 59653  
UN AgroVoc e_38424  

1.7. Glossary
Pristiphora  NALT 59654
UN AgroVoc c_6189

Procecidochares  NALT 59676
UN AgroVoc c_37811

Rolling  NALT 59697
UN AgroVoc c_25797

Procyon  NALT 59730
UN AgroVoc c_331202

Spodoptera eridania  NALT 59735
UN AgroVoc c_30275

Seeding production  NALT 59754
UN AgroVoc c_35313
production of plants propagated by seed to be sold and/or used as transplants. (source: NALT)

Selection criteria  NALT 59759
UN AgroVoc c_1078
The traits of the breeding plant or animal that are desirable in their progeny. (source: NALT)

Selection responses  NALT 59760
UN AgroVoc c_34099
Selection response is a measurement of the progress made by selection, which is, specifically, the difference between the mean values of the progeny of one generation and the mean of the next generation. (source: NALT)

Zein  NALT 59777
UN AgroVoc c_15480
A group of alcohol soluble seed storage proteins from protein bodies in endoplasmic reticulum of corn endosperm. (source: NALT)

Prometryn  NALT 59785
UN AgroVoc c_31474

TATA box  NALT 59792
UN AgroVoc c_37557
A consensus sequence found in the promoter region of most genes transcribed by eukaryotic RNA polymerase II. It is found about 25 nucleotides before the site of initiation of transcription and has the consensus sequence: 5’ TATAAAA 3’. This sequence seems to be important in determining accurately the position at which transcription is initiated. Source: NCI thesaurus link

Propylene glycol  NALT 59796
UN AgroVoc c_28527

Propionibacterium  NALT 59806
UN AgroVoc c_16020
A genus of gram-positive, anaerobic, rod-shaped bacteria in the Propionibacteriaceae family that is a normal skin saprophyte but that can cause chronic infections and abscesses. Source: NCI thesaurus link

**Propionibacterium freudenreichii**  NALT 59813  
UN AgroVoc e_37812

**Propionibacterium jensenii**  NALT 59814  
UN AgroVoc e_37813

**Prosimulium**  NALT 59862  
UN AgroVoc e_13611

**Prosimulium mixtum**  NALT 59863  
UN AgroVoc e_30598

**Prospis alba**  NALT 59864  
UN AgroVoc e_6231

**Prospis chilensis**  NALT 59865  
UN AgroVoc e_6232

**Prospis cineraria**  NALT 59866  
UN AgroVoc e_23970

**Prospis juliflora**  NALT 59867  
UN AgroVoc e_15891

**Tamarugo**  NALT 59868  
UN AgroVoc e_14783

**Prothogonimus**  NALT 59890  
UN AgroVoc e_6238

**Psorergatidae**  NALT 59891  
UN AgroVoc e_30937

**Pyemotidae**  NALT 59892  
UN AgroVoc e_30938

**Protea**  NALT 59900  
UN AgroVoc e_34745

**Recombinant proteins**  NALT 59947  
UN AgroVoc e_36920

**Proteus mirabilis**  NALT 59956  
UN AgroVoc e_37441

A Gram-negative, facultatively anaerobic bacterium with swarming motility, and urease activity. Source: NCI thesaurus link

Reference: FDA UNII link

Reference the NIH NCBI link

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1.7. Glossary
Proteus vulgaris  NALT 59958
UN AgroVoc e_37440
A species of facultatively anaerobic, Gram-negative, rod shaped bacteria assigned to the phylum Proteobacteria. This species is motile, indole, methyl red, and urease positive, hydrolyzes esculin, ferments glucose and amygdalin, but not mannitol or lactose, and produces hydrogen sulfide. P. vulgaris is part of the normal human and animal intestinal flora and is widespread in the environment, but can also be an opportunistic pathogen in humans causing nosocomial, urinary tract, and other wound infections. Source: NCI thesaurus link

Reference: FDA UNII link
Reference the NIH NCBI link

Protomyces  NALT 59964
UN AgroVoc e_31843

Protomycopsis  NALT 59965
UN AgroVoc e_31844

Protostrongylus  NALT 59970
UN AgroVoc e_6265

Rumen protozoa  NALT 59976
UN AgroVoc e_34098

Soil fauna  NALT 59977
UN AgroVoc e_7169

Trichomoniasis  NALT 59982
UN AgroVoc e_22558
Infections in birds and mammals produced by various species of Trichomonas. (source: NALT)

Topping  NALT 59998
UN AgroVoc e_25716
The practice of removing the top branches of a tree or shrub. (source: NALT)

Prunus africana  NALT 60005
UN AgroVoc e_331361

Prunus pumila  NALT 60011
UN AgroVoc e_32222

Pseudaulacaspis pentagona  NALT 60099
UN AgroVoc e_30815

Trachemys scripta  NALT 60105
UN AgroVoc e_49075

Pseudococcus  NALT 60128
UN AgroVoc e_6302

Rastrococcus  NALT 60129
UN AgroVoc e_34476
**Pseudomonas pseudoalcaligenes** NALT 60196
UN AgroVoc c_33833
A species of aerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile, non spore forming and able to use cyanide as a source of nitrogen. P. pseudoalcaligenes is a plant pathogen but may also be used for bioremediation. Source: NCI thesaurus link

**Pseudomonas fragi** NALT 60225
UN AgroVoc c_33828

**Pseudomonas corrugata** NALT 60232
UN AgroVoc c_33827

**Pseudomonas marginalis** NALT 60261
UN AgroVoc c_33832

**Pseudomonas fuscovaginae** NALT 60271
UN AgroVoc c_33829

**Xanthomonas oryzae** NALT 60288
UN AgroVoc c_24383

**Ralstonia** NALT 60332
UN AgroVoc c_37842
A genus of Gram negative, rod shaped bacterium assigned to the phylum Proteobacteria and the family Burkholderiaceae. Source: NCI thesaurus link

**Pseudoperonospora cubensis** NALT 60345
UN AgroVoc c_36068

**Pseudoperonospora humuli** NALT 60346
UN AgroVoc c_37817

**Pseudopleuronectes americanus** NALT 60348
UN AgroVoc c_45645

**Pseudorasbora parva** NALT 60354
UN AgroVoc c_40322

**Psila** NALT 60383
UN AgroVoc c_6317

**Psilotales** NALT 60386
UN AgroVoc c_13648

**Psophocarpus tetragonolobus** NALT 60395
UN AgroVoc c_6322

**Psorergates** NALT 60397
UN AgroVoc c_6328

**Psorophora columbiae** NALT 60402
UN AgroVoc c_30528
Psoroptes  NALT 60405
        UN AgroVoc e_13651
Psoroptes cuniculi  NALT 60406
        UN AgroVoc e_30917
Psoroptes ovis  NALT 60407
        UN AgroVoc e_30918
Thyridopteryx  NALT 60411
        UN AgroVoc e_30345
          Dbpedia Thyridopteryx
Psychotria  NALT 60420
        UN AgroVoc e_36456
Psylla  NALT 60434
        UN AgroVoc e_6329
Psylliodes chrysocephala  NALT 60436
        UN AgroVoc e_30040
Triozidae  NALT 60437
        UN AgroVoc e_30833
Pteris  NALT 60439
        UN AgroVoc e_37705
Pterocarpus santalinus  NALT 60443
        UN AgroVoc e_6341
Pteromalus  NALT 60447
        UN AgroVoc e_29934
Spalangia  NALT 60449
        UN AgroVoc e_29935
Pteropus  NALT 60456
        UN AgroVoc e_331406
Zoraptera  NALT 60464
        UN AgroVoc e_8533
          Dbpedia Zoraptera
Puccinia  NALT 60484
        UN AgroVoc e_6354
Puccinia allii  NALT 60485
        UN AgroVoc e_27322
Puccinia arachidis  NALT 60486
        UN AgroVoc e_27323
Puccinia chondrillina  NALT 60488
  UN AgroVoc c_27325
Puccinia graminis  NALT 60489
  UN AgroVoc c_27327
Puccinia helianthi  NALT 60490
  UN AgroVoc c_27328
Puccinia hordei  NALT 60491
  UN AgroVoc c_27329
Puccinia horiana  NALT 60492
  UN AgroVoc c_27330
Puccinia melanocephala  NALT 60493
  UN AgroVoc c_27331
Puccinia pelargonii zonalis  NALT 60494
  UN AgroVoc c_27332
Puccinia recondita  NALT 60496
  UN AgroVoc c_27334
  Library of Congress sh85108881
Puccinia dispersa  NALT 60498
  UN AgroVoc c_27335
Puccinia striiformis  NALT 60499
  UN AgroVoc c_27339
  Library of Congress sh85108884
Pyrrhocoris  NALT 60500
  UN AgroVoc c_27340
Pucciniastraum  NALT 60516
  UN AgroVoc c_31850
Puddling  NALT 60517
  UN AgroVoc c_35282
Pueraria phaseoloides  NALT 60519
  UN AgroVoc c_6357
Tetradontidae  NALT 60534
  UN AgroVoc c_45853
Pulex  NALT 60537
  UN AgroVoc c_30405
Spilopsyllus  NALT 60539
  UN AgroVoc c_30406
Xenopsylla  NALT 60540
   UN AgroVoc e_30408

Pulpwood  NALT 60548
   UN AgroVoc e_6365
   wood destined or suited for pulp manufacture, including standing or felled trees, logging residues, sawmill wastes, etc. (source: NALT)

Pumice  NALT 60563
   UN AgroVoc e_36851

Xanthines  NALT 60583
   UN AgroVoc e_16068

Vicia narbonensis  NALT 60585
   UN AgroVoc e_32263

Purshia  NALT 60590
   UN AgroVoc e_35577

Pyemotes  NALT 60600
   UN AgroVoc e_30939

Pylorus  NALT 60608
   UN AgroVoc e_13687
   The lower part of the stomach that connects to the duodenum. Source: NCI thesaurus link

Pyometra  NALT 60610
   UN AgroVoc e_13688
   Accumulation of pus in the uterus, normally caused by severe bacterial infection. (source: NALT)

Pyracantha  NALT 60611
   UN AgroVoc e_26655
   Dbpedia Pyracantha

Pyralis  NALT 60615
   UN AgroVoc e_6380

Pyrenophora graminea  NALT 60622
   UN AgroVoc e_34540

Pyrenophora teres  NALT 60624
   UN AgroVoc e_34565

Pyrenophora tritici repentis  NALT 60625
   UN AgroVoc e_34568

Resmethrin  NALT 60628
   UN AgroVoc e_31490
Trigonelline  NALT 60638
  UN AgroVoc c_34355

Pyridoxine  NALT 60643
  UN AgroVoc c_6386

Pyrilla perpusilla  NALT 60645
  UN AgroVoc c_30748

Uraci  NALT 60650
  UN AgroVoc c_8082

Pyrites  NALT 60651
  UN AgroVoc c_15922

Pyrolysis  NALT 60658
  UN AgroVoc c_26874
  Library of Congress sh85109347
  A chemical change brought about by heat alone in the absence of oxygen. Can lead to substances of smaller molecular weight or larger molecular weight than the original compound. (source: NALT)

Pythium aphanidermatum  NALT 60665
  UN AgroVoc c_27341

Pyrrhocoris apterus  NALT 60667
  UN AgroVoc c_30702

Pyrus  NALT 60671
  UN AgroVoc c_6390

Pyrus pyrifolia  NALT 60673
  UN AgroVoc c_32230

Pyrus ussuriensis  NALT 60675
  UN AgroVoc c_32232

Pythium butleri  NALT 60681
  UN AgroVoc c_27342

Pythium debaryanum  NALT 60683
  UN AgroVoc c_27343

Pythium graminicola  NALT 60684
  UN AgroVoc c_27344

Pythium irregulare  NALT 60686
  UN AgroVoc c_27345

Pythium myriotylum  NALT 60687
  UN AgroVoc c_27346
Pythium oligandrum  NALT 60688
   UN AgroVoc c_27347
Pythium splendens  NALT 60691
   UN AgroVoc c_27348
Pythium sylvaticum  NALT 60693
   UN AgroVoc c_33404
Pythium ultimum  NALT 60694
   UN AgroVoc c_27349
pythons  NALT 60696
   UN AgroVoc c_13700
Library of Congress sh85109382
quantitative trait loci  NALT 60703
   UN AgroVoc c_37974
Quassia  NALT 60724
   UN AgroVoc c_35698
Quercus acutissima  NALT 60736
   UN AgroVoc c_24684
Quercus alba  NALT 60737
   UN AgroVoc c_24685
Quercus coccifera  NALT 60739
   UN AgroVoc c_32233
Quercus coccinea  NALT 60740
   UN AgroVoc c_33836
Quercus dentata  NALT 60741
   UN AgroVoc c_33837
Quercus faginea  NALT 60742
   UN AgroVoc c_33840
Quercus falcata  NALT 60743
   UN AgroVoc c_24687
Quercus glauca  NALT 60744
   UN AgroVoc c_33842
Quercus havardii  NALT 60745
   UN AgroVoc c_33843
Quercus laevis  NALT 60748
   UN AgroVoc c_33846
Quercus mongolica  NALT 60751  
UN AgroVoc c_33848

Quercus nigra  NALT 60752  
UN AgroVoc c_24690

Quercus phellos  NALT 60753  
UN AgroVoc c_33850

Quercus pubescens  NALT 60754  
UN AgroVoc c_24694

Quercus pyrenaica  NALT 60755  
UN AgroVoc c_24695

Quercus serrata  NALT 60757  
UN AgroVoc c_33852

Quercus shumardii  NALT 60758  
UN AgroVoc c_33853

Quinapyramine  NALT 60792  
UN AgroVoc c_13713

Rabies  NALT 60805  
UN AgroVoc c_6416

A life-threatening viral infection caused by the neurotropic Rabies virus. It is transmitted to humans usually from a bite by an infected dog. The initial signs and symptoms include malaise, fever, and headache, followed by the central nervous system manifestations which include abrupt behavioral changes. Paralysis, lethargy, and coma follow the behavioral changes. Source: NCI thesaurus link

Radiotherapy  NALT 60817  
UN AgroVoc c_33260

Radishes  NALT 60840  
UN AgroVoc c_13735  
Library of Congress sh85110802

Raphanus sativus  NALT 60841  
UN AgroVoc c_6455

Radopholus similis  NALT 60842  
UN AgroVoc c_24799

Rafflesiacae  NALT 60844  
UN AgroVoc c_26228

Tropical rain forests  NALT 60861  
UN AgroVoc c_7976  
Dbpedia Tropical rain forests
Raja  NALT 60871
       UN AgroVoc c_6438
Rajidae  NALT 60873
       UN AgroVoc c_38513
Rana esculenta  NALT 60890
       UN AgroVoc c_49047
Rana pipiens  NALT 60891
       UN AgroVoc c_49056
Rana temporaria  NALT 60892
       UN AgroVoc c_49050
Randia  NALT 60898
       UN AgroVoc c_33856
Ranunculus  NALT 60909
       UN AgroVoc c_6452
       Dbpedia Ranunculus
Thalictrum  NALT 60910
       UN AgroVoc c_14842
       Dbpedia Thalictrum
Rubus idaeus  NALT 60937
       UN AgroVoc c_6687
Rastrelliger  NALT 60939
       UN AgroVoc c_6459
Raw sugar  NALT 60973
       UN AgroVoc c_36409
Siliqua patula  NALT 60976
       UN AgroVoc c_48335
Reaction wood  NALT 60984
       UN AgroVoc c_24890
Recurrent selection  NALT 61006
       UN AgroVoc c_27595
Recycling  NALT 61008
       UN AgroVoc c_6478
Water reuse  NALT 61009
       UN AgroVoc c_36345
Ribes rubrum  NALT 61015
       UN AgroVoc c_6591
**Tribolium castaneum** NALT 61019  
UN AgroVoc e_30175

**Solenopsis invicta** NALT 61022  
UN AgroVoc e_29902

**Smicronyx fulvus** NALT 61028  
UN AgroVoc e_30093

**Red wines** NALT 61029  
UN AgroVoc e_28614

**Vicia bengalensis** NALT 61031  
UN AgroVoc e_8217

**Sequoia sempervirens** NALT 61042  
UN AgroVoc e_34651

**White sugar** NALT 61045  
UN AgroVoc e_36411

**Solar energy** NALT 61072  
UN AgroVoc e_7222

**Wind power** NALT 61073  
UN AgroVoc e_8394

**Renibacterium salmoninarum** NALT 61074  
UN AgroVoc e_26659

**sporulation** NALT 61085  
UN AgroVoc e_26828

**Turtle culture** NALT 61090  
UN AgroVoc e_8022  
The cultivation of turtles for food or other purposes. (source: NALT)

**Resection** NALT 61106  
UN AgroVoc e_6517

**respiratory quotient** NALT 61123  
UN AgroVoc e_31887

**Swim bladder** NALT 61126  
UN AgroVoc e_15924

**Rhinitis** NALT 61130  
UN AgroVoc e_13903  
An inflammation of the mucous membrane lining the nose, usually associated with nasal discharge.  
Source: NCI thesaurus link
Sinusitis  NALT 61131
  UN AgroVoc c_16811
  An acute or chronic inflammatory process affecting the mucous membranes of the paranasal sinuses.
  Source: NCI thesaurus link

Tracheitis  NALT 61132
  UN AgroVoc c_14946
  Bacterial infectious process with formation of mucopurulent membranes affecting the trachea.
  Causative agents include Staphylococcus, Streptococcus, Haemophilus influenzae, Pseudomonas,
  and Klebsiella. Source: NCI thesaurus link

Resveratrol  NALT 61144
  UN AgroVoc c_36145
  A phytoalexin derived from grapes and other food products with antioxidant and potential chemo-
  preventive activities. Resveratrol induces phase II drug-metabolizing enzymes (anti-initiation activ-
  ity); mediates anti-inflammatory effects and inhibits cyclooxygenase and hydroperoxidase functions
  (anti-promotion activity); and induces promyelocytic leukemia cell differentiation (anti-progression
  activity), thereby exhibiting activities in three major steps of carcinogenesis. This agent may inhibit
  TNF-induced activation of NF-kappaB in a dose- and time-dependent manner. (NCI05) Source:
  NCI thesaurus link
  Reference: FDA UNII link
  Look-up using Google link
  Rotate the 3-D representation
  Look-up synonyms
  Look-up using CAS number link

Reticulitermes  NALT 61149
  UN AgroVoc c_6537

Reticulitermes speratus  NALT 61152
  UN AgroVoc c_36541

Rhabditis  NALT 61177
  UN AgroVoc c_31116

Rhabdocline  NALT 61180
  UN AgroVoc c_27350

Rhagoletis  NALT 61187
  UN AgroVoc c_6547

Rhagoletis cerasi  NALT 61188
  UN AgroVoc c_30616
  Library of Congress sh85113586

Rhagoletis completa  NALT 61189
  UN AgroVoc c_30617
Rhagoletis indifferentis  NALT 61190
    UN AgroVoc e_30618
Rhhamus   NALT 61196
    UN AgroVoc e_13901
Ziziphus   NALT 61197
    UN AgroVoc e_8525
Viscoelasticity   NALT 61207
    UN AgroVoc e_28616
    Library of Congress sh85143853
rhinoceroses   NALT 61217
    UN AgroVoc e_6557
Rhinocyllus conicus   NALT 61220
    UN AgroVoc e_30088
Rhipicephalus appendiculatus   NALT 61223
    UN AgroVoc e_30963
Rhipicephalus evertsi   NALT 61225
    UN AgroVoc e_30964
Rhizobium phaseoli   NALT 61245
    UN AgroVoc e_27355
Rhizoctonia cerealis   NALT 61268
    UN AgroVoc e_36070
Rhizoctonia fragariae   NALT 61269
    UN AgroVoc e_37818
Rhizoglyphus echinopus   NALT 61274
    UN AgroVoc e_30910
Rhizoglyphus robini   NALT 61275
    UN AgroVoc e_30911
Rhizomes   NALT 61276
    UN AgroVoc e_6565
Rhizophagus   NALT 61278
    UN AgroVoc e_31773
Rhizophora apiculata   NALT 61279
    UN AgroVoc e_34644
Rhizophora mangle   NALT 61280
    UN AgroVoc e_34643

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Rhizopus arrhizus  NALT 61286  
UN AgroVoc c_35516

Rhizopus oryzae  NALT 61288  
UN AgroVoc c_35518

Rhizopus stolonifer  NALT 61289  
UN AgroVoc c_33406

Rhodiola rosea  NALT 61300  
UN AgroVoc c_37963

Rhodnius  NALT 61303  
UN AgroVoc c_26661

Rhodnius prolixus  NALT 61304  
UN AgroVoc c_30704

Rhodobacter  NALT 61309  
UN AgroVoc c_37077

Rhodobacter capsulatus  NALT 61313  
UN AgroVoc c_37078

Rhodobacter sphaeroides  NALT 61314  
UN AgroVoc c_37079

Rhododendron obtusum  NALT 61391  
UN AgroVoc c_34646

Rhododendron simsii  NALT 61393  
UN AgroVoc c_34645

Rhodospirillum  NALT 61421  
UN AgroVoc c_27599

Rhodotorula rubra  NALT 61444  
UN AgroVoc c_34572

Rhyacionia  NALT 61481  
UN AgroVoc c_6579

Rhynchophorus palmarum  NALT 61484  
UN AgroVoc c_27358

Riboflavin  NALT 61497  
UN AgroVoc c_6593

An essential human nutrient that is a heat-stable and water-soluble flavin belonging to the vitamin B family. Riboflavin is a precursor of the coenzymes flavin mononucleotide (FMN) and flavin adenine dinucleotide (FAD). These coenzymes are of vital importance in normal tissue respiration, pyridoxine activation, tryptophan to niacin conversion, fat, carbohydrate, and protein metabolism, and
glutathione reductase mediated detoxification. Riboflavin may also be involved in maintaining erythrocyte integrity. This vitamin is essential for healthy skin, nails, and hair. Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Rice straw  NALT 61509
  UN AgroVoc c_16032

Tagosodes orizicolus  NALT 61512
  UN AgroVoc c_35609

Rickettsia  NALT 61536
  UN AgroVoc c_13925
  A genus of bacteria that causes typhus and spotted fevers in humans. (source: NALT)
  A genus of non-motile, Gram-negative, non-spore-forming, obligate intracellular parasitic bacteria in the phylum Proteobacteria. Source: NCI thesaurus link

Ridging  NALT 61569
  UN AgroVoc c_6603

Rill erosion  NALT 61575
  UN AgroVoc c_27001

Rimsulfuron  NALT 61576
  UN AgroVoc c_36925

Ripping (tillage)  NALT 61583
  UN AgroVoc c_36248

transfer RNA  NALT 61601
  UN AgroVoc c_7864
  The small RNA molecules, 73-80 nucleotides long, that function during translation to align amino acids at the ribosomes in a sequence determined by the mRNA (messenger RNA). There are about 30 different transfer RNAs. Each recognizes a specific codon set on the mRNA through its own anticodon and as aminoacyl tRNAs, each carries a specific amino acid to the ribosome to add to the elongating peptide chains. (source: NALT)
  A class of short adaptor RNAs that transfers a specific amino acid to a growing polypeptide chain at the ribosomal site of protein synthesis during translation. Each transfer RNA comprises a three-nucleotide sequence that is complementary to the triplet nucleotide coding sequence of an mRNA, conferring specificity to the amino acid being incorporated into the assembling protein. Source: NCI thesaurus link

Rutilus rutilus  NALT 61608
  UN AgroVoc c_40116
Squirrels  NALT 61624
  UN AgroVoc c_7344

Root cap  NALT 61633
  UN AgroVoc c_6640

Tubers  NALT 61640
  UN AgroVoc c_7998
  Use for the starchy storage organ of a plant which is a short and thickened subterranean stem or root (e.g. potatoes); For tubers that are typically cut for asexual propagation USE seed tubers. (source: NALT)

Soil temperature  NALT 61641
  UN AgroVoc c_7197

Sorbus  NALT 61679
  UN AgroVoc c_7242

Spiraea  NALT 61680
  UN AgroVoc c_14515

Trifolium hirtum  NALT 61685
  UN AgroVoc c_7913

Rosmarinus officinalis  NALT 61694
  UN AgroVoc c_6660

Rotenone  NALT 61713
  UN AgroVoc c_6665

Rotylenchulus reniformis  NALT 61721
  UN AgroVoc c_31058

Rubia  NALT 61739
  UN AgroVoc c_24700

Rubia cordifolia  NALT 61740
  UN AgroVoc c_27359

Uncaria  NALT 61744
  UN AgroVoc c_8053

Rubus phoenicolasius  NALT 61756
  UN AgroVoc c_6690

Rubus strigosus  NALT 61759
  UN AgroVoc c_6691

Ruditapes  NALT 61775
  UN AgroVoc c_36074

Ruditapes decussatus  NALT 61776
  UN AgroVoc c_48150
Ruditapes philippinarum  NALT 61777
   UN AgroVoc c_36075
Ruminococcus albus  NALT 61804
   UN AgroVoc c_37080
Ruta  NALT 61847
   UN AgroVoc c_6711
Swinglea  NALT 61851
   UN AgroVoc c_32253
Rye  NALT 61860
   UN AgroVoc c_14010
Secale cereale  NALT 61861
   UN AgroVoc c_6919
Sabal palmetto  NALT 61868
   UN AgroVoc c_33409
Saccharomyces uvarum  NALT 61891
   UN AgroVoc c_37716
Saccharum officinarum  NALT 61924
   UN AgroVoc c_6727
Stenotaphrum secundatum  NALT 61938
   UN AgroVoc c_34749
Salix  NALT 61956
   UN AgroVoc c_6754
Soil salinization  NALT 61970
   UN AgroVoc c_35321
Salix alba  NALT 61974
   UN AgroVoc c_24364
Salix babylonica  NALT 61975
   UN AgroVoc c_24365
Salmo  NALT 61984
   UN AgroVoc c_6755
Dbpedia Salmo
Salvelinus  NALT 62258
   UN AgroVoc c_6766
Dbpedia Salvelinus
Thymallus  NALT 62259
   UN AgroVoc c_16051

