CLASS 554, ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

SUBCLASSES

1 This subclass is indented under subclass 1. Compounds under Class 532, ... , which are long-chain aliphatic monocarboxylic acid derivatives, herein referred to as "fatty compounds", characterized by having the carbonyl of (1) a carboxylic acid, (2) a carboxylic acid salt, (3) a carboxylic acid ester, or (4) a carboxylic acid amide bonded directly to one end of an acyclic chain of at least seven uninterrupted carbons, i.e., the acid moiety; wherein any additional carbonyl group in the acid moiety is (1) part of an aldehyde or ketone group, (2) bonded directly to a noncarbon atom which is between the additional carbonyl and the chain, or (3) attached indirectly to the chain by ionic bonding.

(1) Note. The term "fatty compounds" referred to throughout the definitions is inclusive of fats, fatty oils, ester-type waxes, higher fatty acids, salts, esters, amides, and fatty still residues, the latter being the bottoms, tars, or pitches resulting from distillation of fats, oils, and waxes, e.g., stearine pitch. Fats and fatty oils are glycerides of higher fatty acids, including naturally occurring mixtures thereof present in a single oil or fat. Ester-type waxes are essentially esters in chemical structure, e.g., beeswax, montan wax, carnauba wax, and spermaceti.

(2) Note. Included herein are processes directed to the preparation, treatment, modification, purification, or recovery of fatty compounds by chemical or physical means which do not involve the destruction of the acid moiety as defined above, when such processes are not provided for elsewhere.

(3) Note. The treatment of a mixture of fats, oils, or waxes from different sources or a single oil, fat, or wax with a mixture of reactants, to produce a particular composition of matter having an art use for which there is a class provided, is classified in the class providing for said art use and cross-referenced hereinto when desirable.

SEE OR SEARCH CLASS:

204, Chemistry: Electrical and Wave Energy, subclasses 157.6+ for methods of preparing and treating fatty compounds by electrical or wave energy.

208, Mineral Oils: Processes and Products, subclass 1 for mineral oil products which have the properties of natural drying oils in that they dry or harden in contact with air and processes of preparing the same.

426, Food or Edible Material: Processes, Compositions, and Products, subclass 417 for patents claiming or solely disclosing processes involving (1) the preparation or treatment of edible triglyceridic fats or oils; or (2) rendering processes to separate an edible triglyceridic fat or oil from a starting material; and subclass 530 for processes of treating butter or a butter substitute.

556, Organic Compounds, subclasses 437 through 442 for compounds wherein the carbonyls of a silicon containing polycarboxylic acid, salt, or ester are bonded directly to an acyclic carbon chain of at least seven uninterrupted carbons.

558, Organic Compounds, subclasses 230+ for compounds wherein the thiocarbonyl of a thiocarbonic or thiocarboxylicester is bonded directly to one end of an acyclic carbon chain of at least seven uninterrupted carbons.

560, Organic Compounds, subclass 44, 54, 66, 76-99, 127, 146, 151, 171, 176, 180-182, and 190-204 for compounds wherein the carbonyls of a polycarboxylic acid ester are bonded directly to an acyclic carbon chain of at least seven uninterrupted carbons.

562, Organic Compounds, subclasses 26+ for compounds wherein the thiocarbonyl of a thiocarbonic or thiocarboxylic acid is bonded directly to one end of an acyclic carbon chain of at least seven carbons; subclasses 480-489, 509, 568, 571-573, 578, 582-585, and 590-596 for compounds wherein the

carbonyls of a polycarboxylic acid or salt are bonded directly to an acyclic carbon chain of at least seven uninterrupted carbons; subclass 838 for compounds wherein the thiocarbonyl of a thioacid halide is bonded directly to one end of an acyclic carbon chain of at least seven uninterrupted carbons; subclasses 840+ for compounds wherein the carbonyl of a carboxylic acid halide is bonded directly to one end of an acyclic carbon chain of at least seven uninterrupted carbons; subclass 886 for compounds wherein the thiocarbonyl of a thioanhydride is bonded directly to one end of an acyclic carbon chain of at least seven uninterrupted carbons; subclasses 887+ for compounds wherein the carbonyl of a carboxylic acid anhydride is bonded directly to one end of an acyclic carbon chain of at least seven uninterrupted carbons.

564, Organic Compounds, subclass 78 for compounds wherein the thiocarbonyl of a thiocarboxamide is bonded directly to one end of an acyclic chain of at least seven uninterrupted carbons; subclasses 152-160 for compounds wherein the carbonyls of a polycarboxamide are bonded to an acyclic carbon of at least seven uninterrupted carbons; subclass 254 for compounds which are O-esters of oximes, wherein the ester forming group contains an acyclic chain of at least seven uninterrupted carbons.

