

## **CLASS 424, DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS**

### **SECTION I - CLASS DEFINITION**

#### **STATEMENT OF CLASS SUBJECT MATTER**

This class includes the following subject matter, not provided for elsewhere, when a utility set forth below is either (a) claimed or (b) solely disclosed.

#### **A. DRUG AND BIO-AFFECTING COMPOSITIONS** which are generally capable of:

1. Preventing, alleviating, treating, or curing abnormal and pathological conditions of the living body by such means as: (a) destroying a parasitic organism; (b) limiting the affect of the disease or abnormality by chemically altering the physiology of the host or parasite.
2. Maintaining, increasing, decreasing, limiting, or destroying a physiologic body function; e.g., vitamin compositions, sex sterilants, fertility inhibitors, growth promotors, etc.
3. Diagnosing a physiological condition or state by an in vivo test; e.g., X-ray contrast, etc.
4. Controlling or protecting an environment or living body by attracting, disabling, inhibiting, killing, modifying, repelling or retarding an animal or micro-organism. For example: (a) Nonfood baits, attractants, and lures; (b) Biocides including antibiotics of undetermined structure; (c) Warfare gases such as lachrymators, sternutators, etc.; (d) Chemical pest repellents and adhesive trapping agents.

#### **B. BODY TREATING COMPOSITIONS** generally intended for deodorizing, protecting, adorning, or grooming a body; e.g., cosmetics, dentifrices, embalming fluids, etc.

#### **C. FERMENTATES** (e.g., antibiotics, etc.), **PLANT AND ANIMAL EXTRACTS, OR BODY FLUIDS OR MATERIAL CONTAINING PLANT OR ANIMAL CELLULAR STRUCTURE, PER SE**, intended to be used for the purposes set forth in A and B above, and whose chemical structure is not sufficiently known to be classified elsewhere.

#### **D. COMPOSITIONS OF THIS CLASS DEFINED IN TERMS OF SPECIFIC STRUCTURE; E.G., LAYERED TABLET, CAPSULE, ETC.**

The lines generally prevailing between the composition classes and the article classes are applicable to Class 424, unless otherwise indicated, with the exception that Class 424 provides for a composition, *per se*, defined in terms of specific structure having a utility for Class 424 (see subclasses 400+).

**E. PROCESSES OF USING** the subject matter of the Class Definition, A through C above, and in Lines With Other Classes or Within This Class, Compositions Of This Class Defined In Terms Of Specific Structure; e.g., Layered Tablet, Capsule, Etc., A, above, or compounds, *per se*, for the purposes set forth in A and B of the Class Definition (See References to Other Classes, below, for those classes that concern "processes." Note particularly the Search Notes for Use Processes involving Class 424 subject matter classified elsewhere.)

**F. PROCESSES OF PREPARING** subject matter of the Class Definition, A through C, and of Lines With Other Classes and Within This Class, Compositions Of This Class Defined In Terms Of Specific Structure; e.g., Lay-ered Tablet, Capsule, Etc., part A.

#### **G. ADJUVANT OR CARRIER COMPOSITIONS, PER SE,** for perfecting compositions for this class.

- (1) Note. This class is the generic home for compositions for treating a living body and for controlling a pest.
- (2) Note. The terms "mere use" or "mere application" as employed in the definitions of Class 424 and the search notes in other classes which refer to Class 424 are defined to encompass only a single step process and include expressions such as applying, contacting, dipping, spraying, injecting, combusting, administering orally, etc., recited either along or with recitations such as dosage amount or the treatment of a specific environment, organism, or body part. Examples of expressions considered mere use or mere application are "injecting 3 cc. of compound x into a vein" and "burning 20 grams of a sulfur fumigant in a room".

### **SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS**

#### **CLASSIFICATION GUIDELINES FOR THIS CLASS**

A. In this class the chemical structure of the ingredient disclosed as having a utility set forth in the Class Definition above, is used as the primary basis of classification. Processes of using compositions or compounds, per se, and processes of making compositions, not provided for elsewhere, are classified in the first appearing subclass providing for the particular active ingredient being employed or prepared.

Compositions containing a biologically or pharmaceutically active ingredient which generally, for example, control, cure, disable, inhibit, kill, modify, protect, repel, retard, sterilize or stimulate a living animal body; or inhibit or kill micro-organisms other than algae, etc., are provided for primarily in subclasses 85.1 and Class 514 appropriate subclasses. Compositions, intended for topical application, containing ingredients having other utilities under the class definition; e.g., grooming, enhancing, etc., which are not provided for in the Special subclasses 1.1-84, 125 and 126 have been classified in Class 514, appropriate subclasses.

B. The rule followed in classifying a patent having separate claims to several species of the active ingredient which fall into different subclasses is that the patent is placed as an original in the first appearing subclass, providing for the claimed subject matter and cross-referenced to the appropriate lower subclass, except where there is a compulsory search note between the subclasses. Where there are one or more indents under the generic subclass and one of the claimed species is not provided for specifically by any of these indents, the patent is placed as original in the generic subclass, since this is the first appearing subclass providing for said individually claimed species. In classifying a patent containing Markush type claims; i.e., "group consisting of X and Y" and no species claims, the original patent is placed in the first appearing subclass providing for the species (members) in the Markush group. If in addition to the Markush group, there are species claims, the first cited rule, governing a patent having separate specie claims, is followed.

C. A patent claiming a composition wherein the active compound or ingredient has not been specified, has been classified as original in the first appearing subclass providing for any one of the claimed ingredients and cross-referenced to appropriate lower subclasses providing for the remaining compounds or ingredients.

D. A patent claiming a composition resulting from a chemical reaction, wherein the chemical structure of the compounds or ingredients which make up the final com-

position are unknown or undetermined, is classified as original in the first appearing subclass providing for anyone of the reactants and cross-referenced to the lower subclasses providing for the other reactants.

E. Patents claiming synergistic or potentiated compositions have been classified as originals in the first appearing subclass providing for either the synergist, potentiator or active ingredient and cross-referenced to appropriate lower subclasses.

F. Patents claiming subject matter coming within the Special Subclasses 1.1-84, 125 and 126 have been classified on the basis of the disclosed or claimed function, or the particular subject matter provided for, in the first appearing subclass providing the same; e.g., Dentrifices, Embalming compositions, Solid synthetic organic polymer containing, etc., and no distinction has been made between the Class 424 active ingredients and nonactive ingredients with the one exception being applied to solid synthetic organic polymers, namely subclasses 78.01, 78.02+, and 78.08+. These subclasses consider only those polymers which are bioactive as defined therein.

G. Patents to adjuvant or carrier compositions, per se, which are claimed or solely disclosed for perfecting a composition for this class are classified as original in the first appearing appropriate subclass providing for any one of the ingredients in Class 514, appropriate subclasses, except where the claimed composition possesses a functional property or other feature which has been provided for in the Special subclasses 1.1-84, 125 and 126; e.g., Free carbon containing, Corrosion inhibitor containing, etc.

H. A patent claiming a Class 424 active ingredient broadly in terms of its function in combination with a specific adjuvant or carrier; e.g., "A tranquilizer and as a carrier therefore sugar and gelatin" has been classified as original in the first appearing subclass providing for any one of the disclosed specific active ingredients and cross-referenced to all other subclasses providing for the remaining disclosed active ingredients.

## CLASSIFICATION LINES WITH OTHER CLASSES

### A. General class lines

#### 1. Compound Classes

a. Where a patent claims a composition in nominal terminology only; e.g., "A composition comprising a therapeutic amount of compound X", and there are no claims to a method of use, or true mixture, the original

has been placed with the compound claimed. Some examples of nominal terminology are: "comprising as an active ingredient", "containing an effective amount of", "containing a lethal amount of, etc.

b. Where a patent claims dosage units (in the absence of more comprehensive or controlling claims as indicated below); e.g., "a tablet comprising (or containing) 15 grains of compound X" and in the absence of any structural limitations, definite shape, surface deformation, etc., the original has been placed with the compound.

c. Where a patent claims a composition wherein (1) another ingredient is recited, however broadly, or (2) proportions are recited, the original has been placed in Class 424. Some examples of claims reciting the following types of terminology are included herewith: "with a carrier", "with a solvent", "with an adjuvant", "with an emulsifier", "wetting agent", "solubilizer", "surface active agent", "extending agent", "buffering agent", "from 5% to 90%", "at least .05%", "minor proportion of compound X and major portions of carrier", etc.

d. Where a patent contains at least one claim to a method of use, even if only nominally recited; e.g., "a method of killing insects by applying compound X", the original has been placed in Class 424 (except when another use is also claimed which is superior to Class 424).

e. Where the patent claims an animal or plant extract of undetermined constitution, which is solely disclosed as being suitable for a Class 424 utility, the original will go to Class 424. Processes for obtaining such extracts will also be classified in Class 424 unless specifically provided for elsewhere.

#### 1a. Cross References From Compound Classes

In most instances, cross-referencing from the compound classes into Class 424 has been limited to those disclosures which provide (1) a specific composition; e.g., numerical values setting forth definite amounts for all ingredients of the composition having Class 424 properties, and (2) processes of using a compound for a Class 424 purpose wherein the process is significant in that it sets forth the administration of the active ingredient in more than just nominal terminology, i.e., it recites administering a specific amount of a compound to treat a specific condition in a specified host. Patents containing a mere recitation that a compound may be administered; e.g., orally, in association with an unspecified

pharmaceutical carrier will be excluded as cross-references.

#### 2. Composition Classes

The following general lines exist between Class 424 and the other composition classes or with classes containing patents wherein the claims recite a composition limited to an art use provided for in that class.

a. Compositions which are disclosed as having a plurality of uses, properties, or functions provided for in different main classes and only a single use, property, or function is claimed, are placed in the composition providing for such claimed use, property, or function and cross-referenced to other classes for disclosed uses, properties, or functions when desirable.

b. A list of superiority of composition classes appears in the main class definition of Class 252 Compositions (5) Note. This note in Class 252 explains classification of a generic composition with several disclosed uses.

504, Plant Protecting and Regulating Compositions

424, Drug, Bio-Affecting and Body Treating Compositions

71, Chemistry: Fertilizers,

149, Explosive and Thermic Compositions or Charges

508, Solid Antifriction Devices, Materials Therefor, Lubricant and Separant Compositions for Moving Solid Surfaces, and Miscellaneous Mineral Oil Compositions

44, Fuel and Related Compositions

148, Metal Treatment

252, Compositions, (special uses and functions) through subclass 88.2.

510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions.

252, Compositions, (special uses and functions) through subclass 194.

106, Compositions: Coating or Plastic

51, Abrasive Tool Making Process, Material, or Composition

520, Synthetic Resins or Natural Rubbers, subclasses 1+

260, Chemistry of Carbon Compounds

585, Chemistry of Hydrocarbon Compounds

252, Compositions, (nonspecial uses or functions).

426, Food or Edible Material: Processes, Compositions, and Products.

This superiority list is not intended as a complete list and will be expanded or added to as the relationship between other classes containing compositions and the above listed classes are determined.

#### B. Lines With Related Composition Classes

#### CLASS 504

1. Class 504 PLANT PROTECTING AND REGULATING COMPOSITIONS, provides for compositions having a stimulating, inhibiting (herbicides), or regulating action on plant growth and methods of using such compositions. Class 504 specifically provides for algicidal compositions and fertilizer compositions which contain an insecticide, fungicide, or deodorant. Class 504 is superior to Class 424. (See above for a list of superiority of composition classes).

2. If claims are drawn to a "pesticide" composition or method without specifically reciting the nature of the "pest" to be controlled or eradicated, the patent is placed as original in Class 424 when only a Class 424 type of "pest" (e.g., fungi, insect, rodent, etc.) is revealed in the patent disclosure. However, if both Class 504 and Class 424 types of "pest" are specifically disclosed or if no disclosure is made as to the specific type of pest, the patent is placed in Class 504 as original and cross-referenced to Class 424.

#### CLASS 8

1. Class 8, BLEACHING AND DYEING; FLUID TREATMENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS, provides for processes of dyeing hair on a living animal, not provided for elsewhere, processes of depilating (i.e., removing hair, fur, or feathers) a living animal and for processes of chemical modification of hair not on a living body. Class 8 also provides for compositions used in these processes.

2. Class 424 provides for a composition for treating hair (e.g., waving etc.) on a living body, and methods of use which are no more than the mere application of the composition. To be placed in Class 424, a patent must either specifically disclose or claim that the hair is on a living body; e.g., living hair, etc., or contain other disclosure which definitely indicates an intent to use the composition or process on a living body; e.g., not injurious to the person, etc. Recitation that the hair is on the body; e.g., scalp, etc., will be presumed to indicate that the body is living in the absence of disclosure to the contrary. The mere recitation "human hair" by itself is not enough to indicate that the hair is on a living body.

#### CLASS 71

1. Class 71, CHEMISTRY: FERTILIZERS, provides for compositions having a nutrient action on plant growth and methods of using such compositions.

#### CLASS 426

1. Class 426, FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS, AND PRODUCTS, provides for compositions intended to nourish an animal by natural oral ingestion, which may contain an additive necessary to maintain the normal metabolism of the animal; e.g., vitamins, minerals, amino acids, etc.

2. Class 424 provides for compositions intended to nourish an animal when such compositions are designed to be administered to the animal by routes other than the oral cavity; e.g., by rectal or parenteral injection, or via a tube through the alimentary tract or stomach wall.

3. Class 424 provides for compositions containing a food or beverage when said compositions are claimed or solely disclosed as having a utility set forth in I above. However, a food or beverage containing a biocide as a preservative therefore will be classified as original in Class 426. Class 424 also provides for methods of preserving Class 426 products when said methods are no more than the mere use of biocides.

4. Class 424 further provides for food or beverage compositions containing an animal growth regulator or other anabolic agents. For purposes of classification, an animal growth regulator or anabolic agent is defined to include the following illustrative causative effects:

a. increase feed efficiency or weight gain

- b. enhance color of egg yolks, combs, skin, or legs of chickens
  - c. enhance the hatchability of eggs
  - d. vary the fat-protein ratio or texture of flesh
  - e. chemically caponize an animal, etc.
5. Compositions wherein the nutritional ingredients fat, carbohydrate, or protein are varied to achieve a varied fat-flesh ratio in an animal or varied to meet the special nutritional needs of an abnormal metabolic condition; e.g., diabetes, etc., will not be considered as subject matter for Class 424.

#### CLASS 106

- 1. Class 106, COMPOSITIONS: COATING OR PLASTIC, provides for coating compositions which protect a base by forming a tough adherent film even though the composition also contains a biocide to protect the base against biological attack; e.g., marine anti-fouling paints, etc.
- 2. Materials or ingredients for coating and molding compositions (Class 106 appropriate subclasses) which are also useful as diluents or inert ingredients in pharmaceutical compositions are placed in Class 106 unless a therapeutic or biocidal property is claimed. Surgical sponges claimed only as being made from Class 106 compositions are placed in Class 106 if the sponge contains no active ingredient with a utility for Class 424. Patents claiming an ink suitable for coating or printing on pharmaceutical dosage units; e.g., tablets, etc., are placed in Class 106 unless the coated or printed article is also claimed.
- 3. Class 424 provides for the following coating compositions: compositions intended to decorate or beautify the body; e.g., hair lacquer, fingernail polish, lipstick, etc.; coating compositions which do not protect the base by forming a tough, adherent film and whose sole function is as a carrier for a composition of Class 424 utility; e.g., "stickers" which adhere insecticides to plants etc., whether or not claimed in combination with an active ingredient; coating compositions applied to the body for therapeutic purposes even though a tough, adherent film is formed; and coating compositions which do not form tough, adherent films and which have a utility provided for in Class 424; e.g., salve, skin cream, or a solution of a material, for example, a mixture of phenols to protect wood against insect, etc.

#### CLASS 119

- 1. Class 119, ANIMAL HUSBANDRY, provides for an animal litter composition, per se.
- 2. Class 424 takes litter compositions combined with a compound or composition having a Class 424 utility; e.g., a biocide, etc.

#### CLASS 127

- 1. Class 127, SUGAR, STARCH, AND CARBOHYDRATES, provides for sugar, starch, and carbohydrates, per se, and their hydrolysis products, even if these materials have utility provided for in Class 424.
- 2. Class 424 provides for compositions containing sugar, starch, or carbohydrates; e.g., a blend of two carbohydrates, etc., having a claimed or solely disclosed utility provided for in Class 424.

#### CLASS 131

- 1. Class 131, TOBACCO, provides for tobacco compositions to be employed to enhance the users' well-being or enjoyment when smoked, chewed, or inhaled including snuff, and takes these compositions even when they have a Class 424 utility; e.g., medicated smoking tobacco, etc. Class 131 also provides for tobacco substitutes or compositions intended to decrease the individual's need for tobacco and which are to be used in the same manner as tobacco; e.g., smoking, etc.
- 2. Class 424 takes a tobacco containing composition which is not intended to be smoked, chewed, etc. for the users' enjoyment; e.g., tobacco used as an insecticide, tobacco burned as a fumigant, etc., when said composition is claimed or solely disclosed for a Class 424 purpose. If the tobacco containing composition has plural functions with some functions provided for in Class 131 and some in Class 424, the patent will be placed in Class 131 as an original and crossed to Class 424. Class 424 also provides for compositions intended to decrease a person's use of tobacco, but which are not intended to be smoked, chewed, etc., as tobacco; e.g., ingested or injected, etc.

#### CLASS 435

- 1. Class 435, CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY, provides for enzymes, per se, which are not more specifically provided for elsewhere, and enzyme compositions containing a pre-

servative unless a Class 424 utility is recited in the claim or is the sole utility disclosed. Class 435 also takes a composition or method employing a live micro-organism for an in vitro test.

2. Class 424 provides for fermentates; e.g., antibiotics, etc., of unknown chemical structure wherein the fermentate is claimed or disclosed to have a utility specified in Class 424.

3. Class 424 provides for compositions containing micro-organisms either alive, dead, or attenuated; enzymes or coenzymes; ferments or fermentates; antigens or antibodies which are claimed or solely disclosed to have a Class 424 utility and methods of using said compositions.

4. Class 424 provides for compositions for in vivo measuring, testing, or diagnosis and methods of using said compositions or a compound for in vivo measuring, testing or diagnosis. This includes in vivo testing compositions containing an enzyme.

#### CLASS 252

1. Class 510, CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COMPOSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS, provides for biocide containing cleaning and detergent compositions having a mere cleaning function.

2. Class 252 provides for compositions specifically classified therein protected against biological attack by a composition otherwise classifiable in Class 424. Class 252, provides for stabilized compositions where the ingredients other than the stabilizers are claimed so broadly as not to furnish a basis of classification (e.g., a carbon compound, etc.).

3. See Class 512 for perfume compositions, per se.

4. Class 424 takes all other detergent or emulsifier containing compositions which are claimed or solely disclosed for a Class 424 purpose.

#### CLASS 260

1. Class 260, CHEMISTRY OF CARBON COMPOUNDS, provides for a compound classified therein containing a preservative; e.g., to protect the compound against biological attack, etc., when there is no claim to an art use for the mixture.

#### CLASS 585

1. Class 585, CHEMISTRY OF HYDROCARBON COMPOUNDS, provides for a composition which is a blend of hydrocarbon compounds only and for a blend of a hydrocarbon with a nonhydrocarbon preservative.

#### CLASS 423

1. Class 423, CHEMISTRY OF INORGANIC COMPOUNDS, provides for compositions containing an element or an inorganic compound combined with a preservative; e.g., a substance which protects the element or compound against biological attack, etc. However, a Class 423 element or compound containing a preservative, in which state it is claimed or solely disclosed as having a Class 424 utility, is placed as an original in Class 424.

C. Lines with other classes

#### CLASS 43

1. Class, 43, FISHING, TRAPPING, AND VERMIN DESTROYING, provides for apparatus for trapping or destroying vermin; i.e., animals injurious or pestiferous to man. The apparatus may utilize a composition classifiable in Class 424; e.g., attractant, nonfood bait, poison, etc. Class 43 structural elements containing a Class 424 composition must have more structure than, for example, that represented by a mere coated or impregnated base; e.g., flypaper of a particular shape or dimension, etc. Class 43 also provides for fumigating candles used for destroying vermin claimed in terms of more structure than a compound or composition containing a nominal wick.

2. vermin which is more than the mere application of a compound or Class 424 composition.

3. Class 424 takes methods of destroying vermin which are no more than a single step of mere application of a compound or a Class 424 composition.

4. Class 424 takes articles for trapping or destroying vermin claimed in terms of no more structure than a coating or impregnant on a base. Class 424 also takes fumigating candles of no more structure than compound or composition nominally containing a wick.

#### CLASS 119

1. Class 119, ANIMAL HUSBANDRY, provides for

the treatment of animals other than man to increase their growth rate, produce a superior quality or quantity of meat, control their sex or the killing of unwanted organisms which interfere with the growth or well-being of the desired animal if the method is more than the mere application or applications of a Class 424 composition or compositions.

2. Class 424 takes a process of treatment of an animal with a compound or composition for a Class 424 purpose which process is a single step or a plurality of steps, each step individually being no more than a mere application of a compound or composition, and there is no manipulative step included.

#### CLASS 128

1. Class 128, SURGERY, provides for bandages, body applicators or body dressings which contain a medicine and are claimed in terms of more structure than a randomly distributed single layer on a base material or randomly impregnated base material. For example, Class 128 takes a base material wherein certain portions thereof are impregnated with an adhesive and other portions are impregnated with a Class 424 medicine at those places where there is no adhesive backing on a gauze impregnated with a Class 424 composition, etc. Class 128 also provides for a bandage, body applicator, or body dressing containing a Class 424 composition and which is claimed in terms of specific structure; e.g., pore size, thickness, length, width, etc.

2. Class 424 takes a bandage, body applicator, or body dressing which contains a specific or nominally recited medicinal ingredient which is either randomly distributed in a single layer on a base material or randomly impregnated in a base material.

3. Class 128 provides for a process of use of a Class 424 composition which is more than single or plural steps of mere application of one or more Class 424 compositions; e.g., removal of a body fluid such as milk, adding medicine to the fluid and re-injecting the fluid, surgical implantation, etc.

4. Class 424 provides for a process of applying a compound or composition to a living body wherein said process is no more than the mere application of the compound or composition, or wherein said process is a combination of steps, each step individually being a mere application, and there are no manipulative steps included. Class 424 takes; e.g., oral administration, injection, etc., even if the particular part of the body treated is recited.

5. Class 128 will take a capsule or pill, not specifically provided for elsewhere, that must be broken prior to use to empty its contents, even if said capsule or pill contains a specific medicine. This includes an inhalant capsule.

6. Class 128 provides for a dosage unit; e.g., suppository, etc., shaped to fit a particular body cavity, even if the active ingredients are claimed specifically.

7. Class 424 takes a medicine in the form of a capsule or pill that is ingested, as well as a method of using an inhalant capsule by squeezing said capsule to liberate the enclosed medicine.

8. Class 128 provides for methods of blood transfusion and insemination by artificial means.

9. Class 128 provides for catgut impregnated with a medicine.

#### CLASS 132

1. Class 132, TOILET, provides for a process of treating the hair on the scalp (e.g., waving, etc.) which is more than the mere application of a Class 424 composition. This includes plural treatments with more than one Class 424 composition (e.g., waving composition followed by neutralizing), and the application of a Class 424 composition combined with a hair treating step, per se, classifiable in Class 132, even if the Class 132 step is only claimed broadly; e.g., application of Class 424 composition combined with "waving" or "shaping the hair" etc.

2. Class 132 provides for dental floss and toothpicks claimed in terms of their shape or structure and nominally recited toothpicks or dental floss which are not classifiable in Class 424.

3. Class 424 takes methods of treating hair on the living body (other than dyeing) which are no more than the mere application of a composition or compound to the hair.

4. Class 424 provides for toothpicks and dental floss which are claimed nominally and which contain a compound or composition having a utility for Class 424.

#### CLASS 435

1. Class 435, CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY, provides for methods of

purifying, propagating or attenuating a micro-organism; e.g., a virus, bacteria, etc., except for propagating a micro-organism in an animal for the purpose of producing an antibody containing sera.

2. Class 435, provides for methods of propagating animal organs, tissues or cells; e.g., blood, sperm, etc., and culture media therefor.

3. Class 435 is the generic home for processes of (1) analyzing or testing which involve a fermentation step or (2) qualitative or quantitative testing for fermentability, or fermentative power.

4. Class 424 provides for methods of in vivo testing, measuring or diagnosis employing a Class 424 compound or composition.

5. Class 424 provides for methods of producing an antibody composition using a live micro-organism; e.g., virus or bacteria, etc., as the antibody inducing agent. For example, injecting a horse with a virus to produce an antibody containing sera.

#### CLASS 206

1. Class 206, SPECIAL RECEPTACLE OR PACKAGE, provides for a dosage unit made up of a therapeutic material or article and a container, where the container is intended to be physically removed from the therapeutic material or article; e.g., a wrapped pill or capsule, etc.

2. Class 424 takes a structured dosage unit which is intended to be used as a whole without disassembly or removal of a part; e.g., unwrapping. Examples of dosage units provided for in Class 424 are a capsule filled with coated particulate material intended to be swallowed whole, and a filled soluble, gelatin container intended to be dissolved into water or other liquid.

#### CLASS 210

1. Class 210, LIQUID PURIFICATION OR SEPARATION, provides for a process for the separation from a liquid of any character of material and a process of a liquid mixture not elsewhere provided for.

2. Class 424 provides for a process of (1) merely adding a chemical to water to impart medicinal values thereto and the resultant treated water; e.g., the fluoridating of drinking water, etc., or (2) merely adding a biocide to water for preventing growth of animal matter or micro-organisms other than algae, where as to either (1) or (2)

there are no other additional water treating steps defined.

#### CLASS 422

1. Class 422, CHEMICAL APPARATUS AND PROCESS DISINFECTING, DEODORIZING, PRESERVING, OR STERILIZING, provides for a process of preserving, disinfecting, or sterilizing which is more than the mere application of a compound or Class 424 composition.

2. Class 422 also provides for fumigating apparatus including fumigating candles in which the shape of the wick or candle is claimed.

3. Class 424 takes a process of preserving against decay, deterioration by a living organism, including disinfecting or sterilizing to prevent the above by employing a compound or composition, which process is no more than the mere application of the compound or composition. Class 424 will also take a nominal product resulting from such a process, where structure sufficient for classification elsewhere is not recited.

4. Class 424 also takes a compound or composition, intended to be used for a Class 424 purpose, nominally recited as containing a wick.

#### CLASS 264

1. Class 264, PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES, provides for manufacturing dosage units by shaping; e.g., molding, etc., a Class 424 composition. The line between Class 424 and Class 264 is that set forth in the main Class 264 definition, Lines With Other Classes and Within This Class, Chemical Composition Classes.

#### CLASS 427

1. Class 427, COATING PROCESSES, has the following line with Class 424. For purposes of placement of a patent between Class 424 and class 427, the controlling claim will be determined according to superiority of invention as follows with regard to claims of equal comprehensiveness.

- (1) Treating a living body
- (2) Coating product
- (3) Method of coating

## (4) Composition

2. Class 427 provides for a claim to a significant coating process, as set forth in the Class 427 definitions, in which an inanimate base is coated with a compound or composition which may have a Class 424 utility. In placement of a patent directed to a process of coating a dosage unit; e.g., pill, tablet, etc., the line between Class 427 and the coating composition Classes is followed.

3. Class 424 provides for a claim to a process of treating the living body (as between Class 424 and Class 427) even though the method of treatment is a coating step.

4. Class 424 provides for a claim to a method of coating (not significant for Class 427) a base or substrate with a compound or composition having a Class 424 utility.

CLASS 428

1. Class 428, STOCK MATERIAL OR MISCELLANEOUS ARTICLES, provides for a stock material product in the form of a single or plural layer web or sheet as provided for therein and which contains a biocide.

2. An article impregnated with a biocide and not containing structure (e.g., size or apertures) and not elsewhere provided (see the Search Class reference to Class 428 below for an example) will be classified in Class 424.

3. Class 428 provides for a claim to a coated or impregnated article, not otherwise provided for, which comprises a base preserved by a composition or compound which has a Class 424 utility, (e.g., mothproofed textile or termite proofed wood).

4. Class 424 provides for a claim to a base coated with a compound or composition which has a Class 424 utility and in which the base function as a carrier for the active material (e.g., medicated applicator or mosquito repellent fabric). Class 424 also provides for a claim to a coated dosage unit containing a substance having a Class 424 utility.

## REFERENCES TO THE SEARCH CLASS NOTES IN REFERENCES TO OTHER CLASSES, BELOW

References to Other Classes, below, contains the following:

- A. Compounds and Compositions
- B. Processes of Use Involving Class 424 Subject Matter
- C. Other Processes
- D. Apparatus and Articles - Bio-Affecting or Other

**SECTION III - REFERENCES TO OTHER CLASSES**

## SEE OR SEARCH CLASS:

- 2, Apparel, for garment structures containing a Class 424 composition, particularly subclass 4 for insect repelling head guards and subclass 171.2 for head coverings containing a medicament. (Apparatus and Articles, Bio-Affecting.)
- 4, Baths, Closets, Sinks, and Spittoons, subclasses 222+ for apparatus for disinfecting the subject matter of the class. Subclasses 245.1+ for sanitary covers for toilet seats. (Apparatus and Articles, Bio-Affecting.)
- 5, Beds, subclass 641 for pillows; and subclasses 482+ for bed clothing, each protected against biological attack. (Apparatus and Articles, Bio-Affecting.)
- 8, Bleaching and Dyeing: Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 405+ for compositions for dyeing hair on a living animal; subclasses 94.16+ for depilating compositions; subclasses 160 and 161 for compositions for depilating a living animal; subclass 127.51 for compositions for chemically modifying human hair not on a living body. (Compounds and Compositions.)
- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 405+ for a process of dyeing hair on living animals; subclasses 94.16+ for a process of depilating a living animal body. (Processes of Use Involving Class 424 subject matter.)
- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclass 101 for processes of bleaching hair not on a living body; subclass 127.51 for processes of chemically modifying human hair not on a living body. (Other Processes.)
- 15, Brushing, Scrubbing, and General Cleaning, for implements useful for applying Class 424 compositions, particularly subclasses 167.1+ for toothbrushes and 209.1+ for wipers, daub-

	ers and polishers; e.g., fabric puffs, <u>per se</u> , etc. (Apparatus and Articles)	
27,	Undertaking, subclasses 22.1+ for a process of embalming or preserving a body which is more than the mere use of a Class 424 compositions.	52,
30,	Cutlery, subclasses 32+ for razors useful in shaving the living body. (Apparatus and Articles)	
34,	Drying and Gas or Vapor Contact With Solids, subclasses 283+ for a process of drying hair on the head. (Other Processes.)	53,
34,	Drying and Gas or Vapor Contact With Solids, subclasses 283+ for apparatus for drying hair on the head. (Apparatus and Articles, Other.)	57,
36,	Boots, Shoes, and Leggings, for boots, etc., or parts thereof which contain a Class 424 composition. (Apparatus and Articles, Bio-Affecting.)	
43,	Fishing, Trapping, and Vermin Destroying, for a process of killing vermin with a Class 424 biocide which is more than the mere application of the biocide to the vermin. See the line note to this class in Lines With Other Classes and Within This Class, for examples of processes which are more than mere application. (Processes of Use Involving Class 424 subject matter.)	62,
43,	Fishing, Trapping, and Vermin Destroying, for apparatus for trapping or destroying animals (other than micro-organisms) which are injurious or pestiferous to man; e.g., insects, etc., and which may use a Class 424 composition; subclasses 114+ for fly paper recited in terms of more structure than a coating on a base; subclasses 125+ for fumigators for destroying insects using a Class 424 composition. (Apparatus and Articles, Bio-Affecting.)	70,
44,	Fuel and Related Compositions, for fuel containing an additive to protect it against decay or biological attack. Particularly note subclasses 300+ for the combination of a mineral oil containing a nonmineral oil preservative disclosed for use as fuel or any light mineral oil fraction with a preservative not restricted to a particular art use. Also for smoke signal compositions. (Compounds and Compositions.)	73,
47,	Plant Husbandry, for apparatus provided for therein which may apply a Class 424 composition; e.g., insecticide, etc., to plants. (Apparatus and Articles, Bio-Affecting.)	73,
51,	Abrasives Tool Making Process, Material, or Composition, for an abrasive composition, per se, including a composition useful in abrading teeth in a dental operation. (Compounds and Compositions.)	75,
	Static Structures (e.g., Buildings), subclasses 129+ for a burial vault with means to treat the corpse or product thereof with a Class 424 composition; subclass 517 for structurally defined static structures; e.g., buildings, utility poles, etc., with a coating to repel biological attack. (Apparatus and Articles, Bio-Affecting.)	83,
	Package Making, for methods of making and filling packages with a Class 424 composition. (Other Processes.)	102,
	Textiles: Spinning, Twisting, and Twining, subclasses 217, 221, 223, 232+ and 258 for textile strands, having structural limitations, coated with a biocide. (Apparatus and Articles, Bio-Affecting.)	
	Refrigeration, for processes of refrigeration combined with deodorizing or disinfecting with a Class 424 composition, also processes of preserving living tissue or organs outside the body by refrigeration. (Processes of Use Involving Class 424 subject matter.)	
	Locks, subclasses 15+ for fetters useful in restraining living animals. (Apparatus and Articles, Bio-Affecting.)	
	Measuring and Testing, subclass 866.2 for methods of measuring the release rate of a sustained release dosage unit. (Other Processes.)	
	Measuring and Testing, subclass 866.2 for apparatus for measuring the release rate of a sustained release dosage unit. (Apparatus and Articles, Other.)	
	Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, subclasses 255+ for loose metal particles which may have a Class 424 utility. (Compounds and Compositions.)	
	Cutting, subclasses 13+ for processes of shaving the living body, particularly subclasses 14+ wherein a Class 424 shaving preparation is used in preparatory treatment of the hair before shaving. (Process of Use Involving Class 424 subject matter.)	
	Ammunition and Explosives, for ammunition, <u>per se</u> , used for applying or delivering Class 424 compositions such as warfare gases, repellents, etc., particularly subclass 367 for gas shells and other gas delivering ammunition, 368 for gas grenades, 369 for gas bombs, and 370 for gas cartridges. (Apparatus and Articles, Bio-Affecting.)	

- 106, Compositions: Coating or Plastic, subclasses 15.05+ for a coating composition provided for in Class 106 containing a biocidal or antifouling agent. (Compounds and Compositions.)
- 109, Safes, Bank Protection, or a Related Device, subclasses 20 and 29+ for safes or bank protection devices with means to release, generate, or distribute a fluent Class 424 composition to repel attack. (Apparatus and Articles, Bio-Affecting.)
- 111, Planting, subclasses 118+ for planting apparatus which treats the soil with a Class 424 composition. (Apparatus and Articles, Bio-Affecting.)
- 118, Coating Apparatus, for apparatus useful in coating a base with a Class 424 composition. (Apparatus and Articles, Other.)
- 119, Animal Husbandry, for a process of treatment of domestic animals with a Class 424 composition which does not involve cutting the skin and which is more than the mere application of the composition to the animal. See subclasses 156+ for methods of topically applying a composition to an animal to heal sores, kill parasites, repel insects, etc., particularly subclass 160 for fumigating. (Processes of Use Involving Class 424 subject matter.)
- 119, Animal Husbandry, subclass 348 for artificially medicated nest eggs; subclasses 156+ for apparatus for topically applying a Class 424 composition to a domestic animal, particularly subclass 160 for fumigators. (Apparatus and Articles, Bio-Affecting.)
- 126, Stoves and Furnaces, subclasses 204+ for body warmers. (Apparatus and Articles, Other.)
- 127, Sugar, Starch, and Carbohydrates, for sugar, starch and carbohydrates, *per se*, which may have a utility for Class 424. Class 127 also provides for a sugar, starch and carbohydrate composition protected against biological attack not having a utility provided for in another class. (Compounds and Compositions.)
- 128, Surgery, for a process of treating an abnormal condition of a living body with a compound or a Class 424 composition which goes beyond one or more steps of mere application of a compound or composition(s); e.g., removal of a body fluid such as milk, adding a medicine to the fluid and re-injecting the fluid, surgical implantation, etc. Processes in Class 128 are either placed in subclass 1 or classified below based on the particular appliance used. (Processes of Use Involving Class 424 subject matter.)
- 128, Surgery, for apparatus for treating abnormal conditions of the human body. Class 128 also provides for medicated applicators; e.g., bandages, etc., claimed in terms of more structure than a coating or a base; subclass 161 for paper containing a biocide to protect it against biological attack, which biocide was incorporated into the paper stock before it was made into a self-sustaining web. (Apparatus and Articles, Bio-Affecting.)
- 131, Tobacco, for tobacco containing a bio-affecting compound or composition intended to be smoked, chewed, etc., for enjoyment. Class 131, subclass 359 also provides for tobacco substitutes intended to be used in the same manner as tobacco for enjoyment. (Compounds and Compositions.)
- 131, Tobacco, for smoking apparatus to be used with tobacco or a tobacco substitute intended for enjoyment. (Apparatus and Articles, Other.)
- 132, Toilet, subclasses 202+ for a process of treating hair on the scalp which is more than the mere application of a Class 424 composition. (Processes of Use Involving Class 424 subject matter.)
- 132, Toilet, for miscellaneous apparatus for grooming or enhancing the appearance of the human body; e.g., combs, manicuring, toothpicks, dental floss, etc. (Apparatus and Articles, Other.)
- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 3 for methods of filling aerosol or gas charged dispensers. (Other Processes.)
- 149, Explosive and Thermic Compositions or Charges, for explosive or thermic compositions. (Compounds and Compositions.)
- 162, Paper Making and Fiber Liberation, subclass 161 for a process of paper making wherein a biocide is added during the process. (Processes of Use Involving Class 424 subject matter.)
- 168, Farriery, subclass 2 for medicating overshoes and subclass 26 for medicating sole pads used in treating the hooves of horses or cattle. (Apparatus and Articles, Bio-Affecting.)
- 174, Electricity: Conductors and Insulators, subclasses 68.1+ for electrical conductor structures containing a biocide or repellent (e.g., to repel rats, etc.). (Apparatus and Articles, Bio-Affecting.)
- 204, Chemistry: Electrical and Wave Energy, appropriate subclasses for compound which may possess a Class 424 utility and which are

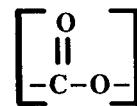
	produced by a chemical change which is brought about by an electric current or wave energy and which can only be defined by its process of making. (Compounds and Compositions.)		carbon compound," etc.); and subclasses 582+ for other optical filter compositions. (Compounds and Compositions.) (Also see the Class 252 reference in Lines With Related Composition Classes above)
206,	Special Receptacle or Package, subclass 213 for insect proof receptacles. (Apparatus and Articles, Bio-Affecting.)	260,	Chemistry of Carbon Compounds, appropriate subclasses for an organic compound which is disclosed or claimed as having a Class 424 utility, also for an organic compound with an additive to protect the compound against deterioration or biological attack. (Compounds and Compositions.)
208,	Mineral Oils: Processes and Products, subclasses 1 and 2 for biocidal mineral oil products and mixture thereof. Subclasses 14+ for mineral oil products preserved against biological attack by a mineral oil additive. (Compounds and Compositions.)	264,	Plastic and Nonmetallic Article Shaping or Treating: Processes, for processes of making molded dosage units; e.g., pills, etc., from Class 424 compositions by a Class 264 process. (Other Processes.)
210,	Liquid Purification or Separation, for a process of liquid purification which is more than the mere application of a Class 424 composition in particular see subclasses 749+ for processes of chemical treatment. (Processes of Use Involving Class 424 subject matter.)	351,	Optics: Eye Examining, Vision Testing and Correcting, for optical methods of eye examination and vision correction. (Processes of Use Involving Class 424 subject matter.)
210,	Liquid Purification or Separation, for apparatus for liquid purification (e.g., water etc.) utilizing a Class 424 composition. (Apparatus and Articles, Bio-Affecting.)	351,	Optics: Eye Examining, Vision Testing and Correcting, for apparatus for eye examination and eye glasses. (Apparatus and Articles, Bio-Affecting.)
219,	Electric Heating, for electrical apparatus for heating the body, particularly subclasses 526+ and 528+. (Apparatus and Articles, Other.)	359,	Optics: Systems (Including Communication) and Elements, subclasses 885+ for optical filters. (Apparatus and Articles, Other.)
220,	Receptacles, subclasses 87.1+ for a disinfecting device to be attached to the receptacles of that class. (Apparatus and Articles, Bio-Affecting.)	383,	Flexible Bags, subclass 901 for hot water bags, useful in heating the body. (Apparatus and Articles, Other.)
222,	Dispensing, subclasses 394+ for the structure of pressurized containers useful for dispensing a Class 424 composition. (Apparatus and Articles, Other.)	401,	Coating Implements With Material Supply, for implements under the class definition used to apply a Class 424 composition; e.g., lipstick, deodorant, etc. (Apparatus and Articles, Other.)
223,	Apparel Apparatus, subclass 86 for insect repelling garment hangers. (Apparatus and Articles, Bio-Affecting.)	420,	Alloys or Metallic Compositions, appropriate subclasses for an alloy or alloy powder which may have a Class 424 utility. (Compounds and Compositions.)
239,	Fluid Sprinkling, Spraying, and Diffusing, subclasses 34+ for slow diffusers useful in applying Class 424 compositions by evaporation. (Apparatus and Articles, Other.)	422,	Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 1+ for processes of disinfecting, deodorizing, preserving, or sterilizing using a compound or a Class 424 composition which is more than the single step of mere application of the compound or composition. (Processes of Use Involving Class 424 subject matter.)
252,	Compositions, subclass 299.01 for liquid crystal containing optical filter compositions; subclasses 365+ for anti-ingestible or denatured compositions; subclasses 380+ provide stabilized compositions where the ingredients other than the stabilizers are claimed so broadly as not to furnish a basis of classification (e.g., a carbon compound, etc.); subclasses 389.1+ for preservative compositions broadly not elsewhere provided for, and for a preservative mixed with a compound claimed so broadly as not to afford a basis of classification (e.g., "a	422,	Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, appropriate subclasses for bio-affecting apparatus employing a Class 424 composition. (Apparatus and Articles, Bio-Affecting.)

- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 129+ for apparatus in general for performing chemical reactions; and subclasses 50+ for testing apparatus, including apparatus for performing a Class 424 test. (Apparatus and Articles, Other.)
- 423, Chemistry of Inorganic Compounds, for inorganic compounds and nonmetallic elements which may have a Class 424 utility. Class 423 provides inorganic compounds which include an additive, see especially subclass 265. (Compounds and Compositions.)
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 2 for apparatus for molding plastic material against animal or plant body structure. (Apparatus and Articles, Other.)
- 426, Food or Edible Material: Processes, Compositions, and Products, for food or edible Material for the nourishment of man and animals. Class 426 also provides for preserved foods and foods containing vitamin or mineral. (Compounds and Compositions.)
- 427, Coating Processes, subclasses 2.1+ for significant processes of coating wherein the product has a medical or dental utility. (Processes of Use Involving Class 424 subject matter.)
- 428, Stock Material or Miscellaneous Articles, subclasses 540+ for articles impregnated with a biocide and not containing structure (e.g., size or apertures); subclass 907 (a cross-reference art collection) for a product treated against attack by plant or animal life. (Apparatus and Articles, Bio-Affecting.)
- 431, Combustion, subclasses 288+ for a candle, per se. (Apparatus and Articles, Other.)
- 433, Dentistry, subclasses 215+ for a process of dentistry which is more than the mere application of a Class 424 composition. (Processes of Use Involving Class 424 subject matter.)
- 433, Dentistry, subclasses 25+ for apparatus for the cleaning or replacement of teeth, especially subclass 80 for structurally defined dental applicators containing a medicament. (Apparatus and Articles, Bio-Affecting.)
- 435, Chemistry: Molecular Biology and Microbiology, for processes of fermentation, including propagation and/or attenuation of a microorganism, (e.g., bacteria and virus, etc.), and compositions for carrying out said processes. subclasses 235.1+ for virus propagation. Subclass 1 for propagating living organs, tissues or cells outside the body. Subclasses 240.1+ for fermentation processes wherein undesired micro-organisms are eliminated from the process by the use of a biocide. ( Processes of Use Involving Class 424 subject matter.)
- 436, Chemistry: Analytical and Immunological Testing, subclasses 1+ for miscellaneous methods of chemical analysis. (Other Processes.)
- 449, Bee Culture, appropriate subclasses for a bee hive or appliance therefor containing a biocide to protect be or honey, particularly subclasses 9+ for a bee hive having feeding provision, and subclass 48 for a free standing be feeder. (See Lines With Other Classes and Within This Class, Apparatus and Articles, Bio-Affecting.)
- 452, Butchering, for methods of killing and dressing animals for use as food. See Lines With Other Classes and Within This Class, (Other Processes.)
- 504, Plant Protecting and Regulating Compositions, for a plant growth regulating composition; subclass 100 for seeds coated with Class 424 biocidal compositions; subclasses 101+ for a fertilizer composition containing an insecticide, fungicide, or deodorant; subclasses 150+ for an algicide composition. (Apparatus and Articles, Bio-Affecting.) (Compounds and Compositions.) (Also see the Class 504 reference in Lines With Related Composition Classes above)
- 508, Solid Antifriction Devices, Materials Therefor, Lubricant and Separant Compositions for Moving Solid Surfaces, and Miscellaneous Mineral Oil Compositions, particularly subclasses 110+ for a lubricant composition protected against biological attack. Subclasses 110+ provide for a mineral oil containing a nonmineral oil preservative when the composition is disclosed to be useful as a lubricant. (Compounds and Compositions.)
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, subclasses 131+, 319, 382+, and other appropriate subclasses for cleaning compositions containing a biocide, insecticide, or antiseptic component, which may function as a preservative for the

	cleaning composition or serve to perfect the cleaning process. These compositions may be disclosed or claimed as useful in cleaning a living body (e.g., human skin, hair, etc.). (Compounds and Compositions.)	ACTIVE
512,	Perfume Compositions, subclasses 1 through 27 for perfume compositions, per se. (Compounds and Compositions.)	Denotes a physiological, pharmacological, or biological affect.
520,	Synthetic Resins or Natural Rubbers, for a synthetic resin or natural rubber, per se, which is disclosed or claimed as having a Class 424 utility. Also Class 523, subclasses 105+ for a non-medicated composition designed to come into contact with the body and which is other than apparel; and subclass 122 for a resin or natural rubber composition preserved against deterioration by bacteria, fungi, or other organisms. (Compounds and Compositions.)	Denotes a compound in which one or more of the valences of a nitrogen atom have been satisfied by a covalently bonded carbon atom.
536,	Organic Compounds, appropriate subclasses for saccharides, polysaccharides, nucleosides, nucleotides, and polynucleotides like RNA and DNA compounds as well as chemical methods of synthesizing these compounds. Search specifically subclasses 23.1+ for fragments of RNA or DNA and subclasses 26.4+ for vitamin B-12 and its derivative. (Compounds and Compositions.)	AROMATIC
549,	Organic Compounds, subclasses 523+ for a preservative fat, fatty oil, ester-type wax or fatty acid. (Compounds and Compositions.)	Denotes a compound which contains a benzene nucleus whether or not it is condensed with other rings.
585,	Chemistry of Hydrocarbon Compounds, subclasses 1+ provides for a composition which is a blend of hydrocarbon compounds only and for a blend of a hydrocarbon with a nonhydrocarbon preservative. (Compounds and Compositions.)	CARBOXYLIC
623,	Prostheses (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor, for the subject matter of that class title. (Apparatus and Articles, Bio-Affecting.)	Denotes the presence of a moiety.

#### SECTION IV - GLOSSARY

The meaning to be given to the various "art" terms appearing in this class, but which have not been included in the glossary below, is the same as that generally accepted or is in common usage. However, certain terms employed in this class, which are included below, have been assigned definitions tailored to meet the needs of this class and therefore these may be more restricted or less limited or even altogether different from those in common usage.



#### FERMENTATE

Denotes the final chemical compound, or compounds, that are produced by a fermentation process and includes compounds which are of known as well as unknown structure.

#### HEAVY METAL

Denotes any metal having a specific gravity greater than 4 and as employed herein includes arsenic and antimony.

#### HETEROCYCLIC

Denotes the presence of one or more carbon atoms covalently bonded in a closed ring with at least one atom of oxygen, nitrogen, sulfur, selenium or tellurium and having no other atoms in the ring.

#### ORGANIC

Denotes compounds containing carbon, which are further characterized by the presence in a molecule thereof of two carbon atoms bonded together; or one atom of carbon bonded to at least one atom of hydrogen or halo-

gen; or one atom of carbon bonded to at least one atom of nitrogen by a single or double bond.

- (1) Note. Compounds included within this definition, but not considered organic are hydrocyanic acid, cyanogen, isocyanic acid, cyanamide, dicyanamide, cyanogen halides, isothiocyanic acid, fulminic acid, and metal carbides.

#### OXO

Denotes the presence of a carbonyl (C=O) bonded to hydrogen and/or carbon and is a term limited to ketones and aldehydes.

#### OXY

Denotes the presence of oxygen singly bonded to a carbon, which is not the carbon of a carbonyl group, and is further bonded to hydrogen, metal or an organic radical. The term is generic to alcohols, phenols, alcoholates, phenolates, ethers and esters thereof.