1.7. Glossary
Salvia leucophylla  NALT 62308
  UN AgroVoc c_33865
Salvia splendens  NALT 62309
  UN AgroVoc c_37312
Salvinia  NALT 62314
  UN AgroVoc c_16288
Samia  NALT 62332
  UN AgroVoc c_34688
Sand  NALT 62338
  UN AgroVoc c_6779
Soil stabilization  NALT 62345
  UN AgroVoc c_7171
Santalum album  NALT 62350
  UN AgroVoc c_23974
Sandy soils  NALT 62360
  UN AgroVoc c_6781
Synanthedon  NALT 62374
  UN AgroVoc c_7568
                    Library of Congress sh90001009
Santalum  NALT 62378
  UN AgroVoc c_23973
Staphyleaceae  NALT 62386
  UN AgroVoc c_26287
Sapogenins  NALT 62400
  UN AgroVoc c_6794
Vitellaria  NALT 62405
  UN AgroVoc c_37352
Saprolegnia  NALT 62409
  UN AgroVoc c_6797
Saprospira  NALT 62413
  UN AgroVoc c_6799
Sapwood  NALT 62415
  UN AgroVoc c_6800
Sarcocystis cruzi  NALT 62424
  UN AgroVoc c_31220
Sarcocystis tenella  NALT 62426
    UN AgroVoc c_31224

Wohlfahrtia  NALT 62432
    UN AgroVoc c_15382

Sarcoptes  NALT 62434
    UN AgroVoc c_14086

Sargassum  NALT 62443
    UN AgroVoc c_37593

Satureja hortensis  NALT 62455
    UN AgroVoc c_34647

Savannas  NALT 62470
    UN AgroVoc c_6825

    A tropical or subtropical biome, consisting mainly of coarse grasses with scattered shrubs and trees due to distinct wet and dry seasons; often a transitional zone between a grassland and a woodland. (source: NALT)

Sawdust  NALT 62479
    UN AgroVoc c_6827

Saxifraga  NALT 62484
    UN AgroVoc c_330569

    Dbpedia Saxifraga

Tupaiidae  NALT 62502
    UN AgroVoc c_331503

Scaphoideus titanus  NALT 62506
    UN AgroVoc c_33414

Scapteriscus borellii  NALT 62509
    UN AgroVoc c_37424

Scapteriscus vicinus  NALT 62510
    UN AgroVoc c_31941

Telenomus  NALT 62531
    UN AgroVoc c_27385

Scenedesmus  NALT 62533
    UN AgroVoc c_35581

Schima  NALT 62546
    UN AgroVoc c_26669

Schinus molle  NALT 62549
    UN AgroVoc c_33416
A parasitic infection caused by flukes of the genus Schistosoma. Signs and symptoms include fever, abdominal pain, eosinophilia and hepatosplenomegaly. If left untreated it may eventually cause liver damage leading to cirrhosis, bladder cancer and kidney failure. Source: NCI thesaurus link
1.7. Glossary

Sciara  NALT 62592
    UN AgroVoc c_34479

Scirtothrips  NALT 62605
    UN AgroVoc c_6859
    Library of Congress sh93006917

Sclerospora graminicola  NALT 62617
    UN AgroVoc c_32335

Sclerotinia homoeocarpa  NALT 62619
    UN AgroVoc c_27367

Sclerotinia minor  NALT 62620
    UN AgroVoc c_27368

Sclerotinia sclerotiorum  NALT 62621
    UN AgroVoc c_27369

Sclerotinia trifoliorum  NALT 62622
    UN AgroVoc c_27372

Sclerotium cepivorum  NALT 62625
    UN AgroVoc c_26672

Scolothrips  NALT 62633
    UN AgroVoc c_33418

Trypodendron  NALT 62634
    UN AgroVoc c_8475

Xylosandrus  NALT 62635
    UN AgroVoc c_30159

Scomber  NALT 62637
    UN AgroVoc c_6868

chub mackerel  NALT 62638
    UN AgroVoc c_37739

Scomberomorus  NALT 62639
    UN AgroVoc c_6870

Thunnus  NALT 62640
    UN AgroVoc c_7746

Scophthalmus  NALT 62643
    UN AgroVoc c_32745

Scorpaenidae  NALT 62645
    UN AgroVoc c_45161
    Dbpedia Scorpaenidae
Rock salmon (sebastes)  NALT 62646
  UN AgroVoc c_13944

Scrophularia  NALT 62658
  UN AgroVoc c_36434
  Dbpedia Scrophularia

Verbascum  NALT 62662
  UN AgroVoc c_16300

Veronica  NALT 62663
  UN AgroVoc c_15154

Scyliorhinus  NALT 62682
  UN AgroVoc c_6890
  Dbpedia Scyliorhinus

seabirds  NALT 62689
  UN AgroVoc c_331212

Spring  NALT 62717
  UN AgroVoc c_7336
  The season between the vernal equinox and the summer solstice. Source: NCI thesaurus link

Summer  NALT 62718
  UN AgroVoc c_7519
  The season between the summer solstice and the autumnal equinox. Source: NCI thesaurus link

Winter  NALT 62719
  UN AgroVoc c_8410
  The season between the winter solstice and the vernal equinox. Source: NCI thesaurus link

Skin glands  NALT 62721
  UN AgroVoc c_7099

Xylem  NALT 62734
  UN AgroVoc c_8471
  A vascular plant tissue that conducts water and minerals salts from the roots to the leaves. (source: NALT)

silt  NALT 62743
  UN AgroVoc c_331558

Doughs  NALT 62746
  UN AgroVoc c_26776

Seed set  NALT 62755
  UN AgroVoc c_36747
**Seed dressing** NALT 62758
   UN AgroVoc c_26820

**Seedbed preparation** NALT 62774
   UN AgroVoc c_6943

**selection index** NALT 62785
   UN AgroVoc c_24423

Prediction of the long term breeding objectives. (source: NALT)

**Selenomonas** NALT 62796
   UN AgroVoc c_6954

A genus of strictly anaerobic, Gram negative, crescent shaped bacterium assigned to the phylum Firmicutes and the family Veillonellaceae. Source: NCI thesaurus link

**Selenothrips** NALT 62812
   UN AgroVoc c_6955

**Senecio jacobaea** NALT 62837
   UN AgroVoc c_37289

**Sepia** NALT 62867
   UN AgroVoc c_6974

**Sepia officinalis** NALT 62868
   UN AgroVoc c_48605

**Septic shock** NALT 62870
   UN AgroVoc c_36492

A state of acute circulatory failure characterized by persistent arterial hypotension despite adequate fluid resuscitation or by tissue hypoperfusion unexplained by other causes. Source: NCI thesaurus link

**mammoth (tree)** NALT 62887
   UN AgroVoc c_15826

**Sequoiadendron** NALT 62889
   UN AgroVoc c_15824

**Serranus** NALT 62906
   UN AgroVoc c_6987

**Sesamia calamistis** NALT 62920
   UN AgroVoc c_34480

**Sesamia inferens** NALT 62921
   UN AgroVoc c_30273

**Sesamia nonagrioides** NALT 62922
   UN AgroVoc c_30274
Sesbania grandiflora  NALT 62927
    UN AgroVoc c_6995
Sesbania rostrata  NALT 62929
    UN AgroVoc c_32336
Sesia  NALT 62934
    UN AgroVoc c_6996
    Library of Congress sh85120375
Vitacea  NALT 62935
    UN AgroVoc c_30347
Setaria cervi  NALT 62939
    UN AgroVoc c_31098
Setosphaeria turcica  NALT 62956
    UN AgroVoc c_27374
Shade trees  NALT 62977
    UN AgroVoc c_25548
    A tall tree which provides shade at ground level due to its large canopy. (source: NALT)
Vitellaria paradoxa  NALT 62986
    UN AgroVoc c_15235
Wethers  NALT 62989
    UN AgroVoc c_8369
Sheep pox  NALT 62997
    UN AgroVoc c_24285
Ulmus pumila  NALT 63053
    UN AgroVoc c_26736
Sigmodon  NALT 63070
    UN AgroVoc c_37051
Whole crop silage  NALT 63074
    UN AgroVoc c_24915
Silene latifolia  NALT 63079
    UN AgroVoc c_36625
Silene vulgaris  NALT 63080
    UN AgroVoc c_36619
Zeoiltes  NALT 63089
    UN AgroVoc c_15928
Silty soils  NALT 63101
    UN AgroVoc c_7066
Siluridae  NALT 63102
    UN AgroVoc c_40719
    Dbpedia Siluridae

Silurus  NALT 63103
    UN AgroVoc c_35435

Silver  NALT 63105
    UN AgroVoc c_7068

Simazine  NALT 63117
    UN AgroVoc c_31491

Simetryn  NALT 63118
    UN AgroVoc c_31492

Simmondsia  NALT 63124
    UN AgroVoc c_32747

Simulium damnosum  NALT 63137
    UN AgroVoc c_30599

Simulium venustum  NALT 63144
    UN AgroVoc c_30600

Simulium vittatum  NALT 63146
    UN AgroVoc c_30601

single strain starters  NALT 63156
    UN AgroVoc c_35072

Trichechidae  NALT 63178
    UN AgroVoc c_48923

Sirex  NALT 63179
    UN AgroVoc c_7085

soil amendments  NALT 63193
    UN AgroVoc c_7159
    Library of Congress sh85124317

Sitodiplosis mosellana  NALT 63198
    UN AgroVoc c_30466

Skeletonema costatum  NALT 63203
    UN AgroVoc c_49463

Trifolium nigrescens  NALT 63245
    UN AgroVoc c_7916

Smilax  NALT 63246
    UN AgroVoc c_36078
Spartina alterniflora  NALT 63255  
     UN AgroVoc c_34748  
     Library of Congress sh85126334

Ulmus procera  NALT 63257  
     UN AgroVoc c_26735

Snake gourd  NALT 63266  
     UN AgroVoc c_14360

Softwood  NALT 63327  
     UN AgroVoc c_7154  
     Library of Congress sh86002922

Generally, one of the botanical groups of trees that have no vessels and in most cases have needlelike or scalelike leaves, the conifers, also the wood produced by such trees. The term has no reference to the actual hardness of the wood. (source: NALT)

Sogatella furcifera  NALT 63330  
     UN AgroVoc c_30745

Soil  NALT 63334  
     UN AgroVoc c_7156

Soil sampling  NALT 63345  
     UN AgroVoc c_25271

soil solution  NALT 63358  
     UN AgroVoc c_7192

Soil physics  NALT 63363  
     UN AgroVoc c_14400

Soil crusts  NALT 63371  
     UN AgroVoc c_26766

Wind erosion  NALT 63376  
     UN AgroVoc c_8393

Soil heating  NALT 63386  
     UN AgroVoc c_7174

soil water characteristics  NALT 63392  
     UN AgroVoc c_330770

Soil water potential  NALT 63393  
     UN AgroVoc c_7210

Soil water retention  NALT 63394  
     UN AgroVoc c_7212

Soil sterilization  NALT 63397  
     UN AgroVoc c_7194
soil mechanics NALT 63402
  UN AgroVoc c_7177
Soil morphology NALT 63408
  UN AgroVoc c_15699
Soil profiles NALT 63413
  UN AgroVoc c_14402
Subsoil NALT 63414
  UN AgroVoc c_7486
Soil structure NALT 63417
  UN AgroVoc c_7196
Soil resources NALT 63435
  UN AgroVoc c_7187
Soil surveys NALT 63437
  UN AgroVoc c_16551
Soil water deficit NALT 63463
  UN AgroVoc c_25307
Solanum NALT 63483
  UN AgroVoc c_7216
Withania NALT 63484
  UN AgroVoc c_32343
Solanum berthaultii NALT 63487
  UN AgroVoc c_26684
Solanum chacoense NALT 63490
  UN AgroVoc c_26685
Solanum commersonii NALT 63491
  UN AgroVoc c_33881
Solanum laciniatum NALT 63500
  UN AgroVoc c_26686
Solanum phureja NALT 63504
  UN AgroVoc c_36079
Dover sole NALT 63555
  UN AgroVoc c_10446
Solea senegalensis NALT 63556
  UN AgroVoc c_45679
Solenopsis geminata NALT 63559
  UN AgroVoc c_29901

1.7. Glossary
**Songbirds**

- **Sorosporium**
  - NALT 63612
  - UN AgroVoc c_31853

**Sphacelotheca reiliana**

- NALT 63614
- UN AgroVoc c_34575

**Xenopus laevis**

- NALT 63629
- UN AgroVoc c_49063

  A species of South African aquatic frog of the genus *Xenopus*. It is up to 12 cm long with a flattened head and body but no tongue. Its name derives from its three short claws on each of its hind feet. It is an important model organism in developmental biology. Source: [NCI thesaurus link](https://ncit.nci.nih.gov/ncitbrowser/term?term=Sphacelotheca_reiliana)

**Spalangia endius**

- NALT 63716
- UN AgroVoc c_29936

**Spartium junceum**

- NALT 63719
- UN AgroVoc c_26689

**Sparganothis**

- NALT 63726
- UN AgroVoc c_24374

**Sparus**

- NALT 63727
- UN AgroVoc c_26690

**Sphacelotheca**

- NALT 63765
- UN AgroVoc c_7288

**Tunstallia**

- NALT 63767
- UN AgroVoc c_31840

**Ustulina**

- NALT 63768
- UN AgroVoc c_31841

**Sphaerotheca fuliginea**

- NALT 63781
- UN AgroVoc c_34578

**Sphaerotheca pannosa**

- NALT 63784
- UN AgroVoc c_34579

**Sphagnum**

- NALT 63793
- UN AgroVoc c_24709

**Sphenophorus parvulus**

- NALT 63801
- UN AgroVoc c_30096

**Sphingomyelins**

- NALT 63817
- UN AgroVoc c_36870

**Zymomonas**

- NALT 63821
- UN AgroVoc c_37081
Sphaeroides  NALT 63844
    UN AgroVoc c_7290
    Dbpedia Sphaeroides

Sphyraena  NALT 63845
    UN AgroVoc c_7296

Spilometra  NALT 63849
    UN AgroVoc c_7302

Spilopsyllus cuniculi  NALT 63850
    UN AgroVoc c_30407

Spinacia oleracea  NALT 63857
    UN AgroVoc c_7304

Vertebrae  NALT 63860
    UN AgroVoc c_15155
    Dbpedia Vertebrae
    Library of Congress sh85142887

Spirocerca  NALT 63878
    UN AgroVoc c_7310

Spirocerca lupi  NALT 63879
    UN AgroVoc c_31120

Treponema  NALT 63907
    UN AgroVoc c_7891
    A genus of Gram-negative, motile, helically coiled bacteria in the phylum Spirochaetes. Source: NCI thesaurus link

Spiroplasma  NALT 63921
    UN AgroVoc c_15677

Spirulina maxima  NALT 63938
    UN AgroVoc c_49456

Spirulina subsalsa  NALT 63939
    UN AgroVoc c_49454

Spissistilus festinus  NALT 63941
    UN AgroVoc c_30738

Spisula solidissima  NALT 63943
    UN AgroVoc c_48250

Spongia  NALT 63958
    UN AgroVoc c_7322
Zoospores  NALT 63966
  UN AgroVoc e_35124

Xestia c nigrum  NALT 64004
  UN AgroVoc e_30281

Spring wheat  NALT 64010
  UN AgroVoc e_7337
  A general term for wheat sown in the early spring and harvested in the late summer or early autumn of the same year. (source: NALT)

Squalidae  NALT 64020
  UN AgroVoc e_38343
  Dbpedia Squalidae

Squalus  NALT 64021
  UN AgroVoc e_7341

Squatinidae  NALT 64022
  UN AgroVoc e_38432

Squalus acanthias  NALT 64023
  UN AgroVoc e_38355

Stomoxys calcitrans  NALT 64036
  UN AgroVoc e_30567

Stand density  NALT 64046
  UN AgroVoc e_35781
  The average total basal area per acre of a given stand. (source: NALT)

Uneven aged stands  NALT 64048
  UN AgroVoc e_28181
  A class of forest or stand composed of intermingled trees or groups of trees that differ markedly in age. Compare even-aged stands. (source: NALT)

Staphylococcus intermedius  NALT 64072
  UN AgroVoc e_34503
  A species of facultatively anaerobic, Gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is positive for coagulase, alkaline phosphatase, catalase and urease and negative for oxidase. It can ferment glucose, fructose, sucrose, mannose, trehalose, and glycerol but not arabinose, maltose, or xylose. S. intermedius is commensal of oral, nasal, and skin flora of dogs and other animals and is an opportunistic pathogen in both animals and humans. Source: NCI thesaurus link

Stemwood  NALT 64139
  UN AgroVoc e_28157

Stemphylium vesicarium  NALT 64141
  UN AgroVoc e_34580
Stolons  NALT 64142  
UN AgroVoc c_7421

Stenchaetothrips  NALT 64144  
UN AgroVoc c_33886

Stenella coeruleoalba  NALT 64145  
UN AgroVoc c_48988

Steneotarsonemus  NALT 64146  
UN AgroVoc c_7391

Stephanitis  NALT 64156  
UN AgroVoc c_30709

Stephanurus  NALT 64166  
UN AgroVoc c_7394

Stephanurus dentatus  NALT 64167  
UN AgroVoc c_31131

Sterculia  NALT 64168  
UN AgroVoc c_7396  
Dbpedia Sterculia

Theobroma  NALT 64170  
UN AgroVoc c_7712  
Dbpedia Theobroma

Triplochiton  NALT 64171  
UN AgroVoc c_7937

UHT milk  NALT 64183  
UN AgroVoc c_15068

Sterilized milk that is heated to a temperature of 280 degrees F for at least 2 seconds and packaged in aseptic containers so as not to require refrigeration. (source: NALT)

Stethorus punctum  NALT 64191  
UN AgroVoc c_26698

Stomatal conductance  NALT 64221  
UN AgroVoc c_37253

Stony soils  NALT 64223  
UN AgroVoc c_7425

Streptococcus equi  NALT 64249  
UN AgroVoc c_26703

A species of facultatively anaerobic, Gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is positive for Lancefield group C, beta hemolysis and arginine deaminase, negative for
catalase and can ferment sorbitol. S. equi can be isolated from many animals and is a pathogen that causes equine distemper and human nephritis. Source: NCI thesaurus link

**Wheat straw**  NALT 64251

UN AgroVoc e_16066

**Trifolium fragiferum**  NALT 64255

UN AgroVoc e_7912

**Street trees**  NALT 64264

UN AgroVoc e_35324

A tree planted along a street to provide shade or for ornamental purposes. (source: NALT)

**Strelitzia**  NALT 64266

UN AgroVoc e_33888

Dbpedia Strelitzia

**Strelitziaceae**  NALT 64267

UN AgroVoc e_33887

**Strelitzia juncea**  NALT 64268

UN AgroVoc e_33890

**Strelitzia reginae**  NALT 64269

UN AgroVoc e_33889

**Stylidae**  NALT 64277

UN AgroVoc e_14639

**Streptococcus bovis**  NALT 64290

UN AgroVoc e_26701

A species of facultatively anaerobic, Gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is positive for arginine deamination and negative for catalase, oxidase, hemolysis, growth in 6.5% NaCl and urease. It can ferment raffinose but not arabinose, mannitol, lactose or glycerol. S. bovis is found in the alimentary tract of ruminants and is a human pathogen that can cause bacteremia, sepsis or endocarditis. Source: NCI thesaurus link

**Streptococcus mutans**  NALT 64317

UN AgroVoc e_26705

**Streptococcus suis**  NALT 64334

UN AgroVoc e_26707

A species of facultatively anaerobic, Gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is beta glucuronidase and arginine deaminase positive, hydrolyzes esculin, alpha hemolytic, Lancefield groups R, S, and T positive, catalase and pyrrolidonylarylamidase negative and does not grow in 6.5% NaCl. It can ferment sucrose, lactose, glucose, galactose, maltose, salicin, trehalose, and inulin but not arabinose, mannitol, melibiose, ribose, or sorbitol. S. suis is found in pigs where it can cause cervical abscesses. Contact of infected pigs by humans can result in meningitis, septicemia, endocarditis, and deafness. Source: NCI thesaurus link
Streptococcus thermophilus  NALT 64335
  
  UN AgroVoc c_26708
  
  A species of facultatively anaerobic, Gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is alpha hemolytic, catalase and arginine deaminase negative, does not grow in 6.5% NaCl and does not hydrolyze esculin. It can ferment fructose, glucose, lactose, mannose and sucrose but not amygdalin, arabinose, cellobiose, inulin, maltose, mannitol, salicin, sorbitol, trehalose and xylose. S. thermophilus is found in milk and milk products, used to manufacture cheese and yogurt and is not known to be a human pathogen. Source: NCI thesaurus link

Streptococcus uberis  NALT 64337
  
  UN AgroVoc c_26709
  
  A species of facultatively anaerobic, Gram positive, cocci shaped bacteria in the phylum Firmicutes. This species is catalase negative, leucine aminopeptidase and pyrrolidonylarylamidase positive, grows in 6.5% NaCl and hydrolyzes esculin. It can ferment salicin, inulin, trehalose, mannitol, and sorbitol but not raffinose. S. uberis is found in a wide variety of environments and may cause mastitis in cows, but is not known to be a human pathogen. Source: NCI thesaurus link

Streptomyces  NALT 64373
  
  UN AgroVoc c_7450
  
  A genus of Gram-positive bacteria in the phylum Actinobacteria that contains over 500 separate species. Streptomyces spp. produce over 60% of all clinically relevant antibiotics, including antibacterial and antifungal agents. Source: NCI thesaurus link

Striga gesnerioides  NALT 65035
  
  UN AgroVoc c_32338

Striga hermonthica  NALT 65036
  
  UN AgroVoc c_32339

Trypodendron lineatum  NALT 65052
  
  UN AgroVoc c_15021

Strongylus  NALT 65059
  
  UN AgroVoc c_7461

Strongyloides  NALT 65060
  
  UN AgroVoc c_7460

Strongyloides ransomi  NALT 65061
  
  UN AgroVoc c_27383

Strongylus vulgaris  NALT 65067
  
  UN AgroVoc c_31126

Stylosanthes capitata  NALT 65090
  
  UN AgroVoc c_34656

Brazilian lucerne  NALT 65091
  
  UN AgroVoc c_9411

Townsville stylo  NALT 65092
  
  UN AgroVoc c_14939
Styrax  NALT 65097
       UN AgroVoc c_34658
Sugarcane juice  NALT 65159
       UN AgroVoc c_32708
Sus  NALT 65165
       UN AgroVoc c_331213
Sulfometuron  NALT 65197
       UN AgroVoc c_34915
Superphosphate  NALT 65239
       UN AgroVoc c_7521
Trypanosoma evansi  NALT 65260
       UN AgroVoc c_27404
Sus scrofa  NALT 65262
       UN AgroVoc c_14709
Swietenia macrophylla  NALT 65291
       UN AgroVoc c_32552
Xiphias gladius  NALT 65299
       UN AgroVoc c_44828
Synanthedon exitiosa  NALT 65316
       UN AgroVoc c_30341
Synanthedon pictipes  NALT 65317
       UN AgroVoc c_30343
Synanthedon tipuliformis  NALT 65319
       UN AgroVoc c_30344
Syngamus  NALT 65336
       UN AgroVoc c_7572
Syphacia obvelata  NALT 65367
       UN AgroVoc c_31103
Syrphus  NALT 65375
       UN AgroVoc c_30605
teratogens  NALT 65382
       UN AgroVoc c_7671
Triiodothyronine  NALT 65388
       UN AgroVoc c_26830

A T3 thyroid hormone normally synthesized and secreted by the thyroid gland in much smaller quantities than thyroxine (T4). Most T3 is derived from peripheral monodeiodination of T4 at the 5'
position of the outer ring of the iodothyronine nucleus. The hormone finally delivered and used by the tissues is mainly T3. (source: NALT)

A thyroid hormone containing 3 iodine atoms generally synthesized from levothyroxine, and has greater biological activity. Source: NCI thesaurus link

Tabanus  NALT 65389
    UN AgroVoc e_14767
Tabanus nigrovittatus  NALT 65391
    UN AgroVoc e_30607
Tacca  NALT 65399
    UN AgroVoc e_7584
Taenia  NALT 65410
    UN AgroVoc e_7589
Taeniothrips  NALT 65415
    UN AgroVoc e_7590
Tamaricaceae  NALT 65438
    UN AgroVoc e_16295
Tamarindus indica  NALT 65441
    UN AgroVoc e_7596
Xanthosoma sagittifolium  NALT 65457
    UN AgroVoc e_8460
Taphrina  NALT 65468
    UN AgroVoc e_7610
Tapirus  NALT 65471
    UN AgroVoc e_24521
Tarsonemus  NALT 65484
    UN AgroVoc e_7619
Torreya  NALT 65490
    UN AgroVoc e_14932
Taxodium  NALT 65493
    UN AgroVoc e_7629
Tectona grandis  NALT 65521
    UN AgroVoc e_7648
Teats  NALT 65524
    UN AgroVoc e_14813
Technetium  NALT 65526
    UN AgroVoc e_24905
Tectona  NALT 65534
    UN AgroVoc c_7647
Teladorsagia  NALT 65538
    UN AgroVoc c_32255
Telegryllus commodus  NALT 65540
    UN AgroVoc c_31938
Temperature profile  NALT 65552
    UN AgroVoc c_7659
Water temperature  NALT 65553
    UN AgroVoc c_16063
Tenebrio  NALT 65560
    UN AgroVoc c_7665
Tenebrio molitor  NALT 65561
    UN AgroVoc c_30174
Tenebroides  NALT 65564
    UN AgroVoc c_7666
Tephritis  NALT 65574
    UN AgroVoc c_30620
Toxotrypana  NALT 65577
    UN AgroVoc c_26727
Urophora  NALT 65578
    UN AgroVoc c_30622
Terbuthylazine  NALT 65586
    UN AgroVoc c_34131
Terbutryn  NALT 65587
    UN AgroVoc c_31502
Terfezia  NALT 65594
    UN AgroVoc c_31824
Terminalia catappa  NALT 65596
    UN AgroVoc c_7673
Terminalia ivorensis  NALT 65599
    UN AgroVoc c_26715
Terminalia superba  NALT 65600
    UN AgroVoc c_26716
Trinervitermes  NALT 65604
    UN AgroVoc c_7932
Zootermopsis NALT 65606
UN AgroVoc e_30637

Trionychidae NALT 65622
UN AgroVoc e_32578
Dbpedia Trionychidae

Tetragnatha NALT 65633
UN AgroVoc e_30887

Tetrameres NALT 65640
UN AgroVoc e_7688

Tetranychus NALT 65645
UN AgroVoc e_8555

Tetranychus urticae NALT 65648
UN AgroVoc e_26721

Teucrium chamaedrys NALT 65673
UN AgroVoc e_26725

Teucrium polium NALT 65675
UN AgroVoc e_26726

Thanasimus dubius NALT 65685
UN AgroVoc e_30044

Thaumetopoea NALT 65697
UN AgroVoc e_7705

Theileria annulata NALT 65702
UN AgroVoc e_31225

Theileria mutans NALT 65705
UN AgroVoc e_31226

Theileria parva NALT 65706
UN AgroVoc e_16414

Theileria sergenti NALT 65707
UN AgroVoc e_31227

Thelazia NALT 65710
UN AgroVoc e_7709

Red oat grass NALT 65714
UN AgroVoc e_13783

Theophylline NALT 65717
UN AgroVoc e_16089
A natural alkaloid derivative of xanthine isolated from the plants Camellia sinensis and Coffea arabica. Theophylline appears to inhibit phosphodiesterase and prostaglandin production, regulate calcium flux and intracellular calcium distribution, and antagonize adenosine. Physiologically, this agent relaxes bronchial smooth muscle, produces vasodilation (except in cerebral vessels), stimulates the CNS, stimulates cardiac muscle, induces diuresis, and increases gastric acid secretion; it may also suppress inflammation and improve contractility of the diaphragm. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms

Therioaphis trifoli**i** NALT 65721

UN AgroVoc c_30790

Thigmotropism NALT 65869

UN AgroVoc c_18963

A movement induced in sessile organisms in response to touch or contact stimuli, such as seen in leaves or tendrils of plants. (source: NALT)

Thiourea NALT 65872

UN AgroVoc c_7733

A white crystalline solid, both naturally occurring and synthetic, that is soluble in water, ammonium thiocyanate solution and ethanol. In the past, it was used as a photographic toning agent, a component of hair preparations and a dry cleaning agent. Currently, it is only used in animal glue liquefiers and silver tarnish removers. When heated to decomposition, thiourea emits toxic fumes of nitrogen oxides and sulfur oxides. Long-term exposure of humans to thiourea may cause bone marrow damage, resulting in reduced levels of red blood cells, white blood cells and/or platelets. It is reasonably anticipated to be a human carcinogen. (NCI05) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms

Thiouracil NALT 65932

UN AgroVoc c_7732

A sulfur-containing uracil. An established antithyroid drug and highly selective inhibitor of nitric oxide synthase (NOS), thiouracil also covalently binds to dopaquinone, produced by tyrosinase catalyzed oxidation of tyrosine, thereby selectively accumulating in de novo-synthesized melanin in overactive melanin-producing cells and providing a means to localize melanoma cells. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms

Look-up using CAS number link

**Thrips palmi**  NALT 65956

UN AgroVoc c_30395

**Thrombocytopenic purpura**  NALT 65959

UN AgroVoc c_16807

Purpura associated with a reduction in circulating blood platelets which can result from a variety of factors. Source: NCI thesaurus link

**Thryonomys**  NALT 65960

UN AgroVoc c_33900

**Thuja plicata**  NALT 65961

UN AgroVoc c_7744

**Thunnus albacares**  NALT 65969

UN AgroVoc c_44809

**Wikstroemia**  NALT 65978

UN AgroVoc c_24810

**Thymelicus lineola**  NALT 65979

UN AgroVoc c_30217

**Thymine**  NALT 65980

UN AgroVoc c_7750

**Thyridopteryx ephemeraeformis**  NALT 65986

UN AgroVoc c_30346

**Tilapia zillii**  NALT 66004

UN AgroVoc c_35437

**Tilia**  NALT 66005

UN AgroVoc c_7769

**Triumfetta**  NALT 66017

UN AgroVoc c_7960

**Tilletia**  NALT 66023

UN AgroVoc c_7774

**Tilletia tritici**  NALT 66026

UN AgroVoc c_24524

**Tineola**  NALT 66044

UN AgroVoc c_7784

**Vicia hirsuta**  NALT 66054

UN AgroVoc c_26738
Tipula  NALT 66057  
   UN AgroVoc c_7787

Titanium  NALT 66068  
   UN AgroVoc c_32704  
   An element with atomic symbol Ti, atomic number 22, and atomic weight 47.867. Source: NCI thesaurus link  
   Reference: FDA UNII link  
   Look-up using Google link  
   Rotate the 3-D representation  
   Look-up synonyms  
   Look-up using CAS number link

Tithonia diversifolia  NALT 66069  
   UN AgroVoc c_32258

Tocotrienols  NALT 66106  
   UN AgroVoc c_32610

Todarodes pacificus  NALT 66107  
   UN AgroVoc c_31164

Tolyposporium  NALT 66117  
   UN AgroVoc c_7804

Tolyposporium penicillariae  NALT 66118  
   UN AgroVoc c_32342

Tomato spotted wilt virus  NALT 66134  
   UN AgroVoc c_34133

Tomicus minor  NALT 66141  
   UN AgroVoc c_33905

Tortrix  NALT 66154  
   UN AgroVoc c_7819

Zeiraphera  NALT 66155  
   UN AgroVoc c_8510

Tortrix viridana  NALT 66156  
   UN AgroVoc c_30381

Torulopsis  NALT 66157  
   UN AgroVoc c_31619

Torymus  NALT 66159  
   UN AgroVoc c_29948
Toxascaris leonina  NALT 66172
UN AgroVoc c_31003

Toxocara canis  NALT 66190
UN AgroVoc c_31004

Toxoplasma gondii  NALT 66194
UN AgroVoc c_33438

Toxorhynchites amboinensis  NALT 66196
UN AgroVoc c_30530

Toxorhynchites brevipalpis  NALT 66197
UN AgroVoc c_30531

Toxorhynchites rutilus  NALT 66198
UN AgroVoc c_30532

Toxorhynchites splendens  NALT 66199
UN AgroVoc c_30533

Tungsten  NALT 66208
UN AgroVoc c_8006
Library of Congress sh85138607

Vanadium  NALT 66209
UN AgroVoc c_8154

Tracheids  NALT 66211
UN AgroVoc c_7837
Tracheids are elongated cells in the xylem, which conduct water and mineral salts in plants. Sometimes referred to as fibers, tracheids are more abundant and longer in length in softwoods than hardwoods. The longer length of softwood tracheids is significant to paper manufacture. (source: NALT)

Transforming growth factor  NALT 66245
UN AgroVoc c_36758
Transforming Growth Factors are a family of extracellular signaling peptides involved in cell growth stimulation. Found in hematopoietic tissue, various TGF-beta subtypes stimulate wound healing and may inhibit lymphopoiesis and myelopoiesis. TGF-alpha binds to EGFR and stimulates endothelial cell growth. Source: NCI thesaurus link

Zirconium  NALT 66253
UN AgroVoc c_16070

Tranzschelia  NALT 66262
UN AgroVoc c_31851

Trapa  NALT 66263
UN AgroVoc c_7876
okwa  NALT 66267
   UN  AgroVoc e_12921
Trema  NALT 66281
   UN  AgroVoc e_14976
Triatoma  NALT 66320
   UN  AgroVoc e_30705
Triatoma infestans  NALT 66321
   UN  AgroVoc e_30706
Uniconazole  NALT 66325
   UN  AgroVoc e_34359
Tribulus  NALT 66330
   UN  AgroVoc e_14979
Tribulus terrestris  NALT 66331
   UN  AgroVoc e_330099
Trichechus manatus  NALT 66332
   UN  AgroVoc e_48924
Trichinella  NALT 66336
   UN  AgroVoc e_7897
Trichinella spiralis  NALT 66338
   UN  AgroVoc e_31135
   Dbpedia Trichinella spiralis
Trichiurus  NALT 66341
   UN  AgroVoc e_7899
Trichuris  NALT 66344
   UN  AgroVoc e_7908
Trichodectes  NALT 66346
   UN  AgroVoc e_14981
Trichoderma hamatum  NALT 66349
   UN  AgroVoc e_33908
Trichodorus  NALT 66364
   UN  AgroVoc e_24712
Trichogramma  NALT 66366
   UN  AgroVoc e_16054
Trichogramma brassicae  NALT 66368
   UN  AgroVoc e_37823
Trichogramma chilonis  NALT 66370
UN AgroVoc c_29950

Trichogramma dendrolimi  NALT 66371
UN AgroVoc c_29951

Trichogramma evanescens  NALT 66372
UN AgroVoc c_29952

Trichogramma nubilale  NALT 66374
UN AgroVoc c_29955

Trichogramma pretiosum  NALT 66375
UN AgroVoc c_29956

Trichogrammatoida  NALT 66379
UN AgroVoc c_29957

Trichomonas  NALT 66382
UN AgroVoc c_7900

A genus of flagellate protozoa parasitic in birds and mammals, distinguished by the presence of four anterior flagella, an undulating membrane, and a trailing flagellum. Source: NCI thesaurus link

Tririchomonas  NALT 66383
UN AgroVoc c_7959

Tririchomonas foetus  NALT 66387
UN AgroVoc c_31177

Trichophyton mentagrophytes  NALT 66391
UN AgroVoc c_36568

Trichostrongylus  NALT 66404
UN AgroVoc c_7906

Trichostrongylus axei  NALT 66405
UN AgroVoc c_27389

Trichostrongylus colubriformis  NALT 66406
UN AgroVoc c_27390

Trichostrongylus vitrinus  NALT 66407
UN AgroVoc c_27391

Trichuris suis  NALT 66415
UN AgroVoc c_31145

Trichuris vulpis  NALT 66416
UN AgroVoc c_31146

Trifolium alpestre  NALT 66417
UN AgroVoc c_32260
Trioza  NALT 66439
    UN AgroVoc e_7934
Triplochiton scleroxylon  NALT 66444
    UN AgroVoc e_7938
Trisetum flavescens  NALT 66449
    UN AgroVoc e_7946
Triticum aestivum  NALT 66457
    UN AgroVoc e_7951
Triticum monococcum  NALT 66458
    UN AgroVoc e_7956
Triticum turgidum  NALT 66460
    UN AgroVoc e_7958
Trogoderma glabrum  NALT 66495
    UN AgroVoc e_30103
Trombicula  NALT 66500
    UN AgroVoc e_7963
Tropaeolum  NALT 66502
    UN AgroVoc e_7966
    Dbpedia Tropaeolum
Tropaeolum tuberosum  NALT 66503
    UN AgroVoc e_7968
Tropilaelaps clareae  NALT 66520
    UN AgroVoc e_30897
Trypanosoma  NALT 66528
    UN AgroVoc e_7987
Trypanosoma brucei  NALT 66529
    UN AgroVoc e_27400
Trypanosoma congoense  NALT 66530
    UN AgroVoc e_27401
Trypanosoma musculi  NALT 66532
    UN AgroVoc e_31179
Trypanosoma rangeli  NALT 66533
    UN AgroVoc e_27406
Trypanosoma theileri  NALT 66535
    UN AgroVoc e_27407
Trypanosoma vivax  NALT 66536
    UN AgroVoc c_27408
Tsuga heterophylla  NALT 66549
    UN AgroVoc c_7993
Tuber melanosporum  NALT 66569
    UN AgroVoc c_35521
Tubifex  NALT 66571
    UN AgroVoc c_30871
Urocystis  NALT 66574
    UN AgroVoc c_8106
Tuff  NALT 66575
    UN AgroVoc c_34356
Tulasnella  NALT 66578
    UN AgroVoc c_31846
Tursiops truncatus  NALT 66618
    UN AgroVoc c_48983
Tylenchus  NALT 66629
    UN AgroVoc c_31148
Tylenchulus  NALT 66631
    UN AgroVoc c_31150
Tylenchulus semipenetrans  NALT 66632
    UN AgroVoc c_31151
Typha  NALT 66637
    UN AgroVoc c_15058
Typhaceae  NALT 66638
    UN AgroVoc c_8030
    Dbpedia Typhaceae
Typhlodromus pyri  NALT 66643
    UN AgroVoc c_24714
Typhula idahoensis  NALT 66645
    UN AgroVoc c_27409
Typhula incarnata  NALT 66646
    UN AgroVoc c_27410
Typhula ishikariensis  NALT 66647
    UN AgroVoc c_23982
Ullucu  NALT 66679
    UN AgroVoc c_15072

Ulmus glabra  NALT 66683
    UN AgroVoc c_26732

Undaria pinnatifida  NALT 66720
    UN AgroVoc c_16298

Uromyces  NALT 66764
    UN AgroVoc c_8108

Ureter  NALT 66771
    UN AgroVoc c_8095
    The thick-walled tube that carries urine from each kidney to the bladder. Source: NCI thesaurus link

Urethra  NALT 66772
    UN AgroVoc c_8096
    The tube carrying urine from the bladder to outside of the body. Source: NCI thesaurus link

Uromyces appendiculatus  NALT 66786
    UN AgroVoc c_34583

Uromyces viciae fabae  NALT 66789
    UN AgroVoc c_35522

Ursus  NALT 66806
    UN AgroVoc c_15113

Urtica  NALT 66807
    UN AgroVoc c_15114

Urtica dioica  NALT 66808
    UN AgroVoc c_35595

Ustilago  NALT 66811
    UN AgroVoc c_8122

Ustilago scitaminea  NALT 66812
    UN AgroVoc c_27411

Ustilago segetum  NALT 66813
    UN AgroVoc c_34719

Ustilago striiformis  NALT 66814
    UN AgroVoc c_27412

Ustilago zeae  NALT 66815
    UN AgroVoc c_34724
Uterine prolapse NALT 66831
  UN AgroVoc c_15117
  The sliding of the uterus into the vaginal canal. It results from the weakening of the pelvic floor muscles and ligaments and is usually seen in postmenopausal women with several vaginal deliveries. Clinical manifestations include sensation of heaviness in the pelvis, urinary difficulties, and tissue protrusion from the vagina. Source: NCI thesaurus link

Uterine torsion NALT 66832
  UN AgroVoc c_8124

Vaccinium virgatum NALT 66843
  UN AgroVoc c_331315

Vaginal prolapse NALT 66862
  UN AgroVoc c_13599

Vaginitis NALT 66863
  UN AgroVoc c_15125
  A non-infectious or infectious inflammatory process affecting the vagina. Source: NCI thesaurus link

Vairimorpha necatrix NALT 66868
  UN AgroVoc c_31190

Valeriana NALT 66869
  UN AgroVoc c_35596
  Dbpedia Valeriana

Valerianella NALT 66874
  UN AgroVoc c_24715

Vanilla fragrans NALT 66881
  UN AgroVoc c_15127

Varanus NALT 66886
  UN AgroVoc c_25095

Varroa NALT 66888
  UN AgroVoc c_23983

Varroa jacobsoni NALT 66890
  UN AgroVoc c_23984
  Use for the ectoparasitic mite geographically restricted to Indonesia, host-specific for the honey bee Apis cerana, and incapable of reproducing in A. mellifera brood; For the widely distributed ectoparasitic mite of honey bee, Apis mellifera, USE Varroa destructor. (source: NALT)

Venus NALT 66926
  UN AgroVoc c_31162

Venturia canescens NALT 66931
  UN AgroVoc c_29919
Venturia pirina  NALT 66933
  UN AgroVoc c_33441
Verbena  NALT 66936
  UN AgroVoc c_35597
Vitex  NALT 66937
  UN AgroVoc c_32264
Verticillium albo atrum  NALT 66955
  UN AgroVoc c_35187
Verticillium dahliae  NALT 66957
  UN AgroVoc c_34585
Vesicular stomatitis  NALT 66967
  UN AgroVoc c_16826
wasps  NALT 66972
  UN AgroVoc c_29958
Vespa orientalis  NALT 66973
  UN AgroVoc c_29961
Vespula pensylvanica  NALT 66980
  UN AgroVoc c_29964
Veterinary dentistry  NALT 66986
  UN AgroVoc c_25141
Vibrio salmonicida  NALT 67018
  UN AgroVoc c_35880
Vicia cracca  NALT 67094
  UN AgroVoc c_8218
common wheat  NALT 67095
  UN AgroVoc c_15326
Vigna angularis  NALT 67108
  UN AgroVoc c_8231
Vigna parkeri  NALT 67109
  UN AgroVoc c_8241
Vigna radiata  NALT 67110
  UN AgroVoc c_8242
Vigna unguiculata  NALT 67111
  UN AgroVoc c_8247
Vigna vexillata  NALT 67112
  UN AgroVoc c_8251
Viola  NALT 67126
UN AgroVoc c_8254

vipers  NALT 67134
UN AgroVoc c_15208

Viscum  NALT 67154
UN AgroVoc c_8264

Vitis  NALT 67165
UN AgroVoc c_8279

Vitelligenins  NALT 67170
UN AgroVoc c_32703

Vitex negundo  NALT 67172
UN AgroVoc c_32265

Vitis aestivalis  NALT 67175
UN AgroVoc c_8280

Vitis cinerea  NALT 67178
UN AgroVoc c_26741

Vitis riparia  NALT 67179
UN AgroVoc c_26742

Vitis rupestris  NALT 67180
UN AgroVoc c_26743

Xylocoris flavipes  NALT 67219
UN AgroVoc c_30644

Waste reduction  NALT 67229
UN AgroVoc c_35349

Water conservation  NALT 67243
UN AgroVoc c_8315
Library of Congress sh85145542

Water harvesting  NALT 67244
UN AgroVoc c_25305

Water use  NALT 67246
UN AgroVoc c_16065

Water hardness  NALT 67253
UN AgroVoc c_25423

Winter wheat  NALT 67322
UN AgroVoc c_8412

1.7. Glossary
A general term for wheat sown in the fall, persisting through the winter as seedlings, and harvested the following spring or summer after it reaches full maturity. (source: NALT)

**Whey**  NALT 67327
UN AgroVoc c_8376

The portion of milk remaining after the fat and casein (curd) have been removed. It contains about 93.5% water and 6.5% lactose, protein, minerals, enzymes, water-soluble vitamins and traces of fat. (source: NALT)

**White wines**  NALT 67342
UN AgroVoc c_28612

**Wood chips**  NALT 67350
UN AgroVoc c_8423

**Zizania palustris**  NALT 67361
UN AgroVoc c_37151

**Wind direction**  NALT 67367
UN AgroVoc c_29583

**Wood wool**  NALT 67400
UN AgroVoc c_8431

Fine wood shavings, used for surgical dressings, binders for plaster, nesting materials for animals, insulating materials, and packing materials. (source: NALT)

**Wood flour**  NALT 67401
UN AgroVoc c_8425

Wood reduced to finely divided particles, approximately the same as those of cereal flours in size, appearance, and texture, and passing a 40 to 100 mesh screen. (source: NALT)

**Xanthomonas**  NALT 67457
UN AgroVoc c_8455

A genus of bacteria in the family Xanthomonadaceae, similar to Pseudomonas but producing a yellow pigment that is not soluble in water. Source: NCI thesaurus link

**Xylella**  NALT 67532
UN AgroVoc c_34504

**Xanthosoma violaceum**  NALT 67535
UN AgroVoc c_8461

**Xiphias**  NALT 67558
UN AgroVoc c_8466

**Xiphinema americanum**  NALT 67559
UN AgroVoc c_31063

**Xiphinema diversicaudatum**  NALT 67560
UN AgroVoc c_31064
Xiphinema index  NALT 67561
     UN AgroVoc c_31065

Yeast extracts  NALT 67586
     UN AgroVoc c_36892

Yersinia ruckeri  NALT 67599
     UN AgroVoc c_26751
     A species of facultatively anaerobic, Gram negative, rod shaped bacteria in the phylum Proteobacteria. This species is motile, positive for ornithine decarboxylase, lysine decarboxylase, and beta galactosidase and negative for indole, urease, and oxidase. It is able to ferment trehalose, mannitol, and maltose but not sucrose, cellobiose, sorbitol, inositol, rhamnose, raffinose, or melibiose. Y. ruckeri is found in aqueous environments and is the causative agent of redmouth in fish, but is not a known human pathogen. Source: NCI thesaurus link

Zamia  NALT 67621
     UN AgroVoc c_35601

Zeiraphera diniana  NALT 67647
     UN AgroVoc c_30382

Zingiber  NALT 67659
     UN AgroVoc c_8520

Zonocerus variegatus  NALT 67679
     UN AgroVoc c_31932

Zostera  NALT 67698
     UN AgroVoc c_32735

Zostera marina  NALT 67699
     UN AgroVoc c_8535

Zoysia matrella  NALT 67700
     UN AgroVoc c_24721

Zygophyllum  NALT 67707
     UN AgroVoc c_32345

Biodiesel  NALT 67732
     UN AgroVoc c_35013
     A biofuel for use in diesel engines produced through the transesterification of organically-derived oils or fats combined with alcohol (ethanol or methanol) in the presence of a catalyst. It may be used either as a replacement for or as a component of diesel fuel. (source: NALT)

Bullocks  NALT 67757
     UN AgroVoc c_1147
     Young bulls under 24 months of age. (source: NALT)

Capon  NALT 67758
     UN AgroVoc c_1277
Neutered male chickens. (source: NALT)

**Steinernema riobravis**  NALT 67782
  UN AgroVoc e_37445

**Milk ring test**  NALT 67797
  UN AgroVoc e_16780

**Fillies**  NALT 67827
  UN AgroVoc e_10844
  Female horses less than three years old. (source: NALT)

**Colts**  NALT 67829
  UN AgroVoc e_10019
  Male horses less than three years old. (source: NALT)

**Fruit cracking**  NALT 67851
  UN AgroVoc e_32457
  A physiological disorder common in many fruit crops, especially tomato (Lycopersicon esculentum). The pericarp, or skin, of the fruit develops cracks mainly because the fruit contents absorb water faster than the expansion of the fruit wall. (source: NALT)

**Haylage**  NALT 67930
  UN AgroVoc e_24036
  Low-moisture silage (35-55% moisture). Grass and legume crops are cut and wilted in the field to a lower moisture level than normal for grass silage, but the crop is not sufficiently dry for baling. (source: NALT)

**Anarhichas lupus**  NALT 67956
  UN AgroVoc e_33606

**Seriola dumerili**  NALT 67961
  UN AgroVoc e_42771

**Istiophorus platypterus**  NALT 67969
  UN AgroVoc e_44816

**Ocyurus chrysurus**  NALT 67972
  UN AgroVoc e_42913

**Morone americana**  NALT 67974
  UN AgroVoc e_42518

**Pomatomus saltatrix**  NALT 67978
  UN AgroVoc e_42682

**Pogonias cromis**  NALT 67982
  UN AgroVoc e_43158

**Menidia menidia**  NALT 67998
  UN AgroVoc e_42164
Dorosoma cepedianum  NALT 68003
    UN AgroVoc c_39057
Sardinella aurita  NALT 68005
    UN AgroVoc c_39038
Sardinops sagax  NALT 68007
    UN AgroVoc c_39050
Misgurnus  NALT 68010
    UN AgroVoc c_33380
Misgurnus anguillicaudatus  NALT 68011
    UN AgroVoc c_33382
    Dbpedia Misgurnus anguillicaudatus
Notemigonus crysoleucas  NALT 68013
    UN AgroVoc c_40206
Semotilus atromaculatus  NALT 68015
    UN AgroVoc c_40301
Tinca tinca  NALT 68017
    UN AgroVoc c_40073
Molva molva  NALT 68027
    UN AgroVoc c_41479
Culaea inconstans  NALT 68031
    UN AgroVoc c_41677
Paralichthys californicus  NALT 68039
    UN AgroVoc c_45800
Atheresthes stomias  NALT 68042
    UN AgroVoc c_45608
Platichthys stellatus  NALT 68044
    UN AgroVoc c_45642
Reinhardtius hippoglossoides  NALT 68047
    UN AgroVoc c_45605
rice cake  NALT 68071
    UN AgroVoc c_24231
port wine  NALT 68086
    UN AgroVoc c_13522
anatoxins  NALT 68127
    UN AgroVoc c_35967
Yarrowia NALT 68176
UN AgroVoc c_27628
A genus of yeasts in the family Dipodascaceae and phylum Ascomycota. Source: NCI thesaurus link

Yarrowia lipolytica NALT 68177
UN AgroVoc c_27629
A dimorphic yeast in the phylum Ascomycota. This species is strictly aerobic, degrades hydrophobic substrates, assimilates glucose, fructose and mannose, and utilizes ethanol and glycerol as carbon sources. Y. lipolytica is a biocatalyst and used commercially in biotransformation to catalyze hydrolysis, esterification, interesterification and transesterification reactions. It is also used for the production of citric acid. Source: NCI thesaurus link

Water power NALT 68237
UN AgroVoc c_8322
Use for the electrical or mechanical energy harnessed from the action of falling or flowing water or due to water temperature differentials; For the generation of electric power generation usually from water released in controlled amounts though a system of turbines USE hydroelectric power. (source: NALT)

Vinyl chloride NALT 68278
UN AgroVoc c_28290
Library of Congress sh85143414
A chlorinated hydrocarbon occurring as a colorless, highly flammable gas with a mild, sweet odor that may emit toxic fumes of carbon dioxide, carbon monoxide, hydrogen chloride and phosgene when heated to decomposition. Vinyl chloride is primarily used to make polyvinyl chloride to manufacture plastics. Exposure to this substance affects the central and peripheral nervous system and causes liver damage. Prolonged exposure to vinyl chloride can cause a set of symptoms that is characterized by Raynaud’s phenomenon, joint and muscle pain and scleroderma-like skin changes. Vinyl chloride is a known human carcinogen and is associated with an increased risk of developing liver cancer, predominantly angiosarcoma of the liver, but is also linked to brain and lung cancer as well as cancer of the lymphatic and hematopoietic system. (NCI05) Source: NCI thesaurus link

Reference: FDA UNII link
Look-up using Google link
Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

Phoxim NALT 68282
UN AgroVoc c_31466

Coenzymes NALT 68283
UN AgroVoc c_1719

seed collection NALT 68364
UN AgroVoc c_6930
Use for the small-scale harvesting of seed; For collecting and harvesting of seed by insects or other animals for food USE seed predation; For commercial-scale collecting and harvesting of seed for the seed trade USE seed crop production AND harvesting. (source: NALT)

**urban horticulture** NALT 68414
UN AgroVoc c_9001026

The science and art of promoting the successful growth and development of ornamental plants, turf, vegetables and fruit in the urban environment. (source: NALT)

**Erythrosine** NALT 68498
UN AgroVoc c_28360

**Marine sciences** NALT 68701
UN AgroVoc c_4613

The study of saltwater bodies of water, including the oceans and seas, their chemical and physical properties and processes, and the aquatic organisms living in these environments. (source: NALT)

**Physical control** NALT 68703
UN AgroVoc c_5829

The management, eradication or exclusion of pests by nonchemical, abiotic methods or physical barriers. (source: NALT)

**monogamy** NALT 69328
UN AgroVoc c_36960

**Gadus macrocephalus** NALT 69386
UN AgroVoc c_41474

**Limanda ferruginea** NALT 69391
UN AgroVoc c_45626

**Ictalurus furcatus** NALT 69395
UN AgroVoc c_40800

**Urophycis tenuis** NALT 69402
UN AgroVoc c_41489

**Hydrobiology** NALT 69857
UN AgroVoc c_3718

**Fouling** NALT 69869
UN AgroVoc c_25400
Library of Congress sh85051042

Becoming encrusted, clogged or choked with foreign matter. (source: NALT)

**Lampetra fluviatilis** NALT 69870
UN AgroVoc c_38004

**Carcharhiniformes** NALT 69872
UN AgroVoc c_38111
Prionace glauca  NALT 69873
    UN AgroVoc e_38219
Scyliorhinus canicula  NALT 69874
    UN AgroVoc e_38127
Alopiidae  NALT 69875
    UN AgroVoc e_38054
Alopias vulpinus  NALT 69876
    UN AgroVoc e_49547
Isurus oxyrinchus  NALT 69877
    UN AgroVoc e_38062
Carcharodon  NALT 69878
    UN AgroVoc e_1312
Carcharodon carcharias  NALT 69879
    UN AgroVoc e_38067
Pristis  NALT 69882
    UN AgroVoc e_6190
Pristis pectinata  NALT 69883
    UN AgroVoc e_38509
Dasyatis americana  NALT 69886
    UN AgroVoc e_38680
Dasyatis sabina  NALT 69887
    UN AgroVoc e_38706
Raja clavata  NALT 69888
    UN AgroVoc e_38706
Gymnuridae  NALT 69893
    UN AgroVoc e_38798
Gymnura micrura  NALT 69895
    UN AgroVoc e_38805
Myliobatidae  NALT 69896
    UN AgroVoc e_38749
Rhinoptera bonasus  NALT 69900
    UN AgroVoc e_38766
Biofertilizers  NALT 69901
    UN AgroVoc e_24975

Use for beneficial microorganisms that are applied to plants, seed, or soil in order to increase the amount of nutrients available to plants, such as nitrogen-fixing bacteria and mycorrhizal fungi. For
fertilizers that are derived from natural organic materials, such as crab waste, animal manure, or green manures USE organic fertilizers. (source: NALT)

**Cananga** NALT 69911
  - UN AgroVoc c_1238

**Cananga odorata** NALT 69912
  - UN AgroVoc c_1240

**Rhinobatidae** NALT 69914
  - UN AgroVoc c_38457

**Hydrolagus** NALT 69916
  - UN AgroVoc c_3728
  - Dbpedia Hydrolagus

**Hydrolagus colliei** NALT 69917
  - UN AgroVoc c_38911

**Orectolobiiformes** NALT 69919
  - UN AgroVoc c_38070

**Ginglymostomatidae** NALT 69920
  - UN AgroVoc c_38080

**Ginglymostoma** NALT 69921
  - UN AgroVoc c_3264

**Ginglymostoma cirratum** NALT 69922
  - UN AgroVoc c_38082

**Lamna** NALT 69923
  - UN AgroVoc c_4165

**Lamna ditropis** NALT 69924
  - UN AgroVoc c_38066

**Lamna nasus** NALT 69925
  - UN AgroVoc c_38065

**Triakidae** NALT 69926
  - UN AgroVoc c_38285

**Mustelus** NALT 69927
  - UN AgroVoc c_5011

**Sphyrnidae** NALT 69929
  - UN AgroVoc c_38272

**Sphyrna** NALT 69930
  - UN AgroVoc c_7049
Torpediniformes  NALT 69931
   UN AgroVoc e_38856
Torpedinidae  NALT 69932
   UN AgroVoc e_38857
Torpedo californica  NALT 69934
   UN AgroVoc e_38860
Acipenser brevirostrum  NALT 69936
   UN AgroVoc e_38974
Acipenser fulvescens  NALT 69937
   UN AgroVoc e_38971
Polyodon spathula  NALT 69939
   UN AgroVoc e_38991
Pterocarpus indicus  NALT 69965
   UN AgroVoc e_6337
Engraulis encrasicolus  NALT 69968
   UN AgroVoc e_39145
Cobitidae  NALT 69969
   UN AgroVoc e_40508
   Dbpedia Cobitidae
Danio rerio  NALT 69971
   UN AgroVoc e_40188
Fundulidae  NALT 69974
   UN AgroVoc e_41930
   Dbpedia Fundulidae
Beloniformes  NALT 69975
   UN AgroVoc e_873
   Dbpedia Beloniformes
Adrianichthyidae  NALT 69976
   UN AgroVoc e_41423
Gonorynchiformes  NALT 69978
   UN AgroVoc e_39257
   Dbpedia Gonorynchiformes
   Library of Congress sh85055864
Esociformes  NALT 69989
   UN AgroVoc e_39458
Osmerus mordax  NALT 69990
    UN AgroVoc c_39324
Sebastes schlegeli  NALT 69992
    UN AgroVoc c_45189
Sebastes marinus  NALT 69993
    UN AgroVoc c_45163
Rhamdia quelen  NALT 69995
    UN AgroVoc c_40938
Osphronemidae  NALT 69996
    UN AgroVoc c_44930
Trichogaster trichopterus  NALT 69997
    UN AgroVoc c_44944
Channa punctata  NALT 69999
    UN AgroVoc c_45099
Myxiniformes  NALT 70005
    UN AgroVoc c_38012
Myxineidae  NALT 70006
    UN AgroVoc c_38013
Eptatretus burgeri  NALT 70008
    UN AgroVoc c_38017
Amiiformes  NALT 70009
    UN AgroVoc c_38993
Amiidae  NALT 70010
    UN AgroVoc c_38994
Amia calva  NALT 70012
    UN AgroVoc c_38995
Mugiliformes  NALT 70013
    UN AgroVoc c_42205
    Dbpedia Mugiliformes
Mugil cephalus  NALT 70014
    UN AgroVoc c_35403
Mugil curema  NALT 70015
    UN AgroVoc c_42211
Albuliformes  NALT 70016
    UN AgroVoc c_39607
Albulidae  NALT 70017
    UN AgroVoc c_39608
Aulopiformes  NALT 70021
    UN AgroVoc c_39612
    Dbpedia Aulopiformes
Cynodontidae  NALT 70022
    UN AgroVoc c_39998
Lizardfish  NALT 70023
    UN AgroVoc c_24196
Saurida tumbil  NALT 70024
    UN AgroVoc c_39685
Trichiurus lepturus  NALT 70025
    UN AgroVoc c_44861
game fishes  NALT 70030
    UN AgroVoc c_3181
Epinephelus malabaricus  NALT 70038
    UN AgroVoc c_42368
Epinephelus coioides  NALT 70039
    UN AgroVoc c_42378
Epinephelus tauvina  NALT 70040
    UN AgroVoc c_42347
Epinephelus aeneus  NALT 70041
    UN AgroVoc c_42337
Epinephelus marginatus  NALT 70042
    UN AgroVoc c_42336
Epinephelus akaara  NALT 70044
    UN AgroVoc c_42339
Epinephelus morio  NALT 70045
    UN AgroVoc c_42355
Shad  NALT 70046
    UN AgroVoc c_7018
Lutjanus argentimaculatus  NALT 70048
    UN AgroVoc c_42877
Microstomus pacificus  NALT 70052
    UN AgroVoc c_45637
    Dbpedia Microstomus pacificus
Achiridae  NALT 70055
  UN AgroVoc e_45818
Coregonus autumnalis  NALT 70056
  UN AgroVoc e_39376
Coregonus clupeaformis  NALT 70057
  UN AgroVoc e_39374
Prosopium williamsoni  NALT 70059
  UN AgroVoc e_39392
Thymallus arcticus  NALT 70060
  UN AgroVoc e_39317
Thunnus obesus  NALT 70061
  UN AgroVoc e_44810
Katsuwonus  NALT 70062
  UN AgroVoc e_34453
Katsuwonus pelamis  NALT 70063
  UN AgroVoc e_37032
Auxis thazard  NALT 70064
  UN AgroVoc e_24728
Sarda sarda  NALT 70065
  UN AgroVoc e_44751
Sillago ciliata  NALT 70068
  UN AgroVoc e_42647
Merluccius australis  NALT 70069
  UN AgroVoc e_41531
slash  NALT 70084
  UN AgroVoc e_28152
Debris left over after logging, pruning, thinning or brush cutting; includes logs, chips, bark, branches, stumps and broken understory trees or brush. Use for woody debris left in the forest as the result of an anthropogenic activity such as logging; For naturally uprooted trees and fallen branches that serve an ecological function in forests or in streams USE coarse woody debris. (source: NALT)
Fire suppression  NALT 70085
  UN AgroVoc e_2911
The overall process of detecting, locating, containing and extinguishing a fire. (source: NALT)
Alstroemeriaeae  NALT 71371
  UN AgroVoc e_314
Amaryllidaceae  NALT 71469
        UN AgroVoc c_330
        Library of Congress sh85004113
Contarinia sorghicola  NALT 76663
        UN AgroVoc c_30459
Elymus repens  NALT 79217
        UN AgroVoc c_26482
Hedylepta  NALT 82446
        UN AgroVoc c_30320
Hypoxidaceae  NALT 83213
        UN AgroVoc c_33730
Melanthiaceae  NALT 85663
        UN AgroVoc c_331146
Quadraspidiotus  NALT 90222
        UN AgroVoc c_6397
Quadraspidiotus perniciosus  NALT 90225
        UN AgroVoc c_30816
Thinopyrum  NALT 94583
        UN AgroVoc c_36115
Canning  NALT 96878
        UN AgroVoc c_1260
Opogona sacchari  NALT 104932
        UN AgroVoc c_30220
Trupanea  NALT 104948
        UN AgroVoc c_37826
Saccharomycetales  NALT 105029
        UN AgroVoc c_331224
          (source: NALT)
Anthonomus eugenii  NALT 105085
        UN AgroVoc c_34423
Laodelphax striatellus  NALT 105814
        UN AgroVoc c_36608
Free range husbandry  NALT 105821
        UN AgroVoc c_3087
          A system of animal management where animals are not confined and can freely roam and forage
          over a large area of open land. (source: NALT)
**water vapour**  NALT 105956  
UN AgroVoc e_25424

**Osmolality**  NALT 106004  
UN AgroVoc e_35835

The concentration of osmoles of solute per kilogram of solvent present in a sample. Source: NCI thesaurus link

**Mahanarva**  NALT 106020  
UN AgroVoc e_30718

**Sarcocystis miescheriana**  NALT 106025  
UN AgroVoc e_31222

**Oomyzus**  NALT 106051  
UN AgroVoc e_37807

**Roystonea**  NALT 122477  
UN AgroVoc e_6674

**Silk glands**  NALT 123055  
UN AgroVoc e_34337

**Herbicide safeners**  NALT 123142  
UN AgroVoc e_34846

Chemicals that selectively protect crops against herbicide injury. (source: NALT)

**Perca flavescens**  NALT 123150  
UN AgroVoc e_42620

**Latridae**  NALT 123214  
UN AgroVoc e_43991

**Latris lineata**  NALT 123216  
UN AgroVoc e_43993

**Maccullochella peelii**  NALT 123221  
UN AgroVoc e_42548

**Rachycentridae**  NALT 123222  
UN AgroVoc e_42686

**Rachycentron canadum**  NALT 123224  
UN AgroVoc e_42687

**Micropterus dolomieui**  NALT 123225  
UN AgroVoc e_42563

**Deblossoming**  NALT 123840  
UN AgroVoc e_2139

The practice of removing flowers from plants. Deblossoming is done on fruit trees in order to increase the size and quality of the fruit crop. (source: NALT)
cimarrona  NALT 123884
    UN AgroVoc c_9860

Crescentia cujete  NALT 123923
    UN AgroVoc c_1956

Canihua  NALT 124070
    UN AgroVoc c_9574

Pouteria lucuma  NALT 124085
    UN AgroVoc c_330600

Capsicum pubescens  NALT 124102
    UN AgroVoc c_1292

Furcraea  NALT 124206
    UN AgroVoc c_3150

Calathea allouia  NALT 124210
    UN AgroVoc c_1192

Eriocheir sinensis  NALT 124220
    UN AgroVoc c_47213

Grapsidae  NALT 124227
    UN AgroVoc c_47195

Smolts  NALT 124432
    UN AgroVoc c_25078

Adolescent salmonid fish which have lost their parr marks and have developed a silvery coloring on the body. Smolts are physiologically adapted to a marine environment and are ready to begin migration to saltwater. (source: NALT)

Eotetranychus carpini  NALT 124521
    UN AgroVoc c_26484

Eotetranychus hicoriae  NALT 124523
    UN AgroVoc c_26485

Penthaleus  NALT 124586
    UN AgroVoc c_13203

Petrobia  NALT 124589
    UN AgroVoc c_26608

Tetranychus turkestani  NALT 124631
    UN AgroVoc c_30941

Perna  NALT 125078
    UN AgroVoc c_35422

Perna perna  NALT 125079
    UN AgroVoc c_48085
**Perna canaliculus** NALT 125080
  UN AgroVoc c_48087

**Perna viridis** NALT 125081
  UN AgroVoc c_48086

**Pteriidae** NALT 125158
  UN AgroVoc c_47917

**Pinctada** NALT 125159
  UN AgroVoc c_26621

**Pinctada fucata** NALT 125160
  UN AgroVoc c_31160

**Dentex dentex** NALT 125163
  UN AgroVoc c_43266

**Thunnus orientalis** NALT 125164
  UN AgroVoc c_44804

**Chytridiomycota** NALT 125309
  UN AgroVoc c_331236


**Blastocladiomycota** NALT 125311
  UN AgroVoc c_331235


**Capnodiales** NALT 125375
  UN AgroVoc c_31760


**Myriangiales** NALT 125376
  UN AgroVoc c_331230


**Botryosphaerales** NALT 125378
  UN AgroVoc c_331229


**Hysteriales** NALT 125379
  UN AgroVoc c_31763

**Chaetothyriales** NALT 125384

UN AgroVoc e_31761


**Onygenales** NALT 125388

UN AgroVoc e_331227


**Orbiliales** NALT 125411

UN AgroVoc e_331223


**Xylariales** NALT 125420

UN AgroVoc e_31686

Library of Congress sh85148850


**Ascomycota** NALT 125421

UN AgroVoc e_331215


A phylum of fungi whose members are commonly known as the sac fungi. Source: NCI thesaurus link

**Basidiomycota** NALT 125431

UN AgroVoc e_331216


A phylum of filamentous fungi that reproduce sexually via the formation of specialized club-shaped end cells called basidia that normally bear external spores. Source: NCI thesaurus link

**Helicobasidiales** NALT 125444

UN AgroVoc e_331218


**Microbotryales** NALT 125453

UN AgroVoc e_331221


**Sporidiobolales** NALT 125455

UN AgroVoc e_331233

**Entylomatales** NALT 125464

UN AgroVoc e_331220


**Tilletiales** NALT 125467

UN AgroVoc e_31697


**Blastocladiales** NALT 125608

UN AgroVoc e_31644

**Cystofilobasidiales** NALT 125792

UN AgroVoc e_331225

**Cenangium** NALT 125998

UN AgroVoc e_331387

**Godronia** NALT 126000

UN AgroVoc e_15821

**Didymascella** NALT 126007

UN AgroVoc e_32111

**Hymenella** NALT 126044

UN AgroVoc e_31541

**Rhinonyssidae** NALT 126086

UN AgroVoc e_30904

**sinigrin** NALT 126094

UN AgroVoc e_36861

**Caligus** NALT 126110

UN AgroVoc e_33633

**Caligus elongatus** NALT 126111

UN AgroVoc e_36423

**Phyllotreta striolata** NALT 126112

UN AgroVoc e_30039

**Lecanora** NALT 126140

UN AgroVoc e_32165

**Marasmius** NALT 126187

UN AgroVoc e_4597
**Schizosaccharomycetales**  NALT 126506  
UN AgroVoc c_331226

**Saccharomycetaceae**  NALT 126511  
UN AgroVoc c_14019

**Trichosphaeriales**  NALT 126715  
UN AgroVoc c_331228

**Hoggets**  NALT 126789  
UN AgroVoc c_11570

Young sheep from weaning until its first shearing. (source: NALT)

**Cryptorhynchus**  NALT 126927  
UN AgroVoc c_1992  
Library of Congress sh93006463

**Ametastegia**  NALT 127068  
UN AgroVoc c_16221

**Athetis**  NALT 127233  
UN AgroVoc c_27129

**Serpula lacrymans**  NALT 127407  
UN AgroVoc c_33874

**Symphysodon aequifasciata**  NALT 127415  
UN AgroVoc c_43737

**Anatid herpesvirus 1**  NALT 127423  
UN AgroVoc c_331487

**Dovyalis**  NALT 127460  
UN AgroVoc c_32120

**Hylocereus undatus**  NALT 127468  
UN AgroVoc c_34617

**Tarophagus**  NALT 127489  
UN AgroVoc c_33893

**methoxsalen**  NALT 127514  
UN AgroVoc c_35970

A naturally occurring substance isolated from the seeds of the plant Ammi majus with photoactivating properties. As a member of the family of compounds known as psoralens or furocoumarins, methoxsalen’s exact mechanism of action is unknown; upon photoactivation, methoxsalen has been observed to bind covalently to and crosslink DNA. (NCI04) Source: NCI thesaurus link

Reference: FDA UNII link

Look-up using Google link

Rotate the 3-D representation
Look-up synonyms
Look-up using CAS number link

**Atolls**  NALT 127537
  UN AgroVoc e.695
  Coral reef islands that form a circular, oval or crescent shape surrounding a central lagoon and are commonly found in the tropical waters of the Pacific and Indian Oceans. (source: NALT)

**Triphasia**  NALT 127643
  UN AgroVoc e.7935

**Sugarcane byproducts**  NALT 127706
  UN AgroVoc e.14666

**Musa basjoo**  NALT 127711
  UN AgroVoc e.4996

**Bruchus rufimanus**  NALT 127841
  UN AgroVoc e.30006

**Rodolia cardinalis**  NALT 128163
  UN AgroVoc e.32237

**Baris**  NALT 128175
  UN AgroVoc e.818

**Euscepes**  NALT 128256
  UN AgroVoc e.33705

**Euscepes postfasciatus**  NALT 128257
  UN AgroVoc e.33706

**Hypera meles**  NALT 128276
  UN AgroVoc e.30075

**Phloeotribus**  NALT 128337
  UN AgroVoc e.24676

**Sphenophorus callosus**  NALT 128386
  UN AgroVoc e.30095

**Pegomya betae**  NALT 128656
  UN AgroVoc e.30441

**Hydrellia griseola**  NALT 128737
  UN AgroVoc e.30550

**Pseudolynchia**  NALT 128743
  UN AgroVoc e.23845

**Brachycaudus persicae**  NALT 128823
  UN AgroVoc e.30767
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>NALT ID</th>
<th>UN AgroVoc</th>
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<tr>
<td><em>Illinoia liriodendri</em></td>
<td>128871</td>
<td>c_26536</td>
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<tr>
<td><em>Pemphigus bursarius</em></td>
<td>128919</td>
<td>c_30796</td>
</tr>
<tr>
<td><em>Myndus crudus</em></td>
<td>129043</td>
<td>c_27268</td>
</tr>
<tr>
<td><em>Sphaerolecanium</em></td>
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<td>c_7291</td>
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<tr>
<td><em>Epidiaspis</em></td>
<td>129099</td>
<td>c_32132</td>
</tr>
<tr>
<td><em>Pseudaonidia</em></td>
<td>129130</td>
<td>c_6298</td>
</tr>
<tr>
<td><em>Dryocosmus kuriphilus</em></td>
<td>129398</td>
<td>c_29862</td>
</tr>
<tr>
<td><em>Pyroderces</em></td>
<td>129633</td>
<td>c_32228</td>
</tr>
<tr>
<td><em>Zeuzera pyrina</em></td>
<td>129645</td>
<td>c_30195</td>
</tr>
<tr>
<td><em>Lampides</em></td>
<td>129865</td>
<td>c_4168</td>
</tr>
<tr>
<td><em>Euxoa ochrogaster</em></td>
<td>129918</td>
<td>c_30253</td>
</tr>
<tr>
<td><em>Hemileuca oliviae</em></td>
<td>130146</td>
<td>c_30334</td>
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<tr>
<td><em>Nemapogon</em></td>
<td>130219</td>
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<td><em>Bactra</em></td>
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<td><em>Hedya</em></td>
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<td><em>Scutigerella</em></td>
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<td>c_6889</td>
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<tr>
<td><em>Scutigerella immaculata</em></td>
<td>130496</td>
<td>c_33873</td>
</tr>
</tbody>
</table>
Gynaikothrips  NALT 130503
UN AgroVoc e_3450

Economic behaviour  NALT 130587
UN AgroVoc e_28671
The predicted or observable activity or manner in which decisions are made regarding the management of wealth, including the manner of buying/selling goods and services, generating income, allocating economic resources, borrowing/lending, investment and other financial choices. (source: NALT)

Companion crops  NALT 130679
UN AgroVoc e_25549
Crops that are compatible with each other and grow well together. Companion crops are grown at the same time on the same land, especially if one provides a benefit to the other. (source: NALT)

Climax communities  NALT 130682
UN AgroVoc e_1672

Multipurpose trees  NALT 130685
UN AgroVoc e_33512

Shoot pruning  NALT 130709
UN AgroVoc e_7042

Natural pruning  NALT 130712
UN AgroVoc e_28115
The natural dying and breaking off of the lower branches of trees due to shading from the upper canopy. Use for the natural process of branches dying and breaking off; For pruning by man as a cultural practice USE pruning. (source: NALT)

Chemical pruning  NALT 130713
UN AgroVoc e_1517

Acacia xanthophloea  NALT 130717
UN AgroVoc e_26333

Sesamum angustifolium  NALT 130810
UN AgroVoc e_33876

Solanum hyporhodium  NALT 131059
UN AgroVoc e_7217

Multiple land use  NALT 131587
UN AgroVoc e_28734

Arenga pinnata  NALT 131594
UN AgroVoc e_600
Anaplasmataceae  NALT 131649
   UN AgroVoc c_35914

Pentastomida  NALT 131696
   UN AgroVoc c_5684

Spirillaceae  NALT 131918
   UN AgroVoc c_7308

Congridae  NALT 132382
   UN AgroVoc c_41233
   Dbpedia Congridae

Conger (genus)  NALT 132383
   UN AgroVoc c_1809

Conger conger  NALT 132384
   UN AgroVoc c_41235

Conger myriaster  NALT 132385
   UN AgroVoc c_41239
   Dbpedia Conger myriaster

Inland waters  NALT 132583
   UN AgroVoc c_3876

Grazing lands  NALT 132634
   UN AgroVoc c_3369

   1. Collective term used by NRCS for rangeland, pastureland, grazed forest land, native and naturalized pasture, hayland, and grazed cropland. Although grazing is generally a predominate use, the term is used independent of any use. (2) Land used primarily for production of forage plants maintained or manipulated primarily through grazing management. Includes all lands having plants harvestable by grazing without reference to land tenure, other land uses, management, or treatment practices. (source: NALT)

Somatic mutation  NALT 132647
   UN AgroVoc c_27610

   Any mutation with an origin in cells that are not destined to become gametes. As a consequence, such mutations are not transmitted to progeny, though they will be transmitted during any mitosis within the individual. Somatic mutations may contribute to a broad variety of pathologies including cancer. Source: NCI thesaurus link

Aquatic environment  NALT 132650
   UN AgroVoc c_554

Aquatic communities  NALT 132653
   UN AgroVoc c_553

Marine environment  NALT 132655
   UN AgroVoc c_4610
Lepomis gibbosus  NALT 132720
    UN AgroVoc c_42561
Castilla  NALT 132758
    UN AgroVoc c_1372
Castilla ulei  NALT 132759
    UN AgroVoc c_1374
Mammea americana  NALT 132782
    UN AgroVoc c_4564
Dalbergia retusa  NALT 132865
    UN AgroVoc c_2118
Hymenaea courbaril  NALT 132875
    UN AgroVoc c_26530
Guadua angustifolia  NALT 132912
    UN AgroVoc c_3407
Abies guatemalensis  NALT 132915
    UN AgroVoc c_29193
Castilla elastica  NALT 132972
    UN AgroVoc c_1373
Chrysophyllum cainito  NALT 132982
    UN AgroVoc c_1605
Fishery resources  NALT 133002
    UN AgroVoc c_2942
Marine resources  NALT 133003
    UN AgroVoc c_28012
Pterocarpus erinaceus  NALT 133077
    UN AgroVoc c_6336
Pterocarpus macrocarpus  NALT 133080
    UN AgroVoc c_6338
Pesticide selectivity  NALT 133093
    UN AgroVoc c_23873
Magnoliophyta  NALT 133097
    UN AgroVoc c_330268
Industrial crops  NALT 134917
    UN AgroVoc c_3845

Those crops that are not specifically grown for foodstuffs (such as fruit crops, vegetable crops and grain crops), but are specifically grown to yield a useful product for man or industrial processes, such as fiber, oils, rubber, chemicals, resions, energy, waxes, or dyes. (source: NALT)
Hura  NALT 134951
    UN AgroVoc c_16250

Chloranthales  NALT 134983
    UN AgroVoc c_331074

Acorales  NALT 134991
    UN AgroVoc c_331104

Acoraceae  NALT 134992
    UN AgroVoc c_331103

Cymodoceaceae  NALT 134994
    UN AgroVoc c_49796

Posidoniaceae  NALT 134995
    UN AgroVoc c_27312

Dioscoreales  NALT 134999
    UN AgroVoc c_330380

Asparagales  NALT 135002
    UN AgroVoc c_331078

Philydraceae  NALT 135041
    UN AgroVoc c_26301

Poales  NALT 135042
    UN AgroVoc c_330269

Pinctada maxima  NALT 135915
    UN AgroVoc c_47920

Pinctada margaritifera  NALT 135916
    UN AgroVoc c_47919

Pangasiidae  NALT 135922
    UN AgroVoc c_41083

Phyllanthaceae  NALT 136021
    UN AgroVoc c_330130

Malpighiales  NALT 136026
    UN AgroVoc c_330129
    Dbpedia Malpighiales

Ricinodendron heudelotii  NALT 136143
    UN AgroVoc c_331358

Brevoortia patronus  NALT 136449
    UN AgroVoc c_39066
Archosargus  NALT 136457
    UN AgroVoc e_591

Archosargus probatocephalus  NALT 136458
    UN AgroVoc e_43275

Pangasius  NALT 136465
    UN AgroVoc e_24779

Pangasius larnaudii  NALT 136467
    UN AgroVoc e_41089

Pangasius pangasius  NALT 136469
    UN AgroVoc e_24780

cathepsins  NALT 136543
    UN AgroVoc e_36537

Trachinotus carolinus  NALT 136608
    UN AgroVoc e_42750

Acacia pendula  NALT 136895
    UN AgroVoc e_46

Acacia leptocarpa  NALT 136899
    UN AgroVoc e_26331

Acacia cincinnata  NALT 136903
    UN AgroVoc e_26326

population  NALT 136981
    UN AgroVoc e_330887

A group of individuals defined by a particular set of characteristics, e.g., organisms of a particular species living in a given region or area. (source: NALT)

Additive effect  NALT 137125
    UN AgroVoc e_331319

A biologic response to exposure to multiple substances that equals the sum of responses of all the individual substances added together. Use for the biologic response to exposure to multiple substances; for gene action which is the result of genes acting independently of genetic background USE additive gene effects. (source: NALT)

Enzyme polymorphism  NALT 137183
    UN AgroVoc e_33258

A phenomenon that, in the course of evolution, characterizes enzymes that are able to maintain their catalytic capability on the same chemical reaction, even though their amino acid sequences and/or amino acid composition are modified via mutagenesis and/or natural selection. The properties of these enzymes (such as kinetics and electrophoretic mobility) can be differentiated by physical, chemical and immunological techniques. (source: NALT)

Lysiloma latisiliqua  NALT 137199
    UN AgroVoc e_34630
Myroxylon balsamum  NALT 137243
  UN AgroVoc c_5050

Pimenta dioica  NALT 137259
  UN AgroVoc c_5882

Symphonia  NALT 137279
  UN AgroVoc c_33891

Subalpine forests  NALT 137339
  UN AgroVoc c_7483
  A transition zone from dense forest below treeline to alpine tundra above treeline. (source: NALT)

seed trees  NALT 137340
  UN AgroVoc c_6941
  Trees that produce seeds; usually a superior tree left standing at the time of cutting to produced seeds for reforestation. Use for trees left at a logging site or elsewhere for the purpose of seed production; for trees retained on agricultural land or elsewhere for any purpose, such as shade or erosion control, USE retained trees. (source: NALT)

acceptable daily intake  NALT 137381
  UN AgroVoc c_34980
  The amount of a substance to which an organism can be exposed on a daily basis over an extended period of time (usually a lifetime) without suffering deleterious effects. (source: NALT)

Carludovica  NALT 137410
  UN AgroVoc c_1328

Carludovica palmata  NALT 137411
  UN AgroVoc c_1329

Plus trees  NALT 137428
  UN AgroVoc c_24884
  A tree which in its outward appearance (phenotype) is superior to the average tree of the same species grown at a similar site. Visibly superior characteristics may include morphology, vigor, pest or disease resistance, growth, etc., but these characteristics have not been clonally or progeny tested. Use for trees that have not been proven superior genetically; for trees that have been verified superior by appropriate testing USE elite trees. (source: NALT)

Catalytic activity  NALT 137566
  UN AgroVoc c_1382
  An increase in the rate of a chemical reaction produced by the presence of a substance that is not consumed in the net chemical reaction. (source: NALT)

Conception rate  NALT 137863
  UN AgroVoc c_10053
  The percentage of matings that result in the successful fusion of egg and sperm to produce a zygote. Term can be used to describe individuals as well as groups or populations that share a common characteristic. (source: NALT)
Lasalocid  NALT 138171
          UN AgroVoc c_35195
          Cationic ionophore antibiotic obtained from Streptomyces lasaliensis that, among other effects, dis-
          sociates the calcium fluxes in muscle fibers. It is used as a coccidiostat, especially in poultry. (source:
          NALT)

violaxanthin  NALT 138181
          UN AgroVoc c_35002

Farm area  NALT 138267
          UN AgroVoc c_2794
          The area of agricultural land used for farming (crop and livestock production). (source: NALT)

Nitrogen fixing trees  NALT 138382
          UN AgroVoc c_35228
          Trees that can convert atmospheric nitrogen into usable form through a symbiotic relationship with
          bacteria that live in root nodules; they have many uses in agroforestry including mulch, nitrogen
          fertilizer, food and fodder. (source: NALT)

Bamboos  NALT 138423
          UN AgroVoc c_802

Ceratophyllales  NALT 138619
          UN AgroVoc c_331073

Cucurbitales  NALT 138622
          UN AgroVoc c_2014
          Library of Congress sh85034680

Buxales  NALT 138646
          UN AgroVoc c_330159

Saxifrales  NALT 138669
          UN AgroVoc c_330186

Crossosomatales  NALT 138683
          UN AgroVoc c_331075

Zygophyllales  NALT 138710
          UN AgroVoc c_330090

Aquifoliales  NALT 138711
          UN AgroVoc c_331080

Brassicaceae  NALT 138712
          UN AgroVoc c_330276

Oxalidales  NALT 138714
          UN AgroVoc c_330176
          Dbpedia Oxalidales
Irvingiaceae  NALT 138748  
UN AgroVoc c_331357

Enterovirus C  NALT 144771  
UN AgroVoc c_36328
An enterovirus comprised of an single-stranded positive sense RNA genome and a protein capsid. This virus is the human pathogen that causes poliomyelitis. Source: NCI thesaurus link
Reference: FDA UNII link
Reference the NIH NCBI link

Isatis tinctoria  NALT 170018  
UN AgroVoc c_33740

Sorghum bicolor subsp. Verticilliflorum  NALT 187990  
UN AgroVoc c_7246

Vasconcellea pubescens  NALT 189919  
UN AgroVoc c_32092

1.8 Terms related to Project

Grammar  An ontology is a set of statements in the logical form: subject predicate object where subject and object are facet terms.

Python  Application programming language used to build several Ontomatica services. Python is the main scripting language used at Google.

Prototype  Baseline for specifying USDA Complete System requirements using existing Ontomatica capabilities.

Severity Level 1  Bug or issue affects a crucial part of complete system, and must be fixed in order for it to resume normal operation.

Severity Level 3  Bug or issue affects a minor part of complete system, and has very little impact on its operation. This severity level is assigned when a non-central requirement of a system (and with lower importance) is affected.

Severity Level 2  Bug or issue affects a minor part of complete system, but has some impact on its operation. This severity level is assigned when a non-central requirement of a system is affected.

Graph  Composed of vertices (nodes) and lines (edges) that connect them. Ontomatica graphs are directed acyclic graphs that represent things or events, and causal relationships between them.

Illustration  Depicts how a concept works. Illustration (illo) may be a Figure (image or SVG file); a Table; or, a Graph (directed acyclic graph).

Parser  Deposition service that reads food record from GS1 data stream. Using a lexical analyzer and regular expression, parser matches tokens from data stream to ontology terms. Parser output is used to update graphs and build a new application instance for quality assurance.

OnTop  Deposition service to parse inputs and generate outputs.

Landing Page  Displays all facets and data properties for a specific Item.

Listing Page  Displays items that share facets and predicates.
1.8. Terms related to Project

**Item**  Food record in electronic format.

**Depositor**  Food supplier that submits information about food items to label project.

**Modified Specification**  Functional changes and additions to prototype to fulfill specifications for complete system.

**Infrastructure Service**  Hardware and software to execute and manage all services.

**Class**  Hierarchy of facet terms and/or predicate terms.

**Taxonomy**  Hierarchy of facets in a specific knowledge domain. Base of taxonomy is called a facet. Term in hierarchy is called facet term (FT). Code assigned to facet term is called facet term code (FTC). Taxonomy does not include predicates, formal classes, expressions or axioms.

**End User**  Individual consumer who accesses complete system information with respect to food purchasing decisions.

**User**  Individual who accesses complete system.

**Data Service**  Information stored in and presented from REST services and MySQL database to implement label project features.

**Complete System**  Integration of application, deposition, data, infrastructure and operation services to implement label project specifications.

**Future Feature**  Label class not in complete system. Example: integration with Linked Data.

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**Relationship**  Line (edge) expressing connection between facets and facet terms in a graph. Logically, a relationship is a verb.

**Data**  Literals (numbers and letters).

**Navigation**  Map applications, such as Google Maps, display points-of-interest when a user selects and navigates different routes to a destination. For label project, landscape is represented as graphs (rather than maps) and a user navigates facets and predicates to display foods-of-interest.

**Label Project**  Name of USDA project to deliver branded food label information from a web server.

**Application Service**  Navigator, label classes, and related services to implement label project features.

**Navigator**  Ontomatica application that traverses graphs and enables a user to view one or more facets in a taxonomy. As of 2014, Navigator’s ability to generate a multi-facet listing page is unique in technology marketplace.

**OnTarget**  Ontomatica collection of development services tools.

**OnCall**  Ontomatica customer services.

**OnDemand**  Ontomatica Infrastructure, data and operating services.

**OntoLogics**  Ontomatica process of defining graphs and related services such as classes, predicates and data.

**Deposition Service**  Ontomatica service for registering research and related data in a structured format for integration with other data deposits.

**OnLine**  Ontomatica web-based deposition system.
Food Compiler  Person who analyzes food data, calculates representative data, acquires related data from other sources, estimates value of data from similar foods, and calculates multi-ingredient food values.

Development  Process of adding or changing facets, predicates and items to prototype or complete system.

OntoMation  Process of managing Development, Quality Assurance and Production.

Quality Assurance  Process when Development version is evaluated and tested by specific professionals or users.

Production  Process when Quality Assurance version is promoted to public access.

Metadata  Same as terms in taxonomy.

Label Class  Set of facets and predicates required to implement USDA label project.

Ontology  Set of statements about a domain of knowledge. Statements in Ontomatica ontologies are implemented as graphs.

Fail-over  Switching to a redundant or standby computer server, system, hardware component or network upon the failure or abnormal termination of the previously active application, server, system, hardware component, or network.

Conversation  TBD
Deposition Workflow  TBD
Depository  TBD
Development Service  TBD
Food Composition Data  TBD
Food Identity  TBD
Food Non-Composition Data  TBD
Food Supplier  TBD
Github  TBD
Intel Xeon Server  TBD
Investigator  TBD
LAMP  TBD
Level 1 Support  TBD
Level 2 Support  TBD
lex ++  TBD
Maintenance Service  TBD
make ++  TBD
Message Deposit  TBD
Migration  TBD
MySQL  TBD
OnPoint  TBD
Operating Service  TBD
Release 0  TBD
Release 1 TBD
Release 2 TBD
Release 3 TBD
REST TBD
Service Level Agreement TBD
Sphinx TBD
Support Service TBD
Trade Secret TBD
Training Service TBD
USDA NDL FSRG Practice TBD
USDA Prime TBD
USDA Select TBD
Web Deposit TBD
Scope Notes TBD
Additional Information TBD
JSON-LD TBD
OnTask TBD
Constituent TBD
Component TBD
Regular Expression TBD
make++ TBD
Version Control TBD
Concept TBD
Work flow TBD
Predicate Type (single) or hierarchy (class) of relationship. Type or class term is called predicate term. Code assigned to predicate term (PT) is called predicate term code (PTC).

USDA Mathematics USDA algorithm - integrated with deposition services - that assigns new data values during parser operation. Data values are numbers for chemical methods and chemical terms otherwise not available from depositor.

Curator USDA professional who manages item life-cycle. Item life-cycle has five dates: (1) creation; (2) deposition; (3) hold; (4) modification; and, (5) deprecation. See Data Services for detail.

Facet Vertex (node) in a graph. Logically, a facet is a noun. Type or class term is called facet term. Code assigned to facet term (FT) is called facet term code (FTC).

Vocal Vocal (acronym for Latin phrase “Vocabularium Alimentarum” – Vocabulary of Food) is a controlled vocabulary of food. Vocal is organized as a taxonomy.

Authority TBD
OnMessage TBD
Deposit TBD

1.8. Terms related to Project
1.9 Terms imported from Ontologies

agrontology:hasMember Y <hasMember> X. A group Y consists of one or more subsidiary units (group or individual) X. E.g. “herd” <hasMember> “cow”

agrontology:isMadeFrom X <isMadeFrom> Y. A product X obtained mainly (in terms of importance) from a substance or a product Y. E.g. “cheddar cheese” <isMadeFrom> “cow milk”; “beer” <isMadeFrom> “hops”

agrontology:isMemberOf X <isMemberOf> Y. A unit (group or individual) X belongs to a group Y. E.g. “cow” <isMemberOf> “herd”

agrontology:isUsedToMake Y <isUsedToMake> X. A substance or a product Y from which a product X can be mainly (in terms of importance) obtained. E.g. “cow milk” <isUsedToMake> “cheddar cheese”; “hops” <isUsedToMake> “beer”

cheminf:CHEMINF_000059 InChIKey

cheminf:CHEMINF_000140 PubChem compound identifier

dc:date A point or period of time associated with an event in the lifecycle of the resource.

dc:description Description may include but is not limited to: an abstract, a table of contents, a graphical representation, or a free-text account of the resource.
**dc:hasPart** A related resource that is included either physically or logically in the described resource.

**dc:hasVersion** A related resource that is a version, edition, or adaptation of the described resource.

**dc:identifier** An unambiguous reference to the resource within a given context.

**dc:isPartOf** A related resource in which the described resource is physically or logically included.

**dc:provenance** A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity, and interpretation.

**dc:title** A name given to the resource.

**edam:data_0966** ontology term

**edam:data_1179** NCBI taxonomy ID

**edam:data_2337** metadata

**edam:data_2524** protein data

**ero:ERO_0000185** high performance liquid chromatography

**ero:ERO_0000615** An image acquisition instrument that captures digital images from single- and multiple-color fluorescence, chemiluminescence, chemifluorescence, and colorimetric samples

**ero:ERO_0001500** liquid chromatography

**fix:FIX_0000015** Infrared spectroscopy

**fix:FIX_0000016** Ultraviolet/visible spectroscopy

**fix:FIX_0000020** Absorption spectroscopy

**fix:FIX_0000047** Mass spectrometry

**fix:FIX_0000085** Mass spectrometry by ionization method

**fix:FIX_0000321** Near-infrared spectroscopy

**fix:FIX_0000912** Thermal ionization mass spectrometry

**fix:FIX_0000914** Positive thermal ionization mass spectrometry

**fix:FIX_0000915** Negative thermal ionization mass spectrometry

**foaf:Agent** An agent (eg. person, group, software or physical artifact).

**foaf:Document** The Document class represents those things which are, broadly conceived, ‘documents’.

**foaf:Group** A class of Agents.

**foaf:member** Indicates a member of a Group

**foaf:name** A name for some thing.

**foaf:Organization** The Organization class represents a kind of Agent corresponding to social institutions such as companies, societies etc.

**foaf:Person** A person.

**foaf:Project** A project (a collective endeavor of some kind).

**iao:IAO_0000131** serial number

**iao:IAO_0000132** lot number

**iao:IAO_0000581** has time stamp
iao:IAO_0000583 has measurement datum
ncit:C12406 Pregnant
ncit:C16268 Elderly; an age group comprised by people 65 years of age and older
ncit:C16423 Children; a person who is not yet an adult. Specific cut-off age will vary by purpose
ncit:C16576 Female; a person who belongs to the sex that normally produces ova
ncit:C17600 Adult; a human who has reached reproductive age
ncit:C20197 Male; a person who belongs to the sex that normally produces sperm
ncit:C27954 Adolescent; a juvenile between onset of puberty and maturity; in state of development between puberty and maturity
ncit:C38046 Unspecified
ncit:C42548 Joule; a unit of electrical, mechanical, and thermal energy, as well as work and quantity of heat, in the SI system, equal to the work done when the point of application of a force of one newton is displaced through a distance of one meter in the direction of the force or the work done when a current of one ampere passes through a resistance of one ohm for one second. Joule (mean) is equal to 0.23889 gram-calorie.
ncit:C45986 FDA_UNII_Code_Property; contains FDA Unique Ingredient Identifier, a key component of new federal drug information model
ncit:C46090 Glycemic Index; a measure of the increase in the level of blood glucose (a type of sugar) caused by eating a specific carbohydrate (food that contains sugar) compared with eating a standard amount of glucose. Foods with a high glycemic index release glucose quickly and cause a rapid rise in blood glucose. Foods with a low glycemic index release glucose slowly into the blood.
ncit:C48566 Unit of Mass Fraction
ncit:C48570 Percent_Unit
ncit:C48577 Fluid_Ounce_British; a traditional unit of liquid volume equal in the British Imperial system to 1/20 pint, or 1.733 871 cubic inches or 28.413 063 milliliters.
ncit:C48582 Gallon_British; a traditional unit of volume designed to contain 10 pounds of distilled water under precisely defined conditions and equal to 4.546 091 liters, 277.4194 cubic inches, or 1.20095 US liquid gallons, or 1.03206 US dry gallons.
ncit:C48660 Not Applicable
ncit:C49641 In_Utero; period of time during which embryo or fetus is present in uterus of female
ncit:C49643 Infant_and_Toddler; a person from 28 days to 23 months of age
ncit:C49683 Children_Two_Through_Eleven_Years_Old; a person from 2 years to 11 years of age
ncit:C49685 Adult_Eighteen_Through_Sixty-five_Years_Old; a person from 18 years to 65 years
ncit:C53269 No Information Available
ncit:C54352 Limited Information
ncit:C63923 FDA_UNII_Code_Terminology; terminology that includes terms pertaining unique ingredient identifiers (UNII) for substances in drugs, biologics, foods, and devices
ncit:C64343 No Code Available
ncit:C67193 Calorie; a non-SI unit of energy defined as amount of heat required to raise the temperature of one gram of pure water by one degree Celsius under standard conditions (the specific heat...
of the water at 3.98, 14.5, or 19.5 degrees Celsius and the constant pressure of 101.325 kPa or one atm being defined as unity), equal to approximately 4.184 Joule.

\textbf{ncit:C67194} Kilocalorie; a non-SI unit of energy defined as the amount of heat required to raise the temperature of one kilogram of pure water by one degree Celsius under standard conditions (the specific heat of the water at 15 degrees Celsius and the constant pressure of 101.325 kPa or one atm being defined as unity), equal to approximately 4.1855 kJ. It is also is used by nutritionists in measuring the energy-producing potential of food as a unit of potential energy contained by a substance, which can be liberated when the material is oxidized, usually by combustion in the presence of oxygen.

\textbf{ncit:C67391} Unit of Number Concentration
\textbf{ncit:C67396} Microgram_per_Kilogram
\textbf{ncit:C67401} Milligram_per_Kilogram

\textbf{ncit:C67436} Retinol_Equivalent; an arbitrary unit for measurement of a vitamin A activity of provitamin A carotenoids (such as carotenes, xanthophylls, and compounds that arise from rearrangement of carotene I skeleton) in a mixed diet. The concept of the retinol equivalent (RE) is established for the following relationships among food sources of the vitamin A: one microgram of all-trans retinol is equal to one RE, one microgram of beta-carotene is equal to 0.167 RE, and one microgram of other pro-vitamin A carotenoids is equal to 0.084 RE.

\textbf{ncit:C67438} Retinol_Activity_Equivalent; an arbitrary unit for measurement of the bioefficacy of ingested provitamin A carotenoids introduced by the U.S. Institute of Medicine (IOM).

\textbf{ncit:C68511} Dietary_Folate_Equivalent; to describe the Recommended Dietary Allowance of folate; the term accounts for the easier absorption of folate in supplements and fortified foods as compared with the absorption of folic acid found naturally in foods. One Dietary Folate Equivalent (DFE) = 1 microgram food folate = 0.6 microgram folic acid from supplements and fortified food.

\textbf{ncit:C68545} Food_Energy_in_Kilocalories
\textbf{ncit:C68546} Food_Energy_in_Kilojoules
\textbf{ncit:C68547} Kilojoule; a SI unit of energy equal to 10E3 joules
\textbf{ncit:C68550} INFOODS_Property; assigned by International Network of Food Data Systems
\textbf{ncit:C68551} USDA_ID_Property; numeric ID assignment by United States Department of Agriculture

\textbf{ncit:C68555} Recommended_Intake_Property
\textbf{ncit:C69062} Not Used
\textbf{ncit:C69103} Half_Gallon; a unit of volume equal to 1/2 gallon
\textbf{ncit:C69104} Gram_per_Kilogram
\textbf{ncit:C69105} Half_Liter; a non-SI unit of volume equal to 0.5 cubic decimeter, or 500 cubic centimeters
\textbf{ncit:C69113} Half_Pint; a non-SI unit of volume equal to 8 fluid ounces or 0.2365 liter
\textbf{ncit:C69114} Pint_British; a traditional unit of volume equal to 20 British fluid ounces, 34.678 cubic inches or approximately 568.261 milliliters
\textbf{ncit:C69115} Dry_Peck_British; a traditional (non-SI) unit of volume equal to two British gallons, or approximately 9.09218 liters
\textbf{ncit:C69116} Dry_Pint_US; a traditional (non-SI) unit of volume equal to 1/8 dry US gallon, or approximately 0.550611 liter

1.9. Terms imported from Ontologies
Quart_Dry_US; a unit of volume in US customary measure system for dry volumes equal to 67.201 cubic inches, or approximately 1.101 221 liters

Quart_British; a unit of dry and liquid volumes in British Imperial Measurement System equal to 69.354 cubic inches, 40 fluid ounces, or 1.136 5225 liters

Calorie_Unit; a non-SI unit of energy or heat variously defined based on different conditions under which it is measured and the context of its use

Gram_per_Gram

US_Recommended_Intake_Property

Lactose_Unit; a unit of measurement for the activity of lactase enzyme which is expressed as the amount of enzyme that hydrolyzes one microequivalent (µEq) of galactosidic linkage per one minute at a pH of 4.5 and at 37 degrees Celsius

Structured_Product_Labeling_Business_Operation_Terminology; about business operations concerned with product development, manufacturing, and marketing in SPL documents

Milliequivalent_per_Milliliter

Unit_per_Gram

Unit_per_Milliliter

Lactating

Not_Lactating

Not_Pregnant

School_Age_Child; a child between ages of five and twelve years

Structured_Product_Labeling_Unit_of_Presentation_Terminology; about dosage form, package type, and unit of measurement terms used in drug establishment registration and drug listing

Toddler; a child that is approximately between 12 and 18 months of age

Young_Adult; generally covers age range of 20-40

Middle_Adult; approximately 40-60 years of age

Million per Gram

chromatography instrument

liquid chromatography column

gas chromatography detector

Dependency between different (i.e. unique) OWL Individuals typed by the same OWL Class.

Annotation Property definition.

Dependency between an OWL Ontology and another that it’s backward compatible with.

Describes an instantiable entity with properties and semantic meaning.

Dependency between an OWL Class and its complement (or opposite).

Defines a collection of values for an OWL Property.
**owl: Different From** Dependency between two semantically different OWL Individuals typed by the same OWL Class.

**owl: Disjoint With** Dependency between two OWL Classes that have no common individuals.

**owl: Domain** Specifies the OWL Classes that apply the specified OWL Property (Annotation, Datatype or Object Property).

**owl: Enumerated Class** Defines an OWL Class extension defined by any one of the range of the allowed OWL Individuals.

**owl: Equivalent Class** Dependency between two equivalent OWL Classes.

**owl: Equivalent Property** Dependency between two equivalent OWL Property elements.

**owl: Imports** Enables an OWL ontology to reference another OWL Ontology.

**owl: Incompatible With** Dependency between an OWL Ontology and another that it is incompatible with.

**owl: Individual** Instance of an OWL Class which defines an individual fact.

**owl: Intersection Of** Dependency between an OWL Class and others it also specializes.

**owl: Inverse Of** Association, between two opposing, but related OWL Property elements.

**owl: Object Property** Object Property definition.

**owl: Ontology Property** Dependency, representing a property defined on the OWL Ontology.

**owl: Prior Version** Dependency between an OWL Ontology and its predecessor.

**owl: Range** Specifies the OWL Class with the value type applicable to the specified OWL Property (Annotation, Datatype or Object Property).

**owl: Restriction** Defines an OWL Class extension as restricted by the specified property and its allowable values.

**owl: Same As** Dependency between two semantically identical OWL Individuals typed by the same OWL Class.

**owl: Singleton** Class for a specific OWL Individual.

**owl: Sub Property Of** Generalization between two OWL Property elements.

**owl: Subclass Of** Generalization between two OWL Class elements.

**owl: Union Of** Dependency between a general OWL Class and others that distinctly specialize it.

**owl: Value** Association, defining an OWL Property and value between OWL Classes.

**prov: activity** Term indicates meaning

**prov: Association** Term indicates meaning

**prov: Plan** Term indicates meaning

**prov: Role** Term indicates meaning

**prov: Usage** Term indicates meaning

pto:TO_0000071 anthocyanin content

pto:TO_0000274 floret anatomy and morphology trait

pto:TO_0000289 carotene content

pto:TO_0000301 xanthophyll content

1.9. Terms imported from Ontologies
pto:TO_0000333  sugar content
pto:TO_0000372  amylose to amyllopectin ratio
pto:TO_0000374  breakdown viscosity
pto:TO_0000376  consistency viscosity
pto:TO_0000377  cooked grain elongation
pto:TO_0000379  cool paste viscosity
pto:TO_0000408  hot paste viscosity
pto:TO_0000409  peak viscosity
pto:TO_0000412  setback viscosity
pto:TO_0000537  flower color
pto:TO_0000602  total fat content
pto:TO_0000611  malt-extract percentage
pto:TO_0000635  popping expansion volume
pto:TO_0000651  flour color
pto:TO_0000698  starchiness
pto:TO_0000858  flower diameter
pto:TO_0000859  flower shape
pto:TO_0000860  flower length
pto:TO_0000881  flower type
pto:TO_0002646  flour particle size
pto:TO_0002697  cyclic carotene content
pto:TO_0002698  acyclic carotene content
pto:TO_0002736  flower number
pto:TO_0005001  linoleic acid content
pto:TO_0005002  oleic acid content
pto:TO_0005003  stearic acid content
pto:TO_0005004  omega-3 fatty acid content
pto:TO_0006008  carbohydrate derivative content
pto:TO_0020068  beta-glucan content
qb:MeasureProperty class of component properties which represent measured value of phe-
nomenon being observed
qb:measureType generic measure dimension, value of this dimension indicates which measure is
being given by observation
rdf:Blank Node Represents a uniquely identifiable internal resource.
rdf:Class Representing an RDF Class, which describes an instantiable resource with properties.
rdf:Comment Comment element.
rdf:Datatype Representing an RDF Datatype definition.
**sample_doc Documentation, Release**

**rdf:Domain** Association that specifies the RDF Classes that apply the specified RDF Property.

**rdf:Global** Representing a global RDF Property definition.

**rdf:Graph** Represents a set of RDF subject and object triples within the RDF Document.

**rdf:Is Defined By** Dependency between a RDF Resource and another that defines it.

**rdf:Property** Representing an RDF Property definition.

**rdf:Range** Association that specifies the RDF Class with the value type applicable to the specified RDF Property.

**rdf:Reifies** Dependency between a RDF Resource and another that it reifies.

**rdf:Resource** Represents a uniquely identifiable general resource.

**rdf:See Also** Dependency between a RDF Resource and another that contains more information about it.

**rdf:Sub Property Of** Generalization between two RDF Property elements.

**rdf:Subclass Of** Generalization between two RDF Class elements.

**rdf:URI Reference Node** Represents a uniquely identifiable external resource.

**ro:RO_0000056** participates in

**ro:RO_0000081** role of

**ro:RO_0000087** has role

**ro:RO_0001000** derives from

**ro:RO_0001001** derives into

**schema:Code** add detail such as property=schema:targetProduct

**schema:Dataset** add detail such as property=schema:catalog

**schema:Demand** add detail such as property=schema:gtin8

**schema:DietarySupplement** Add detail such as property=schema:manufacturer

Add detail such as property=schema:targetPopulation

**schema:Drug** add detail such as property=schema:foodWarning

**schema:IndividualProduct** add detail such as property=schema:serialNumber

**schema:NutritionalInformation** Add detail such as property=schema:servingSize

Add detail such as property=schema:sodiumContent

**schema:Product** add detail such as property=schema:releaseDate

**skos:broadер** Relates a concept to a concept that is more general in meaning.

**skos:changeNote** A note about a modification to a concept.

**skos:Concept** A SKOS concept can be viewed as an idea or notion; a unit of thought. However, what constitutes a unit of thought is subjective, and this definition is meant to be suggestive, rather than restrictive.

**skos:definition** A statement or formal explanation of the meaning of a concept.

**skos:hasTopConcept** Relates, by convention, a concept scheme to a concept which is topmost in the broader/narrower concept hierarchies for that scheme, providing an entry point to these hierarchies.

**skos:narrower** Relates a concept to a concept that is more specific in meaning.

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**1.9. Terms imported from Ontologies**

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1087
skos:prefLabel A preferred lexical label for a resource.
skos:related Relates a concept to a concept with which there is an associative semantic relationship.
skos:scopeNote A note that helps to clarify the meaning and/or the use of a concept
to:after Term indicates meaning
to:before Term indicates meaning
to:days Term indicates meaning
to:duration Term indicates meaning
to:hasDurationDescription Term indicates meaning
to:intervalEquals Term indicates meaning
uo:UO_0000021 gram
uo:UO_0000022 milligram
uo:UO_0000027 degree Celsius
uo:UO_0000051 concentration unit
uo:UO_0000052 mass density unit
uo:UO_0000112 joule
uo:UO_0000195 degree Fahrenheit
uo:UO_0000196 pH
uo:UO_0000273 milligram per liter
langual:G0004 Cooked by Dry Heat
langual:G0005 Baked or Roasted
langual:G0006 Broiled or Grilled
langual:G0007 Charcoal Broiled
langual:G0008 Griddled
langual:G0009 Popped
langual:G0010 Toasted
langual:G0011 Cooked by Microwave
langual:G0012 Cooked by Moist Heat
langual:G0013 Cooked in Water or Water-Based Liquid
langual:G0014 Boiled
langual:G0015 Boiled and Drained
langual:G0016 Boiled in Large Amount Of Liquid
langual:G0017 Boiled in Small Amount Of Liquid
langual:G0018 Boiled and Undrained
langual:G0019 Braised
langual:G0020 Simmered, Poached or Stewed
langual:G0021 Cooked in Steam
1.10 Bibliographies

Intro text goes here
1.10.1 Books - Food Analysis Methods

1.10.2 Articles - Food Analysis Methods

1.10.3 Books - Food

1.10.4 Articles - Food

1.10.5 Resources - Ontologies

1.10.6 Resources - Data

1.10.7 Resources - Web

1.10.8 Articles - Technology

1.11 Ontomatica

1.11.1 Executive Summary

Ontomatica has developed the most comprehensive database of the food stream, using terms and data that conform to U.S. government and international standards. It provides ability to analyze and track food from its origins, through growing and processing, to consumption. Such thorough documentation provides information to improve food safety and determine “cause and effect” of the food we eat.

Ontomatica products can:

- Automatically generate electronic food labels.
- Combine electronic food labels to create electronic meal labels.
- Automatically generate material safety data sheets (MSDS) for chemical products.
- Submit regulatory data electronically.
- Validate accuracy of product descriptions.
- Read electronic labels with computers, tablets, phones and QR readers.
- Create a personal food record.

Benefits include the ability to:

- Access a transparent food stream.
- Improve food safety by tracing the source of food-borne illness.
- Build a personal history of food and drug intake over time.
- Assess overall health by combining food records with medical records.
- Determine “cause and effect” of food/drug intakes and outcomes.
- Improve health by adjusting intakes.
1.11.2 Ontomatica Expertise

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- Overview
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  - ChEFS - Chemical Entities of Food Significance
  - ChEMATIC - Chemical Entities with Medical Applications, Therapeutic Indications and Consequences
  - Dietary Data Reference
  - USDA National Nutrient Database for Standard Reference
  - Specialty Foods and GS1
  - Basic Food Data Kit
  - USDA Food and Nutrient Database for Dietary Studies
  - Reference Library (based on National Agricultural Library Thesaurus)
  - Dietary Supplements and FDA SPL
  - Homeopathic Remedies
  - Glucosinolate Content in Brassica
  - Plants
- Related Projects
  - Research Data Depository
  - Food specifications designed for a Food SPL
  - Comprehensive Ontologies
    * Pizza Ontology
    * Wheat Ontology
    * Microbiome Ontology
- Summary

Overview

Ontomatica integrates knowledge and informatics about foods, agricultural commodities, agrochemicals and pharmaceuticals. Knowledge and informatics are documented as Ontologies, from which production systems are generated. Scope of Ontomatica expertise is demonstrated in more than twenty (20) production systems. Twelve (12) systems are presented below.

Chemical, Food, Therapeutic, Clinical and Research Databases

**ChEFS - Chemical Entities of Food Significance**  50,000+ chemicals organized by Facets

- Bioactive Capabilities of Specific Chemicals
- Biological Effects of Specific Chemicals
- Chemical Capabilities
- Chemical Category
- Food Nutrient and Dietary Chemicals
- Food Pesticide Chemicals with Regulated Residues on Food Commodities
- Industrial Uses
- Name of Biological Source of Chemical
• Part of Biological Source of Chemical

Example ChEFS

Significance Precise chemical classification and relationships with Authorities and uses.

ChEMATIC - Chemical Entities with Medical Applications, Therapeutic Indications and Consequences
300,000+ substances organized by Facets

• Amino Acids, Peptides, and Proteins
• Biological Factors
• Carbohydrates
• Chemical Actions and Uses
• Complex Mixtures
• Enzymes and Coenzymes
• Heterocyclic Compounds
• Hormones, Hormone Substitutes, and Hormone Antagonists
• Inorganic Chemicals
• Lipids
• Macromolecular Substances
• Nucleic Acids, Nucleotides, and Nucleosides
• Organic Chemicals
• Pharmaceutical Preparations
• Polycyclic Compounds

and their relationship with

• Anatomy
• Diseases and Disorders (26 classes)
• Human Genes
• Organisms

Example ChEMATIC

Significance Precise substance classification and relationships with human disorders, human genes and interactions between substances and genes.

Dietary Data Reference Food items organized by these Facets

• Adjunct Characteristics
• Consumer Group / Dietary Use /Label Claim
• Contact Surface
• Container or Wrapping
• Cooking Method
• Extent of Heat Treatment
• Geographic Places and Regions
• Identifying Substance
• Packing Medium
• Part of Substance
• Physical State, Shape or Form
• Preservation Method
• Regulatory Category
• Substances Included
• Treatment Applied

Example Dietary Data Reference

Significance Foods and their relationships with dietary chemicals, food preparation techniques, food packaging substances and food label claims.

USDA National Nutrient Database for Standard Reference Standard Reference items organized by these Facets
• Food Source
• Index to Food Descriptions (A - Z)
• Product Type
• Substances Included

Example USDA National Nutrient Database for Standard Reference

Significance USDA SR implemented in Facet navigation architecture.

Specialty Foods and GS1 Same structure as Dietary Data Reference but with different items

Example Specialty Foods and GS1

Basic Food Data Kit Food commodities organized by these Facets
• Commodities by Crop Group
• Commodities by Food Group
• Food Source
• Index to Food Commodity Names (A - Z)
• Part of Food Source
• Scientific Name

Example Food Data Kit - Basic

Significance Food commodities and relationships with UN FAO, USDA and US EPA regulatory and identity terms.
USDA Food and Nutrient Database for Dietary Studies Food and meal items organized by these Facets

- Constituents by Crop Group
- Constituents by Food Group
- Food Descriptions and Constituents
- Index to Food Descriptions (1 - 3; A - Z)

**Example** USDA Food and Nutrient Database for Dietary Studies - with EPA FCID

**Significance** Unique implementation of USDA FNDDS foods and meals and their relationships with UN FAO, USDA and US EPA regulatory and identity terms.

Reference Library (based on National Agricultural Library Thesaurus) Agriculture-related items organized by these Facets

- Animal Science and Animal Products
- Biological Sciences
- Breeding and Genetic Improvement
- Calendar Year
- Economics, Business and Industry
- Farms and Farming Systems
- Food and Human Nutrition
- Forest Science and Forest Products
- Geographical Locations
- Government, Law and Regulations
- Health and Pathology
- Insects and Entomology
- Natural Resources, Earth and Environmental Sciences
- Physical and Chemical Sciences
- Plant Science and Plant Products
- Reference Types
- Research, Technology and Engineering
- Rural and Agricultural Sociology
- Taxa - Algae
- Taxa - Animalia
- Taxa - Archaea, Cyanobacteria and Bacteria
- Taxa - Fungi, Yeasts, Molds and Mildews
- Taxa - Plantae
- Taxa - Viruses and Viroids
- Time Periods

**Example** Reference Library - based on National Agricultural Library Thesaurus (NALT)
**Significance** Unique implementation of USDA NALT and relationships with published articles about food and agriculture science.

**Dietary Supplements and FDA SPL**
- Dietary supplement items organized by these Facets
- Additive Treatments
- Contact Surface
- Container or Wrapping
- Dietary Supplement Products
- Dosage Form
- Label Claims
- Manufacturing Procedures
- Nutrients
- Part of Source
- Preservation Methods
- Product Documentation
- Region of Origin
- Sensory Terms
- Source of Base Ingredient
- Supplement Treatments
- Treatments Applied

**Example** Dietary Supplements and FDA SPL

**Significance** Supplements in a Facet navigation architecture with a structure that aligns with US FDA Structured Product Label terms.

**Homeopathic Remedies** Homeopathic remedy items organized by these Facets
- Animal Science and Animal Products
- Biological Sciences
- Economics, Business and Industry
- Health and Pathology
- Physical and Chemical Sciences
- Plant Science and Plant Products
- Research, Technology and Engineering
- Scientific Classification
- Sociology

**Example** Homeopathic remedies and FDA SPL

**Significance** Similar to dietary supplements but where Items are homeopathic remedies.
Glucosinolate Content in Brassica  Phytochemical items organized by these Facets

- Adjunct Characteristics
- Affiliations
- Anatomical Part
- Biological Source
- Data Acquisition Type
- Data Reference Type
- Extent of Heat Treatment
- Genetic Characteristics
- Geographic Regions
- Growing Conditions
- Matrix Values
- Maturity Period
- Measurement Units
- Method Indicators
- Method Type
- Nitrogen Components
- Organosulfur Compounds
- Physical State, Shape or Form
- Product Type
- Review Status
- Time Periods
- Treatment Applied
- Years

Example  Glucosinolate Content in Brassica

Significance  Unique implementation of food and chemistry research integrates data from scientific analysis with a Facet navigation architecture.

Plants  Plant taxonomy database using biological classification.

- Kingdom
- Division
- Class
- Order
- Family
- Subfamily
- Tribe
- Genus
• Species

**Example**  Plants

**Significance**  Uses USDA Germplasm Resources Information Network (GRIN).

### Related Projects

**Research Data Depository**  Ontomatica is building a data depository where results from scientific research about foods, agriculture and related compounds and substances will be stored.

Glucosinolate Content in Brassica is a prototype.

Depository components are summarized in *use case* below.

- Isothiocyanates occur widely in nature and are of interest in food science and medicine. Vegetable foods with characteristic flavors due to isothiocyanates include wasabi, horseradish, mustard, radish, Brussels sprouts, watercress, nasturtiums, and capers. These vegetables generate isothiocyanates in different proportions and have unique flavors.

- Isothiocyanates are produced by enzymatic conversion of metabolites called glucosinolates. Sulforaphane is a type of isothiocyanate. It is produced when enzyme thioglucosidase transforms glucoraphanin, a glucosinolate, into sulforaphane upon damage to the plant (such as from chewing), which allows two compounds to mix and react.

- Sulforaphane is a potent inducer of metabolic detoxication, phase 2. Detoxication 2 induction is associated with reduced susceptibility of animals and their cells to toxic and neoplastic effects of carcinogens. Data from several research projects demonstrate that Sulforaphane blocks chemical carcinogenesis.

- Research data about sulforaphane, specific vegetables, detoxication 2 and chemical carcinogenesis will be managed by Ontomatica Depository and accessible to other Researchers.

**Food specifications designed for a Food SPL**  Structured Product Labeling (SPL) is a document markup standard approved by Health Level Seven (HL7) and adopted by US FDA as a mechanism for exchanging drug product information.

Ontomatica modified US FDA SPL structure as a mechanism for exchanging food product information

- As a baseline, here are lasagna nutrient properties from USDA Standard Reference.
- Here are lasagna nutrient properties in a form consistent with US FDA SPL structure.

**Comprehensive Ontologies**  Ontomatica work is represented as an ontology and documented in Web Ontology Language (OWL) format. Three examples - Pizza, Wheat and Microbiome - are presented.

**Pizza Ontology**  An example of a food ontology is Pizza Ontology. As a baseline, here is pizza as implemented in USDA FNDDS.

- Pizza Ontology as implemented in OWL.
- Pizza Ontology as a Graph.
- Pizza Ontology as multiple Graphs for easier reading.
Wheat Ontology  Ontomatica Wheat Ontology has two dimensions: (1) Facets associated with process of growing wheat; (2) Predicates expressing relationships between wheat and Facet Terms.

Figure below summarizes 13 Facet Classes and 13 Predicate Classes that define wheat.

Specific type of wheat (i.e., cultivar) is the Item.

<table>
<thead>
<tr>
<th>Facets</th>
<th>Predicates relating Facets to Item (wheat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant (weed)</td>
<td>Anatomy and Morphology</td>
</tr>
<tr>
<td>Insect</td>
<td>Development</td>
</tr>
<tr>
<td>Fungus</td>
<td>Pathology</td>
</tr>
<tr>
<td>Bacteria</td>
<td>Action and Usage</td>
</tr>
<tr>
<td>Virus</td>
<td>Administration</td>
</tr>
<tr>
<td>Animal</td>
<td>Trait</td>
</tr>
<tr>
<td>Chemical</td>
<td>Bioactive Property</td>
</tr>
<tr>
<td>Soil</td>
<td>Biochemical Pathway</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>Breeding and Genetic Improvement</td>
</tr>
<tr>
<td>Water</td>
<td>Farming System</td>
</tr>
<tr>
<td>Time</td>
<td>Metrology</td>
</tr>
<tr>
<td>Geographical Location</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>Agricultural Machinery</td>
<td>Authority, Law and Regulation</td>
</tr>
</tbody>
</table>

Wheat Ontology is used to represent USDA Objective Description of Wheat as an electronic message.

Microbiome Ontology  Human microbiome is Classes of microbes that participate in process of unlocking dietary plant and animal nutrients.

Microbes include bacteria, archaea and viruses, such as bacteriophages.

Ontomatica Microbiome Ontology implements relationships between food intake; bacteria, archaea and viruses; human anatomy (location of microbe Classes e.g., human gut); and, health outcomes.

Summary

Examples and projects above demonstrate that Ontomatica is the world leader in building information systems delivering knowledge and informatics about foods, agricultural commodities, agrochemicals and pharmaceuticals.

1.12 Epilogue

- Vegetables are a must on a diet. I suggest carrot cake, zucchini bread, and pumpkin pie. ~Jim Davis
- There is a lot more juice in grapefruit than meets the eye. ~Author Unknown
- Sex is good, but not as good as fresh, sweet corn. ~Garrison Keillor
- Do vegetarians eat animal crackers? ~Author Unknown
- Shipping is a terrible thing to do to vegetables. They probably get jet-lagged, just like people. ~Elizabeth Berry
- Red meat is not bad for you. Now blue-green meat, that’s bad for you! ~Tommy Smothers
- As a child my family’s menu consisted of two choices: take it or leave it. ~Buddy Hackett
- My favorite animal is steak. ~Fran Lebowitz
- The poets have been mysteriously silent on the subject of cheese. ~G.K. Chesterton
- In Mexico we have a word for sushi: bait. ~Jose Simons
• I don’t think America will have really made it until we have our own salad dressing. Until then we’re stuck behind the French, Italians, Russians and Caesarians. ~Pat McNelis
• Chili represents your three stages of matter: solid, liquid, and eventually gas. ~Roseanne Barr
• A nickel will get you on the subway, but garlic will get you a seat. ~Old New York proverb
• It’s bizarre that the produce manager is more important to my children’s health than the pediatrician. ~Meryl Streep
• We are living in a world today where lemonade is made from artificial flavors and furniture polish is made from real lemons. ~Alfred E. Newman
• Hey yogurt, if you’re so cultured, how come I never see you at the opera? ~Attributed to Stephen Colbert
• I will not eat oysters. I want my food dead - not sick, not wounded - dead. ~Woody Allen
• Part of the secret of success in life is to eat what you like and let the food fight it out inside. ~Mark Twain
• Condensed milk is wonderful. I don’t see how they can get a cow to sit down on those little cans. ~Fred Allen
• The most remarkable thing about my mother is that for thirty years she served the family nothing but leftovers. The original meal has never been found. ~Calvin Trillin
• If you ate pasta and antipasto, would you still be hungry? ~Author Unknown
• An onion can make people cry, but there has never been a vegetable invented to make them laugh. ~Will Rogers
• Training is everything. The peach was once a bitter almond; cauliflower is nothing but cabbage with a college education. ~Mark Twain
• And, of course, the funniest food of all, kumquats. ~George Carlin
• Pre-heat the oven? Really? If I was the sort of person who planned ahead, I wouldn’t be eating this Totino’s Party Pizza in the first place. ~Adam Peterson
• A fruit is a vegetable with looks and money. Plus, if you let fruit rot, it turns into wine, something Brussels sprouts never do. ~P.J. O’Rourke
• Avoid fruit and nuts. You are what you eat. ~Jim Davis
• I’m not sure what makes pepperoni so good - if it’s the pepper or the oni. ~S.A. Sachs
• Fish is the only food that is considered spoiled once it smells like what it is. ~P.J. O’Rourke
• We got married in a fever hotter than a pepper sprout. ~June Carter Cash
• Welcome to the Church of the Holy Cabbage. Lettuce pray. ~Author Unknown
• A golfer’s diet: live on greens as much as possible. ~Author Unknown
• Let your food be your medicine and your medicine be your food. ~Hippocrates
• Stressed spelled backwards is desserts. Coincidence? I think not! ~Author Unknown
• Strength is the capacity to break a chocolate bar into four pieces with your bare hands - and then eat just one of the pieces. ~Judith Viorst
• There are four basic food groups: milk chocolate, dark chocolate, white chocolate, and chocolate truffles. ~Author Unknown
• Chocolate is an antidepressant, which is especially useful as you start to gain weight. ~Jason Love
• I’ve been on a diet for two weeks and all I’ve lost is fourteen days. ~Totie Fields
• I’m on a seafood diet. I see food and I eat it. ~Author Unknown
• The biggest seller is cookbooks and the second is diet books - how not to eat what you’ve just learned how to cook. ~Andy Rooney
• A balanced diet is a cookie in each hand. ~Author Unknown
• My doctor told me to stop having intimate dinners for four. Unless there are three other people. ~Orson Welles
• The only way to lose weight is to check it as airline baggage. ~Peggy Ryan
• Never eat more than you can lift. ~Miss Piggy
• Caffeine isn’t a drug, it’s a vitamin! ~Author Unknown
• In Seattle you haven’t had enough coffee until you can thread a sewing machine while it’s running. ~Jeff Bezos
• Ultimate office automation - networked coffee machines. ~Author Unknown
• Water is the most essential element of life, because without it you can’t make coffee. ~Author Unknown
• Vegetarian - that’s an old Indian word meaning “lousy hunter.” ~Andy Rooney
• If vegetarians eat vegetables, what do humanitarians eat? ~Author Unknown

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[BFM63] AOAC Authors. *Official methods of analysis Amino Acids Analysis Acid hydrolysis Hydroxyproline - item 77*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 990.26 (39.1.27); NFNAP; NITR; HYP.