568, Organic Compounds, subclasses 303+ and 700+ for compounds wherein the carboxyl group of a fatty acid is converted into an oxo or carbinol group.

2 This subclass is indented under subclass 1. Products wherein the compound is mixed with a preserving or stabilizing agent which functions to prevent physical or chemical change.

SEE OR SEARCH CLASS:

426, Food or Edible Material: Processes, Compositions, and Products, appropriate subclasses, for preserved edible oils not from a single source.

508, Solid Antifriction Devices, Materials Therefor, Lubricant and Separant Compositions for Moving Solid Surfaces, and Miscellaneous Mineral Oil Compositions, particularly subclasses 110+, for preserved lubricants or cutting oils.

3 This subclass is indented under subclass 2. Products wherein the preservative or stabilizer contains an oxygen containing hetero ring.

4 This subclass is indented under subclass 2. Products wherein the preservative or stabilizer contains phosphorus.

5 This subclass is indented under subclass 2. Products wherein the preservative or stabilizer contains nitrogen.

6 This subclass is indented under subclass 2. Products wherein the preservative or stabilizer contains sulfur.

7 This subclass is indented under subclass 2. Products wherein the preservative or stabilizer contains at least one benzene ring having at least one -OH group bonded directly thereto, wherein H of the -OH may be replaced by metal or substituted or unsubstituted ammonium.

8 This subclass is indented under subclass 1. Processes which include the extraction of the fatty compound(s) directly from animal or plant source material.

(1) Note. Included herein are processes such as the recovery of fatty acid compounds from garbage, fish offal, slaughter house waste, whole fish, olive fruit,etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

175+, for processes directed to the purification of extracted fatty compounds.

SEE OR SEARCH CLASS:

100, Presses, for processes wherein a broadly claimed extraction step is followed by a significant expressing operation.

210, Liquid Purification or Separation, subclasses 600+ for a process of purifying or separating water or a generi-

cally claimed liquid and for significant filtration or decantation treatments.

9 This subclass is indented under subclass 8. Processes wherein the fatty compound is extracted from legumes, nuts, or seeds, such as soya beans, peanuts, flax seed, cotton seed, or portions thereof, e.g., shells, kernels, germs, oil cake, etc.

10 This subclass is indented under subclass 9. Processes wherein sugar or fatty material is utilized to facilitate extraction.

(1) Note. Included herein are processes utilizing (1) miscella, molasses, lecithin, cocoa butter, etc, to extract the fatty compound; (2) heated cashew oil to extract more oil from cashew nuts; (3) soap as an emulsifier, etc.

11 This subclass is indented under subclass 9. Processes wherein carbon dioxide or a peroxy-, sulfur-, nitrogen-, or metal-containing material is utilized facilitate extraction.

12 This subclass is indented under subclass 9. Processes wherein the legume, nut, or seed source material is subjected to the action of an organic solvent to dissolve out the fatty compound(s).

SEE OR SEARCH THIS CLASS, SUBCLASS:
15, or 17, for processes wherein water is utilized in a solvent extraction.

(1) Note. Oil is not miscible with water so in the subclasses wherein water or steam is added, the water or steam is utilized as a heating medium or to dissolve out nonoleaginous principles such as impurities.

13 This subclass is indented under subclass 12. Processes wherein the solvent contains halogen or oxygen.

14 This subclass is indented under subclass 13. Processes wherein two or more different solvents are utilized simultaneously or in succession.

15 This subclass is indented under subclass 12. Processes wherein water or water vapor is utilized to facilitate extraction.

16 This subclass is indented under subclass 12. Processes wherein the extraction is carried out under a pressure greater or less than atmospheric.

(1) Note. The pressure referred to in this subclass is fluid pressure and not mechanical.

17 This subclass is indented under subclass 9. Processes wherein water vapor, water, or a pressure less than atmospheric is utilized.

18 This subclass is indented under subclass 8. Processes wherein fish liver is employed as the source material.

19 This subclass is indented under subclass 8. Processes wherein a material containing sulfur, silicon, nitrogen, or a metal is utilized to facilitate extraction.

20 This subclass is indented under subclass 8. Processes wherein the source material is subjected to the action of an organic solvent to dissolve out the fatty compound.

21 This subclass is indented under subclass 20. Processes wherein the solvent contains halogen or oxygen.

22 This subclass is indented under subclass 8. Processes wherein a pressure less than atmospheric is utilized.

23 This subclass is indented under subclass 8. Processes wherein water vapor or water is added to the source material to facilitate extraction.