#### POTENTIATOR OR SYNERGIST

Denotes an agent (A) which will cooperatively act with an active ingredient for this class (B) to the extent that the total effect (A+B) will be greater than the sum of the two effects taken independently.

#### UNITARY DOSAGE FORM

Denotes that form of medication supplied in a manner requiring no further weighing or measuring to provide the dosage; e.g., tablet, capsule, etc. Medicines in bulk form; e.g., powder, syrup, etc., are not included.

#### SUBCLASSES

#### **1.11 RADIONUCLIDE OR INTENDED RADIONUCLIDE CONTAINING; ADJUVANT OR CARRIER COMPOSITIONS; INTERMEDIATE OR PREPARATORY COMPOSITIONS:**

This subclass is indented under the class definition. Compositions containing a radionuclide or an element intended to be converted to a radionuclide (such as Boron-10 which may be neutron-activated for radio-therapy); methods of making such compositions; class defined methods of using such compositions; class defined methods of using compounds, per se, containing a radionuclide or an element

intended to be converted to a radionuclide; adjuvant or carrier compositions for perfecting compositions of this class; and intermediate or preparatory compositions for compounds or compositions proper for Class 424.

- (1) Note. Radionuclide is an unstable isotope, capable of emitting radiant energy through a process termed decay. Commonly used terms which are substantially synonymous include: radiolabeled, radioactive, and radioisotope.
- (2) Note. An intended radionuclide is an element which is by disclosure or common knowledge intended to be converted to a radionuclide to take advantage of the property or properties exhibited by a radionuclide. This subclass and indented subclasses should be read as incorporating the intended radionuclide embodiment in every instance.
- (3) Note. All elements have multiple isotopes; some radioactive, some not; some naturally occurring; and some man-made. The recitation of a radionuclide will inherently encompass a mixture of isotopes; however, this is not sufficient for placement in Class 424. For placement in Class 424, an intentional mixture of different compounds or different elements or one (or more) of each is required.
- (4) Note. Class 424 takes compounds mixed with a preserving agent when disclosed or claimed for a Class 424 function or utility. Further, Class 424 provides for a solution of a compound when disclosed or claimed for a Class 424 function or utility.
- (5) Note. The intermediate and preparatory compositions are provided for in this subclass and indented subclasses, even though the radionuclide or intended radionuclide may not be present in the claim. The adjuvant and carrier compositions are provided for in this and indented subclasses, even though the radionuclide or intended radionuclide may not be present in the claim. When there are also

- disclosed or claimed non-radionuclide uses of the intermediate, preparatory, adjuvant, or carrier composition, appropriate cross-references are necessary elsewhere in Classes 424 and 514.
- (6) Note. Subclass 1.11 is the appropriate residual location for those compositions, and the appropriate class defined uses, containing a per se radionuclide element or a per se intended radionuclide element (i.e., the elemental material). For example, compositions and methods comprising radioactive Radon baths are found here. Any indication of a compound; i.e., attachment (e.g., recitation of an ion), dictates that proper placement is in an indented subclass, even in the absence of a specifically disclosed compound. In the case of an indicated, but not specifically disclosed compound, the original would be placed in subclass 1.61 and a cross placed in: subclass 1.65 for metal radionuclide or intended metal radionuclide; subclasses 1.81+ for nonmetal radionuclide or intended nonmetal radionuclide; or both.
- (7) Note. The following rule adheres to the rule set forth in Class 514, which statement in Class 514: (A) this and indented subclasses do not provide for cross-reference patents which are originally classified in Class 260, compound areas, or in the Class 530-570 series or in Class 585. Cross-reference patents that are originally classified in the Class 520 series are permitted; (B) the cross-reference rule elaborated above means that a specific compound having a disclosed or even specifically claimed utility (i.e., compound X having an attached radionuclide useful as an anti-cancer diagnostic or treatment agent) will be classifiable only in Class 260 or the Class 530-570 series or Class 585.
- (8) Note. The terminology "derivative thereof" means that the compound retains the biological activity of the compound from which the subclass provides and from which it is derived, or that the compound retains the structural characteristic that places it in the subclass.
- (9) Note. Kits. Claims and disclosures to in vivo kits are classified according to the following guidelines. The use of nominal terms to identify the kit such as "kit," "vial," "container," etc., are disregarded and placement is premised on the radio-labeled product intended for placement in the body even if the ingredients actually recited do not include all the necessary components to form the radiolabeled product (e.g., intermediate). The presence of an accessory such as "instructions", "syringe", "filter", etc., have no effect on this aspect of placement. Claiming of significant packaging or container structure will result in placement in Class 206 when the packaging requirements of that class definition is satisfied.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 2+, for in vivo diagnostic compositions not comprising a radionuclide or intended radionuclide.

SEE OR SEARCH CLASS:

- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, appropriate subclasses for patents relative to the metallurgy of a radioactive metal element or alloy.

- 204, Chemistry: Electrical and Wave Energy, appropriate subclasses for a chemical process making a compound or element and involving the class defined use of electrical or wave energy.

- 206, Special Receptacle or Package, for kits which meet the class definition, particularly subclass 438 for a container for an object or substance adapted for use in wound or disease treatment of the body, subclasses 216+ for container which is for two or more diverse articles or materials or which is structured so that at least a portion thereof is capable of rearrangement for a secondary purpose (especially subclasses 568, 569, and 570) and subclasses 524.1+ for con-

- tainer wherein the cover or contents are specified in terms of chemical constituents.
- 250, Radiant Energy, subclasses 496.1+ for a radioactive source alone or with a shielded container to selectively shield or expose the source, subclass 432 for generators which also separate parent and daughter isotopes.
- 252, Compositions, subclasses 625+ for a radioactive composition and methods of making and disposal thereof, not provided for elsewhere.
- 376, Induced Nuclear Reactions: Processes, Systems, and Elements, appropriate subclasses for apparatus and processes for the production and/or utilization of a radioactive material or composition, especially subclasses 156+ for bombardment of a material to produce an induced nuclear reaction (other than that resulting in the splitting of a nucleus); e.g., transmutation, making radioactive material, producing isotopes of the same or different element.
- 420, Alloys or Metallic Compositions, subclasses 1+ for radioactive alloys.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving or Sterilizing, subclasses 50+ for apparatus for in vitro quantitative or qualitative chemical analysis and laboratory devices, especially subclass 430 for in vitro test package or kit (e.g., radioassay).
- 423, Chemistry of Inorganic Compounds, subclasses 2+ and 249+ for radioactive elements or inorganic compounds and class defined methods of making same.
- 427, Coating Processes, subclasses 2.1+ for coating processes producing a medical or dental product (e.g., coated pills) and subclasses 5+ for coating a radioactive base or applying a radioactive coating.
- 435, Chemistry: Molecular Biology and Microbiology, see appropriate subclasses: for processes in which a material containing an enzyme or micro-organism is used to perform a qualitative or quantitative measurement or test; for compositions or test strips for either of the stated processes; for the processes of making such compositions or test strips; for processes of using micro-organisms or enzymes to synthesize a chemical product; for processes of treating a material with micro-organisms or enzymes to separate, liberate, or purify a preexisting substance or to destroy hazardous or toxic waste; for processes of propagating micro-organisms; for processes of genetically altering a micro-organism; for processes of tissue, organ, blood, sperm, or microbial maintenance; for processes of malting or mashing; for micro-organisms, per se, and subcellular parts thereof; for recombinant vectors and their preparation; for enzymes, per se, compositions containing enzymes not otherwise provided for and processes of preparing and purifying enzymes; for compositions for microbial propagation; for apparatus for any of the processes of the class; for composting apparatus; and subclasses 4+ for in vitro processes in which there is a direct or indirect, qualitative or quantitative, measurement or test, by or of a material which contains an enzyme or micro-organism (for the purposes of Class 435, micro-organism includes bacteria, actinomycetales, cyanobacteria (unicellular algae), fungi, protozoa, animal cells, plant cells, and virus). Class 424 definition contains controlling statements on the class lines.
- 436, Chemistry: Analytical and Immunological Testing, appropriate subclasses for processes which involve a chemical reaction for determining quantitatively or qualitatively the presence of a chemical element, a compound or a complex in a composition or a chemical compound, or an element or radical in a compound; for processes of measuring or testing the chemical properties of a sample, or chemically determining a physical property of a sample; for analytical compositions used in such processes (see Class 436, main definition, Lines

	With Other Classes and Within This Class, for exceptions); for chemical test standards; and for combinations of tests or measurements with methods of regulating a chemical reaction not otherwise provided for in a chemical synthesis class or elsewhere. See especially, subclasses 57+ for processes or compositions where the testing or a chemical reaction includes measurement of radioactivity; subclasses 500-548 for processes of in vitro measuring or testing which involve antigen-antibody, immunological, or protein binding interactions other than those involving an enzyme or micro-organism. Class 436 provides for in vivo production (i.e., by treatment of a live animal with a virus or micro-organism) of immunological (e.g., anti-sera) material when intended for use in an in vitro test.	intended for such use and not requiring any additional component to perfect it other than a pressurizing agent (e.g., heat).
530,	Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, appropriate subclasses for, per se, compounds including those which have attached thereto a radionuclide, such as radiolabeled proteins, peptides, and polypeptides.	(1) Note. Gaseous compositions and methods comprising radioactive Xenon for lung studies are found here.
534,	Organic Compounds, subclasses 10+ for an organic compound, per se, containing a radioactive metal.	<b>Attached to or within viable or inviable whole micro-organism, cell, virus, fungus or specified sub-cellular structure thereof (e.g., platelet, red blood cell):</b> This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to, or contained within, a whole microbial organism, cell, virus, fungus, or specified sub-cellular structure thereof.
600,	Surgery, subclasses 1+ for a device or process applying radioactive substance to or into the body for a therapeutic purpose and wherein more than one nominal step or a series of nominal steps is recited, subclasses 431+ for diagnostic testing processes wherein the radioactive material is placed in the body, and subclass 436 for diagnostic testing processes involving nuclear radiation directed against and passing through or reflected from the body.	(1) Note. Examples of materials intended for placement in this subclass include: platelet, red blood cell, mitochondria, and chloroplast.  (2) Note. This subclass is proper for cells, viruses, etc., which are live, attenuated, or dead.
1.13	<b>In aerosol, fine spray, effervescent, pressurized fluid, vapor or gas, or complete composition therefor:</b> This subclass is indented under subclass 1.11. Subject matter which is contained in or part of an aerosol, a fine spray, an effervescent, a pressurized fluid, a vapor, a gas, or a composition	<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 1.65+, for cellular extracts of undefined or unspecified composition.
1.21		<b>SEE OR SEARCH CLASS:</b> 435, Chemistry: Molecular Biology and Microbiology, subclasses 183+ for radiolabeled enzymes, per se, and processes of preparing them, subclasses 243+ for, radiolabeled micro-organisms, per se, and processes of preparing them, subclass 262.5 for processes of utilizing an enzyme or micro-organism to destroy a toxic or hazardous waste or to convert it into an environmentally safe substance, and subclass 317.1 for radiolabeled sub-cellular parts of micro-organisms.
		<b>Molecular bilayer structure (e.g., vesicle, liposome):</b> This subclass is indented under subclass 1.11. Subject matter which includes a structure typically characterized by molecules having a hydrophilic end or a hydrophobic end which

are organized into a bilayer so as to produce an enclosed volume, an organized layer, or a coating.

- (1) Note. The radionuclide or intended radionuclide may be attached to the wall structure or may be enclosed within it or may be exterior to it or any combination thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 1.17, for cells and sub-cellular structures which may have bilayer structures forming a part thereof.  
 2+, for liposome intended for testing or measuring a condition or substance and not containing a radionuclide.  
 450, for liposomes containing compositions of this class other than radionuclide containing, and other than intended for testing or measuring a condition or substance.

SEE OR SEARCH CLASS:

- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 4+ for generic, or not elsewhere provided for, processes of encapsulating a material which is a liquid (at ambient temperature and pressure) utilizing an emulsion or dispersion (e.g., making microsphere, liposome).  
 427, Coating Processes, subclasses 213.3+ for generic, or not elsewhere provided for, processes of encapsulating a solid material utilizing an emulsion or dispersion (e.g., making microcapsule, liposome).  
 428, Stock Material or Miscellaneous Articles, subclasses 402.2+ and 402.24 for generic, or not elsewhere provided for, liposomes, per se.  
 436, Chemistry: Analytical and Immunological Testing, subclass 829 for in vitro antigen-antibody testing involving liposomes.

**1.25 Dissolving or eluting from solid or gel matrix (e.g., capsule, tablet):**

This subclass is indented under subclass 1.11. Subject matter in which the composition comprises a physical form which includes a reticulated network of solid or gel material from

which the radionuclide or intended radionuclide is eluted, or is released by dissolution of the network.

- (1) Note. Proper for placement in this subclass are compositions in which the radionuclide or intended radionuclide component is entrapped and compositions in which the radionuclide or intended radionuclide component is attached (bonded, chelated, complexed) to the matrix.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 1.29+, for those particulate carriers which dissolve, bio-assimilate, or biodegrade (e.g., in the host) only after the diagnostic or therapeutic process has been accomplished.

**1.29**

**Coated, impregnated, or colloidal particulate (e.g., microcapsule, microsphere, micro-aggregate, macro-aggregate):**

This subclass is indented under subclass 1.11. Subject matter in which the composition comprises a coated, impregnated, or colloidal particle wherein the radionuclide or intended radionuclide may be present in any part of the particle, coating, or impregnant (e.g., colloidal human serum albumin).

- (1) Note. The core of a coated particle may comprise a solid, liquid, or gas (e.g., gas-filled glass microsphere, liquid core microcapsule). However, solid or gel core particles from which the radionuclide or intended radionuclide is eluted or dissolved are classified in subclass 1.25 above.

- (2) Note. A particle coated or impregnated with a composition provided for in this class and in which the composition functions only to preserve the particle from biological attack is generally classified with the particular particle protected, for example, a lyophilized radiolabeled monoclonal antibody impregnated or coated with a Class 424 biocide would be properly classified with the lyophilized radiolabeled monoclonal antibody, per se, in Class 530.

- (3) Note. The coating need not be continuous. The coating material may be adsorbed, chelated, complexed, covalently bonded, ionically bonded, or hydrogen bonded.
- (4) Note. An emulsion is not proper for this subclass based solely on the "attachment" of the emulsifying agent to form a coating.
- (5) Note. Particulate or particle encompasses a form of solid material of such small size that it behaves in a fluid manner (e.g., microcapsule, but not unit dose pills).

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 1.21, for liposomes which may encapsulate or coat a particle.
- 1.25, for particulate material further comprising a reticulated network of solid or gel from which the radionuclide or intended radionuclide is eluted or is released by dissolution of the network.

**1.33 Delivery to active site involves particle dissolving, degrading, or otherwise releasing of radionuclide:**

This subclass is indented under subclass 1.29. Subject matter in which the particle dissolves, degrades, or otherwise releases the radionuclide or intended radionuclide in order to deliver it to the active site, such as a time release microcapsule.

- (1) Note. This subclass is intended to take those compositions which release the radionuclide at a location distant from the target location. Compositions which release the radionuclide within a target cell in the body would not be proper for placement here on that basis.
- (2) Note. A particle designed to dissolve, degrade, etc., (e.g., bio-degradable, bio-assimilable) after the diagnosis, treatment, etc., is not proper for placement here on that basis.

**1.37**

**Radionuclide or intended radionuclide in an organic compound:**

This subclass is indented under subclass 1.29. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to or a part of an organic compound.

- (1) Note. See (1) Note in subclass 1.65 for definition of an organic compound.

**1.41**

**Attached to lymphokine, cytokine, or other secreted growth regulatory factor, differentiation factor, or intercellular mediator specific for a hematopoietic cell (e.g., interferon, interleukin, macrophage factor, colony stimulating factor, erythropoietin); derivative thereof:**

This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to a lymphokine, cytokine, or other secreted growth regulatory factor, differentiation factor, or intercellular mediator specific for any type of hematopoietic cell; and the derivatives thereof.

- (1) Note. The term "growth regulatory factor" is meant to encompass any secretory factor that is growth-stimulatory or growth-inhibitory (i.e., that will stimulate or inhibit cluneal expansion of cells).
- (2) Note. The term "differentiation factor" is meant to encompass any secretory factor that causes cells to progress from a relatively undifferentiated state to a more differentiated state, wherein said progression may include cluneal expansion.
- (3) Note. The term "intercellular mediator" is meant to encompass any secretory factor that affects cellular functions such as chemotaxis, etc.
- (4) Note. Included here are: interferon (IF), interleukin, monokines, macrophage factors, lymphokines, migration inhibitory factor (MIF), lymphotoxin (LT), leukocyte migration inhibitory factor (CIF), eosinophil chemotactic factor-precursor substance (ECFp), eosinophil stimula-

- tion promoter, eosinophil chemotactic factor, monocyte tissue factor, mitogenic factor (MF), lymphocyte activity-factor (LAF), colony stimulating factor (CSF), skin reactive factor (SRF), macrophage cytotoxicity factor (MCF), leukocyte inhibition factor (LIF), vascular permeability factor (VPF), T cell growth factor (TCGF), B cell growth factor (BCGF), erythroid burst promoter, genetically related macrophage factor (GRF), fibroblast activating factor (FAF), tumor necrosis factor (TNF), and macrophage activating factor (MAF).
- (5) Note. Hematopoietic cells are considered to be bone marrow stem cells and cells derived from bone marrow stem cells, including cells at any stage of differentiation from progenitor cells to mature erythrocytes, granulocytes, lymphocytes, etc., both normal and neoplastic.
- 1.45 Attached to cyclopentano-hydrophenanthrene (e.g., cholesterol, bile acid, steroids, cholanate), hormone, or neurotransmitter, or other secreted growth regulatory factor, differentiation factor, or intercellular mediator (e.g., T<sub>3</sub>, T<sub>4</sub>, insulin, human chorionic gonadotropin, intragonadal regulatory protein, Mullerian inhibiting substance, inhibin, epidermal growth factor, nerve growth factor, dopamine, norepinephrine); derivative thereof:**
- This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to a cyclopentano-hydrophenanthrene (e.g., cholesterol), hormone, or neurotransmitter, or any other secreted growth regulatory factor, differentiation factor or intercellular mediator, or derivative thereof, that targets cells other than hematopoietic cells; and the derivatives thereof.
- (1) Note. The term "growth regulatory factor" is meant to encompass any secretory factor that is growth-stimulatory or growth-inhibitory (i.e., that will stimulate or inhibit cluneal expansion of cells).
- (2) Note. The term "differentiation factor" is meant to encompass any secretory factor that causes cells to progress from a relatively undifferentiated state to a more differentiated state, wherein said progression may include cluneal expansion.
- (3) Note. The term "intercellular mediator" is meant to encompass any secretory factor that affects cellular functions such as chemotaxis, etc.
- (4) Note. Cyclopentano-hydrophenanthrene or a derivative thereof means those compounds which do not destroy the 17 carbon atoms forming the four-fused-ring structure. The four-fused-ring structure need not contain the same number of hydrogen atoms or double bonds to be proper for placement here. The necessary requirement is that the 17 carbons atoms retain the relationship exhibited in the base compound.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 1.21, for liposomes containing cholesterol and derivatives within the liposome or liposome bilayer.
- SEE OR SEARCH CLASS:
- 552, Organic Compounds, for per se cyclopentano-hydrophenanthrene and derivatives thereof.
- 1.49 Attached to antibody or antibody fragment or immunoglobulin; derivative thereof:**
- This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to an antibody, or an antibody fragment, or immunoglobulin (e.g. monoclonal antibody); and the derivatives thereof.
- (1) Note. Antibodies, per se, including those having attached thereto a radionuclide, such as monoclonal and polyclonal antibodies, are considered to be compounds and are classified in Class 530, subclasses 387.1+.

- (2) Note. Proper for placement here are mixtures or compositions, such as an immune serum or an antiserum, which are disclosed or reasonably believed to have antibodies attached to radionuclide or intended radionuclide.

**SEE OR SEARCH CLASS:**

- 436, Chemistry: Analytical and Immunological Testing, appropriate subclasses for in vitro test methods including those methods which include injecting a host animal to produce an antibody or antisera if the virus or micro-organism injected is dead. Class 424 provides for such methods, when the virus or micro-organism is live.
- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, particularly subclasses 391.3+ for the radio-labeled compound, per se.

**1.53 Attachment via an added element (e.g., bifunctional compound or coordinate, coupling agent, spacer compound, bridging compound, conjugated chelate):**

This subclass is indented under subclass 1.49. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to an antibody, antibody fragment, immunoglobulin, or derivative thereof via an added, interposed linking means, comprising at least one atom, between the radionuclide and the antibody, antibody fragment, immunoglobulin, or derivative thereof.

- (1) Note. Examples of terms used to describe the subject matter proper for placement in this subclass include: bifunctional compound or coordinate, spacer compound, bridging compound, conjugated chelate, chelating group, coordination complex, coupling agent, and conjugation agent.
- (2) Note. In the absence of a disclosure of an added attachment means the reference is not properly placed in this subclass, and is proper for subclass 1.49, above.

**SEE OR SEARCH CLASS:**

- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, particularly subclasses 391.3+ for the radio-labeled compound, per se.

**1.57**

**Attached to antigen or hapten; derivative thereof:**

This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to an antigen or a hapten; and the derivatives thereof.

- (1) Note. An antigen is a compound which induces the formation of an antibody in the living body.
- (2) Note. A hapten is a compound that has little or no antigenicity unless coupled to a carrier molecule.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 1.49+, for radionuclide or intended radionuclide attached to antibody, antibody fragment, or immunoglobulin.

**1.61**

**In an inorganic compound:**

This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to or a part of an inorganic compound.

- (1) Note. See Note (1) in subclass 1.65 for a definition of organic compound. An inorganic compound is any compound that does not meet the definition of an organic compound.
- (2) Note. An inorganic compound does not mean the, per se, element, but does include homogenous compounds such as I2.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 1.11, through 1.37, as appropriate, for class defined compositions containing or methods using, an unattached radio-

nuclide or an unattached intended radionuclide.

**1.65 In an organic compound:**

This subclass is indented under subclass 1.11. Subject matter in which the radionuclide or intended radionuclide comprises an organic compound.

- (1) Note. An organic compound is defined by the following statement (which originated from the definition set forth in Class 260, Chemistry of Carbon Compounds, as qualified by Note (34)): Compounds containing carbon which are further characterized by the presence in a molecule thereof of two carbon atoms bonded together, or one atom of carbon bonded to at least one atom of hydrogen or halogen, or one atom of carbon bonded to at least one atom of nitrogen by a single or double bond; including dicyanamide, dicyandiamide and salts thereof, which compounds, per se, are classified in Class 260; and excluding hydrocyanic acid, cyanogen, isocyanic acid, cyanamide, cyanogen halides, isothiocyanic acid, fulminic acid and metal carbides, all of which compounds, per se, will be classified in Class 423.
- (2) Note. This subclass is the proper residual location for those class-appropriate compositions and uses having organic compounds not appropriate above or for a hereinunder indented subclass and having a radionuclide or an element intended to be converted to a radionuclide attached (bonded, chelated, complexed) thereto which is a metal. The analogous class-appropriate compositions and uses having organic compounds having attached thereto a nonmetal are proper for subclasses 1.81+, below.
- (3) Note. A metal is any element other than a nonmetal. The nonmetals are: Hydrogen, Boron, Carbon, Silicon, Nitrogen, Phosphorus, Oxygen, Sulfur, Selenium, Tellurium, Fluorine, Chlorine, Bromine, Iodine, Astatine, Helium, Neon, Argon, Krypton, Xenon, and Radon; (H, B, C,

Si, N, P, O, S, Se, Te, F, Cl, Br, I, As, He, Ne, Ar, Kr, Xe, and Rn.)

**SEE OR SEARCH CLASS:**

- 260, Chemistry of Carbon Compounds, see (1) Note above.  
 435, Chemistry: Molecular Biology and Microbiology, subclasses 174+ and 183+ for radiolabeled enzymes, per se.

**1.69 Attached to peptide or protein of 2+ amino acid units (e.g., dipeptide, folate, fibrinogen, transferrin, sp. enzymes); derivative thereof:**

This subclass is indented under subclass 1.65. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to a compound which contains one or more peptide bonds; and the derivatives thereof.

- (1) Note. The term peptide bond means an amide bond (the group N-C(=O)) between two alpha-amino acids or an alpha-amino acid and beta-alanine.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 1.17, for proteinaceous cells or viruses and sub-cellular structures.  
 1.41, for proteins which are hematopoietic cell specific, secreted growth regulatory factor, differentiation factor, or intercellular mediator such as lymphokine.  
 1.45, for proteins which are secreted growth regulatory factor, differentiation factor, or intercellular mediator not specific to hematopoietic cells.  
 1.49+, for proteins which are antibodies.  
 1.57, for proteins which are intended to perform as antigens or haptens.

**SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 174+ and 183+ for radiolabeled enzymes, per se.

**1.73 Attached to carbohydrate compound; derivative thereof (e.g., DNA, nucleotide, nucleoside, sugar, starch, tannin, saccharide,**

**polysaccharide, cellulose, O-, N- and S-glycoside, vitamin B<sub>12</sub>:**

This subclass is indented under subclass 1.65. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to a carbohydrate compound which is a saccharide and whose monomeric units are polyhydroxy mono-aldehydes or polyhydroxy mono-ketones, having the formula C<sub>n</sub>(H<sub>2</sub>O)<sub>n</sub>, wherein n is five or six, or the corresponding cyclic hemiacetals thereof, or the reaction derivatives thereof in which the carbon skeleton and the carbonyl function or hemiacetal function of the saccharide unit are not destroyed; and the derivatives thereof.

- (1) Note. For proper placement here, the saccharide or the monomeric saccharide radical unit of a polysaccharide must contain at least five carbon atoms, and the derivatives or reaction products must not destroy the carbon skeleton of the saccharide or polysaccharide.

**1.77****Phosphorus-containing organic compound:**

This subclass is indented under subclass 1.65. Subject matter in which the radionuclide or intended radionuclide is attached (bonded, chelated, complexed) to, or a part of, an organic compound having a phosphorus atom.

- (1) Note. An organic compound having a radioactive phosphorus atom is proper for placement in this subclass.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

1.61, for the inorganic phosphate, pyrophosphate, or polyphosphate.

**1.81****Nonmetal radionuclide or intended radionuclide (e.g., carbon):**

This subclass is indented under subclass 1.65. Subject matter in which the radionuclide or intended radionuclide is a nonmetal and is attached (bonded, chelated, complexed) to an organic compound.

- (1) Note. A nonmetal is a member of the group: Hydrogen, Boron, Carbon, Silicon, Nitrogen, Phosphorus, Oxygen, Sulfur, Selenium, Tellurium, Fluorine, Chlorine, Bromine, Iodine, Astatine,

Helium, Neon, Argon, Krypton, Xenon, and Radon (i.e., H, B, C, Si, N, P, O, S, Se, Te, F, Cl, Br, I, As, He, Ne, Ar, Kr, Xe, and Rn).

**1.85****Halogen:**

This subclass is indented under subclass 1.81. Subject matter in which the radionuclide or intended radionuclide is a halogen (i.e., F, Cl, Br, I, and At) and is attached (bonded, chelated, complexed) to an organic compound.

**1.89****Fluorine:**

This subclass is indented under subclass 1.85. Subject matter in which the radionuclide or intended radionuclide is fluorine and is attached (bonded, chelated, complexed) to an organic compound.

**9.1****IN VIVO DIAGNOSIS OR IN VIVO TESTING:**

This subclass is indented under the class definition. Subject matter which includes compositions intended for use in in vivo testing or in vivo diagnosis and nominal methods of using compounds or compositions for in vivo testing or in vivo diagnosis.

- (1) Note. Claims which include in vivo diagnosis or in vivo tests as merely incidental to the treatment of a patient are classified in one of the appropriate treatment subclasses below.
- (2) Note. In vivo, for this and the indented subclasses, means the actual test or diagnosis step must occur in or on the living subject.
- (3) Note. In a plural step test procedure, if the actual analysis step takes place in vivo, the test method is classified in this or the indented subclasses. If the actual analysis step takes place in vitro, no matter how many other steps in the method involve in vivo treatment or administration, the test method will be classified in another class appropriate for such an in vitro test method.
- (4) Note. Included herein are methods of determining the efficacy of a bioaffecting compound or composition.

- (5) Note. These subclasses (424/9.1+) provide for plural step in vivo diagnostic procedures which utilize bioaffecting compounds or compositions wherein one of the steps is no more than a mere statement of nuclear magnetic imaging, X-ray imaging, ultrasound imaging, etc. of a living body. Class 128 provides for such tests if a more detailed manipulative step of nuclear magnetic or ultrasound imaging is included. Diagnostic X-ray imaging may be found in Classes 128 and 378 depending on the test details recited. A reading of the definitions for those classes is recommended for proper placement of the subject matter.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

1.11+, for diagnostic radioactive compounds or compositions or nominal diagnostic methods of utilizing such radioactive compounds or compositions.

**SEE OR SEARCH CLASS:**

73, Measuring and Testing, which is the generic class for making a measurement or test of any kind not provided for in other classes.

250, Radiant Energy, for methods of detecting radiant energy

252, Compositions, subclass 408.1 for compositions which do not chemically react in use and are specialized and designed for use in physical analysis, testing or indicating, or as a warning agent.

324, Electricity: Measuring and Testing, as the residual home for measuring and testing electrical properties or the measuring, testing, or sensing of non-electric properties by electric means, but only when absent a significant chemical reaction.

356, Optics: Measuring and Testing, provides for analyzing light to measure or test its characteristics, determining the optical or nonoptical properties of materials or articles by noting the effect produced by the materials or articles on light associated therewith, etc.

- 378, X-Ray or Gamma Ray Systems or Devices, for apparatus and corresponding processes involving the generation or use of electromagnetic radiation within the X-ray spectrum. Mere use with or attachment to an X-ray device or recitation of an undefined X-ray test or analysis is not sufficient for classification in Class 378.
- 426, Food or Edible Material: Processes, Compositions, and Products, provides for processes where a condition in preparing an edible is sensed by other than subjective means.
- 435, Chemistry: Molecular Biology, and Microbiology, subclasses 4+ for in vitro measuring or testing involving enzymes or micro-organisms, subclasses 7.1+ for blood typing, protein binding, ligand-receptor binding, and immunological assays, subclasses 29+ for testing involving a viable micro-organism, and subclasses 40.5+ for testing involving fixed or stabilized, nonliving microorganism, cell, or tissue.
- 436, Chemistry: Analytical and Immunological Testing, subclasses 1+ for chemical test standards and their use and the qualitative or quantitative analysis of chemical compounds, complexes, and elements which at some point involve a chemical interaction (see Class 436, CLASS DEFINITION, I. for further explanation) and subclasses 500+ for in vitro immunological or protein binding assays other than those involving a micro-organism or enzyme.
- 506, Combinatorial Chemistry Technology: Method, Library, Apparatus, subclass 10 for a method of screening a library by measuring the effect on a living organism, tissue, or cell.
- 600, Surgery, subclasses 300+ for an appliance and its use to aid in the diagnosis of a disease or abnormal condition of the body and subclass 556 for skin allergy tests.
- 800, Multicellular Living Organisms and Unmodified Parts Thereof and Related Processes, subclass 3 for a method of using a transgenic nonhuman animal in an in vivo test method.

**9.2 Testing efficacy or toxicity of a compound or composition (e.g., drug, vaccine, etc.):**

This subclass is indented under subclass 9.1. Subject matter wherein the capacity of a compound or composition (e.g., drug, vaccine, etc.) to produce a desired effect or an injurious or harmful effect in a living subject is tested for.

- (1) Note. Claims which include in vivo diagnosis or in vivo tests as merely incidental to the treatment of a patient are classified in one of the appropriate treatment subclasses below.
- (2) Note. Testing for an individual subject's hypersensitivity or possible allergy to a medicament or chemical prior to administration which involves a visible immune reaction on the skin is proper for subclass 9.81.
- (3) Note. Methods of testing for the reduction of toxic side effects of a compound or composition would also be included herein.
- (4) Note. Compounds or compositions tested can include therapeutic compounds or compositions, vaccines, etc.
- (5) Note. Included in this subclass are methods of determining the potency of antigenic preparations in inducing immunity, determining the teratogenic or oncogenic potential of a chemical, determining the prophylactic ability of a medicament, etc.

**SEE OR SEARCH CLASS:**

- 800, Multicellular Living Organisms and Unmodified Parts Thereof and Related Processes, subclass 3 for a method of using a transgenic nonhuman animal in an in vivo test method.

**9.3 Magnetic imaging agent (e.g., NMR, MRI, MRS, etc.):**

This subclass is indented under subclass 9.1. Subject matter wherein a compound or composition is adapted for use as an in vivo magnetic imaging agent in processes such as nuclear magnetic resonance imaging (NMR), magnetic resonance imaging (MRI), magnetic reso-

nance spectroscopy (MRS), magnetometry, etc. and methods of using said compounds and compositions as agents in such processes.

**SEE OR SEARCH CLASS:**

- 324, Electricity: Measuring and Testing, subclasses 307+ for MRI apparatus and methods of using MRI apparatus.
- 436, Chemistry: Analytical and Immunological Testing, subclasses 1+, particularly subclass 173, for in vitro tests using MRI.
- 600, Surgery, subclasses 410+ for diagnostic testing using magnetic resonance imaging or spectroscopy. (See Class 424, subclass 9.1 for a further explanation of the class line.).

**9.31**

**Clay or zeolite containing:**

This subclass is indented under subclass 9.3. Subject matter wherein the agent contains a clay or a zeolite.

- (1) Note. Zeolites are crystalline, hydrated alkali-aluminum silicates.

**9.32**

**Particle containing a transition, actinide or lanthanide metal (e.g., hollow or solid particle, granule, etc.):**

This subclass is indented under subclass 9.3. Subject matter wherein the agent includes particulate matter (e.g., hollow or solid particle, granule, etc.) which contains a transition, actinide or lanthanide metal (Atomic Numbers 21 through 30, 39 through 48, 57 through 80, and 89 through 106, inclusive).

- (1) Note. The particulate matter may be organic, inorganic, or a combination thereof and may be hollow, solid, or aggregates of molecules which are not covalently bound. It may be in the form of granules, microspheres, coated metal cores, metal oxide crystals, etc.
- (2) Note. The metals included under transition, actinide, or lanthanide metals are Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr, Unq, Unp, and Unh.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

1.11+, for compositions or methods under the class definition which contain radioactive isotopes of metals, i.e., U, Tc, etc. including diagnostic or test compositions or methods.

**9.321 Liposome:**

This subclass is indented under subclass 9.32. Subject matter wherein the shell of the particle contains a lipid bilayer.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

450, for compositions or methods under the class definition containing a liposome with a therapeutic agent in it.

**9.322 Polymer containing (e.g., polypeptide, synthetic resin, etc.):**

This subclass is indented under subclass 9.32. Subject matter wherein the particle includes a polymer, e.g., protein, dextran, starch, polyvinyl, polysilane, etc.

(1) Note. The polymer must be attached to, coated on, or complexed to the particle.

SEE OR SEARCH CLASS:

428, Stock Material or Miscellaneous Articles, subclasses 402+, for coated or structurally defined particulate matter as defined under the Class 428 definitions.

**9.323 Metal is paramagnetic:**

This subclass is indented under subclass 9.322. Subject matter wherein the transition, actinide, or lanthanide metal of the particle is paramagnetic.

(1) Note. A paramagnetic metal is one which is capable of aligning with a magnetic field, but does not itself become magnetized.

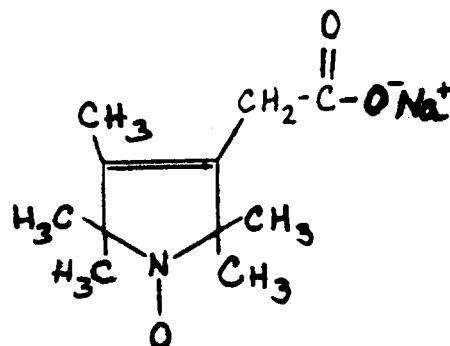
(2) Note. For the purposes of this subclass the term "paramagnetic" is intended to include only substances which are stated to be paramagnetic, not those stated to be superparamagnetic or ferromagnetic.

**9.33**

**Nitroxide or nitroxide containing:**

This subclass is indented under subclass 9.3. Subject matter wherein the agent is a nitroxide or contains a nitroxide.

(1) Note. An example of a nitroxide compound or component provided for herein is:



**9.34**

**Polypeptide attached to or complexed with the agent (e.g., protein, antibody, etc.):**

This subclass is indented under subclass 9.3. Subject matter wherein the agent contains a polypeptide (e.g., protein, antibody, etc.) attached to or complexed with it.

(1) Note. For the purposes of this subclass, a polypeptide contains a sequence of at least three amino acids.

(2) Note. The term "polypeptide" may encompass polypeptides such as glycoproteins, lipoproteins, etc., which additionally contain other moieties.

SEE OR SEARCH CLASS:

514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 1.1 through 21.92 for polypeptides containing a heavy metal and used for therapeutic purposes.

**9.341**

**The region of the imaging agent responsible for binding to an in vivo target or the region of the target responsible for binding to the agent is specifically recited functionally or**

**as a sequence of amino acids, carbohydrate residues, or nucleic acids:**

This subclass is indented under subclass 9.34. Subject matter wherein the polypeptide attached to said imaging agent directs delivery of said imaging agent to a specific in vivo target and wherein the specific binding properties of either the in vivo target or the polypeptide are described by a sequence (e.g., a series of amino acids, carbohydrate residues of a glycoprotein, nucleic acids encoding a polypeptide, etc.) or wherein the particular region of binding is described functionally (e.g., a unique region of an imaging agent defined by the fact that it binds a specific region of a target cell, but does not cross react with another region on the target cell etc.).

- (1) Note. A mere recitation of a generic type of binding (e.g., "an anti-myosin antibody", etc.) would be proper for subclass 9.34, but a recitation of multiple properties of the binding site would be proper for subclass 9.341.

**9.35 Carbohydrate or derivative thereof attached to or complexed with the agent:**

This subclass is indented under subclass 9.3. Subject matter wherein the agent has attached or complexed to it a carbohydrate or a derivative thereof such as a monosaccharide or polysaccharide (the monosaccharide radical units of which contain at least five carbon atoms) or their reaction products wherein the carbon skeleton of the saccharide or polysaccharide is not destroyed, e.g., dextran, cellulose, glucose, etc.

**9.351 The region of the imaging agent responsible for binding to an in vivo target or the region of the target responsible for binding to the agent is specifically recited functionally or as a sequence of amino acids, carbohydrate residues, or nucleic acids:**

This subclass is indented under subclass 9.35. Subject matter wherein the carbohydrate attached to said imaging agent directs delivery of said imaging agent to a specific in vivo target and wherein the specific binding properties of either the in vivo target or the carbohydrate are described by a saccharide sequence or wherein the particular region of binding is described functionally (e.g., a unique region of an imaging agent defined by the fact that it

binds a specific region of a target cell, but does not cross react with another region on the target cell, etc.)

**9.36****Transition, actinide or lanthanide metal containing:**

This subclass is indented under subclass 9.3. Subject matter wherein the agent contains a transition, actinide, or lanthanide metal (Atomic Numbers 21-30, 39-48, 57-80, and 89-106, inclusive).

- (1) Note. The metals included under transition, actinide, or lanthanide metals are Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr, Unq, Unp, and Unh.
- (2) Note. A complex of a metal and an organic compound is considered to be a compound per se and is classified based on the moiety (metal or organic compound) which occurs first in the classification schedule.
- (3) Note. The transition, actinide or lanthanide metal may be complexed to a chelating agent.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

1.11+, for compositions or methods under the class definition which contain radioactive isotopes of metals e.g., U, Tc, etc., including diagnostic or test compositions or methods.

**SEE OR SEARCH CLASS:**

534, Organic Compounds, subclasses 15+ for nonradioactive organic lanthanide or actinide complexes, per se.

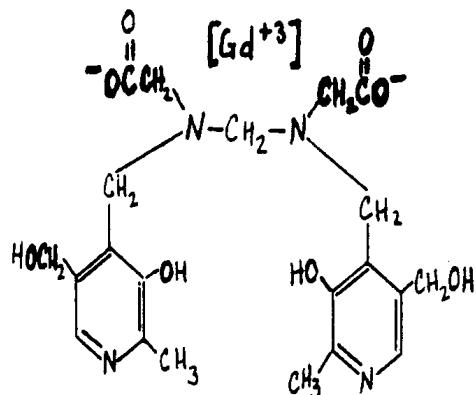
**9.361****Heterocyclic compound is attached to or complexed with the metal:**

This subclass is indented under subclass 9.36. Subject matter wherein the metal is attached to or complexed with a heterocyclic compound.

- (1) Note. A heterocyclic compound is a compound containing at least one hetero

ring which is a ring having carbon and at least one atom from the group consisting of nitrogen, oxygen, sulfur, selenium and tellurium as ring members; and contains no other element as a ring member.

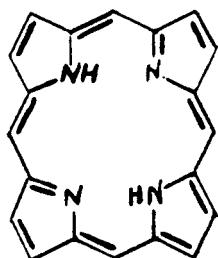
- (2) Note. An example of a compound provided for herein is:



### 9.362 Porphyrin or derivative thereof:

This subclass is indented under subclass 9.361. Subject matter wherein the hetero ring in the heterocyclic compound is part of a porphyrin ring system.

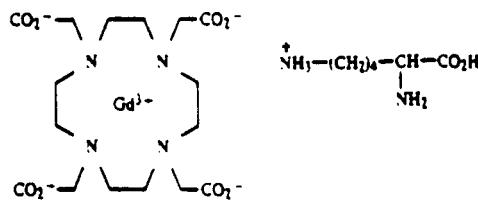
- (1) Note. Porphyrins are compounds containing the following basic structure:



### 9.363 Hetero ring contains at least eight members:

This subclass is indented under subclass 9.361. Subject matter wherein the hetero ring of the heterocyclic compound contains eight or more members.

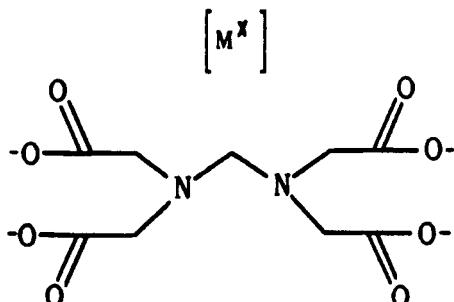
- (1) Note. An example of a compound provided for herein is:



### 9.364 Polyamino-polycarbonyl moiety attached to or complexed with the metal:

This subclass is indented under subclass 9.36. Subject matter wherein the metal is attached to or complexed to a compound, said compound containing at least two amino nitrogen atoms and at least two carbonyl groups.

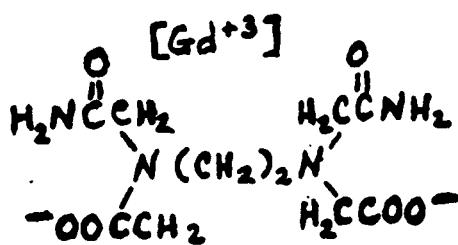
- (1) Note. An example of a compound provided for herein is in the structure below, where M is a transition, actinide or lanthanide metal and X is a positive integer.



### 9.365 Contains at least one -C(=O)-N- group:

This subclass is indented under subclass 9.364. Subject matter wherein the compound contains at least one -C(=O)-N- group.

- (1) Note. An example of a compound provided for herein is:

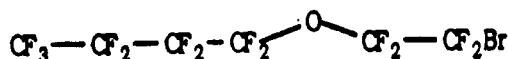
**9.37 Imageable halogen containing:**

This subclass is indented under subclass 9.3. Subject matter wherein the agent is or contains a halogenated compound wherein the halogen is responsible for the agent being imageable.

**9.4 X-Ray contrast imaging agent (e.g., computed tomography, angiography, etc.):**

This subclass is indented under subclass 9.1. Subject matter wherein a compound or composition is adapted for use as an in vivo X-ray contrast imaging agent in methods such as computed tomography, angiography, etc.

- (1) Note. X-ray contrast imaging is based on the fact that the agent renders part of an animal body opaque (degree of opacity may vary) to X-rays.
- (2) Note. An example of a compound provided for herein is:

**SEE OR SEARCH CLASS:**

- 252, Compositions, subclasses 299.01+ for a liquid crystal containing composition and subclasses 582+ for other compositions specialized for use in optical filters, and subclass 478 for a composition specialized and designed for use as an X-ray shield or X-ray shielding material.
- 378, X-Ray or Gamma Ray Systems or Devices, appropriate subclasses, particularly 145+ for beam control devices.

**9.41****Barium containing:**

This subclass is indented under subclass 9.4. Subject matter wherein the agent contains barium, e.g.,  $\text{BaSO}_4$ ,  $\text{BaCl}_2$ , etc.

**9.411****Polymer containing (e.g., polypeptide, synthetic resin, etc.):**

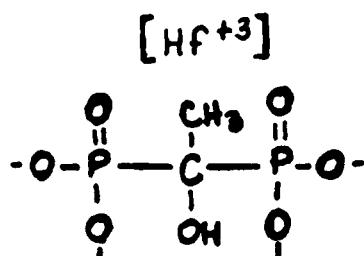
This subclass is indented under subclass 9.41. Subject matter wherein the barium containing agent includes a polymer e.g., dextran, starch, polyvinyl, polysilane, etc.

- (1) Note. The polymer may be an additional separate ingredient in the agent, it may be complexed or attached to the agent, or it may be a coating on the agent.

**9.42****Transition, actinide or lanthanide metal containing:**

This subclass is indented under subclass 9.4. Subject matter wherein the agent contains a transition, actinide, or lanthanide metal (Atomic Numbers 21-30, 39-48, 57-80, and 89-106, inclusive).

- (1) Note. The metals included under transition, actinide, or lanthanide metals are Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr, Unq, Unp, and Unh.
- (2) Note. A complex of a metal and an organic compound is considered to be a compound per se and is classified based on the moiety (metal or organic compound) which occurs first in the classification schedule.
- (3) Note. The transition, actinide or lanthanide metal may be complexed to a chelating agent.
- (4) Note. An example of a compound provided for herein is:



SEE OR SEARCH THIS CLASS, SUB-CLASS:

1.11+, for compositions or methods under the class definition which contain radioactive isotopes of metals, including diagnostic or test compositions or methods.

SEE OR SEARCH CLASS:

534, Organic Compounds, subclasses 15+ for nonradioactive organic lanthanide or actinide complexes, per se.

**9.43 Carbohydrate or derivative thereof attached to or complexed with the agent:**

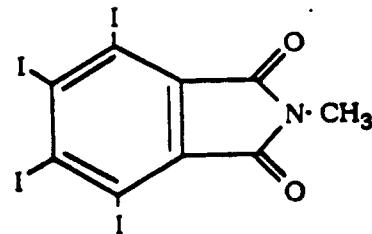
This subclass is indented under subclass 9.4. Subject matter wherein the agent has attached or complexed to it a carbohydrate or a derivative thereof such as a monosaccharide or polysaccharide (the monosaccharide radical units of which contain at least five carbon atoms) or their reaction products wherein the carbon skeleton of the saccharide or polysaccharide is not destroyed, e.g., dextran, cellulose, glucose, etc.

**9.44 Hetero ring containing:**

This subclass is indented under subclass 9.4. Subject matter wherein the agent contains or is a heterocyclic compound.

(1) Note. A heterocyclic compound is a compound containing at least one hetero ring which is a ring having carbon and at least one atom from the group consisting of nitrogen, oxygen, sulfur, selenium and tellurium as ring members; and contains no other element as a ring member.

(2) Note. An example of a compound provided for herein is:

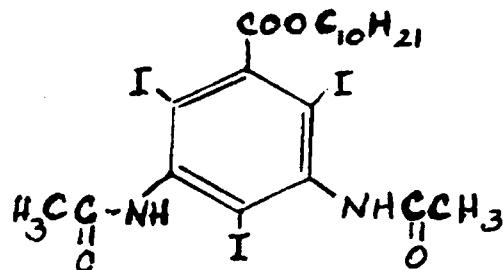


**9.45**

**Halogenated benzene ring containing:**

This subclass is indented under subclass 9.4. Subject matter wherein the agent contains a benzene ring to which at least one halogen atom (F, Cl, Br, or I) is directly attached by nonionic bonding.

(1) Note. An example of a compound provided for herein is:

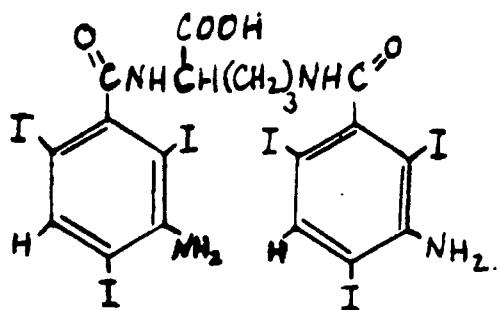


**9.451**

**Two or more halogenated benzene rings in the same compound:**

This subclass is indented under subclass 9.45. Subject matter wherein the agent contains at least two halogenated benzene rings in the same compound.

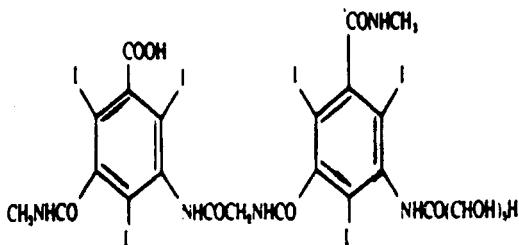
(1) Note. An example of a compound provided for herein is



**9.452 Three or more amide groups are attached directly to the same benzene ring by non-ionic bonding:**

This subclass is indented under subclass 9.451. Subject matter wherein at least three amide groups are directly attached to the same benzene ring by nonionic bonding.

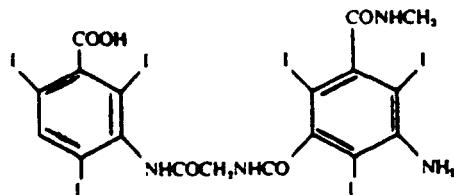
- (2) Note. An example of a compound provided for herein is:



**9.453 Carbonyl of a carboxylic acid or salt thereof attached directly to the benzene ring:**

This subclass is indented under subclass 9.451. Subject matter wherein the benzene ring has the carbonyl of a carboxylic acid or salt thereof attached directly to it.

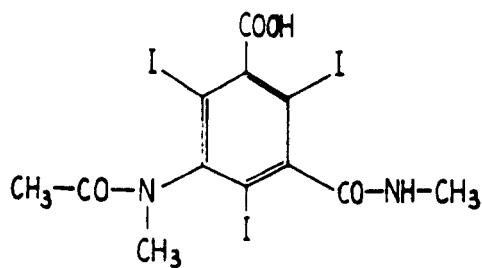
- (1) Note. An example of compounds provided for herein is:



**9.454 Three or more amide groups are attached directly to the same benzene ring by non-ionic bonding:**

This subclass is indented under subclass 9.45. Subject matter wherein at least three amide groups are directly attached to the same benzene ring by nonionic bonding.

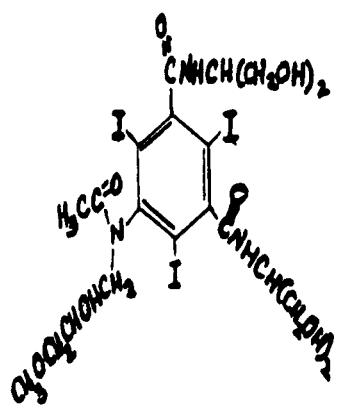
- (1) Note. For the purposes of this subclass either the amino or the carbonyl moiety of the amide group may be the point of attachment to the benzene ring.
- (2) Note. An example of a compound provided for herein is:



**9.455 Carbonyl of a carboxylic acid or salt thereof attached directly to the benzene ring:**

This subclass is indented under subclass 9.45. Subject matter wherein the benzene ring has the carbonyl of a carboxylic acid or salt thereof attached directly to it by nonionic bonding.

- (1) Note. An example of a compound provided for herein is:



#### **9.5 Ultrasound contrast agent:**

This subclass is indented under subclass 9.1. Subject matter wherein a compound or composition is adapted for use as an in vivo ultrasound contrast agent.

##### **SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 173.1+ for processes wherein a microorganism is subjected to sound waves.
- 600, Surgery, subclasses 437+ for methods and apparatus for applying and detecting ultrasonic radiation as it relates to a medical evaluation of a condition of a living body.

#### **9.51 Liposome containing:**

This subclass is indented under subclass 9.5. Subject matter wherein the agent contains hollow particles and the shells of said hollow particles include a lipid bilayer.

##### **SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 450, for compositions or methods under the class definition containing a liposome with a therapeutic agent in it.

#### **9.52 Stable gas bubbles containing or intentional solubilized gas containing:**

This subclass is indented under subclass 9.5. Subject matter wherein the agent contains intended gases, which gases may be either solubilized or in a suspension of fine bubbles.

#### **9.6 Diagnostic or test agent produces in vivo fluorescence:**

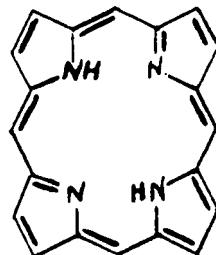
This subclass is indented under subclass 9.1. Subject matter wherein the diagnostic or test compound or composition is adapted for use as a fluorescent contrast agent.

- (1) Note. Processes in this subclass include
  - a) applying a reagent to the skin which will react with a chemical of interest which may be present and then, upon irradiating the skin with UV light, fluorescence can be measured, b) parenterally dosing a patient with a reagent, exposing the subject to UV light and then observing fluorescence of a tissue, blood flow, etc.

#### **9.61 Porphyrin or derivative thereof:**

This subclass is indented under subclass 9.6. Subject matter wherein the fluorescent contrast agent is or contains a porphyrin or a derivative thereof.

- (1) Note. Porphyrins are compounds containing the following basic structure:



#### **9.7 Diagnostic or test agent produces visible change in mouth:**

This subclass is indented under subclass 9.1. Subject matter wherein the compound or composition is adapted to detect a condition in the mouth.

- (1) Note. Intended for this subclass are processes of indicating the presence of gingivitis, malignant lesions, pH, brushing time, etc.

**9.71 Plaque detection:**

This subclass is indented under subclass 9.7. Subject matter wherein the agent indicates the presence of plaque.

**9.8 Diagnostic or test agent produces visible change on skin:**

This subclass is indented under subclass 9.1. Subject matter wherein the diagnostic compound or composition is adapted to detect a condition through a visible change on the skin.

**9.81 Visible immune reaction (e.g., allergy test, etc.):**

This subclass is indented under subclass 9.8. Subject matter wherein the agent, an antigenic substance or allergen, is applied to or injected into a subject in order to determine whether the subject is allergic or hypersensitive to the agent as indicated by a visible change on the skin (i.e., redness, swelling, etc.).

- (1) Note. The antigenic substance or allergen includes pollen, house dust, microorganisms, chemicals, etc.
- (2) Note. Skin tests such as those to indicate an individual's sensitivity to penicillin or other medicaments, tuberculosis tests, etc. are included in this subclass.

**10.1 IDENTIFICATION OR WARNING FEATURE:**

This subclass is indented under the class definition. Subject matter which includes compositions which contain an additional substance or feature which functions to identify the composition, to distinguish the composition from other similar compositions, or to give a warning or alarm to the user.

- (1) Note. Compositions classified herein are intended to provide a combination of an active ingredient of this class together with a component or feature which will facilitate identification of the active ingredient or will prevent and/or warn of improper use of a dangerous aspect of a compound or composition. Examples include a germicidal composition which includes a colorant to show which surfaces have been treated, a pesticide

which is distinctly labeled to prevent accidental consumption, etc.

- (2) Note. Included in this subclass are compositions in which the warning or identification feature is a physical or mechanical one such as indicia on a pill or a peculiar shape which prevents the swallowing of a potentially harmful substance.
- (3) Note. The use of color merely to make a Class 424 or Class 514 compound or composition more attractive is not considered a means of identification or warning proper for this or the indented subclasses. Therefore, pills, capsules, toothpastes, cosmetics, etc. which are colored merely for looks, are classified elsewhere in Class 424 or Class 514 based on their other significant features or their active ingredients.
- (4) Note. If no identification or warning feature is additionally claimed, the following are not included in this or the indented subclasses, but are considered a treatment and are classified based on the first appearing active ingredient. Examples of such are: (1) antidotal compositions or antidotal compositions claimed in combination with the toxicant; (2) compositions wherein the medicament is claimed in combination with another compound or composition intended to minimize the side effects or toxicity of the medicament as is often done in chemotherapy; (3) compounds or compositions claimed in combination with an emetic to prevent poisoning or overdose; (4) compositions with an additional substance to reduce their explosive nature or prevent their deterioration or oxidation.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 49+, for dentifrices.
- 59+, for a sun or radiation screening composition.
- 126, for a composition with a corrosion inhibitor.
- 400+, for preparations characterized by a special physical form.

**SEE OR SEARCH CLASS:**

252, Compositions, subclass 408.1 for compositions which do not chemically react in use and are specialized and designed for use in physical analysis, testing or indicating, or as a warning agent.

**10.2 Printed or embossed unitary dosage form:**

This subclass is indented under subclass 10.1. Subject matter wherein the compound or composition is in a unitary dosage form and contains a surface which is deformed, printed, embossed, engraved, or contains an insignia for the purpose of identification or warning.

- (1) Note. This subclass includes indicia adapted to be attached to a pill for identification purposes.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

467, for tablets which are printed, embossed, grooved, or perforated for a purpose other than identification or warning, such as to permit the tablet to be divided easily.

**10.3 Color or color change feature:**

This subclass is indented under subclass 10.1. Subject matter in which the identification or warning involves a color or color change.

- (1) Note. Included in this subclass are pills containing colored specks to identify toxic substances, biocides which show a temporary color when applied to indicate where application has occurred, drugs which change color to indicate a change in pH, etc.
- (2) Note. The use of color merely to make a Class 424 or Class 514 compound or composition more attractive is not considered a means of identification or warning proper for this or the indented subclasses. Therefore, pills, capsules, toothpastes, cosmetics, etc. which are colored merely for looks, are classified elsewhere in Class 424 or Class 514 based on their other significant features or their active ingredients.

**10.31 Combined with animal or insect repellent or insecticide (e.g., shark, fish, roach, etc):**

This subclass is indented under subclass 10.3. Subject matter wherein the color or color change feature is part of a composition for repelling animals or insects or part of a composition for actually killing insects.

- (1) Note. Included in this subclass are fish repellants colored to indicate areas of the water which have been treated, colored insecticides to prevent inadvertent consumption, etc.
- (2) Note. The use of color merely to make a Class 424 or Class 514 compound or composition more attractive is not considered a means of identification or warning proper for this or the indented subclasses. Therefore, pills, capsules, toothpastes, cosmetics, etc. which are colored merely for looks, are classified elsewhere in Class 424 or Class 514 based on their other significant features or their active ingredients.

**10.32 Combined with ophthalmic or dentifrice preparation:**

This subclass is indented under subclass 10.3. Subject matter wherein the color or color change feature is part of a composition used in association with the eye or the mouth.

- (1) Note. Included in this subclass is an ophthalmological medicinal film colored to identify the active ingredients, color coded tooth powder to identify the ingredients, etc.
- (2) Note. The use of color merely to make a Class 424 or Class 514 compound or composition more attractive is not considered a means of identification or warning proper for this or the indented subclasses. Therefore, pills, capsules, toothpastes, cosmetics, etc. which are colored merely for looks, are classified elsewhere in Class 424 or Class 514 based on their other significant features or their active ingredients.

**10.4 Taste or smell or chemical irritation to the eye, nose or mouth feature:**

This subclass is indented under subclass 10.1. Subject matter in which the identification or warning feature involves a taste or smell signal or a chemical which causes irritation to the eye, nose, or mouth (e.g., burning, coughing, tearing, etc.).

- (1) Note. Included in this subclass are compositions such as fumigants or other toxic gases with an added substance having an obnoxious odor or an irritant so that the presence of the fumigant or toxic gas is quickly noticed, poisons with exceedingly irritating tastes or odors to prevent mistaken use of such poisons, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

900, for an srt collection pertaining to subclasses 9.1-10.4.

**40** This subclass is indented under the class definition. Compositions which under the conditions of use are burned, usually incompletely, or which involve a chemical reaction serving to act as a force to project the material desired into the air as a smoke, mist, or aerosol, the particles of which must be of colloidal size or larger. This and indented subclasses also provide for processes which are no more than the mere use of the composition; e.g., burning the composition in the area to be treated.

- (1) Note. Compositions which are disclosed to be evaporable, per se, to yield smoke or to act as fumigants when left open to the air with or without application of external heat are classified elsewhere on the basis of the ingredients of the composition. To be placed herein, the composition, per se, must contain at least one combustible ingredient or there must be disclosed a chemical reaction taking place as a result of which some ingredient, component, or reaction product in particular form is dispersed into the air.

- (2) Note. A composition designed to be burned in order to produce an odorizing or deodorizing effect upon the atmo-

sphere; e.g., incense, etc., is classified here.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 40, for a candle with a wick.
- 43, for a composition in which a compressed gas or release, or a chemical reaction serves to produce bubbles or effervescence in liquid, or in which a pressurized fluid component which is part of a composition on release serves to project other components of the composition into the air as a foam or spray.
- 53, for an oxygen or chlorine releasing dentifrice.
- 661, for a chlorine releasing composition.
- 667, for an iodine releasing composition.

SEE OR SEARCH CLASS:

- 43, Fishing, Trapping, and Vermin Destroying, subclasses 124+ for certain processes and apparatus for destroying or killing vermin utilizing a smoke, mist, or aerosol.
- 44, Fueled and Related Compositions, appropriate subclasses for a composition designed to be burned primarily for its ability to produce heat.
- 47, Plant Husbandry, subclass 2 for a method of frost preventing by smoke.
- 102, Ammunition and Explosive Devices, appropriate subclasses for a smoke generating ammunition; e.g., bombs, grenades, cartridges, etc.
- 114, Ships, subclass 15 for a warship smoke screen.
- 119, Animal Husbandry, subclasses 677+ for apparatus for fumigating an animal.
- 126, Stoves and Furnaces, subclass 59.5 for a smudge pot.
- 252, Compositions, subclass 305 for smokes, or fogs and processes of making same. Subclasses 315.01+ for a general smoke producing composition.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, appropriate subclasses for fumigators and other smoke- or mist-producing apparatus.

**41** This subclass is indented under subclass 40. Compositions which contain elemental sulfur.

**42** This subclass is indented under subclass 40. Compositions which contain an organic or inorganic nitrate compound.

**43** This subclass is indented under the class definition. Composition:

(1.) in which bubbles or effervescence in a liquid are produced in situ by a chemical reaction, or wherein said bubbles are produced by pressure release on a liquid system in which a gas is dissolved under pressure or

(2.) in which a composition, per se, contains a pressurized fluid which produces sufficient force on release to serve as a propellant for projecting the other components into the air or through the air as a foam, spray, or mist.

(1) Note. Included in this and indented subclasses are compositions which contain carbonated water or those producing carbon dioxide gas by chemical reaction on addition of water or wherein a pressurized fluid is employed as a propellant for projecting a preparation into the air as an aerosol or foam.

(2) Note. Compositions which are disclosed as having a volatile ingredient, per se, or which merely by being in particulate or liquid form may be sprayed or diffused by the simple application of externally applied air pressure or heat are classified elsewhere on the basis of the active component or components in said composition.

(3) Note. Included in this and indented subclasses are all shaving preparations within the subclass definition, including those containing soap or other components which have a detergent action.

**SEE OR SEARCH CLASS:**

222, Dispensing, subclasses 394+ for dispensing with a fluid pressure discharge assistant; e.g., aerosols, etc.

252, Compositions, subclass 305 for a fog, smoke, or gaseous primary dispersant and subclasses 372+ for a gaseous composition.

**44** This subclass is indented under subclass 43. Compositions in which the gas producing the "bubbling" or "effervescence" is the result of an in situ chemical reaction.

(1) Note. Oxygen and halogen releasing compositions are excluded from this and indented subclasses and are classified below according to: (1) the function of the composition or (2) to the particular gaseous material being released or (3) the particular compound which releases said gaseous material.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

40, for a composition in which a chemical reaction is employed for the production of a smoke, mist, or aerosol.

700, for a composition in which carbon dioxide is an active constituent.

**SEE OR SEARCH CLASS:**

169, Fire Extinguishers, especially subclasses 6+, 27+, and 78+ for a fire extinguisher using gas produced in situ by a chemical reaction to produce pressure.

**45** This subclass is indented under subclass 43. Compositions in which the pressurized fluid is an organic compound.

**46** This subclass is indented under subclass 45. Compositions in which the organic pressurized fluid serves to propel or project an ingredient which is in the form of a particulate solid; e.g., body powders, tooth powders, talc, silicas, powdered medicines, insecticides, etc.

**47** This subclass is indented under subclass 45. Compositions in which the organic pressurized fluid serves to propel a grooming or adorning aid; e.g., hair spray, antiperspirant, skin tanning preparation, skin conditioner, sun screening agent, shaving cream, etc., intended for topical application to a living body.

- (1) Note. See (3) Note under the definition of subclass 43.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 65, for antiperspirants or perspiration deodorants, per se.  
69, for face or body powder, per se, for grooming, adorning, or absorbing purposes.

**48** This subclass is indented under the class definition. Compositions which are specifically disclosed to be in a chewing gum form, that is containing a chewable ingredient generally insoluble in the saliva which is usually disclosed a function as the carrier or vehicle for the active ingredient.

- (1) Note. The gum base herein is usually a natural gum or resin.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 400+, for a chewing gum type of composition defined in terms of structure.

SEE OR SEARCH CLASS:

- 51, Abrasive Tool Making Process, Material, or Composition, for an abrasive composition, for abrading teeth in a dental operation; e.g., forming a cavity for a filling, etc.  
106, Compositions: Coating or Plastic, subclass 35 for a dental coating or plastic composition.  
132, Toilet, subclasses 321+ for a toothpick and subclass 323 in particular for a dental floss.  
206, Special Receptacle or Package, subclass 63.5 for a dental supply package.  
420, Alloys or Metallic Compositions, appropriate subclasses for alloys.  
433, Dentistry, subclasses 25+ for dental equipment; and subclasses 226+ for fillings.

**49** This subclass is indented under the class definition. Compositions which function primarily in the normal hygiene of the oral cavity; e.g., tooth pastes, mouth washes, gargles, etc.

- (1) Note. A composition intended to be employed regularly in normal mouth-care is placed herein even if the composition contains ingredients of specific value in killing micro-organisms or in the treatment or prevention of specific mouth diseases or malfunctions such as pyorrhea trench mouth, gingivitis, etc.

- (2) Note. Since a dentifrice or mouthwash is generally compounded of a plurality of ingredients, some of the significant kinds of ingredients have been set out in indented subclasses 50 to 58. For a particular ingredient containing composition not specifically provided for by said indents, a search through this and the indented subclasses will be necessary.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

Appropriate subclasses for a composition disclosed to be useful for treating a specific oral disease or malfunction in which said composition is not disclosed for regular use as a mouthwash or dentifrice in normal mouth care.

**50** This subclass is indented under subclass 49. Compositions which contain as an ingredient an enzyme or a living organism capable of causing or modifying a fermentation; e.g., bacteria, fungi, papain, urease, diastase, etc.

**51** This subclass is indented under subclass 49. Compositions which contain as an ingredient elemental iodine or an iodine containing compound.

**52** This subclass is indented under subclass 49. Compositions which contain as an ingredient elemental fluorine or a fluorine containing compound; e.g., stannous fluoride, etc.

**53** This subclass is indented under subclass 49. Compositions which contain an ingredient capable of releasing oxygen or chlorine under the conditions of use; e.g., chlorates, peroxides, perborates, etc.

**54** This subclass is indented under subclass 49. Compositions which contain as an ingredient a nitrogen containing compound in the form of

ammonia or an amine or derivatives thereof; e.g., urea, diammonium phosphate, etc.

- (1) Note. This subclass includes a heterocyclic nitrogen containing compound.

**55** This subclass is indented under subclass 49. Compositions which contain as an ingredient an hydroxy carboxylic acid or derivative thereof, said derivative being one wherein the oxygen atom of the hydroxy group and the carbonyl of the carboxylic acid group are retained; e.g., citric acid, salicylic acid, etc.

**56** This subclass is indented under subclass 49. Compositions which contain an organic sulfate or sulfonate compound.

**57** This subclass is indented under subclass 49. Compositions which contain a phosphate compound.

**58** This subclass is indented under subclass 49. Compositions which contain a compound or material derived from a plant, including reaction products thereof, wherein the chemical structure of said compound, material, or reaction product is not sufficiently known to be classifiable on a chemical basis; e.g., oil of sassafras, Orris root, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 74, for hair or scalp treating composition containing a plant extract.  
725 through 779, for a composition containing a plant extract or plant material as an active ingredient.

SEE OR SEARCH CLASS:

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 783 for a carrier or adjuvant composition containing a plant extract of undetermined constitution.

**59** This subclass is indented under the class definition. Compositions which are intended to be applied topically to the skin or lips:

- (1) as a protective measure to prevent or lessen the harmful effects which generally result from exposure to the sun or

other similarly acting radiant energy source; e.g., sun, ultraviolet, etc., or

- (2) which tan the skin by a chemical reaction with an ingredient thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

Appropriate subclasses for a method or composition for treating a burn and see subclasses 63 and 64 for live skin and lip colorants.

SEE OR SEARCH CLASS:

252, Compositions, subclasses 299.01+ for an optical filter composition, per se, containing a liquid crystal and subclasses 582+ for other optical filter compositions, per se.

359, Optics: Systems (Including Communication) and Elements, subclasses 350+ for an infrared or ultraviolet filter.

520, Synthetic Resins or Natural Rubbers, appropriate subclasses, particularly Class 523, subclass 136 for a composition containing a synthetic resin or natural rubber which is resistant to, yet does not absorb, radioactive materials or cathode rays or to processes of preparing said composition.

**60** This subclass is indented under subclass 59. Compositions which contain an aromatic acid or derivative thereof; e.g., p-amino benzoic acid, salicylic acid, benzene sulfonamide, etc.

**61** This subclass is indented under the class definition. Compositions which are applied topically to the nails of the hands or feet for the care thereof; e.g., lacquers, polishes, tints, cuticle protectors or removers, nail hardeners, etc.

SEE OR SEARCH CLASS:

- 106, Compositions: Coating or Plastic, appropriate subclasses for a coating composition which is disclosed to have utility as, for example, a lacquer and subclass 311 for a solvent useful as a vehicle for a coating composition.  
252, Compositions, subclass 364 for a lacquer removing composition.

- 520, Synthetic Resins or Natural Rubbers, particularly appropriate areas in Class 523 and 524 for a synthetic resin or natural rubber composition.
- 523, Synthetic Resins or Natural Rubbers, subclasses 105+ for a nonmedicated composition specifically intended for contact with living animal tissue, other than apparel.
- 62** This subclass is indented under the class definition. Compositions which bleach or remove color from live skin or hair and which are applied topically.
- (1) Note. Included herein are compositions for removing natural or artificial colors; e.g., dyes, birthmarks, freckles, and sun-tan, etc.
- (2) Note. A composition for merely covering one color with another is not deemed to be color remover for this subclass.
- (3) Note. Dirt is not considered a colorant for purposes of this subclass; see Class 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, for cleaning compositions which remove dirt.
- SEE OR SEARCH CLASS:**
- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fiber, subclasses 404+ for dyeing and subclasses 101+ for a bleaching process provided for therein which involves more than the mere application of a composition.
- 132, Toilet, subclass 203 for a method of bleaching live human hair on the scalp which is more than the mere application of a composition.
- 252, Compositions, subclasses 186.1+ for a bleaching composition, per se.
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, appropriate subclasses, particularly subclasses 367+, for cleaning compositions which include a bleach component.
- 604, Surgery, subclasses 290+ for a method for applying or removing material to the human body.
- 63** This subclass is indented under the class definition. Compositions which are applied topically for coloring the skin in either a limited or overall area; e.g., blemish cover, cheek rouge, eye shadow, etc.
- SEE OR SEARCH CLASS:**
- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fiber, appropriate subclasses for dyeing compositions, per se.
- 106, Compositions: Coating or Plastic, subclasses 400+ for pigment compositions, per se.
- 520, Synthetic Resins or Natural Rubbers, subclasses 1+ for a synthetic resin or natural rubber composition containing a dye.
- 64** This subclass is indented under subclass 63. Compositions which are specifically applied to the lip; e.g., lip rouge, lipstick, etc.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 400+, for lipstick composition having structural limitations.
- 65** This subclass is indented under the class definition. Compositions which are intended to be utilized as a topical application to the human body and which function: (1) to inhibit or decrease perspiration, or (2) to neutralize, by other than a masking effect, the odor caused by perspiration or (3) to neutralize perspiration odor by action on a micro-organism.
- (1) Note. Compositions classified herein and in the indented subclasses are those in which the active principle or ingredient is not, per se, a perfume.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 47, for an aerosol antiperspirant or deodorant composition.

**SEE OR SEARCH CLASS:**

- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 5 for process of deodorizing which is more than the mere use of a composition.
- 512, Perfume Compositions, subclasses 1 through 27 for a perfume composition, per se.

**66** This subclass is indented under subclass 65. Compositions which contain a zirconium compound.

**67** This subclass is indented under subclass 65. Compositions which contain a zinc compound.

**68** This subclass is indented under subclass 65. Compositions which contain an aluminum compound.

**69** This subclass is indented under the class definition. Compositions which are in the form of minute particles, dusts, or powders having absorbent, grooming, or adorning utility in topical applications to the face or body.

- (1) Note. Included herein are; e.g., compositions for removing skin shine, smoothing the skin surface, lubricating the skin (for purposes of putting on gloves, etc.) and for absorbing perspiration, etc.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 46, for an aerosol composition containing a powder or dust.
- 65+, for anti-perspirant or perspiration deodorant powders.

**SEE OR SEARCH CLASS:**

- 106, Compositions: Coating or Plastic, subclass 36 for friction compositions intended for use with machinery or apparatus; e.g., clutches, belts, etc.
- 512, Perfume Compositions, subclasses 8+ for a lubricant composition, per se, and appropriate subclasses for perfume compositions, per se.

**70.1****LIVE HAIR OR SCALP TREATING COMPOSITIONS (NONTHERAPEUTIC):**

This subclass is indented under the class definition. Compositions which have topical nontherapeutic utility for treating the hair or scalp of the living body; e.g., grooming or adorning aids, tonics, rinses, etc.

**SEE OR SEARCH CLASS:**

132, Toilet, appropriate subclasses for a method of treating human hair on the scalp which is more than the mere application of a Class 424 composition. Examples of processes provided for in Class 132 are successive applications of a plurality of compositions; e.g., waving solution and neutralizing solution, or the application of a setting composition combined with a step of shaping the hair (before or after the application) even though the shaping step is only claimed broadly.

510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, subclasses 119+ for nonmedicated shampoos which have cleaning as their primary function and which may include a hair conditioning, antistatic, softening, etc., component as a perfecting ingredient to compensate for any damage, such as dryness or tangling, resulting from the cleaning process.

514, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for compositions which have utility in promoting hair growth or in treating specific diseases of the hair or scalp, e.g., anti-dandruff compositions for treating the cause of the dandruff rather than mere removal of dandruff as by a shampoo, etc.

**70.11****Polymer containing (nonsurfactant, natural or synthetic):**

This subclass is indented under subclass 70.1. Compositions which contain either a natural or synthetic polymer, which polymer may be solid, wax, or liquid, and is not acting in the composition as a surfactant.

**70.12 Silicon containing:**

This subclass is indented under subclass 70.11. Compositions in which the polymer contains silicon.

**70.121 Silsesquioxanes:**

This subclass is indented under subclass 70.12. Compositions which are silsesquioxanes; i.e., polymers containing the monomer unit  $\text{RSiO}_{1.5}$ .

**70.122 Amino or amido containing:**

This subclass is indented under subclass 70.12. Compositions in which the silicon polymer contains an amino or an amido group.

**70.13 Polysaccharide or derivative:**

This subclass is indented under subclass 70.11. Compositions in which the polymer is a polysaccharide or a derivative.

**70.14 Protein or derivative:**

This subclass is indented under subclass 70.11. Compositions in which the polymer is a protein or a derivative.

**70.15 Polyvinylpyrrolidone or copolymer thereof:**

This subclass is indented under subclass 70.11. Compositions in which the polymer is polyvinylpyrrolidone or copolymer thereof.

**70.16 Poly(meth)acrylic acid, salt, or copolymer thereof:**

This subclass is indented under subclass 70.11. Compositions in which the polymer is derived from acrylic acid, methacrylic acid, their salts, or copolymers thereof.

**70.17 Polyamine, polyamide, or derivatives thereof:**

This subclass is indented under subclass 70.11. Compositions in which the polymer is derived from an amine, from an amide, or derivatives thereof.

**70.19 Two or more designated surfactant containing:**

This subclass is indented under subclass 70.1. Compositions which contains two or more surfactants (i.e. compounds that lower the surface or interfacial tension including detergents, foaming or wetting agents, emulsifiers, solubilizers, or dispersants) which are either design-

nated in the claims or are art recognized as such.

**70.2 Permanent waving or straightening:**

This subclass is indented under subclass 70.1. Compositions which have utility in permanent waving or straightening (relaxing) the hair.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

47, for a pressurized fluid containing a hair setting spray.

SEE OR SEARCH CLASS:

8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 94.1+ for hair treating compositions or processes of using such compositions, particularly subclasses 94.16+ for depilatory compositions or processes of using such depilatory compositions, and for a depilatory having no more structure than a random coating on an unspecified base. Subclass 127.51 for compositions or processes of chemically modifying hair not attached to a living body; e.g., shaping wigs, etc.

**70.21 Amphoteric or zwitterionic surfactant containing:**

This subclass is indented under subclass 70.1. Compositions which contain an amphoteric (zwitterionic) surfactant; e.g.,  $\text{CH}_3\text{NHCH}(\text{COO}-)\text{CH}_2\text{CONH}-(\text{CH}_2)_5\text{N}(\text{CH}_3)(\text{C}_2\text{H}_5)$  Metal (+).

**70.22 Anionic surfactant containing:**

This subclass is indented under subclass 70.1. Compositions which contain an anionic surfactant.

**70.23 Phosphorus containing:**

This subclass is indented under subclass 70.22. Compositions which contains a phosphorous-type anionic surfactant.

**70.24 Sulfur containing (sulfates, sulfonates, etc.):**

This subclass is indented under subclass 70.22. Compositions which contains a sulfur-containing anionic surfactant; e.g., sulfonates, sulfates, sulfosuccinates, isethionates, sarcosinates, taurates, etc.

**70.27 Cationic surfactant containing:**

This subclass is indented under subclass 70.1. Compositions which contain a cationic surfactant (including cationic surfactant material which acts by chemically combining with keratinaceous material to reduce static, untangle, etc.).

**70.28 Quaternary ammonium salts:**

This subclass is indented under subclass 70.27. Compositions which contains a quaternary ammonium cationic surfactant.

**70.31 Nonionic surfactant containing:**

This subclass is indented under subclass 70.1. Compositions which contain a nonionic surfactant.

**70.4 Metal salt containing:**

This subclass is indented under subclass 70.2. Compositions which contain as an ingredient a metal salt.

**70.5 Sulfur compound containing:**

This subclass is indented under subclass 70.2. Compositions which contain as an ingredient a sulfur containing compound; e.g., mercaptans, sulfites, etc.

**70.51 Cysteine, cysteamine, or derivatives thereof:**

This subclass is indented under subclass 70.5. Compositions which contain as an ingredient cysteine, cysteamine, or derivatives thereof.

**70.6 Hair coloring (nondyeing):**

This subclass is indented under subclass 70.1. Compositions which are nondying compositions having utility in coloring the hair.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

62, for compositions having utility in bleaching the hair.

**SEE OR SEARCH CLASS:**

8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, appropriate subclasses for fluid treatment and chemical modifications of the hair, subclasses 404+ for a dye composition disclosed to be suitable for dyeing keratinaceous material; e.g., hair, etc.,

subclasses 101+ for a method of bleaching hair not attached to a living body; e.g., wigs, etc.

**70.7 Mascara:**

This subclass is indented under subclass 70.6. Compositions having utility as mascara; i.e., for coloring eyelash hair.

**70.8 Astringent or sebum inhibiting:**

This subclass is indented under subclass 70.1. Compositions having utility as an astringent or for inhibiting the production of sebum.

**70.9 UV protectant:**

This subclass is indented under subclass 70.1. Compositions having utility in protecting the hair from ultraviolet rays.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

59, for topically applied compositions which act as UV protectants for the skin.

**73** This subclass is indented under subclass 70.1. Compositions which have utility in preparing hair on the body for cutting or shaving or for facilitating the cutting or shaving thereof.

(1) Note. Included herein are the so-called brushless shaving creams which function to "set up" the hair as well as to lubricate the intended cutting area. This subclass includes shaving preparations, regardless of any soap or detergent content.

**SEE OR SEARCH CLASS:**

30, Cutlery, subclasses 32+ for a razor.  
 83, Cutting, appropriate subclasses for a cutting method (shaving).  
 128, Surgery, appropriate subclasses for a surgical cutting instrument.  
 132, Toilet, subclass 203 for a significant hair treatment process on the human scalp.  
 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, for cleaning compositions, per se.

**74** This subclass is indented under subclass 70.1. Compositions which contain as an ingredient a compound or material derived from a plant, including reaction products thereof, said compound, material, or reaction product having a structure which is not sufficiently known to be classifiable on a chemical basis; e.g., bay rum, capsicum, oil of bergamot, oil of rosemary, etc.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 58, for a dentifrice or mouthwash containing a plant extract of undetermined constitution.
- 725 through 779, for a composition containing a plant extract or plant material of undetermined constitution as an active ingredient.

**SEE OR SEARCH CLASS:**

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 783 for a carrier or adjuvant composition containing a plant extract of undetermined constitution.

**75** This subclass is indented under the class definition. Compositions which have utility in preserving and preventing decay and/or in enhancing the appearance of a corpse.

- (1) Note. A tissue filling composition is included herein.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

Appropriate subclasses for a biocidal composition which functions as a preserving or decay preventing agent.

**SEE OR SEARCH CLASS:**

- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 94.16+ for a composition or process for depilating and treating hides, skins, feathers, and other animal tissues.
- 27, Undertaking, subclasses 22.1+ for a significant or manipulative embalming or preserving methods.
- 427, Coating Processes, subclasses 4+ for processes of coating a plant member or animal specimen.

**76.1**

**DEODORANTS (NONBODY):**

This subclass is indented under the class definition. Subject matter which are deodorants and are not directly applied, per se, to a living body and which function: (1) by chemically combining with an odorous principle, or (2) by destroying the odor-causing organism, or (3) by desensitizing the olfactory mechanism.

**SEE OR SEARCH CLASS:**

- 12, Boot and Shoe Making, subclass 128 for a shoemaking form with a deodorant.
- 208, Mineral Oils: Processes and Products, subclass 310 for a process of deodorizing an organic compound by absorption.
- 242, Winding, Tensioning, or Guiding, subclass 905 for a reel with a storage chamber which may contain a deodorant.
- 252, Compositions, subclass 305 for a mere (nonspecial use) aerosol composition.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 1+ for processes of disinfection, deodorizing, preserving, or sterilizing using a compound or a Class 424 composition which is more than the single step of mere application of the compound or composition.
- 504, Plant Protecting and Regulating Compositions, subclasses 101+ for an insecticide, fungicide, or deodorant containing fertilizers.
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, subclasses 131+ for cleaning compositions for human skin which include an antiseptic, biocidal, or deodorizing component.
- 512, Perfume Compositions, for, per se, perfume compositions.
- 523, Synthetic Resins or Natural Rubbers, subclass 102 for a synthetic resin or natural rubber composition which is odor masked, odor reduced or perfumed as well as the process of preparing such composition.

<p>585, Chemistry of Hydrocarbon Compounds, subclasses 823+ for a process of purifying a hydrocarbon by sorption removal of a chemically undetermined odorant.</p> <p>604, Surgery, subclass 333 for a deodorant containing receptacle attached to a surgically constructed body opening; subclass 359 for a deodorant containing receptacle attached to a surgically constructed body opening; and subclass 359 for a deodorant containing absorbent pad.</p> <p><b>76.2 Deodorizing substance is evaporable, sublimable or gas (e.g., deodorization of air, aerosol spray compositions, etc.):</b> This subclass is indented under subclass 76.1. Subject matter which are evaporatable, sublimable, or a gas.</p> <p>(1) Note. The compositions of this and the indented subclasses are for the removal, including chemical reaction, or masking of odors in the air.</p> <p><b>76.21 For chemical reaction with odor producing material or gas evolving composition:</b> This subclass is indented under subclass 72.2. Compositions which, (a) chemically react with the odor producing material (b) is a composition for the chemical evolution of gas.</p> <p><b>76.3 From a gel or solid matrix (e.g., retarded vaporization compositions, etc.):</b> This subclass is indented under subclass 76.2. Subject matter which is released from a gel or solid matrix.</p> <p>(1) Note. This subclass includes deodorant which evaporates or sublimes from a block of deodorizing substance.</p> <p><b>76.4 With odor masking substances (e.g., perfumes, etc.):</b> This subclass is indented under subclass 76.3. Subject matter which contain an odor masking substance.</p> <p><b>SEE OR SEARCH CLASS:</b></p> <p>2, Apparel, subclass 171.2 for a head covering containing perfume.</p> <p>63, Jewelry, digest 2 for perfumed jewelry.</p>	<p>223, Apparel Apparatus, subclass 86 for a garment hanger containing perfume.</p> <p>434, Education and Demonstration, subclass 377 for demonstrating apparatus involving a perfume.</p> <p>510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, subclasses 101+ for perfume-containing cleaning compositions or their auxiliary compositions, such as fabric softeners or antistatic agents used in the laundry rinse or dryer cycle, etc.</p> <p>523, Synthetic Resins or Natural Rubbers, subclass 102 for a perfumed composition or the method of preparing a perfumed composition.</p> <p>D28, Cosmetic Products and Toilet Articles, subclass 5 for a perfume or sachet.</p> <p><b>76.5 For application to waste materials, solid or liquid refuse or sewage:</b> This subclass is indented under subclass 76.1. Subject matter which are for application to waste materials, solid or liquid refuse or sewage.</p> <p><b>76.6 Waste includes fecal material or urine (e.g., feed lot or cage waste, pet litter, etc.):</b> This subclass is indented under subclass 76.5. Compositions which are used on waste including feces or urine.</p> <p><b>76.7 For toilet or urinal (e.g., recirculating toilet fluid, etc.):</b> This subclass is indented under subclass 76.6. Subject matter which are used in a toilet or urinal.</p> <p>(1) Note. This subclass includes recirculating toilet fluids and additives as well as materials for adding to septic systems or cesspools to control odors.</p> <p><b>76.8 With bio-affecting material (i.e., biocide or biostat):</b> This subclass is indented under subclass 76.1. Compositions which contain materials which control or eliminate microbial growth.</p>
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**76.9 Inorganic only or containing plant or animal extract:**

This subclass is indented under subclass 76.8. Compositions which are composed solely of inorganic materials or which contain an animal or plant extract.

**77** This subclass is indented under the class definition. Compositions which are intended to be utilized as an adhesive for trapping a pest which may come in contact therewith.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

443+, for a coated sheet, web, or filament.

SEE OR SEARCH CLASS:

43, Fishing, Trapping, and Vermin Destroying, in particular subclasses 114+ and 136 for an adhesive vermin trapping or destroying device.

106, Compositions: Coating or Plastic, appropriate subclasses for an adhesive composition other than one containing a synthetic resin.

427, Coating Processes, subclasses 207.1+ for processes of manufacturing an adhesive tape by a coating process.

520, Synthetic Resins or Natural Rubbers, appropriate subclasses, particularly Classes 523 and 524 for adhesive compositions.

585, Chemistry of Hydrocarbon Compounds, subclasses 17+ for a non-solid, greasy, or waxy hydrocarbon polymer.

**78.01 DIGESTIVE SYSTEM REGULATOR CONTAINING SOLID SYNTHETIC ORGANIC POLYMER AS DESIGNATED ORGANIC ACTIVE INGREDIENT (DOAI) (E.G., ANTI-DIARRHETIC, ANTI-CONSTIPATION, APPETITE SUPPRES- SANT, LAXATIVE, ETC.):**

This subclass is indented under the class definition. Subject matter wherein the active ingredient is a solid synthetic organic polymer used to treat or regulate the digestive system; e.g., diarrhea, constipation, etc.

(1) Note. The term designated organic active ingredient (DOAI) denotes one which imparts a physiological, pharma-

logical, or biological effect. Please refer to Class 514, Main Class Definition, (3) Note, for further elaboration on this.

(2) Note. This subclass provides for compositions containing a solid synthetic polymer as a DOAI, methods of making such compositions, and mere methods of using such compositions. A composition, for example, containing a laxative (DOAI) and a solid synthetic polymer used merely as a binder or as a slow release agent is not classified here, but is classified in subclasses 400+ when there is special structure or in Class 514, based on the laxative.

(3) Note. See Class 520, subclass 1, (9) Note, for a more complete discussion of what is a solid synthetic polymer. No weight is given to expressions designating molecular weight; e.g., 1,000, 40,000, etc., since these numbers can reflect solid, waxy, or liquid polymers alike.

SEE OR SEARCH CLASS:

523, Synthetic Resins or Natural Rubbers, subclasses 105+ for nonmedicated compositions specifically intended for contact with living animal tissue or processes of preparing other than apparel.

**78.02 TOPICAL BODY PREPARATION CON- TAINING SOLID SYNTHETIC ORGANIC POLYMER AS DESIGNATED ORGANIC ACTIVE INGREDIENT (DOAI):**

This subclass is indented under the class definition. Subject matter wherein the designated organic active ingredient (DOAI) is a solid synthetic polymer used topically to treat a living animal.

(1) Note. The term designated organic active ingredient (DOAI) denotes a polymer which exhibits a physiological, pharmacological, or biological effect. Also, a solid synthetic polymer will be classified here if it behaves as a synergist or potentiator, i.e., one which will cooperatively act with an active ingredient to the extent that the total effect will be

- greater than the sum of the two individual effects. See (2) and (4) Notes below for further details on topical coatings.
- (2) Note. Topical preparations are those medications whose properties are designed either to treat superficial areas; e.g., mucosa of the eyes, nose, mouth (not throat), etc., or epidermis; e.g., skin rashes, burns, lesions, rectum, and other external body parts. There are also medications, though applied topically, which are designed to be absorbed transdermally with the intention of being absorbed into the blood stream. For example, a scopolamine patch (a patch, *per se*, implies no structure) is used to treat motion sickness, a nitroglycerine patch is used to treat angina pectoris, and finally a clonidine patch is used to treat hypertension; likewise, nasal sprays to relieve sinus congestion or pain as well as rectal suppositories are all excluded from this subclass. A drug parenterally administered; i.e., intramuscularly, subcutaneously, or intravenously injected, is also excluded from this subclass. Patients placed here typically treat skin lesions, inflammations; e.g., iliac stoma, etc.
- (3) Note. See Class 520, subclass 1, (9) Note, for a more complete discussion on what is a solid synthetic resin. No consideration is given to numerical expressions of molecular weight since these numbers can reflect solid, waxy, or liquid polymers.
- (4) Note. This note serves to distinguish this class (424), subclasses 78.02 - 78.07 with Class 514, appropriate subclasses, and Class 523, subclasses 105+. A pharmaceutical or cosmetic composition is always sufficient for placement in Class 424. A composition containing a solid synthetic polymer, with or without a DOAI, used to form a barrier layer or film on living animals to ward off harmful or disturbing agents; e.g., radiation, animals, insects, chemicals, allergens, etc., to promote healing; e.g., burns, etc., or to reduce inflammation or irritation, etc., is proper herein. A surgical adhesive composition to be coated on a fabric, gauze, tape, etc., is classified in Class 523, subclass 111. A surgical adhesive composition; e.g., alphacyanoacrylate, when applied directly to living animal tissues is classified herein.
- (5) Note. A topical body preparation appropriate for this class, whose composition contains a monomer, prepolymer, or other chemical intermediates which forms a solid synthetic polymer after being applied and without the aid of catalysis, other than heat or water, is properly classified herein. Otherwise, classification is in Class 514, subclasses 772+. See this class, subclass 78.06 for examples to compositions containing moisture polymerizable alpha-cyanoacrylate to seal wounds and incisions.
- (6) Note. A composition containing a solid synthetic polymer as DOAI broadly disclosed or claimed as a germicide will be classified here since many of them are used topically.
- SEE OR SEARCH CLASS:**
- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclass 161 for processes of applying depilatory lotions or creams to the skin of living animals or compositions thereof.
- 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 1+ for a composition containing both a designated organic active ingredient (DOAI) and a nonactive solid synthetic polymer, subclasses 772.3, 772.2, and 788.1 for compositions devoid of a DOAI containing a solid synthetic polymer.
- 523, Synthetic Resins or Natural Rubbers, subclasses 105+ for nonmedicated compositions for contact with living animal tissue and especially subclass 111 for compositions used to protect wounds, lesions, etc. The mere method of using these compositions for contact with living animal tissue is classified either in Class 424 or Class 514. The following are examples of polymer compositions found in Class

523, subclasses 105+: (1) For manufacturing medical devices; e.g., blood bags, optical lenses, tubes, probes, cannulae, prostheses, catheters, surgical instruments, organs, etc. (e.g., from heparinized polyurethane, etc.); (2) For dental and body impressions; (3) Adhesive for bonding a textile to skin, surgical or medical dressings, etc; (4) As a dental adhesive or cement; (5) For absorbing body fluids other than by topical coating; e.g., sanitary napkins, etc.; (6) For manufacturing bandages; (7) As an osseous or bone cement for bone replacement or repair; e.g., one which contains hydroxyapatite, bio-active glass ceramic powder, crushed bone or particles of demineralized bone, calcium phosphate, etc.; (8) For slow release of pharmaceutically active agents (but not present).

- 525, Synthetic Resins or Natural Rubbers, appropriate subclasses for a solid synthetic polymer which has been chemically aftertreated with a chemical or drug intended for topically treating a living body.
- 604, Surgery, subclass 290 for a significant method of applying a body treating material or removing material from the body surface.

#### **78.03 Skin cosmetic coating:**

This subclass is indented under subclass 78.02. Subject matter wherein the composition contains a solid synthetic polymer used to coat the external body parts for cosmetic purpose; e.g., a skin peel to remove materials from the surface and the sebaceous follicles of human skin, etc.

- (1) Note. The meaning to the term "cosmetic" is essentially the same as that generally accepted or is in common usage.
- (2) Note. See subclass 78.02 for a discussion on the limitations of cosmetic compositions proper for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 401, for cosmetic, antiperspirant, and dentifrice for those compositions associated with some structural limitations; e.g., special form, specific dimensions or configurations, plural layers, etc.

#### **78.04**

#### **Ophthalmic preparation:**

This subclass is indented under subclass 78.02. Subject matter wherein the composition is used for (1) disinfecting, sterilizing or preserving a contact lens or (2) manufacturing a contact lens using a polymer composition in admixture with a polymer from (1). Such a composition normally would be classified in Class 523, subclass 106, but in most cases, said composition likewise reduces or eliminates eye injury or irritation to the contact lens wearer, or (3) for topically treating the eye of a living animal.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 427, in which the ophthalmic drug or ocular device is in a special physical form intended for and adapted to be placed between the surface of the eye and conjunctiva or between the surface of the eye and a lacrimal gland.

SEE OR SEARCH CLASS:

- 8, Bleaching and Dying; Fluid Treatment and Chemical Modifications of Textiles and Fibers, subclass 507 for the process of dyeing a contact lens or product thereof.
- 351, Optics: Eye Examining, Vision Testing and Correcting, appropriate subclasses for methods of and instruments for fitting contact lenses and structural features and adaptations for contact lenses, such as coloring a portion of the lens to adsorb part of the visible spectrum; subclasses 159.02 through 159.38 for eye contact lens.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 1 through 43 for generic processes of deodorizing, preserving or sterilizing of contact lenses or compositions thereof.
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions There-

- for, or Processes of Preparing the Compositions, subclasses 112+ for compositions used for the mere cleaning of contact lenses.
- 514, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for (1) a contact lens composition which contains a nonbioactive polymer admixed with a medicament or (2) a composition with or without a non-bioactive polymer used to sterilize a contact lens composition to reduce or eliminate any eye injury.
- 523, Synthetic Resins or Natural Rubbers, subclass 106 for a composition containing an inactive solid synthetic polymer intended for manufacturing contact lenses. This subclass also provides for a contact lens composition containing its own preserving agent when it is clearly specified and restricted for that use. The nominal method of using these compositions for contact with living animal tissue is classified either in this class or in Class 514. See (3) Note in this class (424), subclass 78.02 for more information distinguishing between these two classes.
- 604, Surgery, subclass 290 for a method of applying a body treating or removing material or subclasses 294+ for a method of application to the eye or eye socket.
- 78.05 Anti-inflammatory or anti-irritant (e.g., anti-arthritis, etc.):**  
This subclass is indented under subclass 78.02. Subject matter wherein a solid synthetic polymer is the active ingredient for topically treating or preventing an inflamed or irritated condition; e.g., an iliac stoma (intestinal opening), etc.
- (1) Note. Compositions which are classified here contain a solid synthetic resin which is considered active when: (a) the polymer, per se, exhibits anti-inflammatory or anti-irritant properties; (b) The polymer synergizes or potentiates an active agent; (c) the polymer is utilized for its film-forming properties to cover a portion of the surface on a living animal to establish a protective layer to either enhance the healing process, or prevent inflammation or irritation.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 400+, especially subclasses 443+ for anti-inflammatory compositions which are structurally designed; e.g., via coating, laminating, encapsulating, etc., to cause slow release of the active agent.
- SEE OR SEARCH CLASS:
- 514, Drug Bio-Affecting and Body Treating Compositions, subclasses 1+ for an anti-inflammatory composition containing both a designated organic active ingredient (DOAI) as well as a nonactive solid synthetic polymer or subclasses 772.3+ for compositions which are proper for this class that do not contain a DOAI, but do contain a nonactive solid synthetic polymer.
- 525, Synthetic Resins or Natural Rubbers, for a solid synthetic polymer which has been chemically aftertreated with an active agent intended for topically treating a living body.
- 78.06 Skin burn or open wound treatment:**  
This subclass is indented under subclass 78.02. Subject matter wherein a solid synthetic polymer is the active ingredient for topically treating a skin burn or open wound; e.g., a composition containing sodium polyacrylate dissolved in a solvent system for application to a human or animal skin burn to enhance healing, etc.
- (1) Note. Search this class, subclass 78.02, for a further discussion on polymers classified herein.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 443+, in which the anti-burn or open-wound-treating composition is in a special physical form; e.g., bandage, dressing, etc., or structurally designed; e.g., coating, laminating, encapsulating, etc., to affect controlled release of the active agent.

**SEE OR SEARCH CLASS:**

- 128, Surgery, appropriate subclasses for a significant method of treating an open wound.
- 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 1+ for skin burn compositions containing an active ingredient (DOAI) and also containing a nonactive solid synthetic polymer or subclasses 772.3+ for compositions which are proper for this class containing a nonactive solid synthetic polymer and devoid of a DOAI.

**78.07 Anti-infective:**

This subclass is indented under subclass 78.02. Subject matter wherein a solid synthetic polymer is the active ingredient for combatting topical infections; e.g., polyvinylpyrrolidone-iodine complex, etc.

**78.08 SOLID SYNTHETIC ORGANIC POLYMER AS DESIGNATED ORGANIC ACTIVE INGREDIENT (DOAI):**

This subclass is indented under the class definition. Subject matter wherein the active ingredient is disclosed to be a solid synthetic polymer DOAI.

(1) Note. The term designated organic active ingredient (DOAI) denotes a polymer which imparts a physiological, pharmacological, or biological effect. Also, a solid synthetic polymer will be classified here, if it functions as a synergist or potentiator, i.e., one which will cooperatively act with an active ingredient to the extent that the total effect will be greater than the sum of the two individual effects. This subclass also provides for both the nominal methods of making and using the composition.

(2) Note. See Class 520, subclass 1, (7) and (8) Notes, for a more complete discussion of what is a solid synthetic polymer. No weight is given to expressions designating molecular weight; e.g., 1,000, 40,000, or 4,000,000, etc., since these numbers can reflect solid, waxy, or liquid polymers alike.

- (3) Note. Carbohydrates, polypeptides, and cellulosic products and most of their derivatives are considered to be naturally occurring polymeric products with some exceptions. Polypeptides synthesized in a random sequence (e.g., the use of N-carboxy-anhydrides of alpha-amino acids, etc.) are considered solid synthetic organic polymers and are proper for this subclass or its indents when it is the DOAI. Polypeptides synthesized in an ordered sequence (e.g., the use of the Merrifield method, etc.) are not proper for this subclass or its indents.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 400+, for a pharmaceutical or cosmetic composition containing a solid synthetic organic polymer which possesses some form or shape, or a specific dimension or configuration, or its components are associated as layers or parts.

**SEE OR SEARCH CLASS:**

- 106, Compositions: Coating or Plastic, subclass 35 for dental compositions devoid of a DOAI or a solid synthetic polymer.
- 128, Surgery, appropriate subclasses for appliances manufactured completely or partially from synthetic organic polymers.
- 427, Coating Processes, subclasses 2.1+ for coating processes wherein the base or the coating has medical or dental utility.
- 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 1.1 through 21.92 for a composition containing a peptide as a designated organic active ingredient (DOAI), subclasses 772.1-772.7 for a composition containing a designated nonactive solid synthetic organic polymer, subclasses 773-776 for a composition containing a nonactive peptide, and subclass 788.1 for a composition containing a nonactive solid synthetic organic polymer derived solely from hydrocarbon reactants.

- 523, Synthetic Resins or Natural Rubbers, subclasses 105+ for non-medicated compositions for contact with living animal tissue and especially subclass 111 for compositions used to protect wounds, lesions, etc. The mere method of using these compositions for contact with living animal tissue is classified either in Class 424 or Class 514. The following are examples of subject matter found in Class 523, subclasses 105+: (1) for manufacturing medical devices; e.g., blood bags, optical lenses, tubes, probes, cannulae, prostheses, catheters, surgical instruments, organs, etc.; e.g., from heparinized polyurethane, etc.; (2) for dental and body impression or filling compositions; (3) as an adhesive for bonding a textile to skin, surgical or medical dressings, etc.; (4) as a dental adhesive or cement; (5) for absorbing body fluids; e.g., sanitary napkins, etc.; (6) for manufacturing bandages; (7) as an osseous or bone cement for bone replacement or repair; e.g., one which contains hydroxyapatite, bio-active glass ceramic powder, crushed bone or particles of demineralized bone, calcium phosphate, etc.; (8) for slow release of pharmaceutically active agents (but not present).
- 525, Synthetic Resins or Natural Rubbers, appropriate subclasses for a solid synthetic polymer which has been chemically aftertreated with a chemical or drug intended for medicinal use; e.g., reacting a polymer with heparin, a glucoside with anticoagulant properties, etc.
- 527, Synthetic Resins or Natural Rubbers, for those synthetic resins which incorporate a naturally occurring material as a reactant; e.g., protein, carbohydrate bituminous material, etc.
- 604, Surgery, appropriate subclasses for medical devices manufactured completely or partially from synthetic organic polymers.
- 623, Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor, appropriate subclasses for prosthesis manufac-

tured completely or partially from synthetic organic polymers.

#### **78.09**

##### **Anti-fouling composition (e.g., paints, etc.):**

This subclass is indented under subclass 78.08. Subject matter wherein a composition contains a synthetic organic polymer as an active ingredient which prevents the fouling of marine structures; e.g., ships, buoys, pilings, etc.

##### **SEE OR SEARCH CLASS:**

- 424, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for a pest-repelling composition, per se, and for certain coated substrates wherein the substrate functions as an applicator or carrier for the composition and wherein the general intent is to provide a pesticidal or pest-repelling effect rather than a means to protect the carrier or substrate.
- 523, Synthetic Resins or Natural Rubbers, subclass 122 for compositions containing a biocide to prevent deterioration of the polymer present in the composition.

#### **78.1**

##### **Ion exchange resin:**

This subclass is indented under subclass 78.08. Subject matter wherein the solid synthetic polymer is an ion-exchange resin; e.g., sodium acrylate-divinyl benzene copolymer, sodium salts of sulfonated polystyrene and sulfonated polystyrene-divinyl benzene, quaternized product of chloromethylated polystyrene-divinyl benzene, etc.

- (1) Note. Since many polymers possess ionic structures as exemplified above, classification is proper here only when the ion exchange properties are clearly disclosed or claimed; e.g., a patent claims the use of an ion exchange resin used to treat hypercholesterolemia (i.e., reduction of serum cholesterol), etc.
- (2) Note. Ion exchange resins are those synthetic resins containing active groups (usually sulfonic, carboxylic, phenol, or substituted amino groups) that give the resin the property of combining with or exchanging ions between the resin and a solution. Thus, a resin with active sul-

fonic groups can be converted to the sodium form and will then exchange its sodium ions with the calcium ions present in hard water.

**SEE OR SEARCH CLASS:**

- 514, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for ion exchange resins which are not considered designated organic active ingredients.
- 521, Synthetic Resins or Natural Rubbers, subclasses 25+ for ion exchange resins and processes of preparing.

**78.11 Plural ion exchange resins:**

This subclass is indented under subclass 78.1. Subject matter wherein the composition contains two or more ion exchange resins as DOAI; e.g., an antihistaminic composition consisting of 10 percent chlorpheniramine sulfonic acid cation exchange resin and 90 percent phenyltoloxamine sulfonic acid cation exchange resin, etc.

- (1) Note. A single resin heated with a multiplicity of reagents; e.g., calcium hydroxide and sodium hydroxide to impart both calcium and sodium ions to the resin is not a mixture of two resins. The same resin treated in separate batches with the above reagents respectively then combined would be proper here.

**78.12 Adsorbate or treating agent contains nitrogen:**

This subclass is indented under subclass 78.1. Subject matter wherein the composition contains an ion exchange resin DOAI whose preparation involved either a nitrogen containing treating agent; e.g., the quaternization with dimethyl amine of chloromethylated polystyrene-divinyl benzene or the chemical addition (adsorbate) of an active agent; e.g., the after-treatment of polyacrylic acid-divinyl benzene with oxytetracycline, etc.

- (1) Note. It is not essential that either the adsorbate or treating agent impart ion exchange capacity to the resin so long as the final product contains these characteristics.

- (2) Note. The adsorbate or treating agent can be regarded as such only with reference to a solid organic polymer, otherwise they must be construed as a reactant to form a solid organic polymer or precursor thereof.

**78.13**

**Oxygen or sulfur heterocycle:**

This subclass is indented under subclass 78.12. Subject matter wherein the adsorbate or chemical treating agent contains an oxygen or sulfur heterocycle; e.g., epichlorohydrin, dithiazanine, dihydrocodeinone (hydrocodone), etc.

**78.14**

**Nitrogen heterocycle:**

This subclass is indented under subclass 78.12. Subject matter wherein the adsorbate or treating agent contains a nitrogen heterocycle; e.g., nicotinamide, pyrilamine, etc.

**78.15**

**Plural nitrogen heteroatoms or rings:**

This subclass is indented under subclass 78.14. Subject matter wherein the adsorbate or treating agent either contains plural nitrogen atoms in the ring or plural nitrogen containing rings; e.g., histamine, phenobarbital, vitamin B-12, vincamine, CDP-choline, etc.

**78.16**

**Amine containing aromatic group:**

This subclass is indented under subclass 78.12. Subject matter wherein the adsorbate or treating agent is an amine containing an aromatic group; e.g., amphetamine, oxytetracycline, Voltaren (registered trademark of diclofenac sodium), etc.

**78.17**

**Aftertreated polymer (e.g., grafting, blocking, etc.):**

This subclass is indented under subclass 78.08. Subject matter wherein the solid synthetic polymer is subjected to an aftertreatment process wherein, though the most common process is chemical in nature, other aftertreatment processes likewise are proper herein; e.g., radiation, physical, heat, etc.; the one requirement being that a bond-breaking process occurs within the polymer molecule.

- (1) Note. The chemical aftertreatment of a solid synthetic organic polymer may be to remove or add a group or element or a combination of both procedures. The following examples are given to illus-

trate the type of polymers which may be found here: (a) a therapeutic preparation for treating encephalomyelitis contained an active polymer which was derived from the N-carboxy-anhydrides of tyrosine, alanine, gamma-benzyl glutamate and epsilon-N-trifluoroacetyllysine followed by the deblocking of the gamma carboxyl group of the glutamic acid and followed further by the removal of the trifluoroacetyl group from lysine; (b) an iron composition suitable for parenteral injection prepared by reacting ferric chloride with a polymer which is the reaction product of a hydroxy carboxylic acid, a polyhydric alcohol and a diepoxyde (c) A germicidal complex derived from the reaction of iodine with a polymer derived from the reaction of sucrose and epichlorohydrin, etc.

- (2) Note. The starting solid synthetic polymer may be subjected to a number of aftertreating steps the sequence or numbers of which will not affect classification. The important criteria is that every reaction be considered in going from the starting solid polymer to the final product. This is consistent with the rules set out in the Class 520 Series.

**SEE OR SEARCH CLASS:**

- 522, Synthetic Resins or Natural Rubbers, for the process of treating a solid polymer utilizing wave energy.
- 525, Synthetic Resins or Natural Rubbers, appropriate subclasses for the after-treatment of solid synthetic organic polymers.
- 526, Synthetic Resins or Natural Rubbers, for the preparations of solid synthetic polymers derived from ethylenic monomers only; e.g., acrylic acid, etc.
- 527, Synthetic Resins or Natural Rubbers, for the preparation of solid synthetic polymers derived from the reaction between a natural product and other chemical intermediates; e.g., a carbohydrate and polyisocyanate, a protein and an ethylenic reactant, etc.
- 528, Synthetic Resins or Natural Rubbers, subclasses 1+ for the preparation of a solid synthetic polymer derived from

at least one saturated reactant; e.g., toluene diisocyanate and polyethylene glycol, etc.; subclasses 480+ for treating a solid polymer merely with heat to affect a chemical change and in the absence of a chemical reactant.

**78.18 Polymer derived from ethylenic monomers only:**

This subclass is indented under subclass 78.17. Subject matter wherein the polymer being aftertreated is derived from ethylenic monomers only; e.g., hydrolysing polyvinyl acetate to produce polyvinyl alcohol which is subsequently reacted with borax yielding a product proved to be an effective ruminant repellent to plant foliage, etc.

- (1) Note. An ethylenic monomer is defined as one which contains at least two carbon atoms bonded together by a double or triple bond, with the proviso that the double bond is not part of an aromatic system; e.g., benzene, naphthalene, anthracene, etc. Included herein are; e.g., coumarone, indene, etc. Also, compounds such as pyridine are regarded as ethylenic monomers since they lack the carbocyclic system.

**SEE OR SEARCH CLASS:**

- 525, Synthetic Resins or Natural Rubbers, appropriate subclasses for the after-treatment of solid synthetic organic polymers.
- 526, Synthetic Resins or Natural Rubbers, for the preparation of solid synthetic polymers derived from ethylenic monomers only; e.g., acrylic acid, etc.

**78.19**

**Heterocyclic monomer:**

This subclass is indented under subclass 78.18. Subject matter wherein the ethylenic monomer contains a heterocyclic ring; e.g., a copolymer derived from divinyl ether and maleic anhydride, etc.

**78.2**

**Maleic anhydride monomer copolymerized with hydrocarbon monomer:**

This subclass is indented under subclass 78.19. Subject matter wherein the maleic anhydride monomer is copolymerized with a hydrocarbon monomer; e.g., maleic anhydride copolymerized with octadecene-1, etc.

**SEE OR SEARCH CLASS:**

526, Synthetic Resins or Natural Rubbers, subclass 272 for the preparation of a copolymer of maleic anhydride with a hydrocarbon monomer.

**78.21 Ring-opened product thereof:**

This subclass is indented under subclass 78.2. Subject matter wherein the polymerized copolymer of maleic anhydride is subjected to a ring opening with a reactant; e.g., alcohols, amines, mercaptans, water, etc.

**SEE OR SEARCH CLASS:**

525, Synthetic Resins or Natural Rubbers, subclasses 54.1+ for the chemical aftertreatment of a solid synthetic organic polymer with a protein or biologically active polypeptide, subclasses 54.2+ aftertreatment with a carbohydrate or derivative, subclasses 327.4+ for a product derived from the aftertreatment of a polymer derived from a monomer containing a carboxylic acid anhydride, and other appropriate subclasses for a solid synthetic polymer which has been chemically aftertreated with a chemical or drug whose use is intended as a drug, bioaffecting or body treating composition.

**78.22 Nitrogen heterocycle:**

This subclass is indented under subclass 78.19. Subject matter wherein the monomer is a nitrogen heterocycle; e.g., 5-ethyl-3-vinyloxazolidin-2-one.

**SEE OR SEARCH CLASS:**

525, Synthetic Resins or Natural Rubbers, subclasses 54.1+ for the chemical aftertreatment of a solid synthetic organic polymer with a protein or biologically active polypeptide, subclasses 54.2+ aftertreatment with a carbohydrate or derivative, subclasses 326.7+ for a product derived from a monomer containing a nitrogen heterocycle, and subclass 356 for the aftertreatment of a solid synthetic organic polymer derived from ethylenic monomers only with elemental halogen; e.g., the formation of the

polyvinylpyrrolidone-iodine complex (well known antimicrobial agent), etc.

526, Synthetic Resins or Natural Rubbers, subclasses 258+ for the preparation of a polymer from ethylenic monomers only wherein the monomer contains a nitrogen heterocycle.

**78.23 Six-membered ring:**

This subclass is indented under subclass 78.22. Subject matter wherein the nitrogen heterocycle is a six-membered ring; e.g., 1-acryloyl-4-methyl piperazine N-acryloyl morpholine, 2-methyl-5-vinyl pyridine, 4-vinyl quinoline, etc.

**N-vinyl-2-pyrrolidone:**

This subclass is indented under subclass 78.22. Subject matter wherein the nitrogen heterocycle is N-vinyl-2-pyrrolidone.

**78.25 Complexed with molecular halogen or compound containing only halogen atoms:**

This subclass is indented under subclass 78.24. Subject matter wherein the polyvinylpyrrolidone homo or copolymer is complexed with molecular halogen or a compound containing only halogen atoms; e.g., I<sub>(2)</sub>, Br<sub>(2)</sub>, I-Br, I-Cl, etc.

**78.26 Chemical treating agent contains element other than C, H, O, alkali, or alkaline earth metal:**

This subclass is indented under subclass 78.17. Subject matter wherein the solid synthetic organic polymer is chemically aftertreated with a material containing an element other than carbon, hydrogen, oxygen, alkali, or alkaline earth metal; e.g., aftertreating polyethylene with phosphorus oxychloride, etc.

(1) Note. The chemical treating agent containing an element other than carbon, hydrogen, oxygen, alkali or alkaline earth metal need not necessarily impart that element to the solid polymer but must react with it; e.g., neutralizing sodium polyacrylate with dilute hydrochloric acid, etc.

**SEE OR SEARCH CLASS:**

525, Synthetic Resins or Natural Rubbers, subclasses 337+ for the chemical aftertreatment of solid polymers

- derived from ethylenic monomers only.
- 78.27 Nitrogen or sulfur:**  
This subclass is indented under subclass 78.26. Subject matter wherein the chemical treating agent contains either nitrogen or sulfur; e.g., the chemical aftertreatment of polyhydroxyethyl methacrylate first with cyanogen bromide and then with heparin or antithrombin III, etc.
- 78.28 Sulfur heterocycle:**  
This subclass is indented under subclass 78.27. Subject matter wherein the chemical treating agent contains a sulfur heterocycle; e.g., treating sulfonated polystyrene with thiamine, etc.
- 78.29 Nitrogen heterocycle:**  
This subclass is indented under subclass 78.27. Subject matter wherein the chemical treating agent contains a nitrogen heterocycle; e.g., treating sulfonated polystyrene with codeine, morphine, etc.
- 78.3 Heterocyclic monomer:**  
This subclass is indented under subclass 78.17. Subject matter wherein the solid synthetic polymer being aftertreated is derived from a heterocyclic monomer; e.g., from the diglycidyl ether of bisphenol A, ethylene oxide, propylene oxide, etc.
- 78.31 Polymer from ethylenic monomers only:**  
This subclass is indented under subclass 78.08. Subject matter wherein the designated organic active ingredient (DOAI) is a solid synthetic polymer derived from ethylenic monomers only; e.g., a fungicidal composition containing a solid polymer prepared from the condensation of 1, 4-bis-(dimethylamino)-2-butene and 1, 4-dichloro-2-butene, a composition for decreasing urinary calcium content containing a solid polymer derived from vinyl benzene-sulfonic acid, etc.
- (1) Note. See subclass 78.17 for the definition of an ethylenic monomer.
- 78.32 Heterocyclic monomer:**  
This subclass is indented under subclass 78.31. Subject matter wherein the solid polymer is derived from a heterocyclic monomer; e.g., a composition to control the proliferation of bacteria contains a polymer derived from the condensation of 1, 4-dichloro-2-butene and 1, 4-bis-(N-homopiperidino)-2-butene, etc.
- 78.33 Maleic anhydride monomer:**  
This subclass is indented under subclass 78.32. Subject matter wherein the heterocyclic monomer is maleic anhydride; e.g., a composition to suppress plant virus growth contains styrene-maleic anhydride copolymer, etc.
- 78.34 Heavy metal containing monomer:**  
This subclass is indented under subclass 78.31. Subject matter wherein the solid polymer is derived from an ethylenically unsaturated monomer containing a heavy metal; e.g., phenyl mercuric acrylate, alpha-tributyltin butyl itaconate, triphenylbismuth bismethacrylate, etc.
- 78.35 Nitrogen or sulfur containing monomer:**  
This subclass is indented under subclass 78.31. Subject matter wherein the polymer derived from ethylenic monomers only is derived from a monomer containing either a nitrogen or sulfur atom; e.g., ethyl-alpha-cyan-oacrylate, acrylamide, p-styrenesulfonic acid, etc.
- 78.36 Nitrogen heterocycle:**  
This subclass is indented under subclass 78.08. Subject matter wherein the solid polymer is derived from a nitrogen heterocyclic monomer; e.g., an antivirally effective composition contains a polymer derived from the polycondensation of pentachloropyridine and liquid polyethylenimine, etc.
- 78.37 Monomer contains oxygen:**  
This subclass is indented under subclass 78.08. Subject matter wherein the solid polymer is derived from an oxygen containing monomer; e.g., a composition for treating animals suffering from either acute or chronic hepatitis or liver cirrhosis which contains a solid polymer derived from 3-trichlorogermylpropionic acid and water, etc.
- 78.38 Oxygen heterocycle:**  
This subclass is indented under subclass 78.37. Subject matter wherein the monomer is an oxygen heterocycle; e.g., a composition used for insulating mucosal tissues from physical trauma which contains an ethylene oxide homopolymer, a composition for use in controlling osseous hemorrhaging which contains

a polymer derived from the oxygen heterocycle, 2-keto- 1, 4-dioxane, etc.

- 84** This subclass is indented under the class definition. Compositions which contain as an ingredient a component which, per se, would not be considered an animal food, but which is disclosed to have utility as an attractant or a lure operating through one of the senses, usually smell or taste.

**SEE OR SEARCH CLASS:**

- 426, Food or Edible Material: Processes, Compositions, and Products, subclass 1, for a food bait, per se.

**85.1 LYMPHOKINE:**

This subclass is indented under the class definition. Subject matter including compositions containing soluble immune mediators produced by the cells of the immune system.

- (1) Note. Included in this and the indented subclasses interferon, interleukin and macrophage factors (monokines).

- (2) Note. Synonyms: Lymphokines Monokines Migration inhibitory Factor (MIF) Lymplotoxin (LT) Leukocyte Migration Inhibitory Factor (CIF) Interferons (IF) Eosinophil Chemotactic Factor - Precursor Substance (ECFp) Eosinophil Stimulation Promoter Eosinophil Chemotactic Factor Monocyte Tissue Factor Mitogenic Factor (MF) Lymphocyte Activity-Factor (LAF) Colony Stimulating Factor (CSF) Skin Reactive Factor (SRF) Macrophage Cytotoxicity Factor (MCF) Lenkocyte Inhibition Factor (LIF) Vascular Permeability Factor (VPF) T cell Growth Factor (TCGF) B cell Growth Factor (BCGF) Erythroid Burst Promoter Genetically Related Macrophage Face (GRF) Fibroblast Activating Factor (FAF) Tumor Necrosis Factor (TNF) Macrophage Activating Factor (MAF).

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 520+, for animal extracts of undetermined chemical constitution where the extracts are from parts of the reticuloendothelial system.

**SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 68.1+ for methods of producing lymphokines by the culture of a micro-organism or animal or plant cell.
- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 351 for patents claiming a lymphokine, per se, the chemical modification of a lymphokine or the purification of a lymphokine.
- 930, Peptide or Protein Sequence, subclasses 140 through 145 for Lymphokine peptide or protein sequences.

**85.2**

**Interleukin:**

This subclass is indented under subclass 85.1. Subject matter in which the immune mediator is a macrophage derived factor that promotes short term proliferation of T cells (IL1) or a lymphocyte derived factor that promotes long term proliferation of T cells in culture (IL2).

- (1) Note. Synonyms. IL1: LAF or leukocyte activating factor. IL2: TCGF or T cell growth factor.

**SEE OR SEARCH CLASS:**

- 930, Peptide or Protein Sequence, subclass 141 for interleukin peptide or protein sequences.

**85.4**

**Interferon:**

This subclass is indented under subclass 85.1. Subject matter in which the lymphokine is a protein elaborated by infected host cells that protects noninfected cells from viral infection.

- (1) Note. This subclass provides for patents which broadly claim interferon or a method of treatment of interferon where the classification of the interferon as alpha, beta or gamma interferon is impossible.

**SEE OR SEARCH CLASS:**

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 889 for interferon inducers.

- 530, Chemistry: Natural Resins or Derivatives Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 351 for interferon, per se, and methods of chemically treating or purifying interferon.
- 930, Peptide or Protein Sequence, subclass 142 for interferon peptide or protein sequences.

**85.5 Gamma or immune:**

This subclass is indented under subclass 85.4. Subject matter in which the interferon is gamma or immune interferon.

SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 142 for interferon peptide or protein sequences.

**85.6 Beta or fibroblast:**

This subclass is indented under subclass 85.4. Subject matter in which the interferon is beta or fibroblast interferon.

SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 142 for interferon peptide or protein sequences.

**85.7 Alpha or leukocyte:**

This subclass is indented under subclass 85.4. Subject matter in which the interferon is alpha or leukocyte interferon.

SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 142 for interferon peptide or protein sequences.

**93.1 WHOLE LIVE MICRO-ORGANISM, CELL, OR VIRUS CONTAINING:**

This subclass is indented under the class definition. Subject matter involving a whole and living micro-organism, cell, or virus or its spore form.

- (1) Note. Utilities such as pest control, warfare, disease eradication, etc., are included in this subclass and indented subclasses.
- (2) Note. Included under the heading micro-organism, cell, or virus are bacteria, acti-

nomyctetales, fungus, protozoa, alga, plant cell, animal cell (includes a specified blood cell or tissue cell), and virus.

(3) Note. If there is no clear disclosure to the contrary, lyophilized micro-organisms, cells, or viruses are considered alive and are therefore appropriate for this subclass or indented subclasses.

(4) Note. If there is no clear disclosure as to whether the whole micro-organism, cell, or virus is alive or dead, it shall be presumed to be alive and therefore appropriate for this subclass or indented subclasses. Placement of cross-references into other appropriate places in Class 424, such as subclasses 195.15-195.17, 520+, or 725-780, is strongly recommended.

(5) Note. For the purposes of this subclass and indented subclasses, protozoa and algae are considered to be micro-organisms, rather than animal or plant cells.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 114, for bio-affecting or body treating compositions containing at least two microbial fermentates of known or unknown constitution.
- 115+, for bio-affecting or body treating compositions containing microbial fermentates of undetermined chemical structure.
- 184.1+, for bio-affecting or body treating compositions or products containing live micro-organisms, cells, or viruses used as antigens in vaccines or bacterins.
- 195.15, and 195.16, for bio-affecting or body treating compositions containing, as the active ingredient, a material or an extract from multicellular or unicellular fungi.
- 195.17, for bio-affecting or body treating compositions containing, as the active ingredient, a material or an extract from algae other than blue green algae.
- 520+, for bio-affecting or body treating compositions or products containing animal cells, and parts thereof, animal

- tissue, or other cell-containing or multiple cell containing compositions wherein the active ingredient is not specifically known.
- 725 through 779, for bio-affecting or body treating compositions containing, as the active ingredient, a plant extract or plant material of undetermined constitution.
- 780, for bio-affecting or body treating compositions containing, as the active ingredient, a material or an extract from a dead micro-organism such as bacteria, protozoa, cyanobacteria, or blue green algae.

**SEE OR SEARCH CLASS:**

- 71, Chemistry: Fertilizers, for fertilizers containing whole live micro-organisms.
- 435, Chemistry: Molecular Biology and Microbiology, appropriate subclasses (2, 235.1+, 243+, 325+ and 410+) for a method of culturing micro-organisms, cells, or viruses and culture media therefor, and also for processes of maintaining the viability of sperm and blood cells and media therefor.
- 504, Plant Protecting and Regulating Compositions, for plant growth regulating compositions containing whole live micro-organisms.

**93.2 Genetically modified micro-organism, cell, or virus (e.g., transformed, fused, hybrid, etc.):**

This subclass is indented under subclass 93.1. Subject matter involving a micro-organism, cell or virus which (a) is a product of recombination, transformation, or transfection with a vector or a foreign or exogenous gene or (b) is a product of homologous recombination if it is directed rather than spontaneous or (c) is a product of fused or hybrid cell formation.

- (1) Note. Examples of subject matter included in this and the indented subclass are compositions containing micro-organisms, cells, or viruses resulting from (a) a process in which the cellular matter of two or more fusing partners is combined producing a cell which initially contains the genes of both fusing partners or (b) a process in which a cell

is treated with an immortalizing agent which results in a cell which proliferates in long term culture or (c) a process involving recombinant DNA methodology.

- (2) Note. Excluded from this subclass are products of unidentified or non-induced mutations; products of microbial conjugation wherein specific genetic material is not identified and controlled; and products of natural, spontaneous, or arbitrary conjugation or recombination events. These products are not considered genetically modified for this subclass and therefore will be classified as unmodified micro-organisms, cells, or viruses.

**93.21**

**Eukaryotic cell:**

This subclass is indented under subclass 93.2. Subject matter involving an eukaryotic cell, such as an animal cell, plant cell, fungus, protozoa, or higher algae which has been genetically modified.

- (1) Note. An eukaryotic cell has a nucleus defined by a nuclear membrane wherein the nucleus contains chromosomes that comprise the genome of the cell.

**93.3**

**Intentional mixture of two or more micro-organisms, cells, or viruses of different genera:**

This subclass is indented under subclass 93.1. Subject matter involving a mixture consisting of two or more different microbial, cellular, or viral genera.

- (1) Note. A mixture of *E. coli* and *Pseudomonas* or a mixture of *Aspergillus* and *Bacillus* would be considered proper for this subclass while a mixture of *Bacillus cereus* and *Bacillus brevis* would be classified under *Bacillus* rather than in this subclass since they are both in the genus, *Bacillus*.
- (2) Note. Rumen, intestinal, vaginal, etc., microflora mixtures are mixtures appropriate for this subclass unless mixture constituents are disclosed and are found to be contrary to the subclass definition.

**93.4 Bacteria or actinomycetales:**

This subclass is indented under subclass 93.1. Subject matter involving bacteria or actinomycetales.

- (1) Note. Rickettsiae are considered proper for this subclass.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 252.1+ for subject matter involving bacteria or actinomycetales including processes and compositions for propagation, etc.

**93.41 Clostridium:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Clostridium.

**93.42 Staphylococcus:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Staphylococcus.

**93.43 Streptomyces:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Streptomyces.

**93.44 Streptococcus:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Streptococcus.

**93.45 Lactobacillus or Pediococcus or Leuconostoc:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Lactobacillus, Pediococcus, or Leuconostoc.

**93.46 Bacillus:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Bacillus.

**93.461 B. thuringiensis:**

This subclass is indented under subclass 93.46. Subject matter involving a Bacillus micro-organism from the species thuringiensis.

**93.462 B. subtilis:**

This subclass is indented under subclass 93.46. Subject matter involving a Bacillus micro-organism from the species subtilis.

**93.47 Pseudomonas:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the genus Pseudomonas.

**93.48 Enterobacteriaceae:**

This subclass is indented under subclass 93.4. Subject matter involving a micro-organism from the family Enterobacteriaceae.

- (1) Note. Bacteria included in the family Enterobacteriaceae are those of the genera Escherichia, Enterobacter (Aerobacter), Proteus, Salmonella, Shigella, and Klebsiella.

**93.5 Fungus:**

This subclass is indented under subclass 93.1. Subject matter involving a fungus which includes mold.

- (1) Note. Included in this subclass are cells from multicellular fungi such as mushrooms.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 254.1+ for subject matter involving fungi including processes and compositions for propagation, etc.

**93.51 Yeast:**

This subclass is indented under subclass 93.5. Subject matter involving a yeast.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 254.2+ and 255.1+ for subject matter involving yeast including processes and compositions for propagation, etc.

**93.6 Virus or bacteriophage:**

This subclass is indented under subclass 93.1. Subject matter involving a virus or bacteriophage.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 235.1+ for subject matter involving virus and bacteriophage including processes and compositions for propagation, etc.

**93.7 Animal or plant cell:**

This subclass is indented under subclass 93.1. Subject matter involving animal cells, per se, such as specific cells from tissue or blood, or plant cells, per se.

(1) Note. While it is recognized that a protozoa is a single celled animal, for the purposes of this class, it will be considered a micro-organism rather than an animal cell and will therefore be proper subject matter for subclass 93.1 or subclasses 93.2, 93.21, or 93.3, if appropriate.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 325+ and 410+ for subject matter involving eukaryotic cells including processes and compositions for propagation, etc.

**93.71 Leukocyte:**

This subclass is indented under subclass 93.7. Subject matter involving a leukocyte which includes lymphocytes, granulocytes, and monocytes.

**93.72 Platelet:**

This subclass is indented under subclass 93.7. Subject matter involving a platelet.

**93.73 Erythrocyte:**

This subclass is indented under subclass 93.7. Subject matter involving a reticulocyte or red blood cell.

(1) Note. A reticulocyte is a young red blood cell.

**94.1 ENZYME OR COENZYME CONTAINING:**

This subclass is indented under the class definition. Subject matter s which contain an enzyme or coenzyme.

(1) Note. The bracketed numerals following the titles in the indented subclasses refer to the nomenclature system recommended by the Commission of Biochemical Nomenclature on the Nomenclature and Classification of enzymes. The titles include the enzymes defined by the bracketed numerals.

(2) Note. Included in this subclass are enzyme adducts wherein the enzyme is intended to be subsequently released as the free enzyme.

(3) Note. Enzymes described in terms of the micro-organism producing them should be placed in this and the intended subclass by disclosed enzymic activity. Such patents should be cross-referenced to Class 435 subclasses 183+. Enzyme fragments and Proenzymes should be classified with the holoenzyme.

(4) Note. CAS registry numbers. For individual enzymes see the Index Guide entries for the name or the E.C. number.

For enzyme classifications see:  
 Hydrolase = (9027-41-2); Isomerase = (9013-19-8); Ligase = (9080-13-1);  
 Lyase = (9055-04-3); Oxidoreductase = (9055-15-6); Transferase = (9047-61-4)

For specific enzymes see inverted headings in the Index Guide under such classes as: Aminotransferase = (9031-66-7); Decarboxylase = (9027-22-9); Dehydratase = (9044-86-4); Dehydrogenase = (9035-82-9); Isomerase = (9031-19-8); Kinase (phosphorylating) = (9031-44-1); Oxidase = (9035-73-8); Phosphatase = (9013-05-2); Reductase = (9037-80-3); Synthesaze = (9031-56-5);

(5) Note. National Library of Medicine Mesh subject headings. See the printed copy of section D8 for individual coenzymes and enzymes.

Coenzymes = D8.176; Hydrolase = D8.586.277; Esterase = D8.586.277.352;  
 Peptide Hydrolases = D8.586.277.656;

Isomerase = D8.586.399; Ligase = D8.586.464; Lyase = D8.586.520; Oxi-doreductase = D8.586.682; Transferase = D8.586.913; Multienzyme Complexes = D8.586.277.656

- (6) Note. This subclass provides for compositions which contain coenzymes.
- (7) Note. A coenzyme is a nonprotein substance whose presence is required for an enzyme to exhibit its catalytic activity and which undergoes a chemical change during the catalytic cycle of the enzyme involved. Regeneration of the original form of the coenzyme requires its participation in a separate reaction.
- (8) Note. Since coenzymes are no more than chemical compounds a search in the appropriate chemical class providing for the compound is recommended.

SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 240 for enzyme peptide or protein sequences.

#### **94.2 Multienzyme complexes or mixtures of enzymes:**

This subclass is indented under subclass 94.1. Subject matter which contain two or more functionally different enzymes.

- (1) Note. Different Enzyme Commission numbers is conclusive proof of functional difference.
- (2) Note. This subclass is intended to provide for intentional mixtures of enzymes for some therapeutic purpose. Many enzymes isolated from natural sources have several enzyme functions. These enzymes have not been placed have but below in the subclasses providing for the dominant enzyme activity.
- (3) Note. Where an isolate is described by an isolation technique or source and has several diverse enzyme actions it is presumed a mixture. Microbial source enzymes should be cross-referenced to Class 435 if the microbial source is claimed or described.

SEE OR SEARCH CLASS:

- 435, Chemistry: Molecular Biology and Microbiology, subclass 175 for two or more functionally different enzymes immobilized on the same support material.

#### **94.21 Pancreatin:**

This subclass is indented under subclass 94.2. in which the enzyme mixture is pancreatin.

SEE OR SEARCH CLASS:

- 435, Chemistry: Molecular Biology and Microbiology, subclass 186 for pancreatin, per se, and methods of producing pancreatin.

#### **94.3 Stabilized enzymes or enzymes complexed with nonenzyme (e.g., liposomes, etc.):**

This subclass is indented under subclass 94.1. Subject matter in which (a) the enzyme is contacted with an extraneous material to impart to the enzyme a resistance to loss of activity, or (b) the enzyme is reacted with a nonenzymatic material to form a complex or a chemically modified enzymatic compound; e.g., conjugate, ligand, etc.

- (1) Note. An enzyme conjugate, enzyme ligand, enzyme adduct for the purpose of this subclass are deemed to enhance enzyme stability.

SEE OR SEARCH CLASS:

- 252, Compositions, subclass 302 for liposomes.
- 435, Chemistry: Molecular Biology and Microbiology, subclass 188 for methods of stabilizing an enzyme by forming a mixture of adduct or composition.
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, appropriate subclasses for cleaning compositions which include an enzyme component and subclass 530 for enzyme compositions designed for use in cleaning compositions.

**94.4 Oxidoreductases (1.) (e.g., catalase, dehydrogenases, reductases, etc.):**

This subclass is indented under subclass 94.1. Subject matter wherein the enzyme catalyzes an oxidation-reduction reaction between a donor and acceptor; e.g.,  $AH_2 + B=A + BH_2$ , etc.

- (1) Note. An oxidation-reduction reaction for the purpose of this classification involves the transfer of oxygen, hydrogen, or electrons from a donor to an acceptor.
- (2) Note. A water molecule is not considered to be an acceptor or a donor.
- (3) Note. Oxidoreductases which catalyze a reaction between a donor and acceptor are different portions of the same molecule, i.e., an intramolecular oxidoreductase, are considered to be isomerases and are excluded herefrom.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 189+ for oxidoreductases and methods of isolating them.

**94.5 Transferases (2.), lyase (4.), isomerase (5.), ligase (6.):**

This subclass is indented under subclass 94.1. Subject matter wherein (a) the enzyme catalyzes the transfer of a functional group from one molecule to another; (b) the enzyme catalyzes the nonhydrolytic cleavage of bonds; (c) the enzyme catalyzes an isomerization reaction; (d) the enzyme which catalyzed the joining of two molecules and the concomitant hydrolysis of pyrophosphate bond in ATP, etc.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclass 183 for ligases, subclass 193 for transferases, subclass 199 for ribonuclease and subclass 232 for lyases, and subclass 233 for isomerases and the transferases which catalyze the cleavage of a functional group from one part of a molecule and the transfer to another part of the same molecule.

**94.6 Hydrolases (3.) (e.g., urease, lipase, asparaginase, muramidase, etc.):**

This subclass is indented under subclass 94.1. Subject matter wherein the enzyme catalyzes the following reaction;  $AB + H_2O=AOH + BH$ .

- (1) Note. The compounds hydrolyzed are usually carboxylic esters, thioesters, phosphoric esters, sulfuric esters, glycosides, ethers, peptides, amides, amidines, nitriles, acid anhydrides, organic halides, etc.
- (2) Note. Peptidases, esterases, glycosidases, and phosphatases are examples of hydrolases.
- (3) Note. Examples of the enzymes included here are lipase and ribonuclease.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclasses 195+ for hydrolases and subclasses 196+ for esterases.

**94.61 Acting on glycosyl compounds (3.2) (e.g., glycosidases, lysozyme, nucleosidases, cellulase, etc.):**

This subclass is indented under subclass 94.6. Subject matter wherein the enzyme catalyzes the hydrolysis of O-glycosyl bonds or N-glycosyl bonds or S-glycosyl bonds.

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Microbiology, subclass 200 for enzymes which hydrolyze the bonds in glycosyl compounds.

**94.62 Hyaluronidase or mucinase (3.2.1.35, 3.2.1.36):**

This subclass is indented under subclass 94.61. Subject matter wherein the enzyme is hyaluronidase or mucinase.

- (1) Note. Enzymes which hydrolyze mucin are classifiable in this subclass.

## SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclasses 201+ for enzymes which act on alpha 1,4 glucosidic bonds, including hyaluronidase.

**94.63 Acting on peptide bonds (3.4) (e.g., urokinase, etc.):**

This subclass is indented under subclass 94.6. Subject matter wherein the enzyme catalyzes hydrolysis of amide bonds in proteins or peptides.

- (1) Synonyms. Peptidases, proteinases, proteolytic enzymes, endopeptidases, exopeptidases, peptidyl-peptide hydrolases.

## SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclasses 212+ for enzymes which act on peptide bonds and subclass 215 for urokinase.

**94.64 Serine proteinases (3.4.21) (e.g., trypsin, chymotrypsin, plasmin, thrombin, elastase, kallikrein, fibrinolysin, streptokinase, etc.):**  
This subclass is indented under subclass 94.63. Subject matter which contain enzymes with the Enzyme Commission classification of 3.4.21.

## SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclass 213 for trypsin and chymotrypsin, subclass 214 for thrombin, subclass 217 for plasmin and subclass 218 for elastase.

**94.65 SH-proteinases (3.4.22) (e.g., papain, chymopain, bromelains, flcin, etc.):**  
This subclass is indented under subclass 94.63. Subject matter which contain enzymes with the Enzyme Commission classification of 3.4.22.**94.66 Acid proteinases (3.4.23) (e.g., pepsin, renin, chymosin, etc.):**  
This subclass is indented under subclass 94.63. Subject matter which contain enzymes with the Enzyme Commission classification of 3.4.23.

## SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, subclass 226 for pepsin and renin.

**94.67 Metalloproteinases (3.4.24) (e.g., collagenase, snake venom zinc proteinase, etc.):**

This subclass is indented under subclass 94.63. Subject matter which contain enzymes with the Enzyme Commission classification of 3.4.24.

**114**

This subclass is indented under the class definition. Compositions which contain at least two fermentates; e.g., antibiotics, etc., of known or unknown constitution.

- (1) Note. Excluded from this subclass is that mixture of fermentates which is formed during a fermentative process employing a single micro-organism and a single set of fermentative conditions. A mixture of fermentates occurring as the result of a fermentation by a single species of micro-organism under a single set of fermentation conditions will be classified in the first appearing subclass providing for one of the active components of the mixture. See especially subclasses 115+; e.g., a mixture comprising dihydrostreptomycin A, B, C, etc.

- (2) Note. This subclass includes mixtures of compounds (antibiotics) which have been produced by a nonfermentative synthesis and which have chemical structures corresponding to natural fermentates.

- (3) Note. Mixtures of simple lower alcohols e.g., ethanol and butanol, etc., are excluded from this subclass and placed in the appropriate lower subclasses.

## SEE OR SEARCH CLASS:

435, Chemistry: Molecular Biology and Microbiology, appropriate subclass for a fermentation method for producing a fermentate or antibiotic.

**115**

This subclass is indented under the class definition. Compositions containing an active ingredient of undetermined structure and originally produced by a fermentation process.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

404, for a structurally defined article or product which contains an antibiotic.

SEE OR SEARCH CLASS:

106, Compositions: Coating or Plastic, subclasses 15.05+ for a hard film forming coating composition which contains an antibiotic.

128, Surgery, appropriate subclass for apparatus or an article having significant structure which may be coated or impregnated with an antibiotic.

260, Chemistry of Carbon Compounds, appropriate subclasses for an antibiotic of known chemical structure.

426, Food or Edible Material: Processes, Compositions, and Products, appropriate subclasses, for food composition containing an antibody intended to preserve the food.

435, Chemistry: Molecular Biology and Microbiology, appropriate subclass for apparatus or process which employs a fermentation step for manufacturing an antibiotic.

510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, appropriate subclasses, particularly subclasses 382+ for cleaning compositions which include an antiseptic or biocidal component.

**116** This subclass is indented under subclass 115. Composition wherein the empirical formula of the fermentate is disclosed as known.

(1) Note. Mixtures of antibiotics of unknown chemical structure obtained by the fermentation of a single micro-organism are classified in this and indented subclasses if the carbon percentage of at least one separable antibiotic is known; e.g., polymyxin wherein the carbon percentage of polymyxin B, is known.

(2) Note. The percentage of carbon is based on the relative quantity of carbon in the pure unreacted antibiotic. Derivatives; e.g., the antibiotic salts, etc., are classi-

fied with the pure unreacted antibiotic, even though the percent carbon of the derivative (e.g., salt) is different from the subclass definition.

(3) Note. In view of the problem of experimental error, the disclosed carbon percentage of a fermentate may only be an approximation. It is therefore advisable to search the adjacent subclass where a carbon percentage of the fermentate being sought is near the borderline between subclasses. Where a disclosed carbon percentage range extends from one subclass into another, the patent is placed as an original in the first appearing subclass and crossed to the subadjacent subclass.

**117** This subclass is indented under subclass 116. Products wherein the fermentate compound contains at least one sulfur atom.

(1) Note. For sulfur containing derivatives of a nonsulfur containing antibiotic; e.g., sulfate salts, etc., see subclass 116 and the other indented subclasses.

**118** This subclass is indented under subclass 116. Products wherein the fermentate contains 45 percent through 55 percent carbon.

**119** This subclass is indented under subclass 116. Products wherein the fermentate contains over 55 percent through 58 percent carbon.

**120** This subclass is indented under subclass 116. Products wherein the fermentate contains over 58 percent through 60 percent carbon.

**121** This subclass is indented under subclass 116. Products wherein the fermentate contains over 60 percent through 62 percent carbon.

**122** This subclass is indented under subclass 116. Products wherein the fermentate contains over 62 percent carbon.

**123** This subclass is indented under subclass 115. Processes which are directed to the nonfermentative preparation, purification or recovery of a fermentate containing composition or a fermentate compound of unknown chemical

structure, not more specifically provided for elsewhere.

**SEE OR SEARCH CLASS:**

- 260, Chemistry of Carbon Compounds, appropriate subclass for a nonfermentative process of preparing or treating an antibiotic compound of known chemical structure.  
 435, Chemistry: Molecular Biology and Microbiology, appropriate subclasses for a fermentative process of preparing or treating an antibiotic product.

**124** This subclass is indented under subclass 123. Processes utilizing an ion exchange or chromatographic step.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 78.01, and see notes thereto, for an ion exchange type of solid synthetic organic polymer containing composition.

**SEE OR SEARCH CLASS:**

- 210, Liquid Purification or Separation, subclasses 656+ and 660+ for a process under the class definition for purifying a liquid.

**125** This subclass is indented under the class definition. Compositions which contain carbon in its elemental state such as in charcoal, carbon black, coal, bone black, etc.

- (1) Note. This subclass also provides for forms of elemental carbon solely disclosed or claimed as an adjuvant or carrier for a Class 424 active ingredient.

**126** This subclass is indented under the class definition. Compositions which (1) contain a corrosion inhibitor intended for perfecting a Class 424 composition or (2) contain a Class 424 active ingredient in combination with a corrosion inhibitor.

**130.1 IMMUNOGLOBULIN, ANTISERUM, ANTIBODY, OR ANTIBODY FRAGMENT, EXCEPT CONJUGATE OR COM-**

**PLEX OF THE SAME WITH NONIMMUNOGLOBULIN MATERIAL:**

This subclass is indented under the class definition. Subject matter involving an immunoglobulin, an antiserum, an antibody, or an antibody fragment, except a conjugate or a complex of the same with a nonimmunoglobulin material.

- (1) Note. This subclass and indented subclasses provide for bioaffecting and body-treating compositions of immunoglobulins, antisera, antibodies, and antibody fragments.
- (2) Note. This subclass and indented subclasses also provide for bioaffecting and body-treating methods of using immunoglobulins, antisera, antibodies, antibody fragments, and compositions thereof.
- (3) Note. This subclass and indented subclasses also provide for methods of immunizing to produce antibodies for recovery, which antibodies are characterized as being useful as bioaffecting or body-treating agents (e.g., to provide passive immunity).
- (4) Note. Methods of immunizing to produce protective immunity in vivo (i.e., for vaccination purposes) are provided for elsewhere.
- (5) Note. Monoclonal and polyclonal antibodies, per se, are considered compounds and are provided for elsewhere.
- (6) Note. Immunoglobulins are a class of globulins found in serum and other body fluids such as milk, saliva, tears, etc. All antibodies found in these fluids are immunoglobulins and can be characterized as having particular antigenic binding specificities. In addition, all immunoglobulins are presumably antibodies, even if their antigenic binding specificities have not been characterized.
- (7) Note. An antigen is a substance that elicits the production of antibodies, which antibodies, in turn, have binding specificity for that antigen.

- (8) Note. Antibodies may be isolated from serum or the other body fluids in which they are found, or they may be isolated from the secretion products of cells grown in culture that express and secrete the products of antibody-encoding genes.
- (9) Note. An antiserum is a serum that contains antibodies.
- (10) Note. The major classes of immunoglobulins are IgG, IgM, IgA, IgD, and IgE. Subclasses of immunoglobulins also exist, notably the IgG1, IgG2a, IgG2b, IgG3, and IgG4 subclasses comprising the IgG class. IgY is similar to IgG and is found only in birds.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 1.49, and 1.53, for methods of using radio-labeled antibodies or compositions thereof for bioaffecting or body-treating purposes and said compositions, per se.
- 9.1+, for methods of using antibodies or compositions thereof for in vivo testing or diagnosis and said compositions, per se.
- 178.1+, for bioaffecting or body-treating methods of using antibodies or fragments thereof that are conjugated to or complexed with nonimmunoglobulin material; bioaffecting or body-treating methods of using compositions of antibodies or fragments thereof, which antibodies or fragments thereof are conjugated to or complexed with nonimmunoglobulin material; and said compositions, per se.
- 184.1+, for methods of immunizing to produce protective immunity in vivo (i.e., for vaccination purposes)

SEE OR SEARCH CLASS:

- 436, Chemistry: Analytical and Immunological Testing, subclass 547 for compositions of polyclonal antibodies used in in vitro testing and subclass 548 for compositions of monoclonal antibodies used in in vitro testing.

- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 387.1+ for immunoglobulins or antibodies, per se, processes of chemically modifying immunoglobulins or antibodies, and processes of separating or purifying immunoglobulins or antibodies.

### **131.1 Anti-idiotypic:**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or an antigen-binding fragment thereof that binds another antibody at one of its idiotopes.

- (1) Note. An idiotope is an antigenic determinant in the variable region of the antibody.
- (2) Note. An idiotype is that set of idiotypes characteristic of a particular antibody.
- (3) Note. Internal image antibodies are a subset of anti-idiotypic antibodies that mimic an antigen in their ability to elicit antibodies that bind said antigen.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 145.1, for non-anti-idiotypic monoclonal antibodies or fragments thereof under the class definition that bind immunoglobulins that are not bound to cells.
- 153.1, for non-anti-idiotypic monoclonal antibodies or fragments thereof under the class definition that bind immunoglobulins that are bound to hematopoietic cells.
- 158.1, for non-anti-idiotypic polyclonal antibodies or fragments thereof under the class definition that bind immunoglobulins that are not bound to cells.
- 173.1, for non-anti-idiotypic polyclonal antibodies or fragments thereof under the class definition that bind immunoglobulins that are bound to hematopoietic cells.

### **132.1 Derived from transgenic multicellular eukaryote (e.g., plant, etc.):**

This subclass is indented under subclass 130.1. Subject matter wherein the material is produced in a transgenic multicellular eukaryote.

- (1) Note. A transgenic multicellular eukaryote is a multicellular eukaryote whose genome carries a stable, heritable genetic sequence derived from an exogenous source (e.g., another species).
- (2) Note. A multicellular eukaryote is a multicellular organism whose cells each contain a nucleus, defined by a nuclear membrane, wherein the nucleus contains chromosomes that constitute the organism's genome. Multicellular eukaryotes include multicellular plants and animals.
- (3) Note. It is suggested that the patents in this subclass be cross-referenced to the appropriate subclass(es) that provide for the binding specificities of the antibodies, if disclosed.

**133.1 Structurally-modified antibody, immunoglobulin, or fragment thereof (e.g., chimeric, humanized, CDR-grafted, mutated, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an antibody, immunoglobulin, or fragment thereof that is purposely altered with respect to its amino acid sequence or glycosylation, or with respect to its composition of heavy and light chains or immunoglobulin regions or domains, as compared with that found in nature; or wherein the antibody, immunoglobulin, or fragment thereof is part of a larger, synthetic protein.

- (1) Note. Structurally-modified antibodies may be made by chemical alteration or recombination of existing antibodies, or by various cloning techniques involving recombinant DNA or hybridoma technology.
- (2) Note. Structurally-modified antibodies may be chimeric (i.e., comprising amino acid sequences derived from two or more nonidentical immunoglobulin molecules, such as interspecies combinations, etc.).
- (3) Note. Structurally-modified antibodies may have domain deletions or substitutions (e.g., deletions of particular constant-region domains or substitutions of

constant-region domains from other classes of immunoglobulins).

- (4) Note. Structurally-modified antibodies may have deletions of particular glycosylated amino acids, or may have their glycosylation otherwise altered, which may alter their function.
- (5) Note. While expression of cloned antibody genes in cells of species other than from which they originated may result in altered glycosylation of the product, compared with that found in nature, this subclass and indented subclasses are not meant to encompass such antibodies or fragments thereof unless such cloning is a deliberate attempt to alter their glycosylation. However, such antibodies or fragments thereof may still be classified here or in indented subclasses if they are structurally-modified in other ways (e.g., if they are single chain, etc.).
- (6) Note. It is suggested that the patents of this subclass and indented subclasses be cross-referenced to the appropriate subclass(es) that provide for the binding specificities of these antibodies, if disclosed.

**134.1 Antibody, immunoglobulin, or fragment thereof fused via peptide linkage to nonimmunoglobulin protein, polypeptide, or fragment thereof (i.e., antibody or immunoglobulin fusion protein or polypeptide):**

This subclass is indented under subclass 133.1. Subject matter involving a fusion protein or fusion polypeptide that includes (a) an antibody, immunoglobulin, or fragment thereof fused directly via a peptide bond to a nonimmunoglobulin protein, polypeptide, or fragment thereof or (b) an antibody, immunoglobulin, or fragment thereof fused indirectly via a peptide linker to a nonimmunoglobulin protein, polypeptide, or fragment thereof, which fusion protein or polypeptide is the expression product of a gene fusion.

- (1) Note. A gene fusion is a nucleic acid sequence that encodes the complete or partial amino acid sequences of two or more proteins or polypeptides in contig-

uous fashion, or in noncontiguous fashion, wherein the expressed sequence is ultimately processed to yield the desired fusion protein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

178.1+, for an immunoglobulin or immunoglobulin fragment joined to a nonimmunoglobulin material, which immunoglobulin or immunoglobulin fragment joined to a nonimmunoglobulin material is not the expression product of a gene fusion.

### **135.1 Single chain antibody:**

This subclass is indented under subclass 133.1. Subject matter wherein the material is a single polypeptide chain that has antigen-binding capability.

- (1) Note. Single chain antibodies may possess amino acid sequences homologous to the complementarity determining, or hypervariable, regions found in native antibodies, as well as their flanking framework regions.
- (2) Note. Single chain antibodies may be chimeric (e.g., having amino acid sequences homologous to complementarity determining regions and flanking framework regions, respectively, that are derived from different species).
- (3) Note. Single chain antibodies may possess an amino acid sequence homologous to the variable region of an immunoglobulin light chain and an amino acid sequence homologous to the variable region of an immunoglobulin heavy chain, which amino acid sequences are joined by a polypeptide linker via chemical coupling or via expression of a gene fusion.
- (4) Note. Single chain antibodies may be termed single chain binding proteins.

### **136.1 Bispecific or bifunctional, or multispecific or multifunctional, antibody or fragment thereof:**

This subclass is indented under subclass 133.1. Subject matter involving an antibody or fragment thereof that is bispecific or bifunctional or multispecific or multifunctional.

- (1) Note. An unmodified antibody has one bivalent antigenic binding specificity. A bispecific or bifunctional antibody has two nonidentical antigenic binding specificities, each of which may be monovalent, bivalent, or multivalent. A multispecific or multifunctional antibody has more than two nonidentical antigenic binding specificities, each of which may be monovalent, bivalent, or multivalent.
- (2) Note. Bispecific or bifunctional antibodies, or multispecific or multifunctional antibodies, may be made by various techniques, ranging from chemical crosslinking of antibodies or fragments thereof having different binding specificities, to the preparation of quadromas, or fused hybridomas, that secrete bispecific antibodies, to the molecular cloning of the relevant genes, possibly followed by chemical coupling of the products produced thereby.

### **137.1 Binds specifically-identified oligosaccharide structure:**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a specifically-identified oligosaccharide structure.

- (1) Note. Some of the oligosaccharide structures disclosed in the patents of this subclass are expressed on the surfaces of cancer cells as components of glycoproteins or glycolipids, and are related to the A, B, Le, or H blood-group antigens.
- (2) Note. It is suggested that the patents in this subclass be cross-referenced to the appropriate subclass(es) that provide for antibodies that bind the cell(s) upon

which the oligosaccharide structure is expressed, if such disclosure is present.

**138.1 Binds expression product or fragment thereof of cancer-related gene (e.g., oncogene, proto-oncogene, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an expression product or fragment thereof of a cancer-related gene, such as an oncogene or a proto-oncogene.

- (1) Note. An oncogene is a genetic sequence whose expression transforms a normal cell into a cancerous cell. A proto-oncogene is a genetic sequence found in non-cancerous cells which, when mutated or otherwise activated in a characteristic way, can become an oncogene.

**139.1 Binds antigen or epitope whose amino acid sequence is disclosed in whole or in part (e.g., binds specifically-identified amino acid sequence, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a protein, polypeptide, or peptide antigen or antigenic determinant whose amino acid sequence is disclosed in whole or in part.

- (1) Note. An antigen is a substance that elicits the production of antibodies, which antibodies, in turn, have binding specificity for that antigen.
- (2) Note. An epitope is a portion of an antigen to which an antibody binds. An epitope is also called an antigenic determinant.
- (3) Note. It is suggested that the patents in this subclass be cross-referenced to the subclass(es) that provide for antibodies that bind the antigen whose amino acid sequence is disclosed in whole or in part.

**140.1 Extracorporeal or ex vivo removal of antibodies or immune complexes (e.g., removal of autoantibodies, etc.); or extracorporeal or**

**ex vivo removal of antigen by antibodies (e.g., removal of cancer cells from bone marrow by antibodies, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving the removal from the body, via separation techniques conducted outside the body, of antibodies or immune complexes; or the removal from the body, via separation techniques conducted outside the body, of antigenic substances by antibodies.

**SEE OR SEARCH CLASS:**

604, Surgery, subclasses 4.01, 5.01-5.04, 6.01-6.09, 6.01, 6.11-6.16 for patents that claim treatment of blood and its return to the body wherein a specific detailed means for attaching a treating means to the patient is specifically claimed, or wherein said treating means includes a body sensing or monitoring means that controls the treating means, or wherein more than a nominal connection of a treating means to a patient is claimed, such as by the recitation of specific arteries or veins to be connected by a specific surgical connection.

**141.1 Monoclonal antibody or fragment thereof (i.e., produced by any cloning technology):**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or fragment thereof produced by a clone of cells or cell line, which clone of cells or cell line is derived from a single antibody-producing cell or antibody-fragment-producing cell, wherein said antibody or fragment thereof is identical to all other antibodies or fragments thereof produced by that clone of cells or cell line.

- (1) Note. This and the indented subclasses provide for bioaffecting and body-treating compositions of antibodies or fragments thereof as well as bioaffecting and body-treating methods of using said compositions, said antibodies, or said fragments, which antibodies or antibody fragments are produced by any cloning technology that yields identical molecules (e.g., hybridoma technology, recombinant DNA technology, etc.).

- (2) Note. Monoclonal antibodies, per se, are considered compounds and are provided

for elsewhere. See the search notes below.

- (3) Note. Monoclonal antibodies are sometimes termed monoclonal receptors or immunological binding partners.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 1.49, and 1.53, for methods of using radio-labeled monoclonal antibodies or compositions thereof for bioaffecting or body-treating purposes and said compositions, per se.  
 9.1+, for methods of using monoclonal antibodies or compositions thereof for in vivo testing or diagnosis and said compositions, per se.  
 178.1+, for bioaffecting or body-treating methods of using monoclonal antibodies or fragments thereof that are conjugated to or complexed with non-immunoglobulin material; bioaffecting or body-treating methods of using compositions of monoclonal antibodies or fragments thereof, which monoclonal antibodies or fragments thereof are conjugated to or complexed with nonimmunoglobulin material; and said compositions, per se.

**SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 326+, for an animal cell, per se, which expresses immunoglobulin, antibody, or fragment thereof.  
 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 387.2+, especially subclasses 388.1+, for monoclonal antibodies, per se.

**142.1 Human:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or fragment thereof derived from a human source or whose amino acid sequence is identical to that found in a human.

- (1) Note. It is suggested that the patents in this subclass be cross-referenced to the appropriate subclass(es) that provide for

the binding specificities of the antibodies, if disclosed.

**143.1 Binds receptor:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a free or cell-associated receptor.

- (1) Note. A receptor is a structure integral to a cell, or released into the surrounding milieu, that has binding specificity for a particular three-dimensional structural configuration of a molecule or portion thereof.  
 (2) Note. For the purpose of this and the indented subclass, an antibody is not considered a receptor. Patents disclosing non-anti-idiotypic monoclonal antibodies or fragments thereof that bind other immunoglobulins are proper for subclass 145.1, unless the monoclonal antibodies specifically bind hematopoietic-cell-bound immunoglobulins, in which case, the patents are proper for subclass 153.1.

**144.1 Receptor integral to or derived from a lymphocytic or lymphocytic-like cell (e.g., NK cell, etc.):**

This subclass is indented under subclass 143.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a receptor integral to or derived from a lymphocytic or a lymphocytic-like cell.

- (1) Note. Lymphocytic cells are considered either B- or T-lineage cells. Null cells, or K cells, and natural killer cells are considered to be "lymphocytic-like" cells, since they have the morphology of lymphocytes, but not the antigenic markers of either B- or T-lineage cells.

**145.1 Binds hormone or other secreted growth regulatory factor, differentiation factor, or intercellular mediator (e.g., cytokine, etc.); or binds serum protein, plasma protein (e.g., tPA, etc.), or fibrin:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof

whose antigen-binding site(s) will combine with a hormone or with any other secreted growth regulatory factor, differentiation factor, or intercellular mediator; or involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a serum protein, a plasma protein, or with fibrin.

- (1) Note. The term "growth regulatory factor" is meant to encompass any secretory factor that is growth-stimulatory or growth-inhibitory (e.g., that will stimulate or inhibit clonal expansion of cells).
- (2) Note. The term "differentiation factor" is meant to encompass any secretory factor that causes cells to progress from a relatively undifferentiated state to a more differentiated state, wherein said progression may include clonal expansion.
- (3) Note. The term "intercellular mediator" is meant to encompass any secretory factor that affects cellular functions such as chemotaxis, etc.
- (4) Note. Patents under the class definition with disclosures to monoclonal antibodies or fragments thereof that bind proteins, including enzymes, that are members of plasma "activation systems"--including the clotting system, the fibrinolytic system, the bradykinin system, and the complement system--are proper for this subclass.
- (5) Note. Patents under the class definition with disclosures to non-anti-idiotypic monoclonal antibodies or fragments thereof that bind immunoglobulins are proper for this subclass, unless the monoclonal antibodies specifically bind hematopoietic-cell-bound immunoglobulins, in which case, they are proper for subclass 153.1.

**SEE OR SEARCH CLASS:**

530, Chemistry: Natural Resins or Derivative, subclasses 380+, for examples of plasma and serum proteins.

**146.1 Binds enzyme:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an enzyme.

**147.1 Binds virus or component thereof:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a virus.

**148.1 Immunodeficiency virus:**

This subclass is indented under subclass 147.1. Subject matter wherein the virus is one that is associated with an immunodeficiency syndrome such as AIDS in humans or an AIDS-related syndrome in animals.

**149.1 Hepatitis virus:**

This subclass is indented under subclass 147.1. Subject matter wherein the virus is a hepatitis virus.

**150.1 Binds bacterium or component thereof or substance produced by said bacterium:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a bacterium or with a substance produced by a bacterium.

**151.1 Binds parasitic organism (i.e., parasitic protozoan, multicellular ectoparasite (e.g., flea, tick, mite, etc.), or multicellular endoparasite (e.g., parasitic worm, etc.)) or component thereof or substance produced by said parasitic organism:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a parasitic organism such as a parasitic protozoan, a multicellular ectoparasite, or a multicellular endoparasite; or will combine with a substance produced by a parasitic organism.

**152.1 Binds eukaryotic cell or component thereof or substance produced by said eukaryotic cell:**

This subclass is indented under subclass 141.1. Subject matter involving a monoclonal antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a eukaryotic cell or with a substance produced by a eukaryotic cell.

- (1) Note. A eukaryotic cell is one that has, among other characteristics, a nucleus defined by a nuclear membrane, which nucleus contains chromosomes that constitute the genome of the organism to which the cell belongs. Eukaryotic organisms may be unicellular, such as yeast, or multicellular, such as higher animals and plants.

**153.1 Hematopoietic cell:**

This subclass is indented under subclass 152.1. Subject matter wherein the cell is a hematopoietic cell.

- (1) Note. Hematopoietic cells are considered to be bone marrow stem cells and cells derived from bone marrow stem cells, including cells at any stage of differentiation from progenitor cells to mature erythrocytes, granulocytes, lymphocytes, etc., both normal and neoplastic.
- (2) Note. Monoclonal antibodies that bind hematopoietic-cell-bound immunoglobulins are proper for this subclass.

**154.1 T lymphocytic cell (e.g., T cell, thymocyte, etc.):**

This subclass is indented under subclass 153.1. Subject matter wherein the cell is of the T lymphocytic lineage.

**155.1 Cancer cell:**

This subclass is indented under subclass 152.1. Subject matter wherein the cell is a cancer cell.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 137.1, for a monoclonal antibody or fragment thereof under the class definition

that binds a specifically-identified oligosaccharide structure derived from a cancer cell.

- 138.1, for a monoclonal antibody or fragment thereof under the class definition that binds the expression product or fragment thereof of a cancer-related gene (e.g., oncogene, proto-oncogene, etc.).

**156.1 Antigen characterized by name or molecular weight:**

This subclass is indented under subclass 155.1. Subject matter wherein the monoclonal antibody or antigen-binding fragment thereof will combine with an antigen that is an integral or isolated part of a cancer cell, or that is produced by a cancer cell, and that is disclosed by name or molecular weight.

- (1) Note. The term "name" does not necessarily define a chemical structure.

**157.1 Derived from, or present in, food product (e.g., milk, colostrum, whey, eggs, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or fragment thereof isolated from, or present in, a food product.

**158.1 Binds hormone or other secreted growth regulatory factor, differentiation factor, or intercellular mediator (e.g., cytokine, vascular permeability factor, etc.); or binds serum protein, plasma protein, fibrin, or enzyme:**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a hormone or with any other secreted growth regulatory factor, differentiation factor, or intercellular mediator; or involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a serum protein, a plasma protein, fibrin, or an enzyme.

- (1) Note. The term "growth regulatory factor" is meant to encompass any secretory factor that is growth-stimulatory or growth-inhibitory (e.g., that will stimulate or inhibit clonal expansion of cells).

- (2) Note. The term "differentiation factor" is meant to encompass any secretory fac-

- tor that causes cells to progress from a relatively undifferentiated state to a more differentiated state, wherein said progression may include clonal expansion.
- (3) Note. The term "intercellular mediator" is meant to encompass any secretory factor that affects cellular functions such as chemotaxis, etc.
- (4) Note. Patents under the class definition with disclosures to antibodies or fragments thereof that bind proteins, including enzymes, that are members of plasma "activation systems"--including the clotting system, the fibrinolytic system, the bradykinin system, and the complement system--are proper for this subclass.
- (5) Note. Patents under the class definition with disclosures to non-anti-idiotypic antibodies or fragments thereof that bind immunoglobulins are proper for this subclass, unless the antibodies specifically bind hematopoietic-cell-bound immunoglobulins, in which case, the patents are proper for subclass 173.1.
- (6) Note. See patent classification definitions for Class 530, subclasses 380+, for examples of plasma and serum proteins.
- 159.1 Binds virus or component thereof:**  
This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a virus.
- 160.1 Immunodeficiency virus:**  
This subclass is indented under subclass 159.1. Subject matter wherein the virus is one that is associated with an immunodeficiency syndrome such as AIDS in humans or an AIDS-related syndrome in animals.
- 161.1 Hepatitis virus:**  
This subclass is indented under subclass 159.1. Subject matter wherein the virus is a hepatitis virus.
- 162.1 Hog cholera virus:**  
This subclass is indented under subclass 159.1. Subject matter wherein the virus is a hog cholera virus.
- 163.1 Binds antigens of multiple bacterial species (e.g., multivalent antiserum that binds antigens of multiple bacterial species, etc.):**  
This subclass is indented under subclass 130.1. Subject matter involving an antiserum or other combination of antibodies that binds antigens of multiple bacterial species, which antiserum or other combination of antibodies comprises a plurality of antibodies, each antibody having an individual bacterial binding specificity, which antibodies together comprise binding specificities for two or more bacterial species.
- (1) Note. Antisera or other combinations of antibodies that bind multiple strains of a single bacterial species are proper for the subclass comprising antibodies that bind that bacterial species.
- 164.1 Binds bacterium or component thereof or substance produced by said bacterium:**  
This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a bacterium or with a substance produced by a bacterium.
- 165.1 Staphylococcus or Streptococcus (e.g., pneumococcus or Streptococcus pneumoniae, Streptococcus mutans, etc.):**  
This subclass is indented under subclass 164.1. Subject matter wherein the bacterium is of the genus *Staphylococcus* or of the genus *Streptococcus*.
- (1) Note. *Streptococcus pneumoniae* bacteria may be termed pneumococci.
- 166.1 Corynebacterium (e.g., *Corynebacterium diphtheriae*, etc.):**  
This subclass is indented under subclass 164.1. Subject matter wherein the bacterium is of the genus *Corynebacterium*.

**167.1 Clostridium (e.g., Clostridium tetani, etc.):**  
This subclass is indented under subclass 164.1. Subject matter wherein the bacterium is of the genus Clostridium.

**168.1 Mycobacterium:**  
This subclass is indented under subclass 164.1. Subject matter wherein the bacterium is of the genus Mycobacterium.

**169.1 Escherichia:**  
This subclass is indented under subclass 164.1. Subject matter wherein the bacterium is of the genus Escherichia.

**170.1 Pseudomonas:**  
This subclass is indented under subclass 164.1. Subject matter wherein the bacterium is of the genus Pseudomonas.

**171.1 Binds allergen or component thereof:**  
This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of an allergen.

**172.1 Binds eukaryotic cell or component thereof or substance produced by said eukaryotic cell (e.g., honey, etc.):**  
This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with an integral or isolated part of a eukaryotic cell or with a substance produced by a eukaryotic cell.

(1) Note. A eukaryotic cell is one that has, among other characteristics, a nucleus defined by a nuclear membrane, which nucleus contains chromosomes that constitute the genome of the organism to which the cell belongs. Eukaryotic organisms may be unicellular, such as yeast, or multicellular, such as higher animals and plants.

**173.1 Hematopoietic cell:**  
This subclass is indented under subclass 172.1. Subject matter wherein the cell is a hematopoietic cell.

(1) Note. Hematopoietic cells are considered to be bone marrow stem cells and cells derived from bone marrow stem cells, including cells at any stage of differentiation from progenitor cells to mature erythrocytes, granulocytes, lymphocytes, etc., both normal and neoplastic.

(2) Note. Antibodies that bind hematopoietic-cell-bound immunoglobulins are proper for this subclass.

**174.1 Cancer cell:**  
This subclass is indented under subclass 172.1. Subject matter wherein the cell is a cancer cell.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

137.1, for an antibody or fragment thereof under the class definition that binds a specifically-identified oligosaccharide structure derived from a cancer cell.

138.1, for an antibody or fragment thereof under the class definition that binds the expression product or fragment thereof of a cancer-related gene (e.g., oncogene, proto-oncogene, etc.).

**175.1 Binds hapten, hapten-carrier complex, or specifically-identified chemical structure (e.g., drug, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an antibody or antigen-binding fragment thereof whose antigen-binding site(s) will combine with a hapten, a hapten-carrier complex, or with a specifically-identified chemical structure that is disclosed.

(1) Note. A hapten is a substance that can bind an antibody, but which cannot induce production of an antibody unless it is coupled to a carrier that is immunogenic. A hapten is usually, but not always, of low molecular weight.

(2) Note. Antibodies that bind a specifically-identified amino acid sequence are proper for subclass 139.1.

**176.1 Free from infectious agents (e.g., viruses or bacteria removed or inactivated, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an immunoglobulin preparation from which infectious agents, such as viruses or bacteria, have been removed or inactivated.

**177.1 Reduced antigenicity, reduced ability to bind complement, or reduced numbers of activated complement components (e.g., free from aggregated, denatured, fragmented, or polymerized immunoglobulins; free from proteolytic enzymes, etc.):**

This subclass is indented under subclass 130.1. Subject matter involving an immunoglobulin preparation from which aggregated, denatured, fragmented, or polymerized immunoglobulins have been removed or prevented from forming; or from which plasma proteins, such as proteolytic enzymes, that contaminate an immunoglobulin preparation have been removed; or that has been treated to reduce the number of activated complement components.

(1) Note. This subclass provides for immunoglobulin preparations that are suitable for intravenous use, since they have been treated to remove aggregated, fragmented, or denatured immunoglobulins, or they have been treated to remove plasma proteins, such as proteolytic enzymes, that co-purify with immunoglobulins and which can denature immunoglobulins, or they have been otherwise treated to reduce the number of activated complement components. Immunoglobulin preparations that are free from aggregated, denatured, fragmented, or polymerized immunoglobulins are less apt to be antigenic or "anticomplementary" in vivo (i.e., are less apt to bind complement, thus setting off the undesired consequences of the complement cascade).

**178.1 CONJUGATE OR COMPLEX OF MONOCLONAL OR POLYCLONAL ANTIBODY, IMMUNOGLOBULIN, OR**

**FRAGMENT THEREOF WITH NONIMMUNOGLOBULIN MATERIAL:**

This subclass is indented under the class definition. Subject matter involving a monoclonal or polyclonal antibody, immunoglobulin, or fragment thereof that is coupled to a nonimmunoglobulin material via a single covalent bond or via a linking chemical group, or which is coupled to a nonimmunoglobulin material via non-covalent means (e.g., via chelation or adsorption).

- (1) Note. A conjugate is taken to mean a coupling of one substance to another via covalent means, either directly via a covalent bond or indirectly via a chemical linking group.
- (2) Note. A complex is taken to mean a coupling of one substance to another via noncovalent means (e.g., via adsorption).
- (3) Note. This subclass and indented subclasses provide for bioaffecting and body-treating compositions of conjugates or complexes of monoclonal or polyclonal antibodies, immunoglobulins, or fragments thereof with nonimmunoglobulin materials.
- (4) Note. This subclass and indented subclasses also provide for bioaffecting and body-treating methods of using conjugates or complexes of monoclonal or polyclonal antibodies, immunoglobulins, or fragments thereof with nonimmunoglobulin materials or compositions thereof.

**SEE OR SEARCH THIS CLASS, SUBCLASS:**

1.49, and 1.53, for methods of using radio-labeled antibodies or compositions thereof for bioaffecting or body-treating purposes and said composition, per se.

**SEE OR SEARCH CLASS:**

530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 391.1+ for antibody conjugates, per se, and methods of making said conjugates.

**179.1 Conjugated via claimed linking group, bond, chelating agent, or coupling agent (e.g., conjugated to proteinaceous toxin via claimed linking group, bond, coupling agent, etc.):**

This subclass is indented under subclass 178.1. Subject matter wherein a monoclonal or polyclonal antibody or immunoglobulin or fragment thereof is conjugated to a nonimmunoglobulin material via a linking group, a bond, a chelating agent, or a coupling agent that is specifically identified in the claim(s) by chemical name or chemical structure.

**180.1 Conjugate includes potentiator or composition comprising conjugate includes potentiator:**

This subclass is indented under subclass 179.1. Subject matter wherein a component of the conjugate is a potentiator or wherein a component of a composition comprising the conjugate is a potentiator.

- (1) Note. A potentiator, for the purposes of this subclass, is a substance that enhances or prolongs the action of the conjugate.

**181.1 Conjugated to nonproteinaceous bioaffecting compound (e.g., conjugated to cancer-treating drug, etc.):**

This subclass is indented under subclass 179.1. Subject matter wherein the nonimmunoglobulin material is a nonproteinaceous bioaffecting compound, such as a nonproteinaceous drug (e.g., a cancer-treating drug).

**182.1 Conjugate includes potentiator; or composition comprising conjugate includes potentiator:**

This subclass is indented under subclass 178.1. Subject matter wherein a component of the conjugate is a potentiator or wherein a compo-

nent of a composition comprising the conjugate is a potentiator.

- (1) Note. A potentiator, for the purposes of this subclass, is a substance that enhances or prolongs the action of the conjugate.

**183.1 Conjugated to proteinaceous toxin or fragment thereof (e.g., conjugated to diphtheria toxin, Pseudomonas exotoxin, ricin, gelonin, abrin, etc.):**

This subclass is indented under subclass 178.1. Subject matter wherein the nonimmunoglobulin material is a proteinaceous toxin or fragment thereof.

- (1) Note. The toxins found here are generally derived from plant or bacterial sources.

**184.1 ANTIGEN, EPITOPE, OR OTHER IMMUNOSPECIFIC IMMUNOEFFECTOR (E.G., IMMUNOSPECIFIC VACCINE, IMMUNOSPECIFIC STIMULATOR OF CELL-MEDIATED IMMUNITY, IMMUNOSPECIFIC TOLEROGEN, IMMUNOSPECIFIC IMMUNOSUPPRESSOR, ETC.):**

This subclass is indented under the class definition. Subject matter involving an antigen, an epitope, or another immunospecific immunoef-fector, such as an immunospecific vaccine, an immunospecific stimulator of cell-mediated immunity, an immunospecific tolerogen, or an immunospecific immunosuppressor.

- (1) Note. An antigen is a substance that elicits the production of antibodies, wherein the antibodies then have binding specificity for that antigen.
- (2) Note. An epitope is a portion of an antigen to which an antibody binds. An epitope is also called an antigenic determin-ant.
- (3) Note. An immunospecific immunoef-fector, for the purposes of this subclass and indented subclasses, is a substance that induces a specific immunological effect (e.g., specific immunity to polio), whether it be immunospecific immunity, immunospecific tolerance, or immuno-specific immunosuppression.

- (4) Note. This subclass and indented subclasses provide for bioaffecting and body-treating compositions of antigens, epitopes, and other immunospecific immunoeffectors.
- (5) Note. This subclass and indented subclasses also provide for bioaffecting and body-treating methods of using antigens, epitopes, and other immunospecific immunoeffectors and compositions thereof.
- (6) Note. This and the indented subclasses provide for methods of immunizing to produce protective immunity *in vivo* (i.e., for vaccination purposes).

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 93.1+, for a nonimmunologic bioaffecting or body-treating composition containing a whole live micro-organism, cell, or virus.
- 130.1+, for methods of immunizing with an antigen to produce antibodies for recovery, which antibodies are characterized as being useful as bioaffecting or body-treating agents (e.g., to provide passive immunity).
- 538+, for bee or other insect or arachnid venom for which there is no specific disclosure that it functions as an antigen.
- 542, for snake venom for which there is no specific disclosure that it functions as an antigen.

**SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 5+ for antigens involved in *in vitro* immunoassays involving an enzyme or a micro-organism.
- 436, Chemistry: Analytical and Immunological Testing, subclasses 500+, for antigens involved in *in vitro* immunoassays not involving an enzyme or a micro-organism.

#### **185.1 Amino acid sequence disclosed in whole or in part; or conjugate, complex, or fusion**

#### **protein or fusion polypeptide including the same:**

This subclass is indented under subclass 184.1. Subject matter wherein an amino acid sequence specifying an antigen, an epitope, or another immunospecific immunoeffector is disclosed in whole or in part, wherein the disclosed amino acid sequence may be part of a conjugate, a complex, or a fusion protein or fusion polypeptide.

- (1) Note. A conjugate is taken to mean a coupling of one substance to another via covalent means, either directly via a covalent bond or indirectly via a chemical linking group.
- (2) Note. A complex is taken to mean a coupling of one substance to another via noncovalent means (e.g., via adsorption).
- (3) Note. A fusion protein or fusion polypeptide is taken to mean the expression product of a gene fusion. A gene fusion is a nucleic acid sequence that encodes the complete or partial amino acid sequences of two or more proteins or polypeptides in contiguous fashion, or in noncontiguous fashion, wherein the expressed sequence is ultimately processed to yield the desired fusion protein.

#### **186.1 Disclosed amino acid sequence derived from virus:**

This subclass is indented under subclass 185.1. Subject matter wherein the disclosed amino acid sequence is derived from a viral protein or fragment thereof.

- (1) Note. "Derived from" in this context is taken to mean an amino acid sequence identical to that found in nature or modified in some respect.

**SEE OR SEARCH CLASS:**

- 930, Peptide or Protein Sequence, subclasses 220+ for a peptide or protein sequence homologous to that of a virus.

**187.1 Retroviridae (e.g., feline leukemia, etc.):**

This subclass is indented under subclass 186.1. Subject matter wherein the virus belongs to the family Retroviridae.

- (1) Note. Retroviruses are RNA (ribonucleic acid) viruses that encode the enzyme reverse transcriptase and that are associated with acquired immune deficiency syndrome (AIDS) and related disorders, as well as with some forms of cancer, such as those caused by HTLV (human T-lymphotrophic virus) I and II, Rous sarcoma virus, MMTV (murine mammary tumor virus), feline leukemia virus, etc.

## SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 221 for a peptide or protein sequence homologous to that of a retrovirus.

**188.1 Immunodeficiency virus (e.g., HIV, etc.):**

This subclass is indented under subclass 187.1. Subject matter wherein the virus is one that is associated with an immunodeficiency syndrome such as AIDS in humans or an AIDS-related syndrome in animals.

**189.1 Hepatitis virus:**

This subclass is indented under subclass 186.1. Subject matter wherein the virus is a hepatitis virus.

## SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 223 for a peptide or protein sequence homologous to that of a hepatitis virus.

**190.1 Disclosed amino acid sequence derived from bacterium (e.g., Mycoplasma, Anaplasma etc.):**

This subclass is indented under subclass 185.1. Subject matter wherein the disclosed amino acid sequence is derived from a bacterial protein or fragment thereof.

- (1) Note. "Derived from" in this context is taken to mean an amino acid sequence identical to that found in nature or modified in some respect.

## SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 200 for a peptide or protein sequence homologous to that of a bacterium.

**191.1 Disclosed amino acid sequence derived from parasitic organism (e.g., Dirofilaria, Eimeria, Trichinella, etc.):**

This subclass is indented under subclass 185.1. Subject matter wherein the disclosed amino acid sequence is derived from a protein or fragment thereof of a parasitic organism.

- (1) Note. "Derived from" in this context is taken to mean an amino acid sequence identical to that found in nature or modified in some respect.

## SEE OR SEARCH CLASS:

- 930, Peptide or Protein Sequence, subclass 210 for a peptide or protein sequence homologous to that of a parasitic organism.

**192.1 Fusion protein or fusion polypeptide (i.e., expression product of gene fusion):**

This subclass is indented under subclass 184.1. Subject matter involving a fusion protein or fusion polypeptide, which fusion protein or fusion polypeptide is taken to mean the expression product of a gene fusion.

- (1) Note. A gene fusion is a nucleic acid sequence that encodes the complete or partial amino acid sequences of two or more proteins or polypeptides in contiguous fashion, or in noncontiguous fashion, wherein the expressed sequence is ultimately processed to yield the desired fusion protein.

**193.1 Conjugate or complex:**

This subclass is indented under subclass 184.1. Subject matter involving a conjugate or a complex.

- (1) Note. A conjugate is taken to mean a coupling of one substance to another via covalent means, either directly via a covalent bond or indirectly via a chemical linking group.

- (2) Note. A complex is taken to mean a coupling of one substance to another via noncovalent means (e.g., via adsorption).
- (3) Note. The conjugates and complexes provided for in this subclass and indented subclasses are often of the hapten-carrier type. A hapten is a substance that can bind an antibody, but which cannot induce production of an antibody unless it is coupled to a carrier that is immunogenic. A hapten is usually, but not always, of low molecular weight. Common carriers, for vaccination purposes in humans, are tetanus toxoid and diphtheria toxoid.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 1.57, for methods of using radiolabeled antigens and compositions thereof for bioaffecting or body-treating purposes and said compositions, per se.

**194.1 Conjugated via claimed linking group, bond, or coupling agent:**

This subclass is indented under subclass 193.1. Subject matter involving a conjugate wherein one component is coupled to another via a linking group, a bond, or a coupling agent that is specifically identified in the claim(s) by chemical name or chemical structure.

**195.11 Conjugate or complex includes hormone or other secreted growth regulatory factor, differentiation factor, intercellular mediator, or fragment thereof:**

This subclass is indented under subclass 193.1. Subject matter wherein at least one component of the conjugate or complex is a hormone or other secreted growth regulatory factor, differentiation factor, intercellular mediator, or fragment thereof.

- (1) Note. The term "growth regulatory factor" is meant to encompass any secretory factor that is growth-stimulatory or growth-inhibitory (e.g., that will stimulate or inhibit clonal expansion of cells).
- (2) Note. The term "differentiation factor" is meant to encompass any secretory fac-

tor that causes cells to progress from a relatively undifferentiated state to a more differentiated state, wherein said progression may include clonal expansion.

- (3) Note. The term "intercellular mediator" is meant to encompass any secretory factor that affects cellular functions such as chemotaxis, etc.

**195.15 EXTRACT OR MATERIAL CONTAINING OR OBTAINED FROM A MULTICELLULAR FUNGUS AS ACTIVE INGREDIENT (E.G., MUSHROOM, FILAMENTOUS FUNGI, FUNGAL SPORES, HYphae, MYCELIUM, ETC.):**

This subclass is indented under the class definition. Subject matter wherein the active ingredient is a material or an extract obtained from a multicellular fungus.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 94.5, for bio-affecting or body treating compositions containing a live cell of fungi.
- 274.1, for bio-affecting or body treating compositions containing an antigen from fungi.
- 780, for bio-affecting or body treating compositions containing a material or an extract from a micro-organism as the active ingredient.

SEE OR SEARCH CLASS:

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 254.1 through 256.8 for fungi, per se.

**195.16 EXTRACT OR MATERIAL CONTAINING OR OBTAINED FROM A UNICELLULAR FUNGUS AS ACTIVE INGREDIENT (E.G., YEAST, ETC.):**

This subclass is indented under the class definition. Subject matter wherein the active ingredient is a material or an extract obtained from a unicellular fungus.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 93.1 through 93.73, for bio-affecting or body treating compositions containing a whole live micro-organism, cell, or virus.

- 115 through 124, for bio-affecting or body treating compositions containing a microbial fermentate of undetermined chemical structure.
- 274.1, for bio-affecting or body treating compositions containing an antigen from fungi.
- 780, for bio-affecting or body treating compositions containing a material or an extract from a micro-organism as the active ingredient.

**SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 255.1 through 255.7 for subject matter involving yeast, including processes and compositions for propagation, etc.

**195.17 EXTRACT OR MATERIAL CONTAINING OR OBTAINED FROM AN ALGAE AS ACTIVE INGREDIENT (E.G., CHLORELLA, SEAWEED, LAVER, KELP, ETC.):**

This subclass is indented under the class definition. Subject matter wherein the active ingredient is a material or an extract obtained from a multicellular or unicellular algae.

- (1) Note. For purpose of this subclass, cyanobacteria (unicellular algae) and blue green algae are considered bacteria and are excluded from this subclass.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 115 through 124, for bio-affecting or body treating compositions containing a microbial fermentate of undetermined chemical structure.
- 780, for bio-affecting or body treating compositions containing, as the active ingredient, a material or an extract of cyanobacteria or blue green algae.

**SEE OR SEARCH CLASS:**

- 435, Chemistry: Molecular Biology and Microbiology, subclasses 257.1 through 257.6 for algae, per se.

**195.18 NATURAL RESIN, GUM, OR BALSAM AS ACTIVE INGREDIENT (E.G., CONI-****FER RESIN, PINE GUM, ROSIN, NATURAL LATEX, ETC.):**

This subclass is indented under the class definition. Subject matter wherein the active ingredient is a natural resin, gum, or balsam.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 78.01 through 78.38, for bio-affecting or body treating compositions containing a synthetic resin as the active ingredient.

**SEE OR SEARCH CLASS:**

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 782 for a gum or resin as a nonactive ingredient.

- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 200 through 233 for natural resins, per se.

**196.11 Conjugate or complex includes virus or component thereof:**

This subclass is indented under subclass 193.1. Subject matter wherein at least one component of the conjugate or complex is a virus or a component of a virus.

**197.11 Conjugate or complex includes bacterium or component thereof or substance produced by said bacterium:**

This subclass is indented under subclass 193.1. Subject matter wherein at least one component of the conjugate or complex is a bacterium, a component of a bacterium, or a substance produced by a bacterium.

**198.1 Hormone or other secreted growth regulatory factor, differentiation factor, intercellular mediator, neurotransmitter, or fragment thereof:**

This subclass is indented under subclass 184.1. Subject matter involving a hormone or other secreted growth regulatory factor, differentiation factor, intercellular mediator, neurotransmitter, or fragment thereof.

- (1) Note. The term "growth regulatory factor" is meant to encompass any secretory factor that is growth-stimulatory or

- growth-inhibitory (e.g., that will stimulate or inhibit clonal expansion of cells).
- (2) Note. The term "differentiation factor" is meant to encompass any secretory factor that causes cells to progress from a relatively undifferentiated state to a more differentiated state, wherein said progression may include clonal expansion.
- (3) Note. The term "intercellular mediator" is meant to encompass any secretory factor that affects cellular functions such as chemotaxis, etc.
- 199.1 Recombinant virus encoding one or more heterologous proteins or fragments thereof:** This subclass is indented under subclass 184.1. Subject matter involving a virus into whose genome is integrated one or more nucleic acid sequences encoding one or more heterologous proteins or fragments thereof.
- (1) Note. A heterologous protein is one derived from another species (e.g., another viral species).
- (2) Note. Such genetically-modified viruses may be used as multivalent vaccines.
- 200.1 Recombinant or stably-transformed bacterium encoding one or more heterologous proteins or fragments thereof:** This subclass is indented under subclass 184.1. Subject matter involving a bacterium into whose genome is integrated one or more nucleic acid sequences encoding one or more heterologous proteins or fragments thereof; or involving a bacterium that carries stable, replicative plasmids that include one or more nucleic acid sequences encoding one or more heterologous proteins or fragments thereof.
- (1) Note. A heterologous protein is one derived from another species (e.g., another bacterial species).
- (2) Note. Such genetically-modified bacteria may be used as multivalent vaccines.
- 201.1 Combination of viral and bacterial antigens (e.g., multivalent viral and bacterial vaccine, etc.):** This subclass is indented under subclass 184.1. Subject matter involving a combination of viral and bacterial antigens, such as that found in a multivalent viral and bacterial vaccine.
- 202.1 Combination of antigens from multiple viral species (e.g., multivalent viral vaccine, etc.):** This subclass is indented under subclass 184.1. Subject matter involving a combination of antigens from multiple viral species, such as that found in a multivalent viral vaccine.
- (1) Note. A combination of antigens from multiple variants of the same viral species should be classified with that viral species.
- 203.1 Combination of antigens from multiple bacterial species (e.g., multivalent bacterial vaccine, etc.):** This subclass is indented under subclass 184.1. Subject matter involving a combination of antigens from multiple bacterial species, such as that found in a multivalent bacterial vaccine.
- (1) Note. A combination of antigens from multiple variants of the same bacterial species should be classified with that bacterial species.
- 204.1 Virus or component thereof:** This subclass is indented under subclass 184.1. Subject matter involving a virus or a component of a virus.
- (1) Note. As a guide to classification, viruses represented in the indented subclasses are listed in the Search This Class, Subclass, section below. This list is not exhaustive.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 207.1, for avian leukosis
  - 207.1, for bovine leukemia
  - 207.1, for equine infectious anemia
  - 207.1, for feline leukemia
  - 207.1, for Rous sarcoma
  - 209.1, for fowl plague
  - 208.1, for immunodeficiency virus

207.1,	for human T-lymphotrophic virus type I (HTLV-I)	229.1,	for bovine herpes virus type 1
209.1,	210.1, for influenza	229.1,	for infectious pustular vulvovaginitis
211.1,	for canine tracheobronchitis	229.1,	for laryngotracheitis
211.1,	for parainfluenza	229.1,	for Marek's disease
211.1,	for respiratory syncytial	229.1,	for feline rhinotracheitis
211.1,	for rinderpest	230.1,	for herpes zoster
211.1,	for Sendai	230.1,	for varicella zoster
211.1,	for turkey rhinotracheitis	230.1,	for cytomegalovirus
212.1,	for measles	230.1,	for Epstein-Barr
212.1,	for mumps	231.1,	for herpes simplex
213.1,	for canine distemper	232.1,	for avian pox
214.1,	for Newcastle disease	232.1,	for rabbit myxoma
215.1,	for orbivirus	232.1,	for smallpox
215.1,	for avian proventriculitis	232.1,	for fowlpox
215.1,	for bluetongue	232.1,	for vaccinia
215.1,	for Colorado tick fever	233.1,	for canine parvovirus
215.1,	for reovirus	233.1,	for adeno-like
215.1,	for rotavirus	233.1,	for adenovirus
216.1,	for coxsackievirus	233.1,	for egg drop syndrome
216.1,	for avian encephalomyelitis	233.1,	for feline panleukopenia
216.1,	for echovirus	233.1,	for mink enteritis
216.1,	for Mengovirus	233.1,	for hemorrhagic enteritis
216.1,	for foot-and-mouth disease		
217.1,	for poliovirus		
218.1,	for Sindbis		
218.1,	for bovine viral diarrhea		
218.1,	for dengue		
218.1,	for equine encephalitis		
218.1,	for equine viral arteritis		
218.1,	for flavivirus		
218.1,	for Japanese B encephalitis		
218.1,	for yellow fever		
219.1,	for rubella		
220.1,	for hog cholera		
221.1,	for canine coronavirus		
221.1,	for feline infectious peritonitis		
221.1,	for neonatal calf diarrhea		
222.1,	for infectious bronchitis		
223.1,	for transmissible gastroenteritis		
224.1,	for vesicular stomatitis		
224.1,	for rabies		
225.1,	for infectious canine hepatitis		
225.1,	for mouse hepatitis		
225.1,	for duck hepatitis		
226.1,	for hepatitis A		
227.1,	for hepatitis B		
228.1,	for non-A, non-B hepatitis		
228.1,	for hepatitis C		
229.1,	for pseudorabies		
229.1,	for infectious bovine rhinotracheitis		
229.1,	for equine rhinopneumonitis		
229.1,	for feline herpesvirus		
229.1,	for Aujeszky's disease		

**SEE OR SEARCH CLASS:**

435, Chemistry: Molecular Biology and Immunology, subclass 173.3 for processes of attenuating a virus via irradiation and subclasses 236.1+ for processes of attenuating a virus via other means (e.g., serial passage, etc.).

**205.1 Reassortant or deletion mutant virus:**

This subclass is indented under subclass 204.1. Subject matter involving a reassortant or deletion mutant virus.

(1) Note. For the purpose of this subclass and the indented subclass, a reassortant virus is one whose genome combines genetic material from genotypically distinct viruses of the same viral species, resulting in a variant having certain desired antigenicity or attenuated virulence characteristics. The term "recombinant virus" has been used previously to describe such a mutant.

(2) Note. For the purpose of this subclass and the indented subclass, a deletion mutant virus is one whose genome has been altered by recombinant DNA techniques so as to produce a variant that is lacking one or more specifically-identified active gene products, and thus has

- certain desired characteristics, such as non-reverting attenuated virulence.
- (3) Note. The mutant viruses disclosed in this subclass and the indented subclass may be useful in attenuated live vaccines.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
199.1, for a recombinant virus encoding one or more heterologous proteins or fragments thereof.
- 206.1 Influenza virus:**  
This subclass is indented under subclass 205.1. Subject matter wherein the virus is an influenza virus.
- 207.1 Retroviridae (e.g., feline leukemia virus, bovine leukemia virus, avian leukosis virus, equine infectious anemia virus, Rous sarcoma virus, HTLV-I, etc.):**  
This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Retroviridae.
- (1) Note. Retroviruses are RNA viruses that encode the enzyme reverse transcriptase and that are associated with acquired immune deficiency syndrome (AIDS) and related disorders, as well as with some forms of cancer, such as those caused by HTLV(human T-lymphotrophic virus) I and II, Rous sarcoma virus, MMTV (murine mammary tumor virus), feline leukemia virus, etc.
- 208.1 Immunodeficiency virus (e.g., HIV, etc.):**  
This subclass is indented under subclass 207.1. Subject matter wherein the retrovirus is one that is associated with an immunodeficiency syndrome such as AIDS in humans or an AIDS-related syndrome in animals.
- 209.1 Orthomyxoviridae (e.g., influenza virus, fowl plague virus, etc.):**  
This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Orthomyxoviridae.
- 210.1 Subunit vaccine containing hemagglutinin or neuraminidase:**  
This subclass is indented under subclass 209.1. Subject matter involving a subunit vaccine containing hemagglutinin or neuraminidase derived from a virus that belongs to the family Orthomyxoviridae.
- (1) Note. A subunit vaccine of a virus is one that does not contain the whole virus, but rather, only part(s) of the virus.
- 211.1 Paramyxoviridae (e.g., parainfluenza virus, respiratory syncytial virus, rinderpest virus, Sendai virus, canine tracheobronchitis virus, turkey rhinotracheitis virus, etc.):**  
This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Paramyxoviridae.
- 212.1 Measles virus or mumps virus:**  
This subclass is indented under subclass 211.1. Subject matter wherein the virus is a measles virus or a mumps virus.
- 213.1 Canine distemper virus:**  
This subclass is indented under subclass 211.1. Subject matter wherein the virus is a canine distemper virus.
- 214.1 Newcastle disease virus:**  
This subclass is indented under subclass 211.1. Subject matter wherein the virus is a Newcastle disease virus.
- 215.1 Reoviridae (e.g., rotavirus, reovirus, orbivirus, avian proventriculitis virus, bluetongue virus, Colorado tick fever virus, etc.):**  
This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Reoviridae.
- 216.1 Caliciviridae or picornaviridae, except hepatitis A virus (e.g., foot-and-mouth disease virus (FMDV), coxsackievirus, echovirus, avian encephalomyelitis virus, Mengovirus, etc.):**  
This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Caliciviridae or to the family Picornaviridae, except a hepatitis A virus.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

226.1, for subject matter under subclass 204.1 involving a hepatitis A virus.

**217.1 Poliovirus:**

This subclass is indented under subclass 216.1. Subject matter wherein the virus that belongs to the Picornaviridae family is a poliovirus.

**218.1 Togaviridae or Flaviviridae, except hepatitis C virus (e.g., yellow fever virus, bovine viral diarrhea virus, dengue virus, equine viral arteritis virus, equine encephalitis virus, Japanese B encephalitis virus, Sindbis virus, flavivirus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Togaviridae or to the family Flaviviridae.

**219.1 Rubella virus:**

This subclass is indented under subclass 218.1. Subject matter wherein the virus that belongs to the family Togaviridae is a rubella virus.

**220.1 Hog cholera virus:**

This subclass is indented under subclass 218.1. Subject matter wherein the virus that belongs to the family Togaviridae is a hog cholera virus.

**221.1 Coronaviridae (e.g., neonatal calf diarrhea virus, feline infectious peritonitis virus, canine coronavirus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Coronaviridae.

**222.1 Infectious bronchitis virus (IBV):**

This subclass is indented under subclass 221.1. Subject matter wherein the virus is an infectious bronchitis virus.

(1) Note. This virus infects poultry.

**223.1 Transmissible gastroenteritis virus (i.e., TGE):**

This subclass is indented under subclass 221.1. Subject matter wherein the virus is a transmissible gastroenteritis virus.

(1) Note. This virus infects swine.

**224.1 Rhabdoviridae (e.g., rabies virus, vesicular stomatitis virus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Rhabdoviridae.

**225.1 Hepatitis virus (e.g., infectious canine hepatitis virus, duck hepatitis virus, mouse hepatitis virus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus is a hepatitis virus.

(1) Note. The hepatitis viruses do not form a single family, morphologically, but rather, are grouped together here for their common ability to cause hepatitis (i.e., inflammation of the liver).

**226.1 Hepatitis A virus:**

This subclass is indented under subclass 225.1. Subject matter wherein the hepatitis virus is a hepatitis A virus.

**227.1 Hepatitis B virus (e.g., hepatitis B surface antigen (HBsAg), pre-S region, hepatitis B core antigen (HBcAg), hepatitis B e-antigen, Dane particle, etc.):**

This subclass is indented under subclass 225.1. Subject matter wherein the hepatitis virus is a hepatitis B virus.

**228.1 Non-A, non-B hepatitis virus or hepatitis C virus:**

This subclass is indented under subclass 225.1. Subject matter wherein the hepatitis virus is a non-A, non-B hepatitis virus or a hepatitis C virus.

**229.1 Herpetoviridae (e.g., herpesvirus, Marek's disease virus, laryngotracheitis virus, infectious bovine rhinotracheitis virus (IBR), pseudorabies virus, infectious pustular vulvovaginitis virus, equine rhinopneumonitis virus, bovine herpes virus type 1, Aujeszky's disease virus, feline rhinotracheitis virus, feline herpes virus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Herpetoviridae.

**230.1 Cytomegalovirus, varicella or herpes zoster virus, or Epstein-Barr virus:**

This subclass is indented under subclass 229.1. Subject matter wherein the virus is a cytomegalovirus, a varicella or herpes zoster virus, or an Epstein-Barr virus.

**231.1 Herpes simplex virus (e.g., HSV-1, HSV-2, etc.):**

This subclass is indented under subclass 229.1. Subject matter wherein the virus is a herpes simplex virus.

**232.1 Poxviridae (e.g., smallpox virus, avian pox virus, fowlpox virus, rabbit myxoma virus, vaccinia virus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Poxviridae.

**233.1 Adenoviridae, adeno-like virus, or Parvoviridae (e.g., adenovirus, canine parvovirus, mink enteritis virus, hemorrhagic enteritis virus, feline panleukopenia virus, egg drop syndrome virus, etc.):**

This subclass is indented under subclass 204.1. Subject matter wherein the virus belongs to the family Adenoviridae or to the family Parvoviridae, or is considered an adeno-like virus.

**234.1 Bacterium or component thereof or substance produced by said bacterium (e.g., Legionella, Borrelia, Anaplasma, Shigella, etc.):**

This subclass is indented under subclass 184.1. Subject matter involving a bacterium, a component of a bacterium, or a substance produced by a bacterium.

**235.1 Transposon mutant or deletion mutant bacterium (e.g., produced by transposon mutagenesis, etc.):**

This subclass is indented under subclass 234.1. Subject matter involving a transposon mutant or a deletion mutant bacterium.

(1) Note. For the purpose of this subclass, a transposon mutant bacterium is a bacterium whose genome has been modified by the introduction of a transposon--a sequence of double-stranded DNA that is able to replicate and insert a copy of itself at another site--which transposon

has inserted a copy of itself at a site in the genome such that a gene of a particular biosynthetic pathway has been inactivated, so as to produce a desired characteristic in the mutant bacterium, such as attenuated virulence.

(2) Note. For the purpose of this subclass, a deletion mutant bacterium is one whose genome has been altered by recombinant DNA techniques so as to produce a variant that is lacking one or more specifically-identified active gene products, and thus has certain desired characteristics, such as non-reverting attenuated virulence.

(3) Note. The mutant bacteria disclosed herein may be useful in attenuated live vaccines.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

200.1, for a recombinant or stably-transformed bacterium encoding one or more heterologous proteins or fragments thereof, which recombinant or stably-transformed bacteria may also be a transposon mutant or a deletion mutant.

**236.1 Toxin or toxoid, except endotoxin (e.g., exotoxin, enterotoxin, etc.):**

This subclass is indented under subclass 234.1. Subject matter involving a bacterial toxin or toxoid, except an endotoxin.

**237.1 Staphylococcus or Streptococcus:**

This subclass is indented under subclass 236.1. Subject matter wherein the toxin or toxoid originates from a bacterium of the genus Staphylococcus or from a bacterium of the genus Streptococcus.

**238.1 Corynebacterium (e.g., Corynebacterium diphtheriae, etc.):**

This subclass is indented under subclass 236.1. Subject matter wherein the toxin or toxoid originates from a bacterium of the genus Corynebacterium.

- 239.1 Clostridium (e.g., *Clostridium tetani*, etc.):**  
This subclass is indented under subclass 236.1. Subject matter wherein the toxin or toxoid originates from a bacterium of the genus *Clostridium*.
- 240.1 Bordetella (e.g., *Bordetella pertussis*, etc.):**  
This subclass is indented under subclass 236.1. Subject matter wherein the toxin or toxoid originates from a bacterium of the genus *Bordetella*.
- 241.1 Escherichia (e.g., *Escherichia coli*, etc.):**  
This subclass is indented under subclass 236.1. Subject matter wherein the toxin or toxoid originates from a bacterium of the genus *Escherichia*.
- 242.1 Pilus, fimbria, or adhesin:**  
This subclass is indented under subclass 234.1. Subject matter involving a bacterial pilus, fimbria, or adhesin.
- (1) Note. Adhesins are surface antigens found on pili and fimbriae, which are filamentous appendages of many gram-negative bacteria.
- 243.1 Staphylococcus (e.g., *Staphylococcus aureus*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Staphylococcus*.
- 244.1 Streptococcus (e.g., Group B streptococcus, pneumococcus or *Streptococcus pneumoniae*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Streptococcus*.
- (1) Note. *Streptococcus pneumoniae* bacteria may be termed pneumococci.
- 245.1 Corynebacterium (e.g., *Corynebacterium diphtheriae*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Corynebacterium*.
- 246.1 Bacillus:**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Bacillus*.
- 247.1 Clostridium (e.g., *Clostridium tetani*, *Clostridium difficile*, *Clostridium perfringens*, *Clostridium botulinum*, *Clostridium chauvoei*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Clostridium*.
- 248.1 Mycobacterium (e.g., *Mycobacterium tuberculosis*, *Calmette-Guerin bacillus* (i.e., BCG), etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Mycobacterium*.
- 249.1 Neisseria (e.g., *Neisseria gonorrhoeae*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Neisseria*.
- 250.1 Neisseria meningitidis:**  
This subclass is indented under subclass 249.1. Subject matter wherein the bacterium is of the species *Neisseria meningitidis*.
- 251.1 Moraxella (e.g., *Moraxella bovis*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Moraxella*.
- 252.1 Brucella (e.g., *Brucella abortus*, *Brucella canis*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Brucella*.
- 253.1 Bordetella (e.g., *Bordetella bronchiseptica*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus *Bordetella*.
- 254.1 Bordetella pertussis:**  
This subclass is indented under subclass 253.1. Subject matter wherein the bacterium is of the species *Bordetella pertussis*.

- 255.1 Pasteurella (e.g., *Pasteurella multocida*, *Pasteurella hemolytica*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Pasteurella.
- 256.1 Hemophilus (e.g., *Hemophilus influenzae*, *Hemophilus gallinarum*, *Hemophilus pleuropneumoniae*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Hemophilus.
- 257.1 Escherichia (e.g., *Escherichia coli*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Escherichia.
- 258.1 Salmonella (e.g., *Salmonella typhimurium*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Salmonella.
- 259.1 Klebsiella (e.g., *Klebsiella pneumoniae*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Klebsiella.
- 260.1 Pseudomonas (e.g., *Pseudomonas aeruginosa*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Pseudomonas.
- 261.1 Vibrio (e.g., *Vibrio cholerae*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Vibrio.
- 262.1 Treponema (e.g., *Treponema hyodysenteriae*, *Treponema pallidum*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Treponema.
- 263.1 Chlamydia (e.g., *Chlamydia trachomatis*, etc.):**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Chlamydia.
- 264.1 Mycoplasma:**  
This subclass is indented under subclass 234.1. Subject matter wherein the bacterium is of the genus Mycoplasma.
- 265.1 Parasitic organism or component thereof or substance produced by said parasitic organism (e.g., *Schistosoma*, *Dirofilaria*, *Trichinella*, *Fasciola*, *Ancylostoma*, *Ascaris*, etc.):**  
This subclass is indented under subclass 184.1. Subject matter involving a parasitic organism, a component of a parasitic organism, or a substance produced by a parasitic organism.
- 266.1 Component characterized by molecular weight:**  
This subclass is indented under subclass 265.1. Subject matter wherein the component is characterized by molecular weight.
- 267.1 Eimeria:**  
This subclass is indented under subclass 266.1. Subject matter wherein the parasitic organism is Eimeria.
- 268.1 Plasmodium:**  
This subclass is indented under subclass 266.1. Subject matter wherein the parasitic organism is Plasmodium.
- 269.1 Parasitic protozoan (e.g., *Trypanosoma*, *Trichomonas*, *Leishmania*, *Entamoeba*, etc.):**  
This subclass is indented under subclass 265.1. Subject matter wherein the parasitic organism is a parasitic protozoan.
- 270.1 Babesia:**  
This subclass is indented under subclass 269.1. Subject matter wherein the parasitic protozoan is of the genus Babesia.
- 271.1 Eimeria:**  
This subclass is indented under subclass 269.1. Subject matter wherein the parasitic protozoan is of the genus Eimeria.
- 272.1 Plasmodium:**  
This subclass is indented under subclass 269.1. Subject matter wherein the parasitic protozoan is of the genus Plasmodium.

**273.1 Toxoplasma:**

This subclass is indented under subclass 269.1. Subject matter wherein the parasitic protozoan is of the genus *Toxoplasma*.

**274.1 Fungus, except allergen, or component thereof or substance produced by said fungus (e.g., *Trichophyton*, etc.):**

This subclass is indented under subclass 184.1. Subject matter involving a fungus, a component of a fungus, or a substance produced by a fungus, except a fungus that functions as an allergen.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

275.1, for a bioaffecting or body-treating composition involving a fungus that functions as an allergen.

**275.1 Allergen or component thereof (e.g., rag-weed pollen, etc.):**

This subclass is indented under subclass 184.1. Subject matter involving an allergen or a component of an allergen.

**276.1 Characterized by molecular weight:**

This subclass is indented under subclass 275.1. Subject matter wherein the allergen or component is characterized by molecular weight.

**277.1 Cancer cell or component thereof:**

This subclass is indented under subclass 184.1. Subject matter involving a cancer cell or a component of a cancer cell.

**278.1 NONSPECIFIC IMMUNOEFFECTOR, PER SE (E.G., ADJUVANT, NONSPECIFIC IMMUNOSTIMULATOR, NONSPECIFIC IMMUNOPOTENTIATOR, NONSPECIFIC IMMUNOSUPPRESSOR, NONSPECIFIC IMMUNOMODULATOR, ETC.); OR NONSPECIFIC IMMUNOEFFECTOR, STABILIZER, EMULSIFIER, PRESERVATIVE, CARRIER, OR OTHER ADDITIVE FOR A COMPOSITION CONTAINING AN IMMUNOGLOBULIN, AN ANTISERUM, AN ANTIBODY, A CONJUGATE OR COMPLEX OF AN ANTIBODY OR FRAGMENT THEREOF, AN ANTI-****GEN, AN EPITOPE, OR OTHER IMMUNOSPECIFIC IMMUNOEFFECTOR:**

This subclass is indented under the class definition. Subject matter involving a nonspecific immunoeffect, per se, or a nonspecific immunoeffect, a stabilizer, an emulsifier, a preservative, a carrier, or any other additive for a composition containing an immunoglobulin, an antiserum, an antibody, a conjugate or complex of an antibody or fragment thereof, an antigen, an epitope, or any other immunospecific immunoeffect.

(1) Note. In order for a patent to be placed here, it must recite a particular nonspecific immunoeffect, stabilizer, emulsifier, preservative, carrier, etc., in the claims.

(2) Note. Patents reciting in the claims a composition comprising (a) a particular antibody or fragment thereof, (b) a particular antiserum, (c) a conjugate or complex of a particular antibody or fragment thereof, or (d) a particular antigen, epitope, or other immunospecific immunoeffect have been placed as original references in that subclass providing for the composition comprising that particular antibody, etc., and cross-referenced to the subclass providing for any pertinent nonspecific immunoeffect, etc., that is recited in the claims.

(3) Note. Patents having in the claims only a nominal recitation to a composition comprising "an antigen" or "an antibody," etc., but a recitation to a particular nonspecific immunoeffect, etc., have been placed as original references in this or the indented subclass that provides for that particular nonspecific immunoeffect, etc., and cross-referenced to that subclass that provides for a composition comprising any pertinent antigen, antibody, etc., that is disclosed.

**279.1 Synthetic or structurally-modified peptidoglycan or mucopolysaccharide or frag-**

**ment thereof (e.g., derivative of N-acetyl-muramyl-L-alanyl-D-glutamic acid, etc.):**

This subclass is indented under subclass 278.1. Subject matter involving a synthetic or structurally-modified peptidoglycan or mucopolysaccharide or fragment thereof.

**280.1 Synthetic polymer or copolymer:**

This subclass is indented under subclass 278.1. Subject matter involving a synthetic polymer or copolymer.

**281.1 Virus (e.g., interferon-inducing virus, etc.):**

This subclass is indented under subclass 278.1. Subject matter involving a virus.

**282.1 Bacterium or component thereof or substance produced by said bacterium:**

This subclass is indented under subclass 278.1. Subject matter involving a bacterium, a component of a bacterium, or a substance produced by a bacterium.

**283.1 Lipid or oil:**

This subclass is indented under subclass 278.1. Subject matter involving a lipid or an oil.

**400 PREPARATIONS CHARACTERIZED BY SPECIAL PHYSICAL FORM:**

This subclass is indented under the class definition. Subject matter which possess some form, or a specific dimension or configuration, or its components are associated as plural layers or parts.

(1) Note. A composition in unit form; e.g., tablet, capsule, etc., of specific structure is classified in this and indented subclasses. However, a composition claimed as an article (or product) and which is only defined in broad descriptive terms such as "pill", "tablet", "granule", "particle", "solid", etc., is classified in appropriate subclasses below on the basis of the composition thereof or other feature, since the recited descriptive terms, per se, are not regarded as defining "structure" for this and indented subclasses. However, this and indented subclasses will take products of special form having reference to nominal structure; e.g., "oval", "spherical", "rod", "tapering", "hollow", etc.

(2) Note. This class provides for impregnated or layered substrates which function as a carrier or applicator; e.g., textiles, bandages filament, paper, etc., having minimum of two layers, wherein one layer (or the impregnant) is a composition for this class and the substrate is no more than a nominally recited single layered base. Thus, this subclass will provide for an impregnant matrix.

(3) Note. An article coated, or impregnated with a composition provided for in this class and in which the composition functions only to preserve the article from biological attack is generally classified with the particular article protected. Seeds coated with Class 424 biocidal compositions are an exception to this rule and are classified in Class 504, subclass 100.

**SEE OR SEARCH CLASS:**

71, Chemistry: Fertilizers, provides for compositions having a nutrient action on plant growth and methods of using such compositions.

106, Compositions: Coating or Plastic, provides for coating compositions which protect a base by forming a tough adherent film even though the composition also contains a biocide of product the base against biological attack; e.g., marine antifouling paints, etc. Materials or ingredients for coating and molding compositions (Class 106 appropriate subclasses) which are also useful as diluents or inert ingredients in pharmaceutical compositions are placed in Class 106 unless a therapeutic or biocidal property is claimed. Surgical sponges claimed only as being made from Class 106 if the sponge contains no active ingredient with a utility for Class 424. Patents claiming an ink suitable for coating or printing or pharmaceutical dosage units; e.g., tablets, etc., are placed in Class 106 unless the coated or printed article is also claimed. Class 424 provides for the following coating compositions: Compositions intended to decorate or

	beautify the body; e.g., hair lacquer, fingernail polish, lipstick, etc.; coating compositions which do not protect the base by forming a tough, adherent film and whose sole function is as a carrier for a composition of Class 424 utility; e.g., "stickers" which adhere insecticides to plants, etc., whether or not claimed in combination with an active ingredient; coating compositions applied to the body for therapeutic purposes even though a tough, adherent film is formed; and coating compositions which do not form tough, adherent films and which have a utility provided for in Class 424; e.g., salve, skin cream or a solution of a material, for example, a mixture of phenols to protect wood against insects, etc.	<b>401</b>	<b>Cosmetic, antiperspirant, dentifrice:</b> This subclass is indented under subclass 400. Subject matter in which the composition is a cosmetic, antiperspirant or dentifrice.
504,	Plant Protecting and Regulating Compositions, provides for compositions having a stimulating, inhibiting (Herbicides), or regulating action on plant growth and methods of using such compositions. Class 504 specifically provides for algicidal compositions in subclasses 150+ and nutrient compositions which contain an insecticide, fungicide, or deodorant in subclasses 101+. Class 504 is superior to Class 424. If claims are drawn to a "pesticide" composition or method without specifically reciting the nature of the "pest" to be controlled or eradicated, the patent is placed as an original in Class 424 when only a Class 424 type of "pest" (e.g., fungi, insect, rodent, etc.) is revealed in the patent disclosure. However, if both Class 504 and Class 424 types of "pest" are specifically disclosed or if no disclosure is made as to the specific type of pest, the patent is placed in Class 504 as an original and cross-referenced to Class 424.		<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 47, for a topical live body growing an adorning aid in aerosol form. 49, for dentifrices. 59, for sun tan or sun block preparations. 61, through 76, for various body treatment compositions.
D24,	Medical and Laboratory Equipment, subclasses 100 through 104 for design patents for pharmaceutical products.		<b>SEE OR SEARCH CLASS:</b> 8, Bleaching and Dyeing: Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 94.16+ for depilating compositions, subclass 127.51 for compositions for chemically modifying human hair not a living body, subclasses 160 and 161 for compositions for depilating a living animal and subclasses 405+ for compositions for dyeing hair on a living animal. 44, Fuel and Related Compositions, appropriate subclasses for fuel containing an additive to protect it against decay or biological attack. Particularly note subclasses 300+ for the combination of a mineral oil containing a nonmineral oil preservative disclosed for use as fuel or any light mineral oil. 83, Cutting, subclasses 13+ for processes of shaving the living body, particularly subclasses 14+ wherein a Class 424 shaving preparation is used in preparatory treatment of the hair before shaving. 106, Compositions: Coating or Plastic, provides for coating compositions which protect a base by forming a tough, adherent film even though the composition also contains a biocide to protect the base against biological attack; e.g., marine antifouling paints, etc. Materials or ingredients for coating and molding compositions (Class 106 appropriate subclasses) which are also useful as diluents or inert ingredients in pharmaceutical compositions

- are placed in Class 106 unless a therapeutic or biocidal property is claimed. Surgical sponges claimed only as being made from Class 106 Compositions, are placed in Class 106, if the sponge contains no active ingredient with a utility for Class 424. Patents claiming an ink suitable for coating or printing on pharmaceutical dosage units; e.g., tablets, etc., are placed in Class 106 unless the coated or printed article is also claimed. Class 424 provides for the following coating compositions: compositions intended to decorate or beautify the body; e.g., hair lacquer, fingernail polish, lipstick, etc.; coating compositions which do not protect the base by forming a tough, adherent film and whose sole function is as a carrier for a composition of Class 424 utility; e.g., "stickers" which adhere insecticides to plants, etc., whether or claimed in combination with an act, ingredient; coating compositions applied to the body for therapeutic purposes even though a tough, adherent film is formed; and coating compositions which do not form tough, adherent films and which have a utility provided for in Class 424; e.g., salve, skin cream or a solution of a material, for example, a mixture of phenols to protect wood against insects, etc.
- 132, Toilet, subclasses 202+ for a process of treating hair on the scalp which is more than the mere application of a Class 424 composition and for miscellaneous apparatus for grooming or enhancing the appearance of the human body; e.g., combs, manicuring, toothpicks, dental floss, etc.
- 402 Apparel, fabric, cloth:**  
This subclass is indented under subclass 401. Subject matter in which wearing apparel, fabric or cloth is coated or impregnated with a biocidal or pharmaceutical composition.
- 403**
- SEE OR SEARCH CLASS:  
 2, Apparel, appropriate subclasses for garment structures containing a Class 424 composition, particularly subclass 4 for insect repelling head guards and subclass 171.2 for head coverings containing a medicament.  
 36, Boots, Shoes, and Leggings, appropriate subclasses for boots, etc., or parts thereof which contain a Class 424 composition.  
 168, Farriery, subclass 2 for medicating overshoes and subclass 26 for medicating sole pads used in treating the hooves of horses or cattle.  
 223, Apparel Apparatus, subclass 86 for insect repelling garment hangers.  
 604, Surgery, subclass 292 for a glove for applying a body treating material and subclasses 358+ for clothing such as diapers and the extensive listing in Note 4 of other subclasses providing for similar subject matter.  
 623, Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor, for the subject matter of the class title.
- Insect repellent or mothproofed:**  
This subclass is indented under subclass 402. Subject matter in which the apparel fabric or cloth is claimed or disclosed as having insect repelling or insect killing properties.
- 404**
- Antifungal or antibacterial:**  
This subclass is indented under subclass 402. Subject matter in which the apparel, fabric or cloth is claimed or disclosed as having antifungal or antibacterial properties.
- 405**
- Biocides; animal or insect repellents or attractants (e.g., disinfectants, pesticides, etc.):**  
This subclass is indented under subclass 400. Subject matter in which the composition having a special physical form is claimed or disclosed as biocidal or repellent or attractant to animals or insects.
- (1) Note. The subject matter included in this and the indented subclasses includes pesticides and disinfectants claimed broadly.

- (2) Note. This subclass is not intended to provide for a pharmaceutical directed against a single group of pathogens but is intended to provide for a composition that is generally biocidal to all organisms in a given local area.

**SEE OR SEARCH CLASS:**

- 8, Bleaching and Dyeing: Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 94.16+ for depilating compositions, subclass 127.51 for compositions for chemically modifying human hair not on a living body, subclasses 160 and 161 for compositions for depilating a living animal and subclasses 405+ for compositions for dyeing hair on a living animal.
- 44, Fuel and Related Compositions, appropriate subclasses for fuel containing an additive to protect it against decay or biological attack. Particularly not subclasses 300+ for the combination of a mineral oil containing a nonmineral oil preservative disclosed for use as fuel or any light mineral oil.
- 71, Chemistry: Fertilizers, provides for compositions having a nutrient action on plant growth and methods of using such compositions.
- 43, Fishing, Trapping, and Vermin Destroying, for apparatus for trapping or destroying vermin, i.e., animals injurious or pestiferous to man. The apparatus may utilize a composition classifiable in Class 424; e.g., attractant, nonfood bait, poison, etc. Class 43 structural elements containing a Class 424 composition must have more structure than, for example, that represented by a mere coated or impregnated base; e.g., flypaper of a particular shape or dimension, etc. Class 43 also provides for fumigating candles used for destroying vermin claimed in terms of more structure than a compound or composition containing a nominal wick. Class 43 provides for a process of trapping or destroying vermin which is more than the mere application of a compound or Class 424 composition. Class 424 takes methods of destroying vermin which are no more than a single step of mere application of a compound of a Class 424 composition. Class 424 takes articles for trapping or destroying vermin claimed in terms of no more structure than a coating or impregnant on a base. Class 424 also takes fumigating candles of no more structure than compound or composition nominally containing a wick.
- 47, Plant Husbandry, appropriate subclasses for apparatus provided for therein which may apply a Class 424 composition; e.g., insecticide, etc., to plants.
- 106, Compositions: Coating or Plastic, for coating compositions which protect a base by forming a tough adherent film even though the composition also contains a biocide to protect the base against biological attack; e.g., marine antifouling paints, etc. Materials or ingredients for coating and molding composition (Class 106 appropriate subclasses) which are also useful as diluents or inert ingredients in pharmaceutical compositions are placed in Class 106 unless a therapeutic or biocidal property is claimed. Surgical sponges claimed only as being made from Class 106 compositions are placed in Class 106 if the sponge contains no active ingredient with a utility for Class 424. Patents claiming an ink suitable for coating or printing on pharmaceutical dosage units; e.g., tablets, etc., are placed in Class 106 unless the coated or printed article is also claimed. Class 424 provides for the following coating compositions: compositions intended to decorate or beautify the body; e.g., hair lacquer, fingernail polish, lipstick, etc.; coating compositions which do not protect the base by forming a tough, adherent film and whose sole function is as a carrier for a composition of Class 424 utility; e.g., "stickers" which adhere insecticides to plants, etc., whether or claimed in combination with an act ingredient; coating compositions applied to the body for therapeutic purposes even though a tough, adher-

- ent film is formed; and coating compositions which do not form tough, adherent film is formed; and coating compositions which do not form tough, adherent films and which have a utility provided for in Class 424; e.g., salve, skin cream or a solution of a material, for example, a mixture of phenols to protect wood against insect, etc.
- 119, Animal Husbandry, appropriate subclasses for a process of treatment of domestic animals with a Class 424 composition which does not involve cutting the skin and which is more than the mere application of the composition to the animal. See subclasses 156+ for methods of topically applying a composition to an animal to heal sores, kill parasites repel insect, etc., particularly subclass 160 for fumigating.
- 162, Paper Making and Fiber Liberation, subclass 161 for a process of paper making wherein a biocide is added during the process.
- 174, Electricity: Conductors and Insulators, subclasses 68.1+ for electrical conductor structures containing a biocide or repellent (e.g., to repel rats, etc.).
- 208, Mineral Oils: Processes and Products, subclass 1 and 2 for biocidal mineral oil products and mixture thereof. Subclasses 4+ and mineral oil products preserved against biological attack by a mineral oil additive.
- 252, Compositions, subclasses 9+ for a lubricant composition protected against biological attack. Subclasses 9+ provides for a mineral oil containing a nonmineral oil preservative when the composition is disclosed to be useful as a lubricant and for preserved mineral oil fractions, heavier than mapthas, gasolines and kerosene which are not disclosed to be lubricants but are disclosed to have several, nonlimiting utilities; subclasses 106+ for detergent cleaning compositions containing a biocide, insecticide or antiseptic. These compositions may be disclosed or claimed as useful in cleaning a living body; e.g., sham-
- poo, etc; subclasses 299.01+ for liquid crystal containing optical filter compositions; subclasses 380+ for preservative compositions broadly not elsewhere provided for and for a preservative mixed with a compound claimed so broadly as not to afford a basis of classification; e.g., "a carbon compound", etc.; subclasses 365+ for antiingestible or denatured compositions; subclass 8.6 for perfume compositions, per se; subclasses 582,+ for other optical filter compositions.
- 260, Chemistry of Carbon Compounds, appropriate subclasses for an organic compound which is disclosed or claimed as having a Class 424 utility, also for an organic compound with an additive to protect the compound against deterioration or biological attack.
- 423, Chemistry of Inorganic Compounds, appropriate subclasses for inorganic compounds and nonmetallic elements which may have a Class 424 utility. Class 423 provides inorganic compounds which include an additive, see especially subclass 265.
- 504, Class 423 provides for compositions containing an element or an inorganic compound combined with a preservative; e.g., a substance which protect the element or compound against biological attack, etc. However, a Class 423 element or compound containing a preservative in which state it is claimed or solely disclosed as having a Class 424 utility, is placed as an original in Class 424.
- Plant Protecting and Regulating Compositions, provides for compositions having a stimulating, inhibiting (Herbicides), or regulating action on plant growth and methods of using such compositions. Class 504 specifically provides for algicidal compositions in subclasses 150+ and nutrient compositions which contain an insecticide, fungicide, or deodorant in subclasses 101+. Class 504 is superior to Class 424. If claims are drawn to a "pesticide" composition or method without

specifically reciting the nature of the "pest" to be controlled or eradicated, the patent is placed as an original in Class 424 when only a Class 424 type of "pest" (e.g., fungi, insect, rodent, etc.) is revealed in the patent disclosure. However, if both Class 504 and Class 424 types of "pest" are specifically disclosed or if no disclosure is made as to the specific type of pest, the patent is placed in Class 504 as an original and cross referenced to Class 424. Class 504, subclass 100, also provides for seeds coated with Class 424 biocidal compositions.

**406 Ingredients for reducing the noxious effect of the active substances to organisms other than pest (e.g., toxicity reducing compositions, selfdestructing compositions, etc.):**  
 This subclass is indented under subclass 405. Subject matter in which the composition includes a component for reducing the toxic effects of the composition on insects, animals or plants that are not the target of the biocidal composition.

**407 Containing material to enhance the sticking of the active ingredients:**  
 This subclass is indented under subclass 405. Subject matter in which the composition contains a component which enhances the ability of the composition to stick to the surface to which it is applied.

**408 Capsule or pelleted or tablet:**  
 This subclass is indented under subclass 405. Subject matter in which the biocide, repellent or attractant is in a capsule or is pelleted or tableted.

**409 Solid as carrier or diluent:**  
 This subclass is indented under subclass 405. Subject matter in which the composition is coated on or impregnated in a solid self sustaining nominally claimed article.

(1) Note. This and indented subclass are intended to provide for articles by name only when coated by a biocidal or insect or animal attractant or repellent composition.

(2) Note. If an article claim has structure claimed the article will usually be provided for in an article class rather than in this class.

#### SEE OR SEARCH CLASS:

**428, Stock Material or Miscellaneous Articles,** appropriate subclasses provides for a stock material product in the form of a single or plural layer web or sheet as provided for therein and which contains a biocide. An article impregnated with a biocide and not containing structure (e.g., size or apertures) and not elsewhere provided (e.g., Class 428, subclass 540) will be classified in Class 424. Class 424 provides for a claim to a base coated with a compound or composition which has a Class 424 utility and in which the base function as a carrier for the active material (e.g., medicated applicator or mosquito repellent fabric). Class 424 also provides for a claim to a coated dosage unit containing a substance having a Class 424 utility. Class 428 provides for a claim to a coated or impregnated article, not otherwise provided for which comprises a base preserved by a composition or compound which has a Class 424 utility (e.g., mothproofed textile or termite proofed wood).

**410 Impregnated or coated food or edible simulative of food (e.g., bait, poison, etc.):**  
 This subclass is indented under subclass 409. Subject matter in which the composition is an impregnated food or edible, a coated food or edible or a material made to simulate an edible or food. Class 424 provides for compositions intended to nourish an animal when such compositions are designed to be administered to the animal by routes other than the oral cavity; e.g., by rectal or parenteral injection, or via a tube through the alimentary tract or stomach wall. Class 424 provides for a compositions containing a food or beverage when said compositions are claimed solely disclosed as having a utility set forth in the Class Definition above. However, a food or beverage containing a biocide as a preservative therefore will be classified as original in Class 426. Class 424

also provides for methods of preserving Class 426 products when said methods are no more than the mere use of biocides. Class 424 further provides for food or beverage compositions containing an animal growth regulator or other anabolic agents. For purposes of classification an animal growth regulator or anabolic agent is defined to include the following illustrative causative effects: (a) increase feed efficiency or weight gain; (b) enhance color of egg yolks, combs, skin or legs of chickens; (c) enhance the hatchability of eggs; (d) vary the fat-protein ratio or texture of flesh; (e) chemically caponize an animal, etc.

**SEE OR SEARCH CLASS:**

426, Foods or Edible Material: Processes, Compositions, and Products, provides for compositions intended to nourish an animal by natural oral ingestion, which may contain an additive necessary to maintain the normal metabolism of the animal; e.g., vitamins, minerals, amino acids, etc.

**411 Impregnated or coated nominal articles (e.g., flea collars, etc.):**

This subclass is indented under subclass 409. Subject matter in which the impregnated or coated material is an article by name only.

(1) Note. The subclass is intended to provide for articles such as flea collars claimed as no more than coated or impregnated with an insecticide.

**SEE OR SEARCH CLASS:**

427, Coating Processes, subclass 212 for a comprehensive listing of classes providing for coated and impregnated articles or materials.  
 428, Stock Material or Miscellaneous Articles, subclass 907 (a cross-reference art collection) for a product treated against attack by plant or animal life.

**412 Packaging, cordage building material or container:**

This subclass is indented under subclass 411. Subject matter in which a product is impregnated or coated with a biocide or repellent which renders the surface of same toxic or repellent to a living organism and which are disclosed as being useful as a wrapping, pack-

aging, lining or building material or a container.

- (1) Note. Included herein are such products as an impregnated twine, bale band, wall paper, wall board, etc.
- (2) Note. The containers included herein are paper bags and tubes and the like.

**SEE OR SEARCH CLASS:**

52, Static Structures (e.g., Buildings), subclasses 129+ for a burial vault with means to treat the corpse or product thereof with a Class 424 composition. Subclass 517 for structurally defined static structures; e.g., buildings, utility poles, etc., which a coating to repel biological attack.  
 57, Textiles: Spinning, Twisting, and Twining, subclasses 217, 221, 223, 232, 232+, and 258 strands, having structural limitations, coated with a biocide.  
 206, Special Receptacle or Package, provides for a dosage unit made up of a therapeutic material or article and a container, where the container is intended to be physically removed from the therapeutic material or article; e.g., a wrapper pill or capsule, etc. Class 424, Drug, Bio-Affecting a Body Treating Compositions, takes a structured dosage unit which is intended to be used as a whole without disassembling or removal of a part; e.g., unwrapping. Examples of dosage units provided for in Class 424 are a capsule filled with coated particulate material intended to be swallowed whole, and a filled soluble, gelatin container intended to be dissolved in toto in water or other liquid. Receptacles, subclasses 87.1+ for a disinfecting device to be attached to the receptacles of that class.

**Cellulosic material or building material:**

This subclass is indented under subclass 412. Subject, matter in which the material impregnated is cellulose or contains cellulose or is claimed or disclosed as a building material.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 461, for a sustained or differential release capsule containing discrete particles coated which cellulose or a cellulose derivative.
- 480, for a tablet coated which cellulose or a cellulose derivative.
- 494, for a cellulose or cellulose derivative coated particle.
- 499, for cellulose or cellulose derivative impregnated particles.

**414 Impregnated or coated paper or foil:**

This subclass is indented under subclass 409. Subject matter in which the solid carrier is paper or a foil.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 419, for a biocidal particle coated with a synthetic resin.
- 443, for a synthetic resin web sheet or filament base, bandage or dressing with an incorporated medicament.
- 462, for a sustained or differential release capsule containing discrete particles coated with a synthetic resin.
- 482, for a tablet coated with a solid synthetic resin.
- 497, for a synthetic resin coated particle.
- 501, for a synthetic resin impregnated particle.

**415 Wrapping paper:**

This subclass is indented under subclass 414. Subject matter in which the paper or foil is disclosed as intended to be used for wrapping.

- (1) Note. This subclass provides for fruit wrappers and the like.

**416 Insecticidal paper or foil:**

This subclass is indented under subclass 414. Subject matter in which the paper or foil is coated or impregnated with an insecticide.

**417 Coated particulate form (e.g., liposome, etc.):**

This subclass is indented under subclass 409. Subject matter in which the composition is in the form of a coated or impregnated particle.

- (1) Note. Subclasses 418-420 provide for coated particles in which either the coating or the core is of the denominated compound. Subclass 421 provides for particles having inorganic cores.

**418**

**Protein or derivative or polysaccharide or derivative:**

This subclass is indented under subclass 417. Subject matter in which the coating or core of the particles is a protein or derivative or a polysaccharide or derivative.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 440, for candy, candy coated pharmaceuticals or chewing gum.
- 456, for a gelatin capsule.
- 460, for a sustained or differential release capsule containing discrete particles coated with a protein.
- 461+, for a sustained or differential release capsule containing discrete particles coated with saccharide.
- 477+, for a protein coated tablet.
- 478, for a gelatin coated tablet.
- 479, for a saccharide coated tablet.
- 491, for protein coated particles.
- 492, for gelatin coated particles.
- 493, for saccharide coated particles.
- 499, for protein or saccharide impregnated particles.

**419**

**Natural or synthetic resin:**

This subclass is indented under subclass 417. Subject matter in which the coating or core is a natural or synthetic resin.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 414, for a synthetic resin foil coated or impregnated with a biocide.
- 443, for a synthetic resin web sheet or filament base, bandage or dressing with an incorporated medicament.
- 462, for a sustained or differential release capsule containing discrete particles coated with a synthetic resin.
- 482, for a tablet coated with a solid synthetic resin.
- 497, for a synthetic resin coated particle.
- 501, for a synthetic resin impregnated particle.

- 420    Waxes, fatty acids, etc. (e.g., liposome, etc.):**  
 This subclass is indented under subclass 417. Subject matter in which the coating or core of the particles is a wax, fatty acid or ester type wax.
- (1) Note. Liposomes are provided for here.
- 421    Inorganic particle:**  
 This subclass is indented under subclass 417. Subject matter which the core of the particles is inorganic.
- 422    Implant or insert:**  
 This subclass is indented under subclass 400. Subject matter in which the composition is in a special physical form to adapt for implanting or inserting in the living body wherein the composition releases an active pharmaceutical ingredient in a sustained or differential manner.
- (1) Note. Where a patent claims dosage units (in the absence of more comprehensive or controlling claims); e.g., a tablet comprising (or containing) 15 grains of compound X", and in the absence of any structural limitations, definite shape, surface deformation, etc., the original has been placed with the compound.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 449, for a transdermal or percutaneous bandage for sustained release of a drug.  
 457, for a sustained or differential release composition is a capsule.  
 468, for a sustained or differential release tablet.
- SEE OR SEARCH CLASS:  
 604, Surgery, subclass 502 for methods of administering a therapeutic material with a subcutaneous implant.
- 423    Surgical implant or material:**  
 This subclass is indented under subclass 422. Subject matter in which the composition is claimed or disclosed as surgically implantable.
- 424    Membrane or diffusion barrier:**  
 This subclass is indented under subclass 423. Subject matter in which the sustained or differential release of active pharmaceutical takes place through a membrane or diffusion barrier.
- SEE OR SEARCH CLASS:  
 604, Surgery, subclass 501 for methods of performing iontophoretic treatment.
- 425    Diffusion barrier is matrix:**  
 This subclass is indented under subclass 424. Subject matter in which the diffusion barrier is a matrix.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 469+, for matrix containing tablets.  
 484+, for orally ingestable matrixes.
- 426    Errodable, resorbable, or dissolving:**  
 This subclass is indented under subclass 423. Subject matter in which the surgical implant or material is errodable, resorbable, or dissolving.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 428, for an errodable, resorbable, or dissolving ocular depot or matrix.  
 444, for a web sheet or filament base or bandage that is resorbable by the body.
- 427    Ocular:**  
 This subclass is indented under subclass 422. Subject matter in which special physical form is intended and adapted for placement between the surface of the eye the conjunctiva or between the surface of the eye and a lacrimal gland.
- (1) Note. This subclass contains therapeutic devices which are inserted into the opening of a lacrimal gland for the purpose of using the tears secreted by said gland to dispense the therapeutic material.
- SEE OR SEARCH CLASS:  
 604, Surgery, subclass 290 for a method of applying a body treating material or removing material from the body surface. Subclasses 294+ for methods of application to the eye or eye socket.

- 428 Bioerrodable, resorbable, or dissolving:**  
This subclass is indented under subclass 427. Subject matter in which the inserted is errodable, resorbable, or dissolving.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
 426, for an errodable, resorbable, or dissolving depot or matrix.  
 444, for a web sheet or filament base or bandage that is resorbable by the body.
- 429 Contact lens:**  
This subclass is indented under subclass 427. Subject matter in which the special physical form is a coated or impregnated lens designed to cover the cornea of the eye.
- SEE OR SEARCH CLASS:  
 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclass 507 for the process of dyeing a contact lens or product thereof.  
 351, Optics: Eye Examining, Vision Testing and Correcting, appropriate subclasses for methods of and instruments for fitting contact lenses and for structural features and adaptations for contact lenses, such as coloring a portion of the lens to adsorb part of the visible spectrum; subclasses 159.02 through 159.38 for eye contact lens.  
 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 1 through 43 for generic processes of deodorizing, preserving, or sterilizing contact lenses or compositions thereof.  
 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, subclasses 112+ for compositions used for the mere cleaning of contact lenses.  
 514, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for (1) a contact lens composition which contains a nonbioactive polymer admixed with a medicament or (2) composition with or without a nonbioactive polymer used to sterilize

- a contact lens composition to reduce or eliminate any eye injury.  
 523, Synthetic Resins or Natural Rubbers, subclass 106 for a composition containing an inactive solid synthetic polymer intended for manufacturing contact lenses. This subclass also provides for a contact lens composition containing its own preserving agent when it is clearly specified and restricted for that use.  
 604, Surgery, subclass 290 for a method of applying a body treating or removing material or subclasses 294+ for a method of application to the eye or eye socket.
- 430 Vaginal, urethral, uterine:**  
This subclass is indented under subclass 422. Subject matter in which the composition is in a special physical form intended to be inserted in the female reproductive tract or the urethra.
- 431 Tampon:**  
This subclass is indented under subclass 430. Subject matter in which the special physical form is coated or impregnated tampon.
- 432 IUD or ring:**  
This subclass is indented under subclass 430. Subject matter in which the special physical form is a structured article intended for insertion in the uterus.
- 433 Depot, pellet, matrix, or suppository:**  
This subclass is indented under subclass 430. Subject matter in which the special physical form is a coated or impregnated depot, pellet, matrix or suppository.
- 434 Mucosal (e.g., nasal, etc.):**  
This subclass is indented under subclass 422. Subject matter in which the special physical form is intended and adapted for application to a mucous membrane.
- 435 Mouth:**  
This subclass is indented under subclass 434. Subject matter in which mucosal surface is in the mouth.

**436 Anal, rectal (e.g., suppositories, etc.):**

This subclass is indented under subclass 434. Subject matter under 5 ... in which the mucosal surface is in the anus or rectum.

**437 Otic:**

This subclass is indented under subclass 422. Subject matter in which the special physical form is intended and adapted for placement in the ear canal.

**438 Specially adapted for ruminant animal:**

This subclass is indented under subclass 400. Subject matter in which the special physical form is a coated or impregnated product that is claimed or disclosed as useful in the treatment of ruminant animals.

- (1) Note. This subclass provides for tablets, capsules, etc., that are typically adapted to be retained in part of the ruminant animals digestive system in the rumino-reticular sac.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 442, for animal food as a carrier for a pharmaceutical.

**439 Food or edible as carrier for pharmaceutical:**

This subclass is indented under subclass 400. Subject matter in which the special physical form is a coated or impregnated food or edible which serves as a means of administering a pharmaceutical.

- (1) Note. For Disposition of Foods, see the Search Class note below.

**SEE OR SEARCH CLASS:**

- 426, Foods or Edible Material: Processes, Compositions, and Products, provides for compositions intended to nourish an animal by natural oral ingestion, which can contain an additive necessary to maintain the normal metabolism of the animal; e.g., vitamins, minerals, amino acids, etc. Class 424 provides for compositions intended to nourish an animal when such compositions are designed to be administered to the animal by routes

other than the oral cavity; e.g., by rectal or parenteral injection, or via a tube through the alimentary tract or stomach wall. However, a food or beverage containing a biocide as a preservative therefore will be classified as original in Class 426. Class 424 also provides for methods of preserving Class 426 products when said methods are no more than the mere use of biocides. Class 424 further provides for food or beverage compositions containing an animal growth regulator or other anabolic agents. For purposes of classification an animal growth regulator or anabolic agent is defined to include the following illustrative causative effects: (a) increase feed efficiency or weight gain; (b) enhance color or egg yolks, combs, skin or legs of chickens; (c) enhance the hatchability of eggs; (d) vary the fat-protein ratio or texture of flesh; (e) chemically caponize an animal, etc.

**440****Candy, candy coated or chewing gum:**

This subclass is indented under subclass 439. Subject matter in which the coated or impregnated food or edible is candy, candy coated or is chewing gum.

- (1) Note. This subclass includes compositions under the class definition which are specifically disclosed to be in a chewing gum form, that is containing a chewable ingredient generally insoluble in the saliva which is usually disclosed to function as the carrier or vehicle for the active ingredient.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 418, for a saccharide coated biocidal particle.  
 459, for a sustained or differential release capsule containing discrete particles coated with a natural gum or resin.  
 461, for a sustained or differential release capsule containing discrete particles coated with a saccharide.  
 479, for a saccharide coated tablet.  
 481, for a tablet coated with a natural gum or resin.

- 493, for saccharide coated particles.
- 496, for a natural gum or resin coated particle.
- 499, for saccharide impregnated particles.
- 500, for natural gum or resin impregnated particles.

**441 Chewable tablet or wafer:**

This subclass is indented under subclass 439. Subject matter in which the coated or impregnated food or edible is in the form of a chewable tablet or wafer.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 464, for tablets intended to be swallowed.

**442 Animal food:**

This subclass is indented under subclass 439. Subject matter in which the coated or impregnated food or edible is intended to be consumed by a nonhuman animal.

**443 Web, sheet or filament bases; compositions of bandages; or dressings with incorporated medicaments:**

This subclass is indented under subclass 400. Subject matter in which the special physical form contains a coated, impregnated of two layer web, sheet, a filament or is a coated or impregnated bandage or dressing.

(1) Note. This subclass provides for physical forms wherein the coated or impregnated base or substrate is of a length or width which is proportionately larger than the thickness thereof; e.g., woven textile material, felted self sustaining mat, film, continuous or indeterminate length filament, synthetic resin film, leather, etc. Fibers nominally recited are excluded from this subclass.

(2) Note. A web sheet or filament base coated with a compound or composition merely to preserve the base against biological attack is excluded from this and indented subclasses (see SEARCH CLASS below).

(3) Note. This and indented subclasses provide only for articles having a maximum of two layers and lacking sufficient structure to be placed in other classes

based on structure (see SEARCH CLASS below).

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 414+, for a synthetic resin foil coated or impregnated with a biocide.
- 419, for a biocidal particle coated with a synthetic resin.
- 462, for a sustained or differential release capsule containing discrete particles coated with a synthetic resin.
- 482, for a table coated with a solid synthetic resin.
- 497, for a synthetic resin coated particle.
- 501, for a synthetic resin impregnated particle.

SEE OR SEARCH CLASS:

- 47, Plant Husbandry, subclass 32.5 for a plant guard containing a biocide and subclass 56 for a seed tape containing a biocide, and subclass 56 for a seed tape containing a biocide, claimed in terms of particular structure or shape, or claimed in combination with plants or seeds.
- 57, Textiles: Spinning, Twisting, and Twining, especially subclass 200 and 241 for a yarn, cord or cable which is coated or impregnated with a compound composition to protect the yarn, cord or cable against biological attack.
- 162, Paper Making and Fiber Liberation, subclass 161 for a process of making paper wherein a biocide is used in the process and the resulting product containing a biocide wherein the biocide protects the product from biological attack.
- 428, Stock Material or Miscellaneous Articles, appropriate subclasses for a stock material product in the form of a single or plural layer web or sheet of the type therein provided, and for which there is no other provision and which is coated or impregnated with a compound or composition to protect the article against biological attack, see subclass 607 (a cross-reference art collection) for a product which has been treated to be resistant against plant or nasal attack. An article

impregnated with a biocide and not containing structure (e.g., size or apertures) and not elsewhere provided (e.g., Class 428, subclasses 540+) will be classified in Class 424. Class 428 provides for a claim to a coated or impregnated article, not otherwise provided for, which comprises a base preserved by a composition or compound which has a Class 424 utility, (e.g., mothproofed textile or termite proofed wood). Class 424 provides for a claim to a base coated with a compound or composition which has a Class 424 utility and in which the base function as a carrier for the active material (e.g., medicated applicator or mosquito repellent fabric). Class 424 also provides for a claim to a coated dosage unit containing a substance having a Class 424 utility. Class 128, provides for bandages, body-applicators or body dressing which contain a medicine and are claimed in terms of more structure than a randomly distributed single layer on a base material or randomly impregnated base material. For example, Class 128 takes a base material wherein certain portions thereof are impregnated with an adhesive and other portions are impregnated with a Class 424 medicine at those places where there is no adhesive backing on a gauze impregnated with a Class 424 composition, etc. Class 128 also provides for a bandage, body applicator or body dressing containing a Class 424 composition and which is claimed in terms of specific structure; e.g., pore size, thickness, length, width, etc. Class 424 takes bandages, body applicator or body dressing which contains a specific or nominally recited medicinal ingredient which is either randomly distributed in a singly layer on a base material or randomly impregnated in a base material.

**444 Resorbable by the body:**

This subclass is indented under subclass 443. Subject matter in which at least part of the dressing or bandage is resorbable by the body.

**445**

**Dressings:**

This subclass is indented under subclass 443. Subject matter in which the web or filament base is intended to be used to cover an open wound but is without means to hold the base in place over the wound.

- (1) Note. This subclass consists primarily of older patents to materials used to cover wounds.

**446**

**Medicated gauze pads:**

This subclass is indented under subclass 445. Subject matter in which the dressing is a gauze pad coated or impregnated with a drug.

**447**

**Bandages with incorporated medicaments:**

This subclass is indented under subclass 443. Subject matter in which the bandage or dressing is coated or impregnated with a pharmaceutical material.

**SEE OR SEARCH CLASS:**

- 128, Surgery, appropriate subclasses for apparatus for treating abnormal conditions of the human body. Class 128, also provides for medicated applicators; e.g., bandages, etc., claimed in terms of more structure than a coating or a base.
- 604, Surgery, subclasses 304 through 308 for subject matter of that class including a bandage pad or shield placed on the body for sustained treatment thereof.

**448**

**Pressure sensitive adhesive means:**

This subclass is indented under subclass 447. Subject matter in which the bandage has a pressure sensitive adhesive as one layer on all or part of the bandage.

**SEE OR SEARCH CLASS:**

- 604, Surgery, subclass 307 for subject matter of that class wherein the bandage pad or shield is adhesively secured to the body. Subclasses 386, 389 and 390 for adhesive sued to attach an absorbent pad during use.

**449 Transdermal or percutaneous:**

This subclass is indented under subclass 447. Subject matter in which the bandage or dressing is designed to permit passage of a medicament through the skin of a living body by absorption through the skin without preliminary puncture or abrasion.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 422+, for an implant or insert for sustained releases of a drug.
- 457, for a sustained or differential release composition in a capsule.
- 468, for a sustained or differential release capsule.

**450 Liposomes:**

This subclass is indented under subclass 400. Subject matter in which the special physical form is a pharmaceutical substance contained in a lipid bilayer.

SEE OR SEARCH CLASS:

- 436, Chemistry: Analytical and Immunological Testing, subclass 829 for an art collection of liposomes containing immunological materials.

**451 Capsules (e.g., of gelatin, of chocolate, etc.):**

This subclass is indented under subclass 400. Subject matter in which the special physical form includes a capsule.

- (1) Note. A capsule is a preformed hard or soft, soluble container or shell which is filled with a pharmaceutical in particulate or liquid form.
- (2) Note. Where a patent claims dosage units (in the absence of more comprehensive or controlling claims as indicated below) e.g., "a tablet comprising (or containing) 15 grains of compound X", and in the absence of any structural limitations, definite shape, surface deformation, etc., the original has been placed with the compound.

SEE OR SEARCH CLASS:

- 128, Surgery, appropriate subclasses for a capsule or pill, not specifically provided for elsewhere, that must be bro-

ken prior to use to empty its contents, even if said capsule or pill contains a specific medicine. This includes an inhalant capsule.

424, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses take a medicine in the form of a capsule or pill that is ingested, as well as a method of using an inhalant capsule by squeezing said capsule to liberate the enclosed medicine. Class 128, provides for a dosage unit; e.g., suppository, etc., shaped to fit a particular body cavity, even if the active ingredients are claimed specifically.

206, Special Receptacle or Package, appropriate subclasses provides for a dosage unit made up of a therapeutic material or article and a container, where the container is intended to be physically removed from the therapeutic material or article; e.g., a wrapped pill or capsule, etc.

424, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses takes a structured dosage unit which is intended to be used as a whole without disassembly or removal of a part; e.g., unwrapping, etc. Examples of dosage units provided for in Class 424 are a capsule filled with coated particulate material intended to be swallowed whole, and a filled soluble, gelatin container intended to be dissolved in toto in water or other liquid.

**452 With claimed designated perfecting feature in contents (e.g., excipient, lubricant, etc.):**

This subclass is indented under subclass 451. Subject matter in which there is claimed a feature which perfects the utility of the capsule which resides in the contents of the capsule.

**453****Telescoping two piece:**

This subclass is indented under subclass 451. Subject matter in which the capsule consists of two sections, one slipping over the other, completely surrounding the drug formulation.

**454 With tamperproof, locking, or sealing feature:**

This subclass is indented under subclass 453. Subject matter in which the telescoping two piece capsule has a feature indicating that the capsule has been opened after filling or a feature that prevents the capsule from being opened after filling without destruction of all or part of the capsule.

**455 Containing emulsions, dispersions, or solutions:**

This subclass is indented under subclass 451. Subject matter in which the capsule contains an emulsion, dispersion or solution.

**456 Gelatin:**

This subclass is indented under subclass 451. Subject matter in which the capsule is made of a gelatin containing composition.

- (1) Note. Typically sugar, water and sulfur dioxide are added to the gelatin of the capsule as an aid in manufacture, filling or as a preservative.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for a protein coated biocidal particle.
- 460, for a sustained or differential release capsule containing discrete particles coated with a protein.
- 476, for particles coated with gelatin.
- 477+, for a protein coated tablet.
- 478, for a pill or tablet coated with gelatin.
- 491, for protein coated particles.
- 492, for gelatin coated particles.
- 499, for particles impregnated with a protein.

**457 Sustained or differential release:**

This subclass is indented under subclass 451. Subject matter in which the timing or spacing of administration or absorption of an active ingredient in a system, (e.g., animal body) is regulated by the structure or physical arrangement of elements so that a single administration provides: (a) a gradual but continuous feeding of the active ingredient to the system by slow release or (b) discontinuous feeding in two or more distinct stages.

- (1) Note. An enteric coated medicament, per se, is not considered to be within the scope of this or the indented subclasses. Such a product, generally is a form, or with a coating designed to enable physical passage through or to resist the acid gastric juices for eventual dissolution or use through or in intestines, is classified elsewhere below, for example, on the basis of the particular disclosed enteric coating. Patents placed in this subclass, however, may claim an enteric coating in addition to a sustained release or differential release mechanism as defined.

- (2) Note. An claimed composition which does not recite structure, but is disclosed to have a sustained release or differential release action, is classified elsewhere according to the nature of the ingredients therein, see, for example, subclass 78.01 which provides for the combination of an active ingredient bound to an ion exchange type synthetic resin or subclass 48 in which active ingredients distributed homogeneously throughout a chewing gum base are released progressively therefrom by chewing and mixing with saliva.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 422+, for an implant or insert for sustained release of a drug.
- 449, for a transdermal or percutaneous bandage for sustained release of a drug.
- 468, for a sustained or differential release tablet.

**458 Containing discrete coated particles, pellets, granules, or beads:**

This subclass is indented under subclass 457. Subject matter in which the capsule contains discrete coated particles, pellets, granules or beads.

- (1) Note. This and the indented subclasses are intended to provide for capsules filled with small fluent particles of relatively small size compared to the capsule.

- (2) Note. This subclass will provide for particles having an inorganic coating.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 414+, for a synthetic resin foil coated or impregnated with a biocide.
- 419, for a biocidal particle coated with a synthetic resin.
- 443, for a synthetic resin web sheet filament base, bandage or dressing with an incorporated medicament.
- 462, for a sustained or differential release capsule containing discrete particles coated with a synthetic resin.
- 482, for a tablet coated with a solid synthetic resin.
- 497, for a synthetic resin coated particle.

**459 Organic coatings:**

This subclass is indented under subclass 458. Subject matter in which the particles contained in the capsule are coated with an organic chemical containing material.

- (1) Note. This subclass would provide for coatings containing natural gums or resins.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 440, for a chewing gum containing a natural gum.
- 481, for a tablet coated with a natural gum or resin.
- 496, for a natural gum or resin coated particle.
- 500, for natural gum or resin impregnated particles.

**460 Containing proteins or derivatives thereof (e.g., gelatin, etc.):**

This subclass is indented under subclass 459. Subject matter in which the particles contained in the capsule are coated with a protein or composition containing a protein or a protein derivative.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for a protein coated biocidal particle.
- 456, for a gelatin capsule.
- 477+, for a protein coated tablet.

- 478, for a gelatin containing gelatin coated tablet.
- 491, for protein coated particles.
- 492, for gelatin coated particles.
- 499, for protein impregnated particles.

**461**

**Containing polysaccharide (e.g., cellulose sugars, etc.):**

This subclass is indented under subclass 459. Subject matter in which the particles contained in the capsule are coated with a saccharide or a composition containing a saccharide.

- (1) Note. This subclass provides for cellulose and cellulose derivatives.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for a saccharide coated biocidal particle.
- 440, for candy, candy coated pharmaceuticals or chewing gum.
- 479, for a saccharide coated tablet.
- 493, for saccharide coated particles.
- 499, for saccharide impregnated particles.

**462**

**Containing solid synthetic polymers:**

This subclass is indented under subclass 459. Subject matter in which the particles contained in the capsule are coated with a solid synthetic resin.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 414, for a synthetic resin foil coated or impregnated with a biocide.
- 419, for a biocidal particle coated with a synthetic resin.
- 482, for a tablet coated with a solid synthetic resin.
- 493, for a synthetic resin web sheet or filament base, bandage or dressing with an incorporated medicament.
- 501, for a synthetic resin impregnated particle.

**463**

**Coated capsules:**

This subclass is indented under subclass 451. Subject matter in which the capsule is coated.

**464**

**Tablets, lozenges, or pills:**

This subclass is indented under subclass 400. Subject matter in which the special physical form is a tablet, lozenge or pill.

- (1) Note. A tablet is made by compressing a drug and an inert binder such as starch or lactose into a hard self sustaining mass. A pill is in obsolete dosage form made by rolling the drug and a binder into a sphere. A lozenge or troche is a flavored tablet intended to dissolve slowly when held in the mouth.
- (2) Note. In the indented subclasses tablet should be understood to include pills, lozenges or troches.
- (3) Note. Where a patent claims dosage units (in the absence of more comprehensive or controlling claims) e.g., "a tablet comprising (or containing) 15 grains of compound X", and in the absence of any structural limitations, definite shape, surface deformation, etc., the original has been placed with the compound.

**SEE OR SEARCH CLASS:**

128, Surgery, appropriate subclasses provides for a capsule or pill, not specifically provided for elsewhere, that must be broken prior to use to empty its contents, even if said capsule or pill contains a specific medicine. This includes an inhalant capsule.

424, Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses takes a medicine in the form of a capsule or pill that is ingested, as well as a method of using an inhalant capsule by squeezing said capsule to liberate the enclosed medicine. Class 128, provides for a dosage unit; e.g., suppository, etc., shaped to fit a particular body cavity, even if the active ingredients are claimed specifically.

208, Mineral Oils: Processes and Products, appropriate subclasses provides for a dosage unit made up of a therapeutic material or article and a container, where the container, where the container is intended to be physically removed from the therapeutic material on article; e.g., a wrapped pill or capsule, etc. Class 424, takes a structured dosage unit which is intended to be used as a whole without disassembly

or removal of a part; e.g., unwrapping. Examples of dosage units provided to in Class 424 are a capsule filled with coated particulate material intended to be swallowed whole, and a filled soluble, gelatin container intended to be dissolved in toto in water or other liquid.

**465****With claimed perfecting feature in contents (e.g., excipient, lubricant, etc.):**

This subclass is indented under subclass 464. Subject matter in which there is claimed a feature which perfects the utility of the tablet, lozenge or pill which resides in the contents of the capsule

**466****Effervescent:**

This subclass is indented under subclass 464. Subject matter in which a tablet is claimed or disclosed which is capable of producing bubbles or effervescence by a chemical reaction, a tablet or contains a pressurized fluid.

- (1) Note. Compositions which are disclosed as having volatile ingredient, per se, or which merely by being in particulate or liquid form may be sprayed or diffused by the simple application of externally applied air pressure or heat are classified elsewhere on the basis of the active component or components in said composition.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

43+, for compositions which produce bubbles or effervescence or use a pressurized gas as a propellant.

**467****Printed, embossed, grooved, or perforated:**

This subclass is indented under subclass 464. Subject matter in which the tablet is printed, embossed, grooved or perforated.

- (1) Note. Typically the tablets of this subclass have an indicia or are shaped to permit the tablet to be divided easily.

**SEE OR SEARCH CLASS:**

D24, Medical and Laboratory Equipment, subclasses 100 through 104 which provides for design patents for pharmaceutical products.

- 468 Sustained or differential release type:** This subclass is indented under subclass 464. Subject matter in which the timing or spacing of administration or absorption of an active ingredient in a system (e.g., animal body) is regulated by the structure or physical arrangement of elements so that a single administration provides: (a) a gradual but continuous feeding of the active ingredient to the system by slow release or (b) discontinuous feeding in two or more distinct stages.
- (1) Note. An enteric coated medicament, per se, is not considered to be within the scope of this or the indented subclasses. Such a product, generally is a form, or with a coating, designed to enable physical passage through or to resist the acid gastric juices for eventual dissolution or use through or in the intestines, is classified elsewhere below, for example, on the basis of the particular disclosed enteric coating. Patents placed in this subclass, however, may claim an enteric coating. Patents placed in this subclass, however, may claim an enteric coating in addition to a sustained release or differential release mechanism as defined.
- (2) Note. A claimed composition which does not recite structure, but is disclosed to have a sustained release or differential release action, is classified elsewhere according to the nature of the ingredients therein, see, for example, subclass 78.01 which provides for the combination of an active ingredient bound to an ion exchange type synthetic resin or subclass 48 in which active ingredients distributed homogeneously throughout a chewing gum base are released progressively therefrom by chewing and mixing with saliva.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 422+, for an implant or insert for sustained release of a drug.
  - 449, for a transdermal or percutaneous bandage for sustained release of a drug.
  - 457, for a sustained or differential release composition in a capsule.
- 469 Discrete particles in supporting matrix:** This subclass is indented under subclass 468. Subject matter in which discrete soluble particles of the active ingredient are positioned or dispersed in a solid, generally insoluble matrix from which said particles are leached sequentially under conditions of use from the outside portions of the matrix inwardly.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:**
- 458+, for a capsule containing discrete coated particles.
  - 484+, for a matrix containing a drug.
  - 489+, for coated or impregnated particles carrying a drug.
- 470 Where particles are granulated:** This subclass is indented under subclass 469. Subject matter in which the particles entrapped in the matrix are preformed granules.
- 471 Plural concentric cores:** This subclass is indented under subclass 468. Subject matter which are composed of plural layers and the layers are plural concentric cores.
- 472 Layered unitary dosage forms:** This subclass is indented under subclass 468. Subject matter in which the tablet contains at least one layer completely covering the core or is composed of multiple layers of differing release properties.
- 473 With porous, perforated, apertured, or sieved layer (e.g., dialyzing layer, microporous layer, etc.):** This subclass is indented under subclass 472. Subject matter in which a sustained or differential release by means of a perforate or porous layer.
- 474 Coated pills or tablets:** This subclass is indented under subclass 464. Subject matter in which the special physical form is a coated pill or tablet.
- 475 Organic coatings:** This subclass is indented under subclass 474. Subject matter in which the coating is or contains an organic compound.

**476 Containing waxes, higher fatty acids, higher fatty alcohols, or derivatives thereof (e.g., chocolate):**

This subclass is indented under subclass 475. Subject matter in which the coating is or contains a wax, higher fatty acid, higher fatty alcohol or derivatives thereof.

**477 Containing proteins or derivatives thereof:**

This subclass is indented under subclass 475. Subject matter in which the coating is or contains a protein or derivative thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for a protein coated biocidal particle.
- 456, for a gelatin capsule.
- 460, for a sustained or differential release capsule containing discrete particles coated with a protein.
- 478, for a gelatin coated tablet.
- 491, for protein coated particles.
- 492, for gelatin coated particles.
- 499, for protein impregnated particles.

**478 Gelatin containing:**

This subclass is indented under subclass 477. Subject matter in which the protein is gelatin.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for a protein coated biocidal particle.
- 456, for a gelatin capsule.
- 460, for a sustained or differential release capsule containing discrete particles coated with a protein.
- 477, for a protein coated tablet.
- 491, for protein coated particles.
- 492, for gelatin coated particles.
- 499, for protein impregnated particles.

**479 Containing polysaccharide (e.g., sugar, etc.):**

This subclass is indented under subclass 475. Subject matter in which the coating is or contains a polysaccharide.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for a saccharide coated biocidal particle.
- 440, for candy, candy coated pharmaceuticals or chewing gum.

461+, for a sustained or differential release capsule containing discrete particles coated with a saccharide.

493, for saccharide coated particles.

499, for saccharide impregnated particles.

**480**

**Cellulose or derivative:**

This subclass is indented under subclass 479. Subject matter in which the coating is cellulose or a derivative thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 413, for cellulosic packaging or building material.
- 461, for a sustained or differential release capsule containing discrete particles coated with cellulose or a cellulose derivative.
- 494, for a cellulose or cellulose derivative coated particle.
- 499, for cellulose or cellulose derivative impregnated particles.

**481**

**Containing natural gums or resins:**

This subclass is indented under subclass 475. Subject matter in which the coating is or contains a natural gum or resin.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 440, for a chewing gum containing a natural gum.
- 459, for a sustained or differential release capsule containing discrete particles coated with a natural gum or resin.
- 496, for a natural gum or resin coated particle.
- 500, for natural gum or resin impregnated particles.

SEE OR SEARCH CLASS:

- 128, Surgery, appropriate subclasses for apparatus for treating abnormal conditions of the human body. Class 128 also provides for medicated applicators; e.g., bandages, etc., claimed in terms of more structure than a coating or a base.

**482**

**Containing solid synthetic polymers:**

This subclass is indented under subclass 475. Subject matter in which the coating is or contains solid synthetic polymer.

	SEE OR SEARCH THIS CLASS, SUB-CLASS:	488	<b>Polysaccharides (e.g., cellulose, etc.):</b> This subclass is indented under subclass 484. Subject matter in which the matrix is of a polysaccharide.
	414+, for a synthetic resin foil coated or impregnated with a biocide.		
	419, for a biocidal particle coated with a synthetic resin.		
	443, for a synthetic resin web sheet or filament base, bandage or dressing with an incorporated medicament.		
	462, for a sustained or differential release capsule containing discrete particles coated with a synthetic resin.		
	497, for a synthetic resin coated particle.		
	501, for a synthetic resin impregnated particle.		
483	<b>Ion-exchange resins:</b> This subclass is indented under subclass 474. Subject matter in which the material is an ion-exchange resin.	489	<b>Particulate form (e.g., powders, granules, beads, microcapsules, and pellets):</b> This subclass is indented under subclass 400. Subject matter in which the special physical form is a coated or impregnated particle.
484	<b>Matrices:</b> This subclass is indented under subclass 400. Subject matter in which the special physical form includes a reticulated net work of material from which the drug is eluted or released by dissolution of the reticulated network physically holding the drug.		(1) Note. Particle is intended to encompass any form which is solid but of sufficiently small size to behave in a fluid manner.
	SEE OR SEARCH THIS CLASS, SUB-CLASS:		(2) Note. This subclass includes any form denominated as powder, granule, bead, microcapsule or pellet.
	469+, for a tablet containing discrete particles in a supporting matrix.		
	489+, for coated or impregnated particles carrying a drug.		
485	<b>Natural gums, resin or latex:</b> This subclass is indented under subclass 484. Subject matter in which the matrix is of a natural gum or resin or latex.	490	<b>Coated (e.g., microcapsules):</b> This subclass is indented under subclass 489. Subject matter in which the particle is coated.
486	<b>Synthetic polymer:</b> This subclass is indented under subclass 484. Subject matter in which the matrix is of a solid synthetic polymer.		SEE OR SEARCH CLASS: 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 4.1 through 4.7 for processes of encapsulation of a material which is liquid involving the formation of microspheres.
487	<b>Acrylic acid and derivatives:</b> This subclass is indented under subclass 486. Subject matter in which the solid synthetic polymer contains acrylic acid.		427, Coating Processes, subclasses 213.3+ for processes of forming a microcapsule or the processes of solid encapsulation utilizing an emulsion or dispersion to form a solid walled microcapsule.
			428, Stock Material or Miscellaneous Articles, subclass 402 and indented subclasses 402.2+ for patents to coated or encapsulated products of general utility which recite a term; e.g., encapsulation, microencapsulation, sphere, microsphere, capsule microcapsule, etc., which give evidence for the product being a microcapsule. Subclass 402 provides an extensive listing to other classes providing for coated or impregnated articles or materials.

<p><b>491      Containing proteins and derivatives:</b> This subclass is indented under subclass 490. Subject matter in which the particle is coated with a protein or derivative thereof.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS:</p> <ul style="list-style-type: none"> <li>418, for a protein coated biocidal particle.</li> <li>456, for a gelatin capsule.</li> <li>460, for a sustained or differential release capsule containing discrete particles coated with a protein.</li> <li>477+, for a protein coated tablet.</li> <li>478, for a protein coated tablet.</li> <li>492, for gelatin coated particles.</li> <li>499, for protein impregnated particles.</li> </ul>	<p><b>494      Cellulose derivatives:</b> This subclass is indented under subclass 493. Subject matter in which the polysaccharide is cellulose or a derivative thereof.</p> <p><b>495      Ethyl cellulose:</b> This subclass is indented under subclass 494. Subject matter in which the cellulose derivative is ethyl cellulose.</p> <p><b>496      Containing natural gums/resins:</b> This subclass is indented under subclass 490. Subject matter in which the particles are coated with a natural gum or resin.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS:</p> <ul style="list-style-type: none"> <li>440, for a chewing gum containing a natural gum.</li> <li>459, for a sustained or differential release capsule containing discrete particles coated with a natural gum or resin.</li> <li>481, for a tablet coated with a natural gum or resin.</li> <li>500, for natural gum or resin impregnated particles.</li> </ul> <p><b>497      Containing solid synthetic polymers:</b> This subclass is indented under subclass 490. Subject matter in which the particles are coated with a solid synthetic resin.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS:</p> <ul style="list-style-type: none"> <li>414+, for a synthetic resin foil coated or impregnated with a biocide.</li> <li>419, for a biocidal particle coated with a synthetic resin.</li> <li>443, for a synthetic resin web sheet or filament base, bandage or dressing with an incorporated medicament.</li> <li>462, for a sustained differential release capsule containing discrete particles coated with a synthetic resin.</li> <li>482, for a tablet coated with a solid synthetic resin.</li> <li>501, for a synthetic resin impregnated particle.</li> </ul>
<p><b>492      Gelatin:</b> This subclass is indented under subclass 491. Subject matter in which the protein is gelatin.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS:</p> <ul style="list-style-type: none"> <li>418, for a protein coated biocidal particle.</li> <li>456, for a gelatin capsule.</li> <li>460, for a sustained or differential release capsule containing discrete particles coated with a protein.</li> <li>477+, for a protein coated tablet.</li> <li>478, for a gelatin coated tablet.</li> <li>491, for protein coated particles.</li> <li>499, for protein impregnated particles.</li> </ul>	
<p><b>493      Containing polysaccharides (e.g., sugars):</b> This subclass is indented under subclass 490. Subject matter in which the particles are coated with a polysaccharide.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS:</p> <ul style="list-style-type: none"> <li>418, for a saccharide coated diocidal particle.</li> <li>440, for candy, candy coated pharmaceuticals or chewing gum.</li> <li>461, for a sustained or differential release capsule containing discrete particles coated with a saccharide.</li> <li>479, for a saccharide coated tablet.</li> <li>499, for saccharide impregnated particles.</li> </ul>	

**498      Containing waxes, higher fatty acids, higher fatty alcohols, or derivatives thereof:**

This subclass is indented under subclass 490. Subject matter in which the particle is coated with a coating containing a wax, higher fatty acid, higher fatty alcohol or derivative thereof.

**499      Contains proteins or derivative or polysaccharides or derivative:**

This subclass is indented under subclass 489. Subject matter in which the particle is impregnated with a protein or derivative or a polysaccharide or derivative.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418,    for a protein or saccharide coated biocidal particle.
- 440,    for candy, candy coated pharmaceuticals or chewing gum.
- 456,
- 460,    for a sustained or differential release capsule containing discrete particles coated with a protein.
- 461+,    for a sustained or differential release capsule containing discrete particles coated with a saccharide.
- 477+,    for a protein coated tablet.
- 478,    for a gelatin coated tablet.
- 479,
- 480,    for a tablet coated with cellulose or a cellulose derivative.
- 491,
- 492,
- 493,
- 494,    for a cellulose or cellulose derivative coated particle.

**500      Contains natural gums and resins:**

This subclass is indented under subclass 489. Subject matter in which the particles are impregnated with a natural gum or resin.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 440,    for a chewing gum containing a natural gum.
- 459,    for a sustained or differential release capsule containing discrete particles coated with a natural gum or resin.
- 481,    for a tablet coated with a natural gum or resin.

496,    for a natural gum or resin coated particle.

**501      Contains solid synthetic resin:**

This subclass is indented under subclass 489. Subject matter in which the particles are impregnated with a solid synthetic resin.

**502      Contains waxes, higher fatty acids, higher fatty alcohols:**

This subclass is indented under subclass 489. Subject matter in which the particle is impregnated with a wax, higher fatty alcohol or derivatives thereof.

**520      EXTRACT, BODY FLUID, OR CELLULAR MATERIAL OF UNDETERMINED CONSTITUTION DERIVED FROM ANIMAL IS ACTIVE INGREDIENT:**

This subclass is indented under the class definition. Compositions or products wherein the active ingredient is an animal tissue extract, animal body fluid, or animal material containing cellular structure of undetermined chemical constitution, i.e., the chemical structure of said animal derived material has not been sufficiently established to classify said material elsewhere.

(1) Note. Patents are classified in this and indented subclasses on the basis of the first active ingredient in the composition and on the basis of the immediate source of the animal material; e.g., certain constituents of urine may originate in the kidney, however the fact that urine is the immediate source of the constituent is deemed of sufficient significance to place a patent to a urine constituent in the urine subclass. "Active" denotes an ingredient having a physiological, pharmacological, or biological effect. In addition, since many active ingredients originate in various tissue sources, a search to be complete, should include the appropriate subclasses providing for the source of the active ingredient.

(2) Note. The material derived from an animal may further be chemically modified or may be in a physical form different from that initially obtained; e.g., hydrogenated oil or butter derived from milk,

- etc. Classification is on the basis of the initial material derived from the animal.
- (3) Note. Cellular material derived from animal is defined as a naturally occurring material which still retains a certain amount of the original tissue structure of the animal. Included within the term are materials which are chopped, cut, comminuted, pulverized, milled or sliced.
- (4) Note. An extract is a material considered to be devoid of original cellular structure.
- (5) Note. Specifically included in this subclass, with the exception of subject matter directed to arthropods, snakes, mollusks, fetuses and embryos, is subject matter directed to a whole animal or unspecified part thereof, i.e., a whole chopped up fish or a chopped up head of an animal. Though the whole body or general body part is known to contain multiple components such as muscle, bone, fat, blood, etc., the patents are not placed in subclasses directed to the individual components. They are considered to be general or unspecified cellular material derived from an animal.
- (6) Note. Many of the patents previously classified in this and the indented subclasses have been transferred to the part of Class 514 or Class 530 providing for peptides and proteins. The patents remaining are patents which contain insufficient information to decide the chemical nature of the animal derived material. Before classifying a patent in this and the indented subclasses standard reference works such as biochemical dictionaries and physiology texts should be consulted to decide if a named extract is not really a peptide, protein or saccharide or other chemical compound of known chemical structure.
- (7) Note. Class 530, subclasses 820-859 provide a breakdown of organs and materials which are sources for proteins and peptides. No attempt has been made to cross-reference these patents here nor have the patents transferred to Class 530
- been cross-referenced back to this and the indented subclasses.
- (8) Note. Disposition of Other Extracts: (A) Class 512, Perfume Compositions, for plant or animal extracts or essential oils of unknown constitution which are disclosed as essences, aromatic oils, perfume essence, or odoriferous essential oils are considered to be compositions for perfumes even when they are from a single source. Processes for extracting these mixtures, such as processes of enfleurage, are also classified in Class 512, unless provided for elsewhere; (B) Class 424, Plant extracts of unknown constitution which are disclosed as having a medicinal use, with or without other disclosed uses, are classified in Class 424, subclasses 725-779; (C) Class 426, Extracts or essential oils of unknown constitution which have traditionally been employed as flavorings, flavor enhancers, seasoning agents, food acidulants or condiments are considered compositions and are classified in Class 426. A specific example is citrus oil which has been used for centuries as a flavoring agent. Processes for extracting such mixtures are classified in Class 426, unless provided for elsewhere, and are not provided for in the 532-570 Series of Classes; (D) Class 530, Animal or plant extracts derived from a single source so long as identified as a protein or peptide, are classified in Class 530 even if a Class 424 utility is disclosed or claimed. A plant or animal extract will be found in Class 424 if it is (a) a single source material and (b) is of undetermined chemical constitution, i.e., is claimed in terms of isolation technique or physical properties. A recitation as broad as "peptide" is enough to defeat placement in Class 424 on the basis of utility.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 50, and 94.1+, for a composition containing an enzyme.  
 538+, for unspecified arthropod derived material.  
 542, for unspecified snake derived material.

- 547, for unspecified mollusk derived material.  
 582, for unspecified embryo or fetus derived material.  
 725 through 779, for a plant extract or plant material of undetermined constitution.

**SEE OR SEARCH CLASS:**

- 8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 438, 439 and 646 for extracts which have been specifically prepared or treated to fit them for use as organic coloring material.  
 71, Chemistry: Fertilizers, subclasses 15+ for a fertilizer which contains an animal extract.  
 203, Distillation: Processes, Separatory, subclasses 50+ for extractive distillation processes, per se, that is, a distillation process carried out in the presence of a solvent for one or more components of the distilland.  
 208, Mineral Oils: Processes and Products, subclasses 31 and 33+ for processes wherein waxes are dissolved from mineral oil containing substances; subclass 45 for the solvent extraction of asphalts, tars, pitches, or resins from mineral oils; subclasses 311+, 390+, and 400+ for processes wherein mineral oils are dissolved from mineral oil containing substances; and subclass 298 for processes of refining mineral oils by treating with liquid treating agents (washing, etc.).  
 210, Liquid Purification or Separation, subclasses 634+ for a process of liquid- liquid extraction wherein one of the compounds purified is water or if the claims are broad as to the liquid being purified.  
 252, Compositions, subclasses 319+ for a process of resolving a colloid.  
 423, Chemistry of Inorganic Compounds, in particular subclass 658.5 and subclasses noted thereunder for a process of leaching, extracting, or dissolving when a process for purifying an inorganic or nonmetallic compound provided for in Class 423 is claimed, or

when the claims are not limited and disclosure of purification of a compound for Class 423 and a compound or composition for that class is present, or a coclaimed extraction process produces products provided for in each of a plurality of other classes.

- 426, Food or Edible Material: Processes, Compositions, and Products, particularly subclass 425 and the noted subclasses thereunder for processes of making an extract having a Class 426 utility and not provided for elsewhere.  
 435, Chemistry: Molecular Biology and Microbiology, subclasses 41+ for obtaining an animal extract which involves a fermentation or culturing step, subclasses 262+ for processes of utilizing an enzyme or micro-organism to liberate, separate, or purify a preexisting compound or composition, and subclasses 325+ for methods of propagating or culturing animal cells.  
 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 1.1-21.92 for a composition containing an active proteinaceous ingredient produced by or extracted from animal tissue, subclass 23 for a composition containing an active carbohydrate, and subclass 169 for a composition containing lanolin or a steroid as an active ingredient.  
 520, Synthetic Resins or Natural Rubbers, appropriate subclass for a protein or biologically active polypeptide which is part of a synthetic resin or natural rubber.  
 536, Organic Compounds, subclass 21 for heparin.  
 554, Organic Compounds, subclasses 8 through 23 and 175-212 for processes and products thereof which are directed to the recovery, removal or extraction of fats, oils, waxes or higher fatty acids, or soaps thereof, from vegetable or animal substances or waste materials containing the same.  
 585, Chemistry of Hydrocarbon Compounds, subclasses 800+ for processes of separating hydrocarbons,

- particularly subclass 833 for forming a hydrocarbon extract as part of a separation process.
- 522 Separated animal oil or solidified form thereof derived from animal flesh and other than from liver or dairy type:**  
 This subclass is indented under subclass 520. Subject matter in which the material is a separated animal oil or solidified form thereof and is other than derived from the liver of any animal or from a lacteal source.
- (1) Note. The term "separated animal oil" denotes an oil which has been physically or chemically extracted or removed from its original animal source.
  - (2) Note. The term "wool fat" is the same as lanolin which is chemically a wax rather than a fat. Subject matter under the class definition directed to lanolin as the active ingredient is proper for Class 514, subclasses 169+.
  - (3) Note. Included in this and the indented subclasses are neat's-foot oil, whale oil, mink oil, etc.
  - (4) Note. Fat absent a rendering process is considered to be adipose tissue and see in particular, subclass 574.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 535, for oils or solidified forms thereof which are derived from dairy products; e.g., butter, etc.  
 554+, for oil derived from liver.
- 523 Fish oil or solidified form thereof:**  
 This subclass is indented under subclass 522. Subject matter in which the material is or is derived from an oil or solidified form thereof of fish origin.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 554, for fish liver oil.  
 555, for cod liver oil.
- 524 Whale or porpoise oil or solidified form thereof:**  
 This subclass is indented under subclass 522. Subject matter in which the material is or is derived from oil or solidified form thereof of whale or porpoise origin.
- 525 Skunk, musk, or mink oil or solidified form thereof:**  
 This subclass is indented under subclass 522. Subject matter in which the material is or is derived from an oil of skunk, musk or mink origin or solidified from thereof.
- 526 Lard, rind, or tallow:**  
 This subclass is indented under subclass 522. Subject matter in which the material is or is derived from an animal fat characterized as lard, rind or tallow.
- (1) Note. If the "fat" is not characterized as lard, rind, or tallow, and no rendering process is associated with it, placement is elsewhere, in particular subclass 574 for adipose tissue or fat absent rendering.
- 528 Bile, bile acid, bile salt, amniotic fluid, or ascitic fluid:**  
 This subclass is indented under subclass 520. Subject matter in which the material is or is derived from bile, bile acids, bile salts, amniotic fluid or ascitic fluid.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 551, for the gall bladder or bile duct.  
 558, for other extracts derived from the urogenital system.  
 582, for extracts from embryonic structures.
- 529 Blood:**  
 This subclass is indented under subclass 520. Subject matter in which the material is or is derived from blood.
- (1) Note. Included in this subclass are extracts of fetal blood.
- SEE OR SEARCH THIS CLASS, SUBCLASS:**
- 85.1+, for a composition containing an antibody derived from blood.

**SEE OR SEARCH CLASS:**

- 71, Chemistry: Fertilizers, subclass 17 for a fertilizer composition which contains components derived from blood.
- 128, Surgery, for a method of blood transfusion.
- 210, Liquid Purification or Separation, appropriate subclass for a significant process of liquid purification or separation; e.g., dialysis and centrifugal extraction, etc.; and for apparatus used in a blood-component separation method.
- 426, Food or Edible Material: Processes, Compositions, and Products, appropriate subclasses for food compositions which contain blood or components thereof.
- 435, Chemistry: Molecular Biology and Microbiology, subclasses 4+ for a ferment composition which is used in a blood clotting test; and subclass 2 for a process or composition for maintaining the viability of blood.
- 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 13.5 through 15.3 for therapeutic or bio-affecting compositions containing blood proteins.
- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 380+ for blood proteins.

**530 Plasma:**

This subclass is indented under subclass 529. Subject matter in which the material is or is derived from blood plasma.

**SEE OR SEARCH CLASS:**

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 15.3 for therapeutic or bio-affecting compositions containing plasma proteins.

**531 Serum:**

This subclass is indented under subclass 529. Subject matter in which the material is or is derived from blood serum.

**532****Platelet:**

This subclass is indented under subclass 529. Subject matter in which the material is or is derived from blood platelets.

**533****Erythrocyte:**

This subclass is indented under subclass 529. Subject matter in which the material is or is derived from red blood cells.

- (1) Note. Included in this subclass are extracts of: Erythroblasts; Erythrocyte Membrane; Erythrocytes; Abnormal; Acanthocytes; Erythrocyte Inclusions; Heinz Bodies; Megaloblasts; Spherocytes; Reticulocytes

**534****Leucocyte:**

This subclass is indented under subclass 529. Subject matter in which the material is or is derived from leucocytes.

- (1) Note. Included in this subclass are extracts of: Granulocytes; Basophils; Eosinophils; Neutrophils; Lymphocytes; Killer Cells; Killer Cells, Natural; B Lymphocytes; T Lymphocytes; Helper Cells; T Lymphocytes, Cytotoxic; T Lymphocytes, Regulatory; Suppressor Cells; Lymphocytes, Null; Monocytes

**535****Milk or colostrum (e.g., butter, whey, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from milk or colostrum; e.g., butter, whey, etc.

**SEE OR SEARCH CLASS:**

- 426, Food Edible Material: Processes, Compositions, and Products, subclasses 34+ for fermented milk products; and subclasses 580+ for lacteal derived products intended to be edible.

**537****Body fluid or exudate or transudate other than snake venom, feces, urine, or semen (e.g., lymph, saliva, honey, royal jelly, digestive juice, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from a body fluid, exudate, or transudate and is other than snake venom, feces,

urine, or semen; e.g., lymph, saliva, honey, royal jelly, digestive juice, etc.

- (1) Note. Included in this subclass are the following body fluids, exudates, or transudates: Beeswax; Honeycomb; Castoreum; Cerebrospinal fluid; Cerumen; Gastric Juice; Honeydew; Intestinal Juice; Lymph; Chyle; Mucus; Opaline (molluskan secretion); Pancreatic Juice; Pericardial fluid; Peritoneal fluid; Perspiration; Pleural fluid; Royal Jelly; Sebum; Sputum; Suint; Synovial fluid; Tear; Venom other than from snake; Vernix caseose

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 542, for snake venom or extracts thereof.
- 543, for feces or extracts thereof.
- 545, for urine or extracts thereof.
- 561, for semen or extracts thereof.

**SEE OR SEARCH CLASS:**

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 169 for materials wherein lanolin is the active ingredient.

**538 Derived from arthropod (e.g., insect, spider, crustacea, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from an arthropod.

- (1) Note. An arthropod is an animal characterized by jointed chitinous exoskeleton and jointed legs. Included in this and the indented subclasses are extracts of the whole body or parts thereof of spiders; crustacea, such as lobsters, crabs, shrimps, and crayfish; and insects, such as fireflies, roaches, fleas, bugs, ants and beetles.

**539 Bee:**

This subclass is indented under subclass 538. Subject matter in which the material is or is derived from a bee.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 537, for honey or royal jelly.

**541**

**Cantharide:**

This subclass is indented under subclass 538. Subject matter in which the material is an extract of dried beetles.

- (1) Note. Included in this subclass are extracts of cantharis vesicatoria.
- (2) Note. Synonyms: Spanish fly; blistering fly; blistering beetle.

**542**

**Derived from snake (e.g., venom, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from a snake.

- (1) Note. Included in this subclass is snake venom.

**543**

**Waste or feces (e.g., slaughterhouse offal, chicken feet, horn, hair, hide, urine, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from waste or feces; e.g., slaughterhouse offal, chicken feet, horn, hair, hide, urine, etc.

- (1) Note. Included in this subclass are fecal matter or waste parts of butchered animals, such as hooves, feathers, down, fur, etc.
- (2) Note. Hide is defined as a slaughterhouse by-product. Where the term skin is used, it is considered proper for this subclass if it is not an intact and functioning piece of skin as is used for grafting purposes.

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 574, for skin which is still intact and functioning, as that which is used in grafting.

**SEE OR SEARCH CLASS:**

- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 357 for purified keratin.

**545 Urine:**

This subclass is indented under subclass 543. Subject matter in which the material is or is derived from urine.

**546 Sex hormone:**

This subclass is indented under subclass 545. Subject matter in which the material is characterized as a sex hormone.

- (1) Note. Classification here is proper only if the particular hormone is chemically unidentifiable.

## SEE OR SEARCH CLASS:

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 9.7 through 13.1 for sex hormones which are proteins, subclass 10.2 for peptides or proteins which affect sex hormones, and subclasses 169-182 for those which contain a cyclopentanohydrophenanthrene ring system with such hormones being used as body treating materials.
- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, the appropriate subclasses for sex hormones which are proteins.
- 552, Organic Compounds, subclasses 502+ for sex hormones, per se, which are cyclopentanohydrophenanthrene compounds.

**547 Derived from mollusk:**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from a mollusk.

- (1) Note. Included in this subclass are clams, mussels, octopus, oysters, snails, slugs and squid.

**548 Derived from musculoskeletal system, other than cardiac muscle (e.g., cartilage, muscle, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from parts of the musculoskeletal system and wherein the muscle is other than cardiac muscle.

- (1) Note. Included in this subclass are cartilage, tendons, ligaments and synovial bursa.

## SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 569, for active material which is derived from cardiac muscle.

**549****Skeleton (e.g., bone, teeth, etc.):**

This subclass is indented under subclass 548. Subject matter in which the material is or is derived from parts of the skeleton or teeth.

- (1) Note. Included in this subclass are extracts of epiphyses.

- (2) Note. Excluded from this subclass are bone marrow cells isolated from the bone. See subclass 577.

**550****Digestive system (e.g., salivary gland, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from a part of the digestive system; e.g., salivary gland, etc.

- (1) Note. Included in this and the indented subclasses are: Biliary Tract; Bile Ducts; Gallbladder; Esophagus

**551****Gastrointestinal system (e.g., intestine, stomach, gall bladder, etc.):**

Subject matter under subclasses 550 in which the material is or is derived from part of the gastrointestinal system; e.g., intestine, stomach, gall bladder, etc.

- (1) Note. Included in this subclass are the large and small intestines and parts thereof such as intestinal mucosa, the stomach, and parts thereof such as gastric mucosa, and bile ducts.

**553****Liver:**

This subclass is indented under subclass 551. Subject matter in which the material is or is derived from liver.

**554****Fish liver oil or solidified form thereof:**

This subclass is indented under subclass 553. Subject matter in which the material is an oil or solidified form thereof derived from fish liver.

	<b>SEE OR SEARCH CLASS:</b>	
514,	Drug, Bio-Affecting and Body Treating Compositions, appropriate subclasses for vitamins; e.g., A or D, etc., extracted or derived from a fish liver.	<b>559</b> <b>Genitalia (e.g., ovary, uterus, prostate, testis, etc.):</b>
<b>555</b>	<b>Cod liver oil or solidified form thereof:</b> This subclass is indented under subclass 554. Subject matter in which the material is an oil or solidified form thereof derived from cod liver.	This subclass is indented under subclass 558. Subject matter in which the material is or is derived from the female or male genitalia, such as the ovary, uterus, prostate, and testis.
<b>556</b>	<b>Pancreas:</b> This subclass is indented under subclass 551. Subject matter in which the material is or is derived from pancreas.  (1) Note. Included in this subclass are the Islands of Langerhans.	<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 572, for mammary gland. 582, for corpus luteum.
	<b>SEE OR SEARCH CLASS:</b>	
514,	Drug, Bio-Affecting and Body Treating Compositions, subclasses 5.9 through 6.6 for therapeutic or bio-affecting compositions containing insulin.	<b>561</b> <b>Germ cells (e.g., ovum, spermatozoa, etc.):</b>
530,	Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 303 for insulin, per se.	This subclass is indented under subclass 558. Subject matter in which the material is or is derived from germ cells which are sexual reproductive cells.
<b>557</b>	<b>Respiratory system (e.g., lung, etc.):</b> This subclass is indented under subclass 520. Subject matter in which the material is or is derived from part of the respiratory system.  (1) Note. Included in this subclass are lung, larynx, nasal cavity, paranasal sinuses, pleura and trachea.	<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 581, for extracts or isolates of eggs with shells.
<b>558</b>	<b>Urogenital system (e.g., kidney, etc.):</b> This subclass is indented under subclass 520. Subject matter in which the material is or is derived from part of the urogenital system.  (1) Note. Included in this and the indented subclasses are kidney, bladder, genitalia, germ cells, etc.	<b>SEE OR SEARCH CLASS:</b> 62, Refrigeration, subclasses 62+ for methods of freezing ovum or spermatozoa. 128, Surgery, appropriate subclasses for methods of artificial insemination. 435, Chemistry: Molecular Biology and Microbiology, subclass 2 for frozen ovum or spermatozoa.
		<b>562</b> <b>Endocrine system, other than the thymus gland (e.g., parathyroid gland, etc.):</b>
		This subclass is indented under subclass 520. Subject matter in which the material is or is derived from part of the endocrine system, parathyroid gland, etc., and other than material derived from the thymus gland.  (1) Note. Included in this subclass are pineal body, etc.
	<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b>	
		580, for the thymus gland.
	<b>SEE OR SEARCH CLASS:</b>	
514,	Drug, Bio-Affecting and Body Treating Compositions, subclasses 9.7 through 13.1 for therapeutic or bio-affecting compositions containing a	

peptide derived from the endocrine system.

**563 Adrenal gland:**

This subclass is indented under subclass 562. Subject matter in which the material is or is derived from the adrenal gland.

- (1) Note. Suprarenal is another name for adrenal.

SEE OR SEARCH CLASS:

- 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 10.8 for a therapeutic or bio-affecting composition containing adrenocorticotropic hormone (ACTH).
- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 306 for ACTH, per se.
- 564, Organic Compounds, subclass 361 for epinephrine type compounds; e.g., a blood pressure-raising/stimulating compound, etc.

**565 Pituitary gland:**

This subclass is indented under subclass 562. Subject matter in which the material is or is derived from the pituitary gland.

- (1) Note. This subclass provides for extracts which are either from whole pituitaries or parts of the pituitary.
- (2) Note. The pituitary is also known as the hypophysis. The anterior pituitary is also known as the adenohypophysis. The posterior portion is also called the interfundibular portion or neurohypophysis.

**568 Thyroid gland:**

This subclass is indented under subclass 562. Subject matter in which the material is or is derived from the thyroid gland.

**569 Cardiovascular system, other than the umbilical artery or vein (e.g., blood vessel, heart, cardiac muscle etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from part of the cardiovascular system

and is other than material derived from the umbilical artery or vein.

- (1) Note. Included in this subclass are arteries, veins, capillaries, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 583, for umbilical artery or vein.

**Nervous system (e.g., brain, nerve, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from part of the central or peripheral nervous systems; e.g., brain, nerve, etc.

- (1) Note. Included in this subclass are extracts of the brain, spinal column, nerve tissue and myelin sheath.

**571 Sense organ (e.g., eye, taste bud, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from a sense organ; e.g., eye, taste bud, etc.

- (1) Note. Included in this subclass are parts of the ear and olfactory mucosa.

**572 Tissue, other than lymphoid tissue (e.g., connective, etc.):**

This subclass is indented under subclass 520. Subject matter in which the material is or is derived from a specific isolated tissue; e.g., connective, etc., and wherein said tissue is other than lymphoid.

- (1) Note. Improper for this subclass is subject matter directed to a collection of undefined tissues, i.e., a whole animal or body part which inherently contains skin, muscle, fat, blood, etc., such subject matter is found in subclass 520 of this class or in the subclass directed to the specific animal of interest.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 578, for lymphoid tissue.

- 573    Neoplastic, tumor, or cancer:**  
This subclass is indented under subclass 572. Subject matter in which the material is or is derived from neoplastic tissue, tumor tissue or cancer tissue.
- 574    Adipose or epithelium:**  
This subclass is indented under subclass 572. Subject matter in which the material is or is derived from adipose tissue or epithelial tissue.
- (1) Note. Included in this subclass are patients directed to fat wherein the disclosure is silent as the rendering.
- (2) Note. An intact and functioning piece of skin is considered proper subject matter for this subclass. Such skin is usually used in skin grafting procedures.
- (3) Note. Included in this subclass are endothelium, epidermis, and basement membrane.
- 577    Hemic or immune system (e.g., hematopoietic system, bone marrow cells, etc.):**  
This subclass is indented under subclass 520. Subject matter in which the material is or is derived from part of the hemic or immune system; e.g., hematopoietic system, bone marrow cells, etc.
- (1) Note. Included in this and the indented subclasses are lymphoid tissue, lymph nodes, etc.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
85.1+, for medicinal composition containing lymphokines.
- SEE OR SEARCH CLASS:  
530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 351 for lymphokines claimed as compounds regardless of medicinal disclosure.
- 578    Lymphoid tissue (e.g., adenoid, lymph node, etc.):**  
This subclass is indented under subclass 577. Subject matter in which the material is or is derived from lymphoid tissue; e.g., adenoid, lymph node, etc.
- (1) Note. Included in this subclass are tonsils, and Peyer's patches.
- 579    Spleen:**  
This subclass is indented under subclass 578. Subject matter in which the material is or is derived from the spleen.
- 580    Thymus gland:**  
This subclass is indented under subclass 578. Subject matter in which the material is or is derived from the thymus gland.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
85.1+, for medicinal compositions containing lymphokines.
- SEE OR SEARCH CLASS:  
530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 351 for lymphokines claimed as compounds in spite of any disclosed or implied medicinal utility.
- 581    Egg enclosed in shell or a part thereof (e.g., eggshell, egg yolk, etc.):**  
This subclass is indented under subclass 520. Subject matter in which the material is or is derived from an egg or part thereof; e.g., eggshell, egg yolk, etc., which is of the type which has a shell.
- (1) Note. Included in this subclass are bird eggs.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
561, for isolates prepared from human or animal ova.

<p><b>582      Embryonic structure (e.g., embryo or fetus, etc.):</b> This subclass is indented under subclass 520. Subject matter in which the material is or is derived from an embryonic structure, embryo, or fetus, etc.</p> <p>(1) Note. Included in this subclass are amniotic sac, corpus luteum, and whole embryo or fetus.</p>	<p><b>602      Calcium containing:</b> This subclass is indented under subclass 601. Compositions which contain calcium and phosphorus.</p> <p>(1) Note. Synonyms/Examples: Bone meal, phosphate of lime, calcium phosphate.</p>
<p><b>583      Placenta or umbilical cord:</b> This subclass is indented under subclass 582. Subject matter in which the material is or is derived from placenta or umbilical cord.</p>	<p><b>603      Pyrophosphate:</b> This subclass is indented under subclass 602. Compositions which contain calcium pyrophosphate.</p>
<p><b>600      INORGANIC ACTIVE INGREDIENT CONTAINING:</b> This subclass is indented under the class definition. Compositions in which the active ingredient is disclosed to be an element or an inorganic compound.</p>	<p><b>604      Heavy metal containing:</b> This subclass is indented under subclass 601. Compositions which contain a heavy metal and phosphorus.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 617, for other heavy metal containing compositions.</p>
<p>(1) Note. Anesthetic compositions which contain oxygen and an active anesthetic compound are classified with the active anesthetic compound. For example, a composition containing an ether and O<sub>2</sub> is classified in Class 314 subclass 715 or its indents.</p> <p>(2) Note. A life supporting gaseous mixture; e.g., O<sub>2</sub> and He, etc., is classified in Class 514, subclass 789.</p> <p>(3) Note. See the Glossary for the definition of the term "active ingredient".</p> <p>SEE OR SEARCH CLASS: 423, Chemistry of Inorganic Compounds, appropriate subclasses for inorganic compounds, per se.</p>	<p><b>605      Phosphorus acid:</b> This subclass is indented under subclass 601. Compositions which include a phosphorus containing acid.</p> <p><b>606      Sodium containing or fluorine containing:</b> This subclass is indented under subclass 601. Compositions which include a sodium or fluorine containing phosphorus compound.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 632, for compositions containing copper containing fluorine compounds. 673+, for compositions containing elemental fluorine or fluorine compounds.</p>
<p><b>601      Phosphorus or phosphorus compound:</b> This subclass is indented under subclass 600. Compositions which contain elemental phosphorus or an inorganic compound thereof.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 57, for a dentifrice or mouthwash containing a phosphate compound.</p>	<p><b>607      Hydrogen metal cyanide, cyanide, cyanate, or thio analog thereof:</b> This subclass is indented under subclass 600. Compositions which contain an inorganic compound having a NAC=N radical.</p> <p><b>608      Heavy metal containing (e.g., nitroprusside, etc.):</b> This subclass is indented under subclass 607. Compositions which contain a heavy metal cyanide, cyanate, or thio analog.</p>

		(1) Note. See subclass 617 for a list of the elements considered to be heavy metals.	252, Compositions, subclasses 186.1+ for a general bleaching composition.
<b>609</b>	<b>Thiocyanates:</b>	This subclass is indented under subclass 608. Compositions which contain compounds with the radical - SCN.	<b>614</b> <b>Zinc containing:</b> This subclass is indented under subclass 613. Compositions which include peroxide containing zinc compounds.  SEE OR SEARCH THIS CLASS, SUB-CLASS: 641, for other compositions containing zinc.
	(1) Note. Synonyms/Examples: Thiocyanide, sulfocyanate, rhodanate, rhodanide.		
<b>610</b>	<b>Potassium or lithium containing:</b>	This subclass is indented under subclass 607. Compositions which contain potassium or lithium.	<b>615</b> <b>Sodium containing:</b> This subclass is indented under subclass 613. Compositions which contain compounds of sodium containing peroxides.
<b>611</b>	<b>Sodium containing:</b>	This subclass is indented under subclass 607. Compositions which contain sodium.	<b>616</b> <b>Hydrogen peroxide:</b> This subclass is indented under subclass 613. Compositions which contain hydrogen peroxide.
<b>612</b>	<b>Hydrocyanic acid:</b>	This subclass is indented under subclass 607. Compositions which contain hydrocyanic acid.	(1) Note. Synonyms/Examples: Hydrogen dioxide auricome, perhydrol.
<b>613</b>	<b>Peroxide or compositions of or releasing gaseous oxygen or ozone:</b>	This subclass is indented under subclass 600. Compositions which contain an inorganic compound having a bivalent -O-O-group; e.g., H <sub>2</sub> O <sub>2</sub> , BaO <sub>2</sub> , etc., or gaseous oxygen or ozone containing compositions, etc.	<b>617</b> <b>Heavy metal or compound thereof:</b> This subclass is indented under subclass 600. Compositions which contain a metal having a specific gravity greater than 4 and wherein the metal is present in either its free elemental form or as part of an inorganic compound.  SEE OR SEARCH THIS CLASS, SUB-CLASS: 66, for an antiperspirant containing a zirconium compound. 67, for an antiperspirant containing a zinc compound.
	(1) Note. Synonyms/Examples: Superoxide.		
	SEE OR SEARCH THIS CLASS, SUB-CLASS:		<b>618</b> <b>Silver:</b> This subclass is indented under subclass 617. Compositions wherein the metal is silver.
	53, for a dentifrice or mouthwash containing an oxygen releasing agent.		
	62, for peroxide containing compositions intended for use on live skin or hair.		<b>619</b> <b>Nitrate:</b> This subclass is indented under subclass 618. Compositions which contain silver nitrate.
	SEE OR SEARCH CLASS:		
	8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 101+ for a method of bleaching which is more than the mere use of a composition.		<b>620</b> <b>Arsenic:</b> This subclass is indented under subclass 617. Compositions wherein the metal is arsenic.  (1) Note. Synonyms/Examples: London Purple.

- 621 With elemental arsenic or arsenic containing compound:**  
This subclass is indented under subclass 620. Compositions which contain elemental arsenic or an inorganic arsenic compound and an organic compound which contains arsenic.
- (1) Note. Example: Paris Green, etc.
- 622 Copper compound of arsenic:**  
This subclass is indented under subclass 620. Compositions which include a copper containing compound of arsenic.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
630, for compositions containing other copper compounds.
- 623 Oxygen compound of arsenic:**  
This subclass is indented under subclass 620. Compositions which include a oxygen containing compound of arsenic.
- (1) Note. Examples, arsenic acid, arsenic acid cahydride, arsenious oxide, white arsenic.
- 624 Sodium compound of arsenic:**  
This subclass is indented under subclass 620. Compositions which contain a sodium compound of arsenic.
- 625 Manganese containing arsenic compound or with added manganese compound:**  
This subclass is indented under subclass 620. Compositions which contain (1) elemental arsenic or an arsenic compound admixed with elemental manganese or a manganese compound or (2) arsenic chemically combined with manganese.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
639, for compositions containing other manganese compounds.
- 626 Chromium containing arsenic compound or with added chromium compound:**  
This subclass is indented under subclass 620. Compositions which contain (1) elemental arsenic or an arsenic compound admixed with elemental chromium or a chromium compound or (2) arsenic chemically combined with chromium.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
655+, for compositions containing other compounds of chromium.
- 627 Lead compound of arsenic:**  
This subclass is indented under subclass 620. Compositions which contain arsenic chemically combined with lead; e.g., elad arsenate, lead arsenite, etc.
- (1) Note. Search appropriate subclasses in this class for compositions containing other lead compounds.
- 628 Calcium compound of arsenic:**  
This subclass is indented under subclass 620. Compositions which contain arsenic chemically combined with calcium; e.g., calcium arsenate, etc.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
675, 678 and 682+, for compositions containing other calcium compounds.
- 629 With added organic compound:**  
This subclass is indented under subclass 620. Compositions which contain in addition to the elemental arsenic or inorganic arsenic compound an organic compound.
- 630 Copper:**  
This subclass is indented under subclass 600. Compositions which contain the heavy metal copper.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
604, for compositions containing compounds of copper containing phosphorus.  
608, for compositions containing copper and cyanide.  
622, for compositions containing copper compounds of arsenic.
- 631 With cellulose-sulfur compound or lignin:**  
This subclass is indented under subclass 630. Compositions which contain elemental copper or an inorganic copper compound thereof and

an organic compound which is either lignin sulfonate or a reaction product of cellulose with sulfur or a sulfur compound.

**632 Halogen containing:**

This subclass is indented under subclass 630. Compositions which contain a compound of copper and a halide.

**633 Hydroxide:**

This subclass is indented under subclass 630. Compositions which contain copper hydroxide.

**634 Carbonate:**

This subclass is indented under subclass 630. Compositions which contain copper carbonate.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

686+, for compositions containing aluminum, calcium or magnesium carbonate.

715+, for other compositions containing a carbonate.

**635 Oxide:**

This subclass is indented under subclass 630. Compositions which contain copper oxide.

**637 Sulfur containing:**

This subclass is indented under subclass 630. Compositions which contain a compound of copper and sulfur.

(1) Note. Synonyms/Examples: For sulfates Blue or roman vitrol, Bordeaux mixture, Blue stone.

**638 With added organic compound:**

This subclass is indented under subclass 630. Compositions which contain an inorganic copper compound with an added organic compound.

**639 Manganese:**

This subclass is indented under subclass 617. Compositions wherein the heavy metal is manganese.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

625, for compositions containing manganese and arsenic.

**640**

**Potassium permanganate:**

This subclass is indented under subclass 639. Compositions which contain potassium permanganate.

**641**

**Zinc:**

This subclass is indented under subclass 617. Compositions wherein the heavy metal is zinc.

(1) Note. Synonyms/Examples: White Vitrol.

(2) Note. This subclass provides principally for compositions used to preserve substrates from biological attack; e.g., wood preservatives, etc.

**642**

**For topical application:**

This subclass is indented under subclass 641. Compositions which are claimed or disclosed as for topical application to the living body.

(1) Note. Synonyms/Examples: Dental pastes, shampoo.

**643**

**Orally assimilable or injectable composition:**

This subclass is indented under subclass 641. Compositions which are claimed or disclosed as orally assimilable or injectable.

**644**

**Mercury:**

This subclass is indented under subclass 617. Compositions which contain the heavy metal mercury.

(1) Note. Synonyms/Examples: Red precipitate (mercuric oxide).

**645**

**Chlorine containing:**

This subclass is indented under subclass 644. Compositions which contain an inorganic compound of mercury and chlorine.

(1) Note. Synonyms/Examples: Corrosive sublimate, calomel.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

677, for compositions containing alkali or alkaline earth metal chlorides.

<p><b>646 Iron, cobalt, nickel, vanadium, molybdenum or palladium:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal iron, cobalt, nickel, vanadium, molybdenum or palladium.</p> <p><b>647 Ferric:</b> This subclass is indented under subclass 646. Compositions which contain iron in the ferric form.</p> <p>(1) Note. Synonyms/Examples: Venetian, red ocher or yellow ocher.</p>	<p><b>653 Bismuth:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal bismuth.</p> <p><b>654 Cadmium:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal cadmium.</p> <p><b>655 Chromium:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal chromium.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 626, for compositions containing compounds of chromium and arsenic.</p>
<p><b>648 Ferrous:</b> This subclass is indented under subclass 646. Compositions which contain iron in its ferrous form.</p> <p>(1) Note. Synonyms/Examples: Copperas, green vitrol.</p>	<p><b>656 Potassium dichromate:</b> This subclass is indented under subclass 617. Compositions which contain the chromium compound potassium dichromate.</p>
<p><b>649 Gold or platinum:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal gold or platinum.</p>	<p><b>657 Boron:</b> This subclass is indented under subclass 600. Compositions which contain elemental boron or an inorganic compound thereof.</p> <p>(1) Note. Synonyms/Examples: Borax.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 613+, for perborates which generate hydrogen peroxide.</p>
<p><b>650 Tin, gallium, germanium, indium, or tellurium:</b> This subclass is indented under subclass 617. Compositions which contain gallium, germanium, indium, tin or tellurium.</p>	<p><b>658 Borax:</b> This subclass is indented under subclass 657. Compositions which contain borax.</p> <p>(1) Note. Synonyms/Examples: Sodium Tetraborate (<math>\text{Na}_2\text{B}_4\text{O}_7</math>).</p>
<p><b>651 Antimony:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal antimony.</p>	<p><b>659 Boric Acid:</b> This subclass is indented under subclass 657. Compositions which contain boric acid.</p> <p>(1) Note. Synonyms/Examples: Boracic Acid.</p>
<p><b>652 Lead:</b> This subclass is indented under subclass 617. Compositions which contain the heavy metal lead.</p> <p>(1) Note. Synonyms/Examples: litharge.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 627, for compositions containing compounds of lead and arsenic.</p>	

<b>660</b>	<b>Borates:</b> This subclass is indented under subclass 657. Compositions which contain a borate.	<b>667</b>	<b>Elemental iodine or iodine compound:</b> This subclass is indented under subclass 600. Compositions containing elemental iodine or an iodine inorganic compound containing iodine.
<b>661</b>	<b>Elemental chlorine or elemental chlorine releasing inorganic compound (e.g., chlorites, hypochlorites, etc.):</b> This subclass is indented under subclass 600. Compositions containing elemental chlorine or an inorganic chlorine releasing compound.		<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 51, for a dentifrice or mouthwash which contains iodine or an iodine compound.
(1)	Note. This subclass is not intended to include chlorine containing compounds which do not readily release free chlorine. For such compounds, search other appropriate subclasses; e.g., NaCl, see subclass 666, for HCl, see subclass 680, etc.	<b>668</b>	<b>Iodate:</b> This subclass is indented under subclass 667. Compositions which contain an iodate.
(2)	Note. Synonyms/Examples: Hypochlorite, chlorite, chlorates perchlorates.	<b>669</b>	(1) Note. Synonyms/Examples: Compounds yielding the $\text{IO}_3^-$ -ion.
<b>662</b>	<b>Chlorate:</b> This subclass is indented under subclass 661. Compositions which contain a chlorate.	<b>670</b>	<b>Iodide:</b> This subclass is indented under subclass 667. Compositions which contain an iodide.
<b>663</b>	<b>Chloride:</b> This subclass is indented under subclass 661. Compositions which contain a chloride.	<b>671</b>	<b>Potassium iodide:</b> This subclass is indented under subclass 669. Compositions which contain potassium iodide.
<b>664</b>	<b>Ammonium chloride:</b> This subclass is indented under subclass 663. Compositions which contain ammonium chloride.	<b>672</b>	<b>Sodium iodide:</b> This subclass is indented under subclass 669. Compositions which contain sodium iodide.
	<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 677, through 681, for compositions containing alkali or alkaline earth metal chlorides.	<b>673</b>	<b>Iodophors:</b> This subclass is indented under subclass 667. Compositions which contain a bactericidal complex of iodine and a nonionic surface-active agent which releases iodine in water.
<b>665</b>	<b>Alkali metal or alkaline earth metal:</b> This subclass is indented under subclass 661. Compositions wherein the elemental chlorine releasing inorganic compound contains alkali or alkaline earth metal.	(1)	Note. A composition containing a surfactant and iodine is presumed to be an iodophor in the absence of a clear showing to the contrary.
<b>666</b>	<b>Hydrochloric acid:</b> This subclass is indented under subclass 600. Compositions which contain hydrochloric acid.	<b>673</b>	<b>Elemental fluorine or fluorine compound:</b> This subclass is indented under subclass 600. Compositions which contain fluorine or an inorganic fluoride compound.
(1)	Note. Synonyms/Examples: Muriatic acid.		<b>SEE OR SEARCH THIS CLASS, SUB-CLASS:</b> 52, for a dentifrice or mouthwash which contains fluorine or a fluorine compound.

	606, for compositions containing fluorine and phosphorus.	
	632, for compositions containing copper compounds of chlorine.	
	650, for compositions containing tin compounds of fluorine.	
<b>674</b>	<b>Silicofluoride:</b> This subclass is indented under subclass 673. Compositions wherein the inorganic fluoride compound is a reaction product of silica or a silica compound and fluorine or a fluoride compound.	
<b>675</b>	<b>Calcium containing:</b> This subclass is indented under subclass 673. Compositions which contain a calcium compound of fluorine.	
<b>676</b>	<b>Sodium containing:</b> This subclass is indented under subclass 673. Compositions which contain a compound of sodium and fluoride.	
<b>677</b>	<b>Alkali or alkaline earth chloride (e.g., barium or lithium chloride, etc.):</b> This subclass is indented under subclass 600. Compositions wherein the active ingredient is a chloride of a metal selected from the group consisting of Li, Na, K, Rb, Cs, Mg, Ca, Sr and Ba.	
	SEE OR SEARCH THIS CLASS, SUB-CLASS:	
	469, for a salt tablet comprising granules of NaCl in a solid matrix.	
<b>678</b>	<b>Calcium chloride:</b> This subclass is indented under subclass 677. Compositions which contain calcium.	
<b>679</b>	<b>Potassium chloride:</b> This subclass is indented under subclass 677. Compositions which contain potassium.	
<b>680</b>	<b>Sodium chloride:</b> This subclass is indented under subclass 677. Compositions which contain sodium chloride.	
<b>681</b>	<b>Magnesium chloride:</b> This subclass is indented under subclass 677. Compositions which contain magnesium.	
<b>682</b>	<b>Aluminum, calcium, or magnesium element, or compound containing:</b> This subclass is indented under subclass 600. Compositions which contain aluminum, magnesium or calcium in a free metallic state or as part of an inorganic compound.	
	(1) Note. Many compounds of aluminum calcium in magnesium are characterized as carriers or fillers in a medicinal composition while in other documents the same compound is described as an active ingredient. In this and the following subclasses doubt should always be resolved in favor of classifying the compound as an active ingredient absent a clear showing to the contrary.	
	SEE OR SEARCH THIS CLASS, SUB-CLASS:	
	68, for an aluminum compound as part of an antiperspirant composition.	
<b>683</b>	<b>Magnesium silicate:</b> This subclass is indented under subclass 682. Compositions which contain compounds of magnesium and silicon.	
<b>684</b>	<b>Aluminum silicate:</b> This subclass is indented under subclass 682. Compositions which contain compounds of aluminum and silicon.	
	(1) Note. Synonyms/Examples: Kaolin Zeolites.	
<b>685</b>	<b>Aluminum chloride or bromide:</b> This subclass is indented under subclass 682. Compositions which contain aluminum chloride or bromide.	
<b>686</b>	<b>Carbonate or bicarbonate:</b> This subclass is indented under subclass 682. Compositions containing a compound wherein aluminum, calcium or magnesium is chemically combined with a carbonate ( $\text{CO}_3^{2-}$ ) or bicarbonate ( $\text{HCO}_3^-$ ) radical.	
	(1) Note. Compositions containing a carbonate or bicarbonate compound in combination with a dry acid which will react in the presence of $\text{H}_2\text{O}$ to form as gas in subclass 44.	

	(2) Note. Synonyms/Examples: Dolomite.	694	<b>Characterized as lime or slaked lime:</b> This subclass is indented under subclass 693. Compositions wherein the calcium compound is claimed a characterized as lime or slaked lime.
687	<b>Calcium carbonate:</b> This subclass is indented under subclass 686. Compositions which contain calcium carbonate.		(1) Note. Synonyms/Examples: Lime is naturally occurring calcium carbonate. Slaked lime is hydrated lime CaOH. This subclass serves to collect older patents. The presumption is made that the slaked product still contains some of the hydroxide.
688	<b>Oxide or hydroxide:</b> This subclass is indented under subclass 682. Compositions which contain an oxide or hydroxide of aluminum calcium or magnesium.	695	<b>Lime-sulfur:</b> This subclass is indented under subclass 695. Compositions which contain (a) lime or slaked lime in admixture with free sulfur or (b) a reaction product of lime or slaked lime with sulfur or a sulfur containing compound.
689	<b>With stabilizer or suspending agent:</b> This subclass is indented under subclass 688. Compositions which contain in addition to the oxide or hydroxide of aluminum, calcium or magnesium a suspending agent which maintains the composition in the form of a suspension, or a stabilizing agent which preserves the activity of the active ingredient.	696	<b>Calcium containing sulfur compound (e.g., calcium sulfate, etc.):</b> This subclass is indented under subclass 682. Compositions which contain a calcium containing sulfur compound.
690	<b>Aluminum hydroxide:</b> This subclass is indented under subclass 688. Compositions which contain aluminum hydroxide.		(1) Note. Synonyms/Examples: Calcium sulfate, Plaster of Paris, gypsum.
	(1) Note. Synonyms/Examples: Aluminum chlorhydride complex.	697	<b>Magnesium sulfate (e.g., epson salts, etc.):</b> This subclass is indented under subclass 682. Compositions which contain magnesium sulfate.
691	<b>Aluminum oxide:</b> This subclass is indented under subclass 688. Compositions which contain aluminum oxide.		(1) Note. Synonyms/Examples: Epson salts.
	(1) Note. Synonyms/Examples: Alumina, alpha-corundum.	698	<b>Alum or burnt alum:</b> This subclass is indented under subclass 695. Compositions which contain alum or burnt alum.
692	<b>Magnesium hydroxide or oxide:</b> This subclass is indented under subclass 688. Compositions which contain magnesium hydroxide or oxide.		(1) Note. This subclass is primarily a collection of older patents.
	(1) Note. Synonyms/Examples: Milk of Magnesia.	699	<b>Carbon disulfide, monoxide, or dioxide:</b> This subclass is indented under subclass 600. Compositions which contain carbon disulfide, carbon monoxide or carbon dioxide.
693	<b>Calcium hydroxide:</b> This subclass is indented under subclass 688. Compositions which contain calcium hydroxide.		

**700 Carbon dioxide:**

This subclass is indented under subclass 699.  
Compositions which contain carbon dioxide.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

43+, for an effervescent or pressurized composition containing carbon dioxide.

**701 Carbon disulfide:**

This subclass is indented under subclass 699.  
Compositions which contain carbon disulfide.

**702 Selenium or compound thereof:**

This subclass is indented under subclass 600.  
Compositions which contain elemental selenium in an inorganic selenium compound.

**703 Elemental sulfur or compound thereof:**

This subclass is indented under subclass 600.  
Compositions containing elemental sulfur or an inorganic compound thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

Appropriate subclasses for a combustible or chemically reactive composition which contains elemental sulfur and produces a smoke, mist or aerosol; e.g., nominally recited sulfur candles, etc.

**704 With inorganic silicones material:**

This subclass is indented under subclass 703.  
Compositions which contain in addition to elemental sulfur or an inorganic compound thereof, an inorganic silicon containing compound e.g., silica, bentonite, diatomaceous earth, etc.

**705 Sulfur, per se:**

This subclass is indented under subclass 703.  
Compositions which contain elemental sulfur.

(1) Note. Synonyms/Examples. Flowers of sulfur, precipitated sulfur.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

708, for fumigating compositions which produce hydrogen sulfide.

712, for fumigating compositions which produce sulfur dioxide.

**706 Sulfide:**

This subclass is indented under subclass 703.  
Compositions which contain a sulfide.

**707 Disulfides:**

This subclass is indented under subclass 706.  
Compositions which contain a disulfide.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

701, for carbon disulfide.

**708 Hydrogen sulfide:**

This subclass is indented under subclass 706.  
Compositions which contain hydrogen sulfide.

**709 Sulfate:**

This subclass is indented under subclass 703.  
Compositions which contain a sulfate.

(1) Note. Synonyms/Examples. Sulfuric acid salt.

**710 Ammonium sulfate:**

This subclass is indented under subclass 709.  
Compositions which contain ammonium sulfate.

**711 Sulfites or thiosulfates:**

This subclass is indented under subclass 703.  
Compositions which contain sulfites or thiosulfates.

**712 Sulfur dioxide:**

This subclass is indented under subclass 703.  
Compositions which contain sulfur dioxide.

**713 With added organic compound:**

This subclass is indented under subclass 703.  
Compositions which contain in addition to elemental sulfur, or an inorganic compound thereof an organic compound.

**714 Plant extract of undetermined constitution:**

This subclass is indented under subclass 713.  
Composition wherein the organic compound is of undetermined constitution and derived from a plant.

<p><b>715      Carbonate:</b> This subclass is indented under subclass 600. Compositions which contain a carbonate.</p> <p>(1) Note. Synonyms/Examples: Potash is presumed to be potassium carbonate in older patents.</p>	<p><b>722      Alkali metal or alkaline earth containing:</b> This subclass is indented under subclass 600. Compositions which contain an alkali metal or alkaline earth or inorganic compounds thereof.</p> <p>(1) Note. Synonyms/Examples. Sodium hydroxide.</p>
<p><b>716      Ammonium carbonate:</b> This subclass is indented under subclass 715. Compositions which contain ammonium carbonate.</p>	<p><b>723      Elemental bromine or bromine compound containing:</b> This subclass is indented under subclass 600. Compositions which contain elemental bromine or an inorganic bromine compound.</p>
<p><b>717      Bicarbonate:</b> This subclass is indented under subclass 715. Compositions which contain a bicarbonate.</p> <p>(1) Note. Synonyms/Examples. Sodium bicarbonate.</p>	<p><b>724      Silicon dioxide containing:</b> This subclass is indented under subclass 600. Compositions which contain silicon dioxide.</p> <p>(1) Note. Typically the patents in this subclass are pre-1920 patents containing animal plant and mineral extracts. Silicon dioxide is typically the only identifiable inorganic constituents of the composition.</p>
<p><b>718      Nitrates or nitrites or nitric acid or nitrogen oxides:</b> This subclass is indented under subclass 600. Compositions which contain inorganic nitrates or nitrites or nitric acid or nitrogen oxides.</p> <p>(1) Note. Synonyms/Examples. Saltpeter, gunpowder.</p>	<p><b>725      PLANT MATERIAL OR PLANT EXTRACT OF UNDETERMINED CONSTITUTION AS ACTIVE INGREDIENT (E.G., HERBAL REMEDY, HERBAL EXTRACT, POWDER, OIL, ETC.):</b> This subclass is indented under the class definition. Subject matter wherein the active ingredient is a plant extract or plant material of unknown constitution and undefined reaction product thereof.</p> <p>(1) Note. Plant material or plant extract containing one or more known compounds therein as the active ingredients is still proper for this and indented subclasses, as long as the plant material or plant extract contains other active ingredients of undetermined structure therein.</p> <p>(2) Note. An exception to this is pyrethrum, cube root, derris root, or rotenone containing plant material as the active ingredient which is excluded from this and indented subclasses.</p>
<p><b>720      Ammonium chloride:</b> This subclass is indented under subclass 719. Compositions which contain ammonium chloride.</p> <p>(1) Note. Synonyms/Examples: Muriate of ammonia, sal ammoniac.</p> <p>(2) Note, Search appropriate subclasses in this class for ammonium chloride containing compositions described as releasing chlorine gas.</p>	
<p><b>721      Aqueous ammonia containing:</b> This subclass is indented under subclass 719. Compositions which contain aqueous ammonia.</p>	

**SEE OR SEARCH THIS CLASS, SUB-CLASS:**

- 58, for dentifrice or mouth wash containing a plant material or plant extract of unknown constitution.
- 74, for hair or scalp treating composition containing a plant material or plant extract of unknown constitution.
- 93.7, for bio-affecting or body treating compositions containing a live cell of a plant as the active ingredient.
- 195.15, for bio-affecting or body treating compositions containing a material or an extract from a multicellular fungus as the active ingredient.
- 195.16, for bio-affecting or body treating compositions containing a material or an extract from a unicellular fungus as the active ingredient.
- 195.17, for bio-affecting or body treating compositions containing a material or an extract from an algae as the active ingredient.
- 401, for cosmetics of special physical forms containing a plant material or a plant extract of unknown constitution.
- 714, for bio-affecting or body treating compositions containing an elemental sulfur or sulfur compound as the inorganic active ingredient with a plant extract of undetermined constitution.
- 773 through 779, for bio-affecting or body treating compositions containing a plant material or plant extract from a specific part of a plant not named in any of the higher appearing subclasses.

**SEE OR SEARCH CLASS:**

- 44, Fuel and Related Compositions, subclasses 307 and 308 for a fuel containing a plant extract of indeterminate structure.
- 426, Food or Edible Material: Processes, Compositions, and Products, subclasses 615 through 640 for a food containing a plant of undetermined constitution and subclass 655 for a food containing a plant extract of undetermined constitution.
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions There-

for, or Processes of Preparing the Compositions, subclasses 249, 339, 344, 420, and 463 for cleaning compositions containing a plant material or plant extract.

- 512, Perfume Compositions, subclass 5 for a perfume composition containing a plant material or extract as the active ingredient.
- 514, Drug, Bio-Affecting and Body Treating Compositions, subclasses 65 through 74 for a composition containing pyrethrum, cube root, derris root, or rotenone containing plant material; and subclass 783 for a carrier or adjuvant composition containing a plant material or plant extract of unknown constitution.

**725.1 Pyrolysis product of a plant (e.g., heated to ashes, tar, etc.):**

This subclass is indented under subclass 725. Subject matter wherein the plant, plant material, or plant extract has undergone a thermal decomposition or transformation to produce a product of unknown constitution.

**726 Containing or obtained from Hydratis (e.g., goldenseal, etc.):**

This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Hydratis.

**727 Containing or obtained from Palmaceae (e.g., date, coconut, saw palmetto, etc.):**

This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Palmaceae.

**SEE OR SEARCH CLASS:**

- 426, Food or Edible Material: Processes, Compositions, and Products, subclass 601 for palm oil containing foods.

**728 Containing or obtained from Panax or Acanthopanax (e.g., ginseng, etc.):**

This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genera Panax or Acanthopanax.

- 729 Containing or obtained from *Camellia* (e.g., tea, including green or black tea, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Camellia*.
- SEE OR SEARCH CLASS:  
 426, Food or Edible Material: Processes, Compositions, and Products, subclass 597 for beverages containing tea extracts.
- 730 Containing or obtained from *Hypericum* (e.g., St. John's wort, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Hypericum*.
- SEE OR SEARCH CLASS:  
 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 680 for a drug containing Hypericin, an active ingredient from *Hypericum*.
- 731 Containing or obtained from *Ricini* (e.g., castor bean, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Ricini*.
- SEE OR SEARCH CLASS:  
 554, Organic Compounds Part of the Class 532-570 Series, subclasses 8 through 17 for processes of extracting castor oil.
- 732 Containing or obtained from *Vaccinium* (e.g., bilberry, cranberry, blueberry, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Vaccinium*.
- SEE OR SEARCH CLASS:  
 426, Food or Edible Material: Processes, Compositions, and Products, subclass 615 for a food containing cranberries, etc.
- 733 Containing or obtained from *Valeriana* (i.e., *Valeriana officinalis*):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Valeriana*.
- 734 Containing or obtained from *Piper* (e.g., black pepper, kava-kava, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Piper*.
- SEE OR SEARCH CLASS:  
 426, Food or Edible Material: Processes, Compositions, and Products, subclass 638 for food products flavored with black pepper.
- 735 Containing or obtained from *Prunus* (e.g., prune, cherry, plum, apricot, peach, almonds, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Prunus*.
- (1) Note. The seed of the genus *Prunus* is called a pit and is included herein.
- SEE OR SEARCH CLASS:  
 426, Food or Edible Material: Processes, Compositions, and Products, subclass 615 for food products containing *Prunus* fruits.  
 PLT, Plants, subclass 180 for *Prunus* varieties, per se.
- 736 Containing or obtained from *Citrus* (e.g., orange, lemon, lime, grapefruit, etc.):**  
 This subclass is indented under subclass 725.  
 Subject matter wherein the plant material or plant extract is obtained from a plant of the genus *Citrus*.
- SEE OR SEARCH CLASS:  
 426, Food or Edible Material: Processes, Compositions, and Products, subclass 590 for food products containing *Citrus*.

<p><b>737 Containing or obtained from Echinacea (e.g., coneflower, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Echinacea</i>, of the family Compositeae.</p> <p>SEE OR SEARCH THIS CLASS, SUB-CLASS: 764, for plant extract or plant material of the family Compositeae as the active ingredient.</p>	<p><b>743 Containing or obtained from Sassafras (e.g., sassafras, saloop, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Sassafras</i>.</p> <p><b>744 Containing or obtained from Aloe (e.g., aloe vera, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Aloe</i>.</p>
<p><b>738 Containing or obtained from Plantago (e.g., plantain, psyllium, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Plantago</i>.</p>	<p><b>745 Containing or obtained from Labiateae (e.g., oregano, marjoram, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family <i>Labiatae</i>.</p>
<p><b>739 Containing or obtained from Cinnamomum (e.g., cinnamon, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Cinnamomum</i>.</p> <p>SEE OR SEARCH CLASS: 426, Food or Edible Material: Processes, Compositions, and Products, subclass 638 for food flavored with cinnamon.</p>	<p><b>746 Containing or obtained from Salvia (e.g., sage, etc.):</b> This subclass is indented under subclass 745. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Salvia</i>.</p>
<p><b>740 Containing or obtained from Artemisia (e.g., wormwood, absinthe, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Artemisia</i>.</p>	<p><b>747 Containing or obtained from Mentha (e.g., mint, peppermint, spearmint, habak, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Mentha</i>.</p>
<p><b>741 Containing or obtained from Scutellaria (e.g., scullcap, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Scutellaria</i>.</p>	<p><b>748 Containing or obtained from Commiphora (e.g., myrrh, myrrha, balm of Gilead, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Commiphora</i>.</p>
<p><b>742 Containing or obtained from Eucalypti (e.g., eucalyptus, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Eucalyptus</i>.</p>	<p><b>749 Containing or obtained from Sanguinaria (e.g., bloodroot, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus <i>Sanguinaria</i>.</p>
	<p><b>750 Containing or obtained from Gramineae (e.g., bamboo, corn, or grasses such as grain</b></p>

	<b>products including wheat, rice, rye, barley, oat, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Gramineae.	
<b>751</b>	<b>Containing or obtained from Nicotiana (e.g., tobacco, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Nicotiana.	<b>756</b> <b>Containing or obtained from Zingiberaceae (e.g., Afromonun, cardemon, ginger, turmeric, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Zingiberaceae.
	<b>SEE OR SEARCH CLASS:</b> 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 343 for drugs or pesticides containing nicotine. 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 350 for nicotinic receptors. 546, Organic Compounds Part of the Class 532-570 Series, subclass 279.4 for nicotine, per se.	<b>SEE OR SEARCH CLASS:</b> 426, Food or Edible Material: Processes, Compositions, and Products, subclass 638 for food products flavored with ginger.
<b>752</b>	<b>Containing or obtained from Ginkgo (e.g., ginkgo biloba, maidenhair, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from the genus Ginkgo.	<b>757</b> <b>Containing or obtained from Leguminosae (e.g., legumes such as soybean, kidney bean, pea, lentil, licorice, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Leguminosae.
<b>753</b>	<b>Containing or obtained from Narcissus (e.g., daffodil, sabidilla, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Narcissus.	<b>758</b> <b>Containing or obtained from Cucurbits (e.g., gourds such as pumpkin, squash, cucumber, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Cucurbits.
<b>754</b>	<b>Containing or obtained from Allium (e.g., onion, garlic, ramp, chive, scallion, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Allium.	<b>759</b> <b>Containing or obtained from Tryptergium:</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Tryptergium.
<b>755</b>	<b>Containing or obtained from Brassica (e.g., horseradish, mustard, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Brassica.	<b>760</b> <b>Containing or obtained from Capsicum (e.g., chili pepper, cayenne pepper, red pepper, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Capsicum.
		<b>SEE OR SEARCH CLASS:</b> 426, Food or Edible Material: Processes, Compositions, and Products, subclasses 638 and 641 for food flavored with Capsicum. 514, Drug, Bio-Affecting and Body Treating Compositions, subclass 625 for pharmaceuticals containing capsaicin, the active ingredient of Capsicum.

<p>530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 350 for vanillinoid receptors, which the Capsicum interacts with.</p> <p><b>761 Containing or obtained from Azadirechta (e.g., neem, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Azadirechta.</p> <p>(1) Note. The genus Azadirechta is usually used as an insecticide.</p> <p><b>762 Containing or obtained from Musci (e.g., moss, peat moss, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Musci.</p> <p><b>763 Containing or obtained from Filicinae (e.g., fern, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Filicinae.</p> <p><b>764 Containing or obtained from Compositeae (e.g., marigold, sunflower, dandelion, feverfew, yarrow, chamomile, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Compositeae.</p>	<p><b>766 Containing or obtained from Vitis (e.g., grape, grapeseed, wine from grapes, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Vitis.</p> <p><b>SEE OR SEARCH CLASS:</b></p> <p>426, Food or Edible Material: Processes, Compositions, and Products, subclass 15 for a process of preparing an alcoholic beverage from a fruit or fruit material.</p> <p>436, Chemistry: Analytical and Immunological Testing, subclass 24 for a chemical analysis of wine or alcoholic beverages.</p> <p><b>767 Containing or obtained from Cactaceae (e.g., cactus such as Opuntia, prickly pear, Cereus, Selenicereus, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the family Cactaceae.</p> <p><b>768 Containing or obtained from Linaceae (e.g., flaxseed, linseed, etc.):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant of the genus Linaceae.</p> <p><b>769 Containing or obtained from a tree having matured height of a least two meters:</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant that grows taller than two meters at maturity and has a woody trunk.</p> <p>(1) Note. Excluded from this and indented subclasses are shrubs and bushes.</p> <p><b>770 Conifer (e.g., needle and cone bearing trees such as pine, spruce, hemlock, fir, cypress, cedar, yew, etc.):</b> This subclass is indented under subclass 769. Subject matter wherein the tree is a conifer.</p> <p>(1) Note. Conifers are trees that bear needles and cones.</p>
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	<b>SEE OR SEARCH CLASS:</b> 549, Organic Compounds Part of the Class 532-570 Series, subclass 510 for taxols.	<b>779</b>	<b>Containing or obtained from a stem, stalk, branch, or twig (aka ramus or ramulus):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant stem, stalk, branch, or twig.
<b>771</b>	<b>Oak, maple, walnut, ash, poplar, dogwood, or persimmon:</b> This subclass is indented under subclass 769. Subject matter wherein the tree is an oak, maple, walnut, ash, poplar, dogwood, or persimmon.	<b>780</b>	<b>EXTRACT OR MATERIAL CONTAINING OR OBTAINED FROM A MICROORGANISM AS ACTIVE INGREDIENT (E.G., BACTERIA, PROTOZOA, ETC.):</b> This subclass is indented under the class definition. Subject matter wherein the active ingredient is a material or an extract obtained from a micro-organism.
<b>773</b>	<b>Containing or obtained from a root, bulb, tuber, corm, or rhizome (aka radix):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant root, bulb, tuber, or rhizome.		<b>SEE OR SEARCH THIS CLASS, SUBCLASS:</b>
<b>774</b>	<b>Containing or obtained from a leaf (aka folium or foliage):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant leaf.	93.1	through 93.73, for bio-affecting or body treating compositions containing a whole live micro-organism, cell, or virus.
<b>775</b>	<b>Containing or obtained from a bark (aka cortex):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant bark.	115,	to 124, for bio-affecting or body treating compositions containing a microbial fermentate of undetermined chemical structure.
<b>776</b>	<b>Containing or obtained from a seed or nut:</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant seed or nut.	195.15,	for bio-affecting or body treating compositions containing an extract or material containing a multicellular fungus as active ingredient.
<b>777</b>	<b>Containing or obtained from a fruit (aka fructus), including berry:</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant fruit or berry.	195.16,	for bio-affecting or body treating compositions containing an extract or material containing a unicellular fungus as active ingredient.
<b>778</b>	<b>Containing or obtained from a flower or blossom (aka flos):</b> This subclass is indented under subclass 725. Subject matter wherein the plant material or plant extract is obtained from a plant flower or blossom.	195.17,	for bio-affecting or body treating compositions containing an extract or material containing an algae as active ingredient.
	(1) Note. Pollen is considered to be a part of a flower and is proper herein.	234.1	through 264.1, for bio-affecting or body treating compositions containing an antigen from bacteria.
			<b>SEE OR SEARCH CLASS:</b>
		435,	Chemistry: Molecular Biology and Microbiology, subclasses 243 through 253.6 and 258.1-261 for micro-organism, per se, compositions thereof, process of maintaining, preserving, or culturing.

**CROSS-REFERENCE ART COLLECTIONS**

The following art collections are related to subclasses 130.1 through 283.1

**800 ANTIBODY OR FRAGMENT THEREOF WHOSE AMINO ACID SEQUENCE IS DISCLOSED IN WHOLE OR IN PART:**

This subclass is indented under the class definition. Subject matter involving an antibody or fragment thereof whose amino acid sequence is disclosed in whole or in part.

**801 INVOLVING ANTIBODY OR FRAGMENT THEREOF PRODUCED BY RECOMBINANT DNA TECHNOLOGY:**

This subclass is indented under the class definition. Subject matter involving an antibody or fragment thereof produced by recombinant DNA technology.

**802 ANTIBODY OR ANTIGEN-BINDING FRAGMENT THEREOF THAT BINDS GRAM-POSITIVE BACTERIA:**

This subclass is indented under the class definition. Subject matter involving an antibody or antigen-binding fragment thereof that binds gram-positive bacteria.

**803 ANTIBODY OR ANTIGEN-BINDING FRAGMENT THEREOF THAT BINDS GRAM-NEGATIVE BACTERIA:**

This subclass is indented under the class definition. Subject matter involving an antibody or fragment thereof that binds gram-negative bacteria.

**804 INVOLVING IgG3, IgG4, IgA, OR IgY:**

This subclass is indented under the class definition. Subject matter involving immunoglobulin IgG3, IgG4, IgA, or IgY.

(1) Note. IgY is similar to IgG and is found only in birds.

**805 INVOLVING IgE or IgD:**

This subclass is indented under the class definition. Subject matter involving immunoglobulin IgE or IgD.

**806 INVOLVING IgM:**

This subclass is indented under the class definition. Subject matter involving immunoglobulin IgM.

**807**

**Monoclonal:**

This subclass is indented under subclass 806. Subject matter involving a monoclonal antibody that is IgM.

**808**

**Human:**

This subclass is indented under subclass 807. Subject matter involving a human monoclonal antibody that is IgM.

**809**

**INVOLVING IMMUNOGLOBULIN OR ANTIBODY FRAGMENT (E.G., F(abi)<sub>2</sub>, Fab, Fab, Fv, Fc, HEAVY CHAIN, LIGHT CHAIN, ETC.):**

This subclass is indented under the class definition. Subject matter involving an immunoglobulin or antibody fragment.

**810**

**INVOLVING AUTOIMMUNITY, ALLERGY, IMMEDIATE HYPERSENSITIVITY, DELAYED HYPERSENSITIVITY, IMMUNOSUPPRESSION, IMMUNOTOLERANCE, OR ANERGY:**

This subclass is indented under the class definition. Subject matter involving autoimmunity, allergy, immediate hypersensitivity, delayed hypersensitivity, immunosuppression, immunotolerance, or anergy.

**811**

**INVOLVING SEX SELECTION OR CONTRACEPTION:**

This subclass is indented under the class definition. Subject matter involving sex selection or contraception.

**812**

**LIPOSOME COMPRISING AN ANTIBODY, ANTIBODY FRAGMENT, ANTIGEN, OR OTHER SPECIFIC OR NONSPECIFIC IMMUNOEFFECTOR:**

This subclass is indented under the class definition. Subject matter involving a liposome comprising an antibody, an antibody fragment, an antigen, or another specific or nonspecific immunoefector.

**813**

**VIRAL VACCINE FOR BOVINE SPECIES (E.G., CATTLE, ETC.):**

This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in bovine species such as cattle.

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| <p><b>814 VIRAL VACCINE FOR OVINE SPECIES (E.G., SHEEP, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in ovine species such as sheep.</p> <p><b>815 VIRAL VACCINE FOR PORCINE SPECIES (E.G., SWINE, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in porcine species such as swine.</p> <p><b>816 VIRAL VACCINE FOR AVIAN SPECIES (E.G., POULTRY OR OTHER BIRDS, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in avian species such as poultry or other birds.</p> <p><b>817 VIRAL VACCINE FOR FISH:</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in fish.</p> <p><b>818 VIRAL VACCINE FOR CANIDAE OR MUSTELIDAE (E.G., DOGS, FOXES, MINKS, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in species belonging to the family Canidae, such as dogs or foxes, or in species belonging to the family Mustelidae, such as minks.</p> <p><b>819 VIRAL VACCINE FOR FELINE SPECIES (E.G., CATS, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in feline species such as cats.</p> <p><b>820 VIRAL VACCINE FOR EQUINE SPECIES (E.G., HORSES, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a viral vaccine designated for use in equine species such as horses.</p> | <p><b>821 INVOLVING TEMPERATURE-SENSITIVE MUTANT VIRUS:</b><br/>This subclass is indented under the class definition. Subject matter involving a temperature-sensitive mutant virus.</p> <p><b>822 INVOLVING TK- VIRUS:</b><br/>This subclass is indented under the class definition. Subject matter involving a tk- virus, which produces no active thymidine kinase.</p> <p><b>823 BACTERIAL VACCINE FOR BOVINE SPECIES (E.G., CATTLE, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in bovine species such as cattle.</p> <p><b>824 BACTERIAL VACCINE FOR OVINE SPECIES (E.G., SHEEP, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in ovine species such as sheep.</p> <p><b>825 BACTERIAL VACCINE FOR PORCINE SPECIES (E.G., SWINE, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in porcine species such as swine.</p> <p><b>826 BACTERIAL VACCINE FOR AVIAN SPECIES (E.G., POULTRY OR OTHER BIRDS, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in avian species such as poultry or other birds.</p> <p><b>827 BACTERIAL VACCINE FOR FISH:</b><br/>This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in fish.</p> <p><b>828 BACTERIAL VACCINE FOR CANIDAE OR MUSTELIDAE (E.G., DOGS, FOXES, MINKS, ETC.):</b><br/>This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in species belonging to the family Canidae, such as dogs or foxes, or in</p> |
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species belonging to the family Mustelidae, such as minks.

**829 BACTERIAL VACCINE FOR EQUINE SPECIES (E.G., HORSES, ETC.):**

This subclass is indented under the class definition. Subject matter involving a bacterial vaccine designated for use in equine species such as horses.

**830 INVOLVING TEMPERATURE-SENSITIVE MUTANT BACTERIUM:**

This subclass is indented under the class definition. Subject matter involving a temperature-sensitive mutant bacterium.

**831 INVOLVING CAPSULAR POLYSACCHARIDE OF BACTERIUM (E.G., POLYRIBOSYL RIBITOL PHOSPHATE (PRP), ETC.):**

This subclass is indented under the class definition. Subject matter involving a capsular polysaccharide of a bacterium.

**832 INVOLVING BACTERIAL TOXIN THAT HAS MODIFIED AMINO ACID SEQUENCE:**

This subclass is indented under the class definition. Subject matter involving a bacterial toxin that has an amino acid sequence that differs from that found in nature.

(1) Note. Such modification may render the toxin nontoxic, but still antigenic.

**900 In vivo diagnostic or in vivo test agent which contains an additional ingredient to reduce the toxicity or side effects of the active ingredient:**

Subject matter involving a diagnostic or test agent to be used in vivo which contains an additional ingredient to reduce the toxicity of the active diagnostic or test ingredient.

END