[BFM64] AOAC Authors. *Official methods of analysis Amino Acids Analysis Acid hydrolysis Hydroxyproline Meat and Meat products - item 78*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 990.26 (39.1.27); NFNAP; NITR; HYP.

[BFM65] AOAC Authors. *Official methods of analysis Amino Acids Analysis Acid hydrolysis Hydroxyproline Milk - item 79*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 991.20; NFNAP; NITR; NT.

[BFM66] AOAC Authors. *Official methods of analysis Amino Acids Analysis Amino Acid Profile without Tryptophan (AAP-T) - item 71*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.30 E(a,b); NFNAP; NITR; AA.

[BFM67] AOAC Authors. *Official methods of analysis Amino Acids Analysis Available Lysine (AL) - item 68*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 975.44; NFNAP; NITR; LYSAVL.

[BFM68] AOAC Authors. *Official methods of analysis Amino Acids Analysis Complete Amino Acid Profile (AAP) - item 72*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.30 E(a,b,c); NFNAP; NITR; AA.
[BFM69] AOAC Authors. *Official methods of analysis Amino Acids Analysis Cysteine & Methionine (CM) - item 73.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.30 E(b); NFNAP; NITR; AA.

[BFM70] AOAC Authors. *Official methods of analysis Amino Acids Analysis Feed (OPA post column) - item 81.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 994.12 (4.1.11); NFNAP; NITR; AA.

[BFM71] AOAC Authors. *Official methods of analysis Amino Acids Analysis Free Supplemental Amino Acids (FM, FL or FML) - item 82.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 999.13; NFNAP; NITR; AA.

[BFM72] AOAC Authors. *Official methods of analysis Amino Acids Analysis Methionine, Lysine or Hydroxyproline (M, L or HP) - item 70.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.30 (45.3.05); NFNAP; NITR; AA.

[BFM73] AOAC Authors. *Official methods of analysis Amino Acids Analysis Standard Protein Hydrolysate (SPH) - item 69.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.30 (45.3.05); NFNAP; NITR; PER.

[BFM74] AOAC Authors. *Official methods of analysis Amino Acids Analysis Tryptophan (T) Food and Feed Ingredients - item 75.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 988.15; NFNAP; NITR; TRP.

[BFM75] AOAC Authors. *Official methods of analysis Available Carbohydrates Calculation: 100 percent minus percent (CP + Ash + Crude Fat + M + Crude Fiber) - item 86.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.14 (32.2.07); NFNAP; CHO; SUGAR.


[BFM77] AOAC Authors. *Official methods of analysis Cellulose (Cel) Calculation: Cellulose = ADF minus Acid Detergent Lignin (ADL) - item 91.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. NFNAP; PROX.


[BFM80] AOAC Authors. *Official methods of analysis Lipids, Fats and Oils Analysis Carotene - item 30.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 970.64; LIPD; CARTOID.


[BFM84] AOAC Authors. *Official methods of analysis* Lipids, Fats and Oils Analysis Conjugated Linoleic Acids (CLA, reported as 'total') - item 45. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method Ce 1h-05; NFNAP; LIPD; FA.


[BFM98] AOAC Authors. *Official methods of analysis* Lipids, Fats and Oils Analysis Total Carotenoids - item 22. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 941.15 (45.1.03); NFNAP; LIPD; CART.

[BFM100] AOAC Authors. *Official methods of analysis Lipids, Fats and Oils Analysis Total Fat by Acid Hydrolysis Pet Food - item 24.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 954.02 (4.5.02 or 7.063); NFNAP; LIPD; FA.

[BFM101] AOAC Authors. *Official methods of analysis Lipids, Fats and Oils Analysis Total Fatty Acids (Crude) - item 38.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method Ca 5b-71; NFNAP; LIPD; FA.


[BFM103] AOAC Authors. *Official methods of analysis Lipids, Fats and Oils Analysis Xanthophylls - item 31.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 970.64; NFNAP; LIPD; FA.

[BFM104] AOAC Authors. *Official methods of analysis Minerals Analysis - item 59.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 975.03B(b); NFNAP; MIN.


[BFM106] AOAC Authors. *Official methods of analysis Minerals Analysis Boron - item 61.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.01 B(a); NFNAP; MIN; B.


[BFM108] AOAC Authors. *Official methods of analysis Minerals Analysis Chloride, manual titration - item 47.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 9.15.01, 943.01; NFNAP; MIN; CLD.


[BFM111] AOAC Authors. *Official methods of analysis Minerals Analysis Gravimetric Phosphorus plant tissue - item 57.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 966.01; NFNAP; MIN; P.


[BFM113] AOAC Authors. *Official methods of analysis Minerals Analysis Inductively Coupled Plasma - Optical Emission Spectroscopy (ICP-OES) - item 63.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 985.01(A, B, D); NFNAP; MIN.

[BFM115] AOAC Authors. Official methods of analysis Minerals Analysis Selenium - item 65. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 996.16(G); NFNAP; MIN; SEIO.


[BFM118] AOAC Authors. Official methods of analysis Minerals Analysis Volumetric Boron - item 56. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 958.03; NFNAP; MIN; B.


[BFM120] AOAC Authors. Official methods of analysis Nitrogen-free Extract Calculation: 100 minus (Moisture + Ash + Protein + Fiber + Fat) - item 93. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. NFNAP; PROX.

[BFM121] AOAC Authors. Official methods of analysis Non-structural Carbohydrates Calculation: 100 percent minus percent (NDF + CP + ether extract + ash) - item 87. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. NFNAP; PROX.

[BFM122] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Acid Detergent Fiber (ADF) - item 1. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 973.18 (A-D); CHO; FIB.


[BFM125] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Ash Determination (Ash) Animal Feed - item 52. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 942.05 (4.1.10); NFNAP; MIN; ASH.

[BFM126] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Ash Determination (Ash) Flour - item 49. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 923.03 (32.1.05 or 14.006); NFNAP; MIN; ASH.


[BFM129] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Cellulose (Cel) - item 2. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 973.18 (A-D); CHO; CELLU.
AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Crude Fat (CF) - item 17.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 920.39 (A); LIPD; FA.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Crude Fat (CF) - item 23.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 954.02; LIPD; FA.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Crude Fat (CF) Flour - item 18.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 922.06 (32.1.14); NFNAP; LIPD; FA.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Crude Fat (CFiber) - item 4.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 978.10; CHO; FIB.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Crude Fiber - item 11.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Procedure Ba 6a-05; CHO; FIB.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Crude Protein Meat and Meat Products Including Pet Foods - item 80.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 992.15 (39.1.16); NFNAP; NITR; NT.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Lignin - item 3.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 973.18 (A-D); CHO; LIGN.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Moisture (M) - item 105.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 934.01; WATER.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Moisture (M) Animal Feed - item 106.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 934.01 (4.1.03); NFNAP; WATER.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Moisture (M) Canned Vegetables - item 109.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 964.22 (42.1.05); NFNAP; WATER.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Moisture (M) Fruits, Vegetables, and their Products - item 107.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 934.06 (37.1.10); NFNAP; WATER.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Moisture (M) Meat - item 108.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 950.46 (39.1.02); NFNAP; WATER.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Nitrogen - item 74.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 984.13 (A-D); NITR; NT.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Nitrogen Solubility Index (NSI) - item 83.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method Ba 11-65; NITR.

AOAC Authors. *Official methods of analysis Proximate Analysis and Calculations Phytic acid - item 8.* Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 986.11; CHO; PHYTAC.
[BFM145] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Starch - item 5. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 979.10 (32.2.05); NFNAP; CHO; STAR.

[BFM146] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Total Dietary Fiber (TDF) in Foods - item 7. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 985.29 (45.4.07); NFNAP; CHO; FIB.


[BFM148] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Total Fat Foods - item 32. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 983.23 (45.4.02); NFNAP; LIPD; FA.

[BFM149] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Total Fat Macaroni Products - item 19. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 925.12 (32.5.05); NFNAP; LIPD; FA.


[BFM151] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Total Fat Milk - item 33. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 989.05; NFNAP; LIPD; FA.

[BFM152] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Total Fat Milk - item 34. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 989.05 (33.2.26); NFNAP; LIPD; FA.

[BFM153] AOAC Authors. Official methods of analysis Proximate Analysis and Calculations Total Nitrogen or Crude Protein (CP) - item 76. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 990.03; NITR; NT.


[BFM156] AOAC Authors. Official methods of analysis Total Carbohydrates, crude ‘by difference’ Calculation: 100 percent minus percent (CP + Ash + Crude Fat + M) - item 85. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 991.43; NFNAP; PROX.

[BFM157] AOAC Authors. Official methods of analysis Vitamin Analysis Cobalamin (Vitamin B12 Activity) Vitamin Preparations - item 98. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 952.20 (45.2.02); NFNAP; VIT; VITB12.


[BFM159] AOAC Authors. Official methods of analysis Vitamin Analysis L-ascorbic acid Vitamin Preparations - item 100. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 967.22 (45.1.15); NFNAP; VIT; ASCL.
[BFM160] AOAC Authors. *Official methods of analysis Vitamin Analysis Microbiological method Vitamin Preparations - item 94*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 940.33 (45.2.06); NFNAP; VIT; RIBF.

[BFM161] AOAC Authors. *Official methods of analysis Vitamin Analysis Niacin and Niacinamide Vitamin Preparations - item 96*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 944.13 (45.2.04); NFNAP; VIT; NIA.

[BFM162] AOAC Authors. *Official methods of analysis Vitamin Analysis Pantothenic acid Milk-Based Infant Formula - item 103*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 992.07 (50.1.22); NFNAP; VIT; PANTAC.


[BFM164] AOAC Authors. *Official methods of analysis Vitamin Analysis Vitamin B6 (Pyridoxine, Pyridoxal, and Pyridoxamine) Food Extracts - item 99*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 961.15 (45.2.08); NFNAP; VIT; VITB6A.

[BFM165] AOAC Authors. *Official methods of analysis Vitamin Analysis Vitamin D Infant Formulas and Enteral Products - item 104*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 995.05 (50.1.23); NFNAP; VIT; GRP_VITD.

[BFM166] AOAC Authors. *Official methods of analysis Vitamin Analysis Vitamin D Mixed Feeds, Premixes, and Pet Foods - item 102*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 982.29 (45.1.22); NFNAP; VIT; GRP_VITD.

[BFM167] AOAC Authors. *Official methods of analysis Vitamin Analysis Vitamin Preparations - item 97*. Association of Analytical Communities, Gaithersburg, MD, 17th edition, 2006. Reference data: Method 945.74 (45.2.05); NFNAP; VIT; PANTAC.


[AFM3] E. Anklam, A. Burke, and H. D. Isengard. Water determination in food - a challenge for the analysts; a selection of papers from the 1st international workshop, Ispra, Italy, 6-7 April 2000 - item 3. *Food Control*, 12(7):393–498, 2001. Reference data: WATER; m00008; Microwave oven; Medium or high moisture.


[AFM34] H. N. Englyst, M. E. Quigley, and G. J. Hudson. Determination of dietary fibre as non-starch polysaccharides with gas-liquid chromatography, high-performance liquid chromatography, or spectrophotometric measurement of component sugars - item 1. Analyst, 119:1497–1509, 1994. Reference data: CHO; NSP; Enzymatic hydrolysis and removal of starch; acid hydrolysis of NSP; GLC, HPLC separation of component monosaccharides; Colorimetric analysis of monosaccharides; m00043; Virtually all foods.


[AFM55] W. D. Hubbard, A. J. Sheppard, and D. R. Newkirk. Comparison of various methods for the extraction of total lipids, fatty acids, cholesterol and other sterols from food products. *Journal of the American Oil Chemists' Society*, 54:81–83, 1977. Reference data: LIPD; FA; m00054; Rapid, efficient for many foods; extract can be used for fatty acid measurements.


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[AFR105] J. L. Weihrauch and J. Tamaki. Provisional Table on the Vitamin D Content of Foods. USDA, 


[AFR107] J. Williams, K. Patterson, and J. M. Holden. Nutrient Composition in Ground Pork using Regression Tech-
niques. Institute of Food Technologists Annual Meeting - June 6-9, 2009, Anaheim, CA.


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[AFR180] No author identified. Dietary reference intakes for vitamin D and Calcium. Institute of Medicine, 2011. Washington, DC.


[AFR195] No author identified. FAO Agricultural Development Paper. *Food and Agriculture Organization (FAO) of the United Nations*, date-NS.


[ONT1] AGROVOC. Last accessed: 17-Nov-2014. Using prefix: agrovoc. AGROVOC is a controlled vocabulary covering areas of interest of the Food and Agriculture Organization (FAO) of the United Nations. Areas include food, nutrition, agriculture, fisheries, forestry, environment, etc. It includes class terms such as Triticum aestivum, Puccinia graminis, and Xanthomonas. URL: http://aims.fao.org/standards/agrovoc/functionalities/search.

[ONT2] Adverse Event Reporting Ontology. Last accessed: 17-Nov-2014. Using prefix: aero. Adverse Event Reporting Ontology (AERO) is aimed at supporting clinicians at the time of data entry, increasing quality and accuracy of reported adverse events. It includes object property terms such as found to exhibit, has specified input, and has specified output. URL: https://code.google.com/p/adverse-event-reporting-ontology/.
providing domain properties to AGROVOC. It includes object property terms such as hasPest, isCausedBy, and
hasPropagationMaterial. URL: http://aims.fao.org/aos/agrontology#.

a small, upper level ontology designed to support information retrieval, analysis and integration in scientific and
other domains. It does not contain physical, chemical, biological or other terms which would properly fall within
the coverage domains of the special sciences. BFO is used by more than 100 ontology-driven endeavors throughout
the world. URL: http://www.ifomis.org/bfo/.

scribe bibliographic things on the semantic Web in RDF. This ontology can be used as a citation ontology,
as a document classification ontology, or simply as a way to describe any kind of document in RDF. URL:

of Biological Interest (ChEBI) is a freely available dictionary of molecular entities focused on 'small’ chemical
compounds. URL: http://www.ebi.ac.uk/chebi/.

ontology (cheminf) describes information entities about chemical entities. It provides qualitative and quantitative
attributes to richly describe chemicals. URL: https://code.google.com/p/semanticchemistry/.

tology (CHMO) describes methods used to collect data in chemical experiments, such as mass spectrometry
and electron microscopy; prepare and separate material for further analysis, such as sample ionization, chroma-
tography and electrophoresis; synthesis materials, such as epitaxy and continuous vapor deposition. It also
describes the instruments used in these experiments, such as mass spectrometers and chromatography columns.
URL: https://code.google.com/p/rsc-cmo/.

cast (CF) metadata conventions are conventions for the description of Earth sciences data. CF is intended
for use with estimation and forecasting data in the atmosphere, ocean and other physical domains. URL:

Language (CC REL) lets you describe copyright licenses in RDF. URL: http://creativecommons.org/ns#.

ogy (DRON) supports comparative effectiveness researchers studying claims data. URL:

describe web resources (video, images, web pages) and physical resources such as books, CDs, and objects like
artworks. One important purpose is to provide interoperability for metadata vocabularies in the Linked data cloud
and Semantic web implementations. URL: http://purl.org/dc/terms/.

is an ontology of common bioinformatics operations, topics, types of data and formats. It includes class terms
such as Data, Sequence alignment, and OWL/XML. URL: http://edamontology.org/.

for the concise, controlled description of environments. It includes class terms such as animal manure, ditch water,
and grass silage. URL: http://environmentontology.org/.

number) is a numerical classification scheme for enzymes, based on the chemical reactions they catalyze. As a sys-
tem of enzyme nomenclature, every EC number is associated with a recommended name for the respective enzyme.
Strictly speaking, EC numbers do not specify enzymes, but enzyme-catalyzed reactions. If different enzymes (for
instance from different organisms) catalyze the same reaction, then they receive the same EC number. Furthermore,
through convergent evolution, completely different protein folds can catalyze an identical reaction and therefore would be assigned an identical EC number (a.k.a. non-homologous isofunctional enzymes, or NISE). By contrast, UniProt identifiers uniquely specify a protein by its amino acid sequence. URL: http://enzyme.expasy.org/.

[ONT16] Epidemiology Ontology. Last accessed: 17-Nov-2014. Using prefix: eo. Epidemiology Ontology (EO) is designed to support the semantic annotation of epidemiology resources. It supports efforts to increase the amount of epidemiological data available, improve disease surveillance systems and promote collaboration among epidemiological researchers. The EO is integrated into NERO (Network of Epidemiology Related Ontologies), a collection of existing ontologies that supports the semantic annotation of epidemiology resources contained in the Epidemic Marketplace (EM), a platform for sharing resources and knowledge within the Epidemiology community. It includes terms such as carrier - an animal or plant harboring a specific infectious agent that serves as a potential source of infection. URL: https://code.google.com/p/epidemiology-ontology/.

[ONT17] FOAF Vocabulary. Last accessed: 17-Nov-2014. Using prefix: foaf. FOAF is a project devoted to linking people and information using the Web. FOAF integrates three kinds of network: social networks of human collaboration, friendship and association; representational networks that describe a simplified view of a cartoon universe in factual terms and information networks that use Web-based linking to share independently published descriptions of this inter-connected world. FOAF does not compete with socially-oriented Web sites; rather it provides an approach in which different sites can tell different parts of the larger story and by which users can retain some control over their information in a non-proprietary format. URL: http://xmlns.com/foaf/0.1/.


[ONT21] Harmonized Tariff Schedule. Last accessed: 17-Nov-2014. Using prefix: hts. Harmonized Tariff Schedule (HTS) of the United States is the primary resource for determining tariff classifications for goods imported into the United States. It can also be used in place of Schedule B for classifying goods exported from the United States to foreign countries. The U.S. International Trade Commission is responsible for periodically updating it and makes it available in a variety of electronic formats. The U.S. Harmonized Tariff Schedule classifies a good based on its name, use, and/or the material used in its construction and assigns it a ten-digit number. There are over 17,000 unique ten-digit HTS classification code numbers. The Harmonized Tariff Schedule is based on the international Harmonized Commodity Coding and Classification System established by the World Customs Organization (WCO). Virtually all countries base their tariff schedules on the WCO’s Harmonized System. URL: http://www.usitc.gov/tata/hts/bychapter/index.htm.

[ONT22] Human Disease Ontology. Last accessed: 17-Nov-2014. Using prefix: doid. Human disease ontology (DOID) is a comprehensive hierarchical controlled vocabulary for human disease representation. It includes object property terms such as complicated by, has symptom, and transmitted by. It includes class terms such as nutritional deficiency disease, multiple chemical sensitivity, and food allergy. Ontomatica has mapped DOID to MeSH to promote interoperability. URL: http://do-wiki.nubic.northwestern.edu/do-wiki/index.php/Main_Page.


[ONT24] Infectious Disease Ontology. Last accessed: 17-Nov-2014. Using prefix: ido. Infectious Disease Ontology (IDO) is an ontology of entities relevant to biomedical and clinical aspects
of infectious diseases. It includes terms such as pathogen, host, vector, and vaccine. URL: http://www.bioontology.org/wiki/index.php/Infectious_Disease_Ontology.


[ONT28] Medical Subject Headings. Last accessed: 17-Nov-2014. Using prefix: mesh. Medical Subject Headings (MeSH) is a comprehensive controlled vocabulary for the purpose of indexing journal articles and books in the life sciences; it can also serve as a thesaurus that facilitates searching. Created and updated by the United States National Library of Medicine (NLM), it is used by the MEDLINE/PubMed article database and by NLM’s catalog of book holdings. It can be browsed and downloaded free of charge through PubMed. Originally in English, MeSH has been translated into numerous other languages and allows retrieval of documents from different languages. URL: http://bioportal.bioontology.org/ontologies/MESH.

[ONT29] Metadata Authority Description Schema in RDF. Last accessed: 17-Nov-2014. Using prefix: madsrdf. MADS/RDF (Metadata Authority Description Schema in RDF) is a knowledge organization system (KOS) designed for use with controlled values for names (personal, corporate, geographic, etc.), thesauri, taxonomies, subject heading systems and other controlled value lists. It is closely related to SKOS, the Simple Knowledge Organization System and a widely supported and adopted RDF vocabulary. MADS/RDF has been fully mapped to SKOS. It is presented as an OWL ontology. The MADS/RDF is designed as a data model for authority and vocabulary data used within the library and information science (LIS) community, which is inclusive of museums, archives and other cultural institutions. For example, MADS/RDF provides a means to record data from the Machine Readable Cataloging (MARC) Authorities format in RDF for use in semantic applications and Linked Data projects. URL: http://www.loc.gov/mads/rdf/v1#.


[ONT32] National Agricultural Library Thesaurus. Last accessed: 17-Nov-2014. Using prefix: nalt. National Agricultural Library Thesaurus is primarily used for indexing and for improving retrieval of agricultural information. Currently, thesaurus is indexing vocabulary for the National Agricultural Library’s bibliographic database of citations to agricultural resources, AGRICOLA. The Food Safety Research Information Office (FSRIO) and Agricultural Network Information Center (AgNIC) also use NALT as indexing vocabulary for their information systems. In addition, NALT is used as an aid for locating information at Agricultural Research Service, Economic Research Service and AgNIC web sites and databases. Thesaurus is organized into 17 subject categories, indicated by the Subject Category designation. Subject categories are used to browse Thesaurus in a specific discipline or subject area. Subject scope of agriculture is broadly defined in thesaurus and includes terminology in biological, physical and social sciences. Biological nomenclature comprises a majority of terms in the thesaurus and is located in the...
Taxonomic Classification of Organisms Subject Category. Political geography is mainly described at the country level. URL: http://lod.nal.usda.gov/nalt/.


[ONT34] North American Industry Classification System. Last accessed: 17-Nov-2014. Using prefix: naics. North American Industry Classification System (NAICS) is used by business and government to classify business establishments according to type of economic activity (process of production) in Canada, Mexico and the United States of America. It has largely replaced the older Standard Industrial Classification (SIC) system. An establishment is typically a single physical location, though administratively distinct operations at a single location may be treated as distinct establishments. Each establishment is classified to an industry according to the primary business activity taking place there. URL: http://www.census.gov/eos/www/naics/.


[ONT37] Ontology for Biomedical Investigations. Last accessed: 17-Nov-2014. Using prefix: obi. Ontology for Biomedical Investigations (OBI) models the design of an investigation, the protocols and instrumentation used, the material used, the data generated and the type analysis performed on it. It will serve as a resource for annotating biomedical investigations, including the study design, protocols and instrumentation used, the data generated and the types of analysis performed on the data. URL: http://www.ontobee.org/browser/index.php?o=OBI.

[ONT38] Ontology for Clinical Research. Last accessed: 17-Nov-2014. Using prefix: ocre. Ontology for Clinical Research (OCRe) is an ontology for planning, execution and analysis of clinical research, including longitudinal studies and clinical trials. It is used in conjunction with domain specific models of diseases and measurements to provide specific models of studies and trials. It includes object property terms such as is defined by, has route of administration, and has gender restriction. URL: http://www.w3.org/2001/XMLSchema#.

[ONT39] Ontology for Media Resources. Last accessed: 17-Nov-2014. Using prefix: ma. Ontology for Media Resources 1.0 describes a core vocabulary of properties and a set of mappings between different metadata formats of media resources that describe media resources published on the Web (as opposed to local archives, museums, or other non-web related and non-shared collections of media resources). The purpose of these mappings is to provide metadata representations that describe the characteristics and behavior of media resources in an interoperable manner, thereby enabling different applications to share and reuse these metadata. URL: http://www.w3.org/TR/mediaont-10/.

[ONT40] Ontology of Adverse Events. Last accessed: 17-Nov-2014. Using prefix: oae. Ontology of Adverse Events (OAE) is a biomedical ontology in the domain of adverse events. OAE aims to standardize adverse event annotation, integrate various adverse event data and support computer-assisted reasoning. OAE is a community-based ontology. Its development follows the OBO Foundry principles. URL: http://www.ontobee.org/browser/index.php?o=OAE.


[ONT42] Open Archives Initiative Object Reuse and Exchange. Last accessed: 17-Nov-2014. Using prefix: ore. Open Archives Initiative (OAI) is an interoperability framework for archives (institutional repositories) managing digital content (digital libraries). It allows people (service providers) to harvest metadata (from data providers). This metadata is used to provide value-added services often by combining different data sets. Open Archives Initiative
Protocol for Metadata Harvesting (OAI-PMH) defines a mechanism for data providers to expose their metadata. Object Reuse and Exchange (OAI-ORE) defines standards for the description and exchange of aggregations of Web resources. URL: http://www.openarchives.org/ore/1.0/.

[ONT43] PROV. Last accessed: 17-Nov-2014. Using prefix: prov. Provenance is information about entities, activities, and people involved in producing a piece of data or thing, which can be used to form assessments about its quality, reliability or trustworthiness. The PROV Family of Documents defines a model to enable inter-operable interchange of provenance information in heterogeneous environments such as the Web. URL: http://www.w3.org/TR/2013/NOTE-prov-overview-20130430/.

[ONT44] Phenotypic Quality Ontology. Last accessed: 17-Nov-2014. Using prefix: pato. Phenotypic qualities (PATO) ontology can be used in conjunction with other ontologies such as anatomical ontologies to refer to phenotypes. Examples of qualities are red, ectopic, high temperature, fused, small, edematous and arrested. URL: http://obofoundry.org/wiki/index.php/PATO:Main_Page.

[ONT45] Physico-chemical methods and properties. Last accessed: 17-Nov-2014. Using prefix: fix. FIX consists of two ontologies: methods and properties (but not objects, which are subject of the chemical ontology). The methods are applied to study the properties. URL: http://www.ontobee.org/browser/index.php?o=FIX.


[ONT50] Resource Description Framework. Last accessed: 17-Nov-2014. Using prefix: rdf. Resource Description Framework (RDF) is a standard model for data interchange on the Web. RDF has features that facilitate data merging even if the underlying schemas differ and it specifically supports the evolution of schemas over time without requiring all the data consumers to be changed. RDF extends the linking structure of the Web to use URIs to name the relationship between things as well as the two ends of the link (this is usually referred to as a triple). Using this simple model, it allows structured and semi-structured data to be mixed, exposed and shared across different applications. This linking structure forms a directed, labeled graph, where the edges represent the named link between two resources, represented by the graph nodes. This graph view is the easiest possible mental model for RDF and is often used in easy-to-understand visual explanations. URL: http://www.w3.org/RDF/.

[ONT51] Schema.org. Last accessed: 17-Nov-2014. Using prefix: schema. Schema.org is an initiative launched by Bing, Google and Yahoo to create and support a common set of schemas for structured data markup on web pages. They propose using their ontology and Microdata in HTML5 to mark up website content with metadata about itself. Such markup can be recognized by search engine spiders and other parsers, thus gaining access to the meaning of the sites. URL: http://schema.org/.


(distinguishable layers of material) and by ability to support rooted plants in a natural environment. URL: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/class/taxonomy/.

[ONT54] Timeline Ontology. Last accessed: 17-Nov-2014. Using prefix: tl. Time line Ontology (TL) is a controlled vocabulary to identify a temporal backbone. A time line may support a signal, a video, a score, a work, or a growing season. URL: http://purl.org/NET/c4dm/timeline.owl#.


[ONT58] Vocabulary of Interlinked Datasets. Last accessed: 17-Nov-2014. Using prefix: void. Vocabulary of Interlinked Datasets (VoID) is an RDF Schema vocabulary for expressing metadata about RDF datasets. It enables the discovery and usage of linked data sets. A linked dataset is a collection of data, published and maintained by a single provider, available as RDF on the Web, where at least some of the resources in the dataset are identified by dereferenceable URIs. URL: http://rdfs.org/ns/void#.


[ONT60] Web Ontology Language. Last accessed: 17-Nov-2014. Using prefix: owl. Web Ontology Language (OWL) is a Semantic Web language designed to represent rich and complex knowledge about things, groups of things, and relations between things. OWL is a computational logic-based language such that knowledge expressed in OWL can be exploited by computer programs, e.g. to verify the consistency of that knowledge or to make implicit knowledge explicit. OWL documents, known as ontologies, can be published in the World Wide Web and may refer to or be referred from other OWL ontologies. OWL is part of the W3C’s Semantic Web technology stack, which includes RDF, RDFS, SPARQL, etc. URL: http://www.w3.org/2001/sw/wiki/OWL.

[ONT61] XML Schema. Last accessed: 17-Nov-2014. Using prefix: xsd. XML schema is a description of a type of XML document, typically expressed in terms of constraints on the structure and content of documents of that type, above and beyond the basic syntactical constraints imposed by XML itself. These constraints are generally expressed using some combination of grammatical rules governing the order of elements, Boolean predicates that the content must satisfy, data types governing the content of elements and attributes and more specialized rules such as uniqueness and referential integrity constraints. URL: http://www.w3.org/2001/XMLSchema#.


[DAT1] Chemical Entities of Biological Interest (ChEBI) data. Last accessed: 17-Nov-2014. Chemical Entities of Biological Interest (ChEBI) is a freely available dictionary of molecular entities focused on small chemical compounds. ChEBI is part of European Bioinformatics Institute (EBI) and European Molecular Biology Laboratory (EMBL). URL: http://www.ebi.ac.uk/docs/ontology/chebi.


[DAT3] DBpedia data. Last accessed: 17-Nov-2014. DBpedia is a community effort to extract structured information from Wikipedia and to make this information available on the Web. URL: http://dbpedia.org/About.

[DAT4] Encyclopedia of Life (EOL) data. Last accessed: 17-Nov-2014. Encyclopedia of Life (EOL) is a free, online collaborative encyclopedia intended to document all of the 1.9 million living species known to science. It aims to
build one page for each species, including video, sound, images, graphics, text. Initially, project was sponsored by MacArthur Foundation and Sloan Foundation. Additional sponsors are Field Museum, Harvard University, Marine Biological Laboratory, Missouri Botanical Garden and Smithsonian Institution. URL: http://www.eol.org.

[DAT5] European Union E Number data. Last accessed: 17-Nov-2014. E numbers are codes for substances which can be used as food additives for use within the European Union and Switzerland (the E stands for Europe). They are commonly found on food labels throughout the European Union. URL: http://en.wikipedia.org/wiki/E_numbers.

[DAT6] International Union of Basic and Clinical Pharmacology (IUPHAR) ligands and targets data. Last accessed: 17-Nov-2014. IUPHAR ligand data is about a substance that forms a bond with a biomolecule to serve a biological purpose. In protein-ligand binding, ligand usually is a signal-triggering molecule, binding to a site on a target protein. In DNA-ligand binding studies, ligand is usually a small molecule, ion or protein that binds to the DNA double helix. Ontomatica imports ligand and associated target data from International Union of Basic and Clinical Pharmacology (IUPHAR). URL: http://www.guidetopharmacology.org/.


[DAT13] RCSB Protein Data Bank (PDB) data. Last accessed: 17-Nov-2014. Protein Data Bank (PDB) is a repository for the three-dimensional structural data of large biological molecules, such as proteins and nucleic acids. Data is submitted by biologists and biochemists from around the world and is freely accessible on the Internet. PDB is a key resource in areas of structural biology, such as structural genomics. URL: http://www.rcsb.org/pdb/home/home.do.


[DAT16] UN FAO AGRIS data. Last accessed: 17-Nov-2014. AGRIS is part of the CIARD (Coherence in Information for Agricultural Research for Development) initiative to create a community for efficient knowledge sharing in agricultural research and development. AGRIS archives and bibliographical databases cover many aspects of agriculture, including forestry, animal husbandry, aquatic sciences and fisheries, and human nutrition from over 100 participating countries. URL: http://agris.fao.org/.

[DAT17] UN FAO AGROVOC data. Last accessed: 17-Nov-2014. AGROVOC is the corporate thesaurus of the Food and Agriculture Organization of the United Nations (FAO). It covers topics related to the interest of FAO, including agriculture, forestry, fisheries, environment and related domains. AGROVOC is a multilingual resource, available
in 19 languages (translations into 5 languages is under development). It contains an average of 40,000 terms in each of the available languages. URL: http://aims.fao.org/standards/agrovoc.functionalities/search.


[DAT19] UN FAO CODEX INS data. Last accessed: 17-Nov-2014. Codex General Standard for Food Additives (GSFA) sets forth the conditions under which permitted food additives may be used in all foods, whether or not they have previously been standardized by Codex. A database provides, in a searchable format, all the provisions for food additives that have been adopted by the Codex Alimentarius Commission. Provisions are searchable by food additive (name, synonym, INS number), by functional class and by food category. URL: http://www.codexalimentarius.org/standards/gsfa/.

[DAT20] UN FAO INFOODS data. Last accessed: 17-Nov-2014. INFOODS is the International Network of Food Data Systems. It is a worldwide network of food composition experts aiming to improve the quality, availability, reliability and use of food composition data. INFOODS also stands as a forum through which international harmonization and support for food composition activities can be achieved and advocated. URL: http://www.fao.org/infoods/infoods/en/.

[DAT21] US EPA Pesticide Code (PC) data. Last accessed: 17-Nov-2014. US EPA pesticide chemical codes (PC codes) identify chemical substances that are pesticides. They also identify bio-chemical substances (a.k.a. bio-pesticides), precise atomic varieties of conventional pesticides (i.e. formulations), and degradates formed from regulated pesticides. URL: http://www.epa.gov/opp00001/foia/list/clearedpcode02.htm.

[DAT22] US Integrated Taxonomic Information System (ITIS) data. Last accessed: 17-Nov-2014. Integrated Taxonomic Information System (ITIS) provides consistent and reliable information on taxonomy of biological species. Database draws from a large community of taxonomic experts. Smithsonian National Museum of Natural History provides content staff. US Geological Survey provides IT services. ITIS primary focus is North American species, but many groups are worldwide and ITIS collaborates with other international agencies to increase global coverage. URL: http://www.itis.gov/.

[DAT23] US Library of Congress Subject Headings (LCSH) data. Last accessed: 17-Nov-2014. US Library of Congress Subject Headings (LCSH) comprise a thesaurus (a.k.a. controlled vocabulary) of subject headings, maintained by the United States Library of Congress, for use in bibliographic records. LCSH are an integral part of bibliographic control, which is the function by which libraries collect, organize and disseminate documents. LCSHs are applied to every item within a library’s collection, and facilitate a user’s access to items in the catalog that pertain to similar subject matter. URL: http://id.loc.gov/authorities/subjects.html.


[DAT25] US NIH NCBI BioSystems data. Last accessed: 17-Nov-2014. NCBI BioSystems data is a group of molecules that interact in a biological system. One type of biosystem is a biological pathway, which can consist of interacting genes, proteins and small molecules. Another type of biosystem is a disease, which can involve components such as genes, biomarkers, and drugs. The NCBI BioSystems database (1) serves as a centralized repository of data; (2) connect biosystem records with associated literature, molecular, and chemical data; and (3) facilitate computation on biosystems data. URL: http://www.ncbi.nlm.nih.gov/biosystems.

[DAT26] US NIH NCBI Macromolecular Modeling Database (MMDB) data. Last accessed: 17-Nov-2014. NCBI Macromolecular Modeling Database (MMDB) is derived from Protein Data Bank (PDB). Value-added features include explicit chemical graphs, computationally identified 3D domains that are used to identify similar 3D structures, as well as links to literature, similar sequences, information about chemicals bound to the structures and more. URL: http://www.ncbi.nlm.nih.gov/structure/.

USDA ARS Food and Nutrient Database for Dietary Studies (FNDDS) data. Last accessed: 17-Nov-2014. USDA ARS Food and Nutrient Database for Dietary Studies (FNDDS) is a database of foods, nutrient values, and weights for typical food portions. FNDDS is used to analyze data from the survey What We Eat in America (WWEIA), the dietary intake component of National Health and Nutrition Examination Survey (NHANES). USDA National Nutrient Database for Standard Reference (SR) is source of underlying food composition data. URL: http://www.ars.usda.gov/services/docs.htm?docid=12089.

USDA ARS Germplasm Resources Information Network (GRIN) data. Last accessed: 17-Nov-2014. USDA ARS Germplasm Resources Information Network (GRIN) is an online database of plant, insect, microbial and animal species germplasm. Database manages taxonomic information and common names on more than 500,000 accessions (distinct varieties, cultivars, etc.) of plants covering 10,000 species. URL: http://www.ars-grin.gov/.


USDA ARS National Nutrient Database for Standard Reference (SR) data. Last accessed: 17-Nov-2014. USDA ARS National Nutrient Database for Standard Reference (SR) manages nutrient information on over 8,000 foods. Information is organized by food item, group, or list to find the nutrient information for your food items. URL: http://ndb.nal.usda.gov/.


University of California, Davis (UC Davis) Marker Assisted Selections in Wheat (MAS Wheat) data. Last accessed: 17-Nov-2014. Data provided by USDA National Institute of Food and Agriculture (NIFA) and Department of Plant Sciences, University of California, Davis. URL: http://maswheat.ucdavis.edu/Index.htm.


[WEB7] Biophenome Linked Open Databases (BioLOD). Biophenome Linked Open Databases. Last accessed: 17-Nov-2014. Industry link to Biophenome Linked Open Databases (BioLOD) - providing access to genes and bio-resources. Data includes observable characteristics and behavior (phenotypes) that has been reported in literature, annotations and the like. Data can be downloaded in RDF format. Users can register novel phenotypic information that relates to each resource. Data is organized by ontological hierarchies based on semantic web technology standards including LOD (Linked Open Data), OWL and OBO (Web Ontology Language and Open Biomedical Ontology). BioLOD plans to provide a variety of tools and workflows to work with this data. URL: http://biolod.jp/.


[WEB17] eagle-i project. eagle-I and network of universities. Last accessed: 17-Nov-2014. Industry page about the eagle-i project - a web-based application providing access to resources available at participating universities. Its purpose is to help investigators accelerate their research. eagle-i content is published as Linked Open Data (LOD). URL: https://www.eagle-i.net/.


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[WEB24] Insight Centre for Data Analytics. Linking Open Data cloud diagram. Last accessed: 17-Nov-2014. Industry link to image of Linked Open Data (LOD) cloud. Image shows data-sets that have been published in LOD format, by contributors to the LOD community project and other individuals and organizations. It is based on metadata collected and curated by contributors to the Data Hub. Clicking image will take you to an image map, where each data-set is a hyperlink to its homepage. URL: http://lod-cloud.net/.


[WEB28] Morgan & Claypool. Linked Data and Evolving the Web into a Global Data Space. Last accessed: 17-Nov-2014. Industry link to an on-line book - 'Linked Data: Evolving the Web into a Global Data Space.' Book gives an overview of Linked Data principles as well as the Web of Data that has emerged through the application of these principles. Book discusses patterns for publishing Linked Data, describes deployed Linked Data applications and examines their architecture. URL: http://linkeddatabook.com/editions/1.0/.


[WEB33] Ontomatica. 1,4-benzoquinone. Last accessed: 17-Nov-2014. Ontomatica link to 1,4-benzoquinone. URL: http://72.167.253.87/cgi-bin/flamenco.cgi/_ChEFS_/Flamenco?q=facet_BIOACTIVE:4500&group=facet_BIOACTIVE&


[WEB39] Ontomatica. Amino acid measured on head of plant; with matrix value; with measurement unit; according to method indicator. Last accessed: 17-Nov-2014. Ontomatica link to Amino acid measured on head of plant; with matrix value; with measurement unit; according to method indicator. URL: http://72.167.253.87/cgi-bin/flamenco.cgi/_Glucosinolates_-_14-01-16_/Flamenco?q=facet_AP:95/facet_MI:140/facet_MT:3/facet_MU:12/facet_MX:10/facet_NC:448&amp;group=facet_AP.


[WEB142] Ontomatica. Meals made with Brassica (head and stems) and grain products. Last accessed: 17-Nov-2014. Ontomatica link to Meals made with Brassica (head and stems) and grain products. URL: http://72.167.253.87/cgi-bin/flamenco.cgi/_USDA_FNDDS_-_EPA_FCID_-_14-01-16_/Flamenco?q=facet_A_FCID_Crop:90/facet_A_FNDDS3_Food:6737&amp;amp;group=facet_A_FNDDS3_Food.


[WEB150] Ontomatica. Metrology to support UC Davis reports. Last accessed: 17-Nov-2014. Ontomatica link to metrology to support UC Davis reports. URL: https://docs.google.com/spreadsheets/d/1_xFiJlsQdVbAeSCDU4t7H8odBwmxDFOG6cvsadDTZg/edit?usp=sharing.


[WEB169] Ontomatica. Pizza with meat - scroll through each ingredient. Last accessed: 17-Nov-2014. Ontomatica link to Pizza with meat - scroll through each ingredient. URL: http://72.167.253.87/cgi-bin/flamenco.cgi/_USDA_FNDDS_-_EPA_FCID_-_14-01-16_/Flamenco?q=facet_A_FNDDS3_Food:9960/facet_A_FNDDS3_View:3&amp;group=facet_A_FNDDS3_View&amp;index=0.

[WEB170] Ontomatica. Pizza with meat, not specific as to type of crust. Last accessed: 17-Nov-2014. Ontomatica link to Pizza with meat, not specific as to type of crust. URL: http://72.167.253.87/cgi-bin/flamenco.cgi/_USDA_FNDDS_-_EPA_FCID_-_14-01-16_/Flamenco?q=facet_A_FNDDS3_Food:9960&amp;group=facet_A_FNDDS3_View.


[WEB203] Ontomatica. Two all beef patties, special sauce ... Last accessed: 17-Nov-2014. Ontomatica link to Two all beef patties, special sauce ... URL: http://72.167.253.87/cgi-bin/flamenco.cgi/_USDA_FNDDS_-_EPA_FCID_-_14-01-16_/Flamenco?q=facet_A_FNDDS3_Food:4953&amp;amp;group=facet_A_FNDDS3_Food.


(EDI) format that enables 8,000+ financial institutions in 200+ countries to exchange financial data in a secure, cost effective and reliable way. URL: http://www.swift.com/about_swift/index?rdct=t.


[WEB253] UN FAO. AGROVOC - UN FAO corporate thesaurus. Last accessed: 17-Nov-2014. UN link about AGROVOC - a multilingual controlled vocabulary covering areas of interest to the Food and Agriculture Organization of the United Nations. Areas of interest include food, nutrition, agriculture, fisheries, forestry and environment. Ontomatica imports AGROVOC terms, together with USDA National Agricultural Library Thesaurus (NALT) terms, to define things when those things have been defined in AGROVOC and NALT. URL: http://aims.fao.org/about/agrovoc/about.

[WEB254] UN FAO. Agrontology domain properties for AGROVOC. Last accessed: 17-Nov-2014. UN link about Agrontology - defining the domain properties for UN FAO AGROVOC as implemented in the Web Ontology Language (OWL). Ontomatica imports Agrontology terms to express relationships among things (such as AGROVOC or NALT terms). Ontomatica commodity ontologies, such as the wheat ontology (WON) are based on Agrontology. URL: http://aims.fao.org/aos/agrontology#.


[WEB258] University of Maryland School of Medicine. Disease Ontology - Institute for Genome Sciences, University of Maryland. Last accessed: 17-Nov-2014. Industry link about Disease Ontology - developed by Institute for Genome Sciences, University of Maryland. Disease Ontology (a.k.a. DOID) is a comprehensive hierarchical controlled vocabulary for human disease representation. It includes object property terms such as ‘complicated by,’ ‘has symptom,’ and ‘transmitted by.’ It includes class terms such as ‘nutritional deficiency disease,’ ‘multiple chemical sensitivity,’ and ‘food allergy.’ Ontomatica has mapped DOID to MeSH to promote interoperability. URL: http://disease-ontology.org/.


[WEB262] US FDA. FDA and Open Data for drug events. Last accessed: 17-Nov-2014. US FDA link to OpenFDA - providing access to health data collected by FDA. The application programming interface (API) is similar to Representational state transfer (REST) protocol. MedDRA ontology is used to document reactions to adverse events (see Advice and prefix:meddra). In the future, items will be identified by FDA unique ingredient identifier (UNII). Ontomatica imports OpenFDA data about adverse reactions. URL: https://open.fda.gov/index.html.
sample_doc Documentation, Release


Faceted search - (a.k.a. faceted navigation or faceted browsing) is the user-interface of a faceted classification system. Users explore a collection of information by applying multiple filters (a.k.a. facet terms). URL: http://en.wikipedia.org/wiki/Faceted_search.

Faceted search is a navigation technique that allows users to browse through information by applying multiple filters. This method is widely used on the web to make information easier to find and understand. It is particularly useful in situations where there is a large amount of data to sift through, such as online shopping or digital libraries.

Farinograph - (a.k.a. farinometry) measures the rheological properties of bread flour. The Farinograph is an instrument used to characterize the work done during the development of dough. It is used to determine the bread-making properties of flour.

Food Additive E number - This number is assigned to food additives to identify them. The E number system is used in many countries to regulate food additives. Each number is unique and indicates the specific additive.

Food energy - This refers to the energy content of food. It is usually measured in calories or kilojoules. Food energy is important for maintaining metabolic processes and providing energy for activities.

GS1 - GS1 is a set of standards used to create a unique identifier for products. These identifiers are used to track products throughout their lifecycle, from production to consumption.

Globally Harmonized System of Classification and Labeling of Chemicals (GHS) - This system is used to classify and label chemicals based on their hazards. It is a global standard that helps to ensure that consumers and workers are protected from hazardous chemicals.

HUGO Gene Nomenclature Committee (HGNC) - This committee is responsible for assigning official names to human genes. These names are used to uniquely identify genes and facilitate communication between researchers.

Hazard analysis and critical control points (HACCP) - This is a system used to control food safety risks. It involves identifying potential hazards, assessing their risk, and implementing controls to manage these risks.

Inter-Regional Research Project Number 4 (IR-4) - This project focuses on developing new technologies for crop protection. It is a partnership between various organizations and countries to improve pest management practices.

International Chemical Identifier (InChI) - This is a standardized way to represent chemical structures. The InChI is used to uniquely identify chemical substances and is important for chemical communication and storage.

Internet of Things - The Internet of Things (IoT) is a network of interconnected devices that can communicate and exchange data. Devices in the IoT can include anything from home appliances to industrial equipment. The IoT offers many benefits, including increased efficiency, automation, and data collection.

Life-cycle assessment (LCA) - Life-cycle assessment is a method used to evaluate the environmental impacts of a product or service throughout its life cycle. It includes all stages from raw material extraction to disposal.

Linked Data - Linked Data is a method of publishing structured data so that it can be interlinked and become more useful. It builds upon standard web technologies such as HTTP, RDF, and URIs, but rather than using them to serve web pages for human readers, it extends them to share information in a way that can be read automatically by computers. This enables data from different sources to be connected and queried.
Web Consortium, coined the term in a design note discussing issues around the Semantic Web project. URL: http://en.wikipedia.org/wiki/Linked_Open_Data.


[WEB335] Wikipedia. Ontology. Last accessed: 17-Nov-2014. Wikipedia link about ontology - a formal way to represent entities, ideas, and events (a.k.a. things or objects). Things have properties such as names and values. Things have relationships such as kinship and sequence of steps to perform a task. Things, properties and relationships are organized by categories. ‘Knowledge’ - in a form that can be processed by a computer - is the categorical ordering of things, properties and relationships for a specific topic. URL: http://en.wikipedia.org/wiki/Ontologies.

[WEB336] Wikipedia. Open Biomedical Ontologies (OBO). Last accessed: 17-Nov-2014. Wikipedia link about Open Biomedical Ontologies (OBO) - an effort to create controlled vocabularies for shared use across different biological and medical domains. OBO Ontology library forms the basis of the OBO Foundry, a collaborative experiment involving a group of ontology developers who have agreed in advance to the adoption of a growing set of principles specifying best practices in ontology development. These principles are designed to foster interoperability of ontologies within the broader OBO framework, and also to ensure a gradual improvement of quality and formal rigor in ontologies, in ways designed to meet the increasing needs of data and information integration in the biomedical domain. Ontomatica imports several Open Biomedical Ontologies. See Advice for detail. URL: http://en.wikipedia.org/wiki/Open_Biomedical_Ontologies.


[WEB342] Wikipedia. Reasoner to infer logical consequences from set of facts. Last accessed: 17-Nov-2014. Wikipedia link about Reasoners - to infer logical consequences from set of facts. Logical consequence (a.k.a. entailment) is the relationship between statements that hold true when one logically 'follows from' another. A valid logical argument is one where conclusions follow from its premises, and its conclusions are consequences of its premises. Ontomatica uses reasoners to verify that an electronic food label is consistent with a food labeling ontology and that ingredients in a food label are consistent with food identity (as asserted by the electronic food label). URL: http://en.wikipedia.org/wiki/Semantic_reasoner.

[WEB343] Wikipedia. SPARQL Protocol and RDF Query Language. Last accessed: 17-Nov-2014. Wikipedia link about SPARQL Protocol and RDF Query Language - technology for retrieving and manipulating data stored in Resource Description Framework (RDF) format. Like a database query language, SPARQL provides analytic query operations such as JOIN, SORT, and AGGREGATE. Schema information (the ontology) is external to the RDF format to allow different data-sets to be joined in an unambiguous manner. URL: http://en.wikipedia.org/wiki/SPARQL.


[WEB347] Wikipedia. Semantic network. Last accessed: 17-Nov-2014. Wikipedia link about semantic network (SN) - a network for documenting relationships among concepts and for representing knowledge. SN is a directed graph consisting of vertices or nodes that represent concepts, and edges or arcs that represent relationships. The arcs and nodes can be organized into a taxonomic hierarchy. An example is WordNet, a lexical database of English. It groups English words into sets of synonyms called synsets. Synsets document semantic relations among synonyms. Examples are meronymy (A is part of B, i.e. B has A as a part of itself), holonymy (B is part of A, i.e. A has B as a part of itself), hyponymy (A is subordinate of B; A is kind of B), hypernymy (A is superordinate of B), synonymy (A denotes the same as B) and antonymy (A denotes the opposite of B). URL: http://en.wikipedia.org/wiki/Semantic_network.


[WEB367] XBRL International. eXtensible Business Reporting Language (XBRL). Last accessed: 17-Nov-2014. Industry link about eXtensible Business Reporting Language (XBRL) - a controlled vocabulary (CV) for financial reporting. XBRL is a standards-based way to communicate and exchange business information between business systems. Communications are defined by a CV about individual reporting concepts as well as the relationships between concepts and other semantic meaning. URL: http://xbrlsite.com/2013/fro/fro-2013_Relations.html.


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