(1) Note. This subclass includes processes which are directed to the melting out of the fatty compound from animal or vegetable matter by heat using steam or water.

24 This subclass is indented under subclass 1. Processes which are directed to chemically treating fatty oils to impart drying or film-

forming properties thereto, and the products produced by said treatment.

(1) Note. Drying oils are characterized by becoming hard and resinous in contact with the air (absorbing oxygen) and are especially useful in the manufacture of varnishes and coating compositions. Drying oils contain a great proportion of polyethylenically unsaturated acids, usually conjugated. This subclass includes processes of treating the commonly known drying or semi-drying oils, such as linseed oil (which may contain inhibitors for satisfactory drying), to improve their drying properties, and processes of treating nondrying oils, such as castor oil, to impart drying properties thereto.

(2) Note. Fatty compounds produced from drying oils, which compounds no longer retain drying properties, are classified where appropriate elsewhere.

SEE OR SEARCH CLASS:
208, Mineral Oils: Processes and Products, subclass 1 for mineral oil products which have the properties of natural drying oils and processes of preparing the same.

25 This subclass is indented under subclass 24. Processes which are directed to polymerizing an oil, such as by heating or oxidizing, and the polymerized products resulting therefrom.

(1) Note. Included herein are synthetic drying products resulting from, for example, the interaction of unsaturated fatty acid oils and polyhydric alcohol polyesters of aromatic polycarboxylic acids.

(2) Note. The process of thermally polymerizing oils is commonly termed "bodying" of oils and the resulting products, "bodied oils", which describes oils whose mean molecular weight, specific gravity, and viscosity have been increased by the application of heat.

26 This subclass is indented under subclass 25. Processes which include, in addition to the oil reactant, at least one other organic compound in the polymerization reaction, such as a catalyst, promoter, or reactant.

27 This subclass is indented under subclass 26. Processes wherein the additional organic compound is an ethylenically unsaturated monomer containing hydrogen and carbon only.

28 This subclass is indented under subclass 25. Processes wherein an inorganic material is utilized in the polymerization reaction.

29 This subclass is indented under subclass 25. Processes which include separating the polymerized product from impurities or from the reaction mixture.

30 This subclass is indented under subclass 24. Processes which include esterification or wherein a starting material is treated, such as by heat or with catalysts, to cause a rearrangement of elements.

31 This subclass is indented under subclass 24. Processes which are directed to dehydrating a starting material or forming carbon to carbon unsaturation in a starting material to impart drying properties thereto.

(1) Note. Provided for herein are processes directed to (1) the removal of water from compounds such as hydroxylated fatty acids or oils, or (2) the formation of conjugated unsaturation by dehydrogenation or dehalohydrogenation, etc.

32 This subclass is indented under subclass 31. Processes wherein a compound containing a metal having a specific gravity greater than four is utilized, e.g., as reactant, catalyst, promoter, etc.

33 This subclass is indented under subclass 31. Processes wherein a compound containing sulfur is utilized.

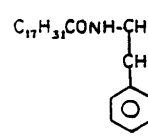
34 This subclass is indented under subclass 31. Processes wherein a compound containing a Group IA or Group IIA light metal is utilized.

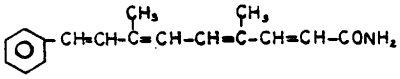
(1) Note. The Group IA light metals are lithium (Li), sodium (Na), potassium (K), rubidium (Rb), and cesium (Cs). The Group IIA light metals are beryl-

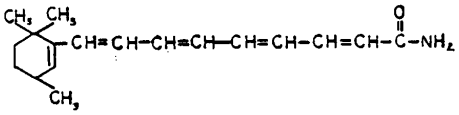
lium (Be), magnesium (Mg), calcium (Ca), strontium (Sr), and barium (Ba).

35 This subclass is indented under subclass 1. Compounds which are fatty acid amides, i.e., compounds having an acyclic chain of at least seven uninterrupted carbons bonded directly to the carbonyl of a -C(=O)- NH(H) group, wherein the hydrogens may be substituted.

(1) Note. This subclass contains, for example:





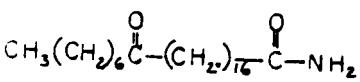


SEE OR SEARCH CLASS:

564, Organic Compounds, subclasses 152+ for compounds having plural carboxamide groups bonded through their carbonyls to each end of an acyclic carbon chain of any length.

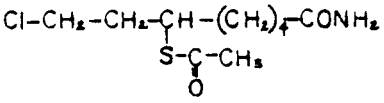
36 This subclass is indented under subclass 35. Compounds wherein an additional carbonyl is in the acid moiety.

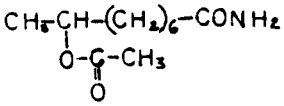
(1) Note. This subclass contains, for example:



37 This subclass is indented under subclass 36. Compounds wherein an atom other carbon is bonded directly to the additional carbonyl.

(1) Note. This subclass contains, for example:





38 This subclass is indented under subclass 35. Compounds which contain aluminum or a metal having a specific gravity greater than four.

39 This subclass is indented under subclass 35. Compounds which contain boron, silicon, selenium, or tellurium.

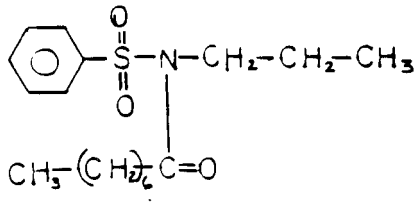
40 This subclass is indented under subclass 35. Compounds which contain phosphorus.

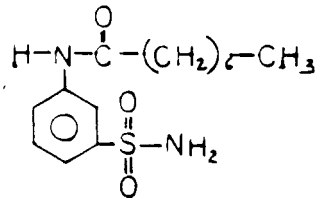
41 This subclass is indented under subclass 40. Compounds which contain nitrogen in addition to the carboxamide nitrogen.

42 This subclass is indented under subclass 35. Compounds which contain sulfur.

43 This subclass is indented under subclass 42. Compounds wherein sulfur is bonded directly to the carboxamide nitrogen or to an additional nitrogen.

(1) Note. This subclass contains, for example:





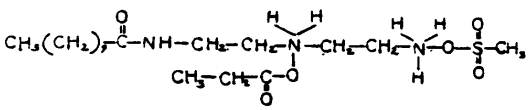
44 This subclass is indented under subclass 42. Compounds which contain oxygen bonded directly to sulfur.

45 This subclass is indented under subclass 44. Compounds wherein the sulfoxy group is bonded directly to a ring.

46 This subclass is indented under subclass 44. Compounds which contain nitrogen in addition to the carboxamide nitrogen.

47 This subclass is indented under subclass 46. Compounds which contain a -O- group.

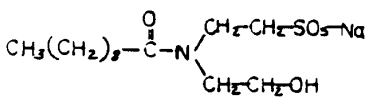
(1) Note. This subclass contains, for example:

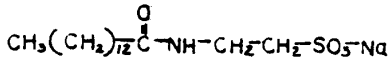


48 This subclass is indented under subclass 46. Compounds which contain two or more carboxamide groups.

49 This subclass is indented under subclass 44. Compounds wherein the carboxamide nitrogen and a -S(=O)(=O)-O-X group are attached to each other through an acyclic carbon chain, where X is hydrogen or a metal.

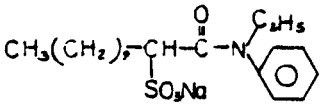
(1) Note. This subclass contains, for example:





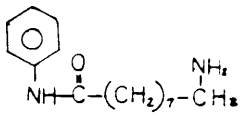
50 This subclass is indented under subclass 44. Compounds which contain sulfur bonded directly to oxygen in the acid moiety of the carboxamide.

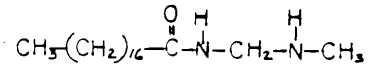
(1) Note. This subclass contains, for example:



51 This subclass is indented under subclass 35. Compounds which contain plural nitrogens, i.e., nitrogen in addition to the carboxamide nitrogen.

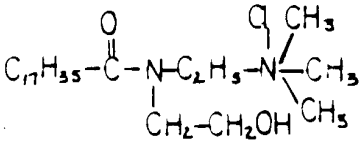
(1) Note. This subclass contains, for example:





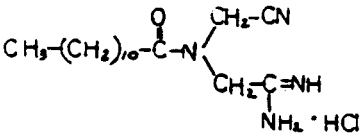
52 This subclass is indented under subclass 51. Compounds wherein the additional nitrogen is in a quaternary ammonium group; i.e., a pentavalent nitrogen is bonded by four valences to carbon.

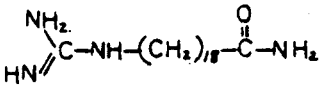
(1) Note. This subclass contains, for example:



53 This subclass is indented under subclass 51. Compounds which contain the $-NH_2$ or $-NH-NH_2$ group, wherein substitution may be made for hydrogen only.

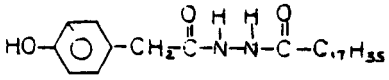
(1) Note. This subclass contains, