

- 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.)
- 512, Perfume Compositions, subclasses 1 through 27 for perfume compositions, per se. (Compounds and Compositions.)
- 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.)
- 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.)
- 549, Organic Compounds, subclasses 523+ for a preservative fat, fatty oil, ester-type wax or fatty acid. (Compounds and Compositions.)
- 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.)
- 623, Prosthesis (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.)
- ACTIVE**
- Denotes a physiological, pharmacological, or biological affect.
- AMINE**
- Denotes a compound in which one or more of the valences of a nitrogen atom have been satisfied by a covalently bonded carbon atom.
- AROMATIC**
- Denotes a compound which contains a benzene nucleus whether or not it is condensed with other rings.
- CARBOXYLIC**
- Denotes the presence of a moiety.
- $$\left[\begin{array}{c} \text{O} \\ || \\ -\text{C}-\text{O}- \end{array} \right]$$
- 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-

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.

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 radiolabeled 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, SUBCLASS:

- 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.

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.

534, Organic Compounds, subclasses 10+ for an organic compound, per se, containing a radioactive metal.

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.

1.13 In aerosol, fine spray, effervescent, pressurized fluid, vapor or gas, or complete composition therefor:

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

intended for such use and not requiring any additional component to perfect it other than a pressurizing agent (e.g., heat).

- (1) Note. Gaseous compositions and methods comprising radioactive Xenon for lung studies are found here.

1.17 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):

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.

- (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.

SEE OR SEARCH THIS CLASS, SUBCLASS:

1.65+, for cellular extracts of undefined or unspecified composition.

SEE OR SEARCH CLASS:

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.

1.21 Molecular bilayer structure (e.g., vesicle, liposome):

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, SUBCLASS:

- 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, SUBCLASS:

- 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, SUBCLASS:

- 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, cholane), hormone, or neurotransmitter, or other secreted growth regulatory factor, differentiation factor, or intercellular mediator (e.g., T₃, T₄, 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, SUBCLASS:

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 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, SUBCLASS:

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, SUBCLASS:

- 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 B₁₂):

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_n(H₂O)_n, 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, SUBCLASS:

- 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, SUBCLASS:

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, SUBCLASS:

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.

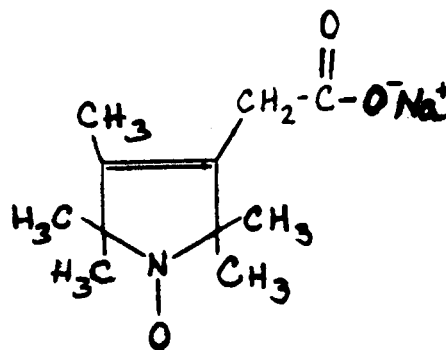
(1) Note. A paramagnetic metal is one which is capable of aligning with a magnetic field, but does not itself become magnetized.

(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, SUBCLASS:

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.

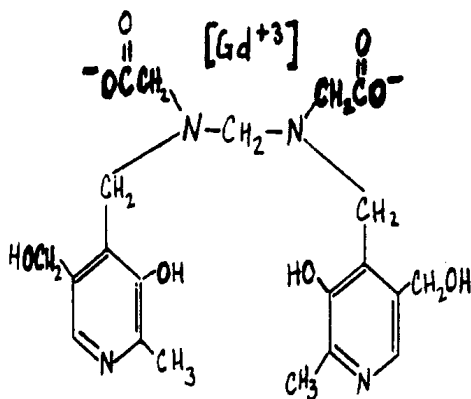
9.361 Heterocyclic compound is attached to or complexed with the metal:

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.

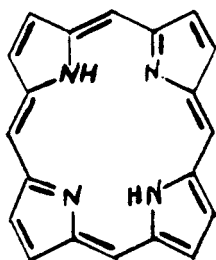
- (2) Note. An example of a compound provided for herein is:



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.

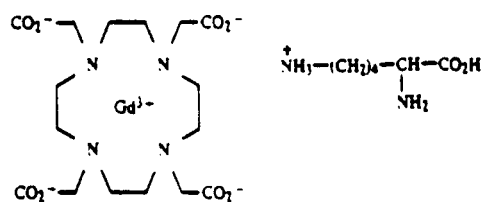
- (1) Note. Porphyrins are compounds containing the following basic structure:



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.

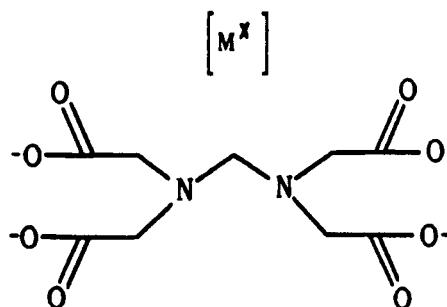
- (1) Note. An example of a compound provided for herein is:



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.

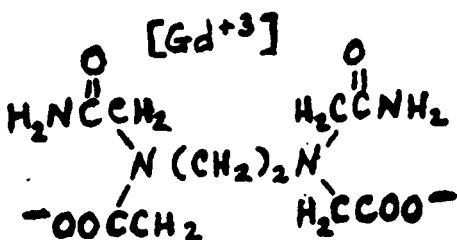
- (1) Note. An example of a compound provided for herein is in the structure below, where M is a transition, actinide or lanthanide metal and X is a positive integer.



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:

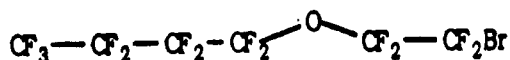
**9.37 Imageable halogen containing:**

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., BaSO₄, BaCl₂, etc.

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

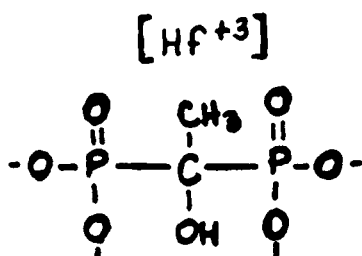
This subclass is indented under subclass 9.41. Subject matter wherein the barium containing agent includes a polymer e.g., dextran, starch, polyvinyl, polysilane, etc.

- (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, SUBCLASS:

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:

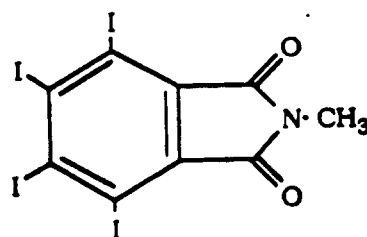
This subclass is indented under subclass 9.4. Subject matter wherein the agent has attached or complexed to it a carbohydrate or a derivative thereof such as a monosaccharide or polysaccharide (the monosaccharide radical units of which contain at least five carbon atoms) or their reaction products wherein 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.

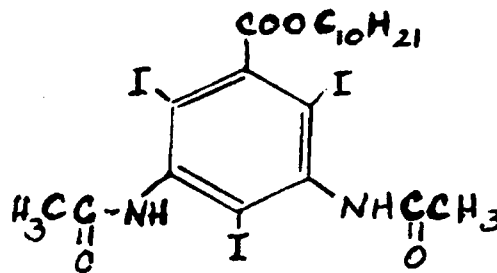
(2) Note. An example of a compound provided for herein is:



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.

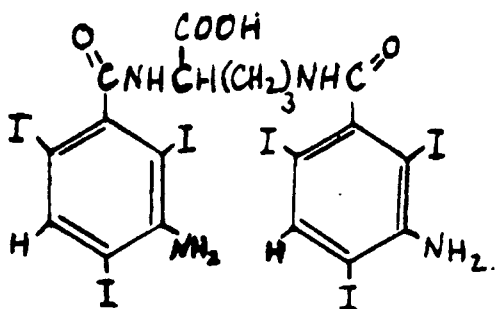
(1) Note. An example of a compound provided for herein is:



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.

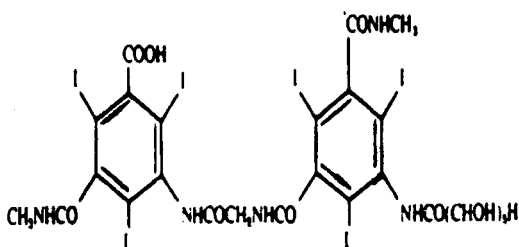
(1) Note. An example of a compound provided for herein is



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.

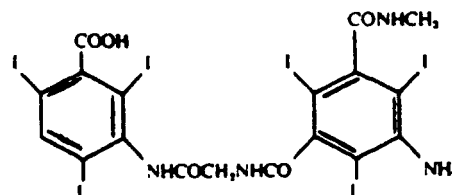
(2) Note. An example of a compound provided for herein is:



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:

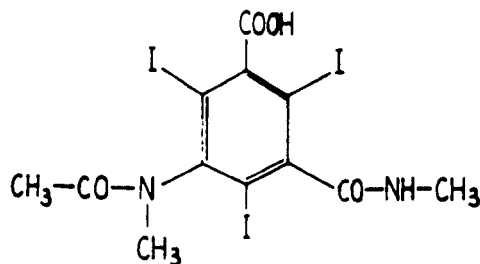


9.454 Three or more amide groups are attached directly to the same benzene ring by non-ionic bonding:

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.

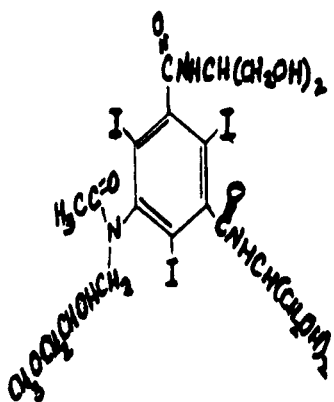
(2) Note. An example of a compound provided for herein is:



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, SUBCLASS:

- 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:

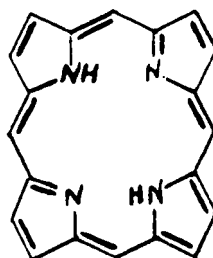
This subclass is indented under subclass 9.1. Subject matter wherein the diagnostic or test compound or composition is adapted for use as a fluorescent contrast agent.

- (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, SUBCLASS:

- 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, SUBCLASS:

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, SUBCLASS:
- 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, SUBCLASS:

- 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, SUBCLASS:

- 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, SUBCLASS:

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, SUBCLASS:
- 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, SUBCLASS:
- 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 suntan, 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 over-all 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, SUBCLASS:
- 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, SUBCLASS:
- 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, SUBCLASS:

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 non-therapeutic 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 desig-

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, SUBCLASS:

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., $\text{CH}_3\text{-NHCH}(\text{COO-})\text{CH}_2\text{CONH-}(\text{CH}_2)_5\text{N}(\text{CH}_3)(\text{C}_2\text{H}_5)\text{Metal (+)}$.

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 nondyeing compositions having utility in coloring the hair.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
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, SUBCLASS:
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, SUBCLASS:

- 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, SUBCLASS:

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.

- 585, Chemistry of Hydrocarbon Compounds, subclasses 823+ for a process of purifying a hydrocarbon by sorption removal of a chemically undetermined odorant.
- 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.
- 76.2 Deodorizing substance is evaporable, sublimable or gas (e.g., deodorization of air, aerosol spray compositions, etc.):**
This subclass is indented under subclass 76.1. Subject matter which are evaporatable, sublimable, or a gas.
- (1) Note. The compositions of this and the indented subclasses are for the removal, including chemical reaction, or masking of odors in the air.
- 76.21 For chemical reaction with odor producing material or gas evolving composition:**
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.
- 76.3 From a gel or solid matrix (e.g., retarded vaporization compositions, etc.):**
This subclass is indented under subclass 76.2. Subject matter which is released from a gel of solid matrix.
- (1) Note. This subclass includes deodorant which evaporates or sublimates from a block of deodorizing substance.
- 76.4 With odor masking substances (e.g., perfumes, etc.):**
This subclass is indented under subclass 76.3. Subject matter which contain an odor masking substance.
- SEE OR SEARCH CLASS:
- 2, Apparel, subclass 171.2 for a head covering containing perfume.
- 63, Jewelry, digest 2 for perfumed jewelry.
- 223, Apparel Apparatus, subclass 86 for a garment hanger containing perfume.
- 434, Education and Demonstration, subclass 377 for demonstrating apparatus involving a perfume.
- 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.
- 523, Synthetic Resins or Natural Rubbers, subclass 102 for a perfumed composition or the method of preparing a perfumed composition.
- D28, Cosmetic Products and Toilet Articles, subclass 5 for a perfume or sachet.
- 76.5 For application to waste materials, solid or liquid refuse or sewage:**
This subclass is indented under subclass 76.1. Subject matter which are for application to waste materials, solid or liquid refuse or sewage.
- 76.6 Waste includes fecal material or urine (e.g., feed lot or cage waste, pet litter, etc.):**
This subclass is indented under subclass 76.5. Compositions which are used on waste including feces or urine.
- 76.7 For toilet or urinal (e.g., recirculating toilet fluid, etc.):**
This subclass is indented under subclass 76.6. Subject matter which are used in a toilet or urinal.
- (1) Note. This subclass includes recirculating toilet fluids and additives as well as materials for adding to septic systems or cesspools to control odors.
- 76.8 With bio-affecting material (i.e., biocide or biostat):**
This subclass is indented under subclass 76.1. Compositions which contain materials which control or eliminate microbial growth.

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, SUBCLASS:

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 SUPPRESSANT, 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-

cological, 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 CONTAINING 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 adhe-

sive 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-arthritic, 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, SUBCLASS:
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, SUBCLASS:
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, SUBCLASS:

- 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, bioactive 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-
- 523, 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 hypercholesteremia (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 diepoxide (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-vinylloxazolidin-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.

78.24 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₍₂₎, Br₍₂₎, 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 con-

densation 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) Lymphotoxin (LT) Leukocyte Migration Inhibitory Factor (LIF) 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) 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) Macrophage Activating Factor (MAF).

SEE OR SEARCH THIS CLASS, SUBCLASS:

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, actinomycetales, 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, SUBCLASS:
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 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 subclassifications 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;

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

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, SUBCLASS:

- 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, SUBCLASS:

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 radiolabeled 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 TOLERAGEN, IMMUNOSPECIFIC IMMUNOSUPPRESSOR, ETC.):

This subclass is indented under the class definition. Subject matter involving an antigen, an epitope, or another immunospecific immunoeffector, such as an immunospecific vaccine, an immunospecific stimulator of cell-mediated immunity, an immunospecific toleragen, 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 determinant.

(3) Note. An immunospecific immunoeffector, 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 immunospecific 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, SUBCLASS:

- 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, SUBCLASS:

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, SUBCLASS:

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, SUBCLASS:

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, SUBCLASS:

- 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, SUBCLASS:

- 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, SUBCLASS:

- 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)
 209.1, 210.1, for influenza
 211.1, for canine tracheobronchitis
 211.1, for parainfluenza
 211.1, for respiratory syncytial
 211.1, for rinderpest
 211.1, for Sendai
 211.1, for turkey rhinotracheitis
 212.1, for measles
 212.1, for mumps
 213.1, for canine distemper
 214.1, for Newcastle disease
 215.1, for orbivirus
 215.1, for avian proventriculitis
 215.1, for bluetongue
 215.1, for Colorado tick fever
 215.1, for reovirus
 215.1, for rotavirus
 216.1, for coxsackievirus
 216.1, for avian encephalomyelitis
 216.1, for echovirus
 216.1, for Mengovirus
 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

229.1, for bovine herpes virus type 1
 229.1, for infectious pustular vulvovaginitis
 229.1, for laryngotracheitis
 229.1, for Marek's disease
 229.1, for feline rhinotracheitis
 230.1, for herpes zoster
 230.1, for varicella zoster
 230.1, for cytomegalovirus
 230.1, for Epstein-Barr
 231.1, for herpes simplex
 232.1, for avian pox
 232.1, for rabbit myxoma
 232.1, for smallpox
 232.1, for fowlpox
 232.1, for vaccinia
 233.1, for canine parvovirus
 233.1, for adeno-like
 233.1, for adenovirus
 233.1, for egg drop syndrome
 233.1, for feline panleukopenia
 233.1, for mink enteritis
 233.1, for hemorrhagic enteritis

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, SUBCLASS:

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-lymphotropic 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 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, SUBCLASS:

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, SUBCLASS:

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., ragweed 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 immunoeffector, per se, or a nonspecific immunoeffector, 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 immunoeffector.

(1) Note. In order for a patent to be placed here, it must recite a particular nonspecific immunoeffector, 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 immunoeffector 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 immunoeffector, 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 immunoeffector, etc., have been placed as original references in this or the indented subclass that provides for that particular nonspecific immunoeffector, 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-acetylmuramyl-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.
- 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.
- D24, Medical and Laboratory Equipment, subclasses 100 through 104 for design patents for pharmaceutical products.
- 401 Cosmetic, antiperspirant, dentifrice:**
This subclass is indented under subclass 400. Subject matter in which the composition is a cosmetic, antiperspirant or dentifrice.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 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.
- 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 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.

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.

403 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., shampoo, 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.
- 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.
- 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. 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.

220, Receptacles, subclasses 87.1+ for a disinfecting device to be attached to the receptacles of that class.

413 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, SUBCLASS:
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, SUBCLASS:
469+, for matrix containing tablets.
484+, for orally ingestible 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, SUBCLASS:
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 erroable, resorbable, or dissolving.

SEE OR SEARCH THIS CLASS, SUBCLASS:

426, for an errodable, resobable, 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 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, SUBCLASS:
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 or 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, SUBCLASS:
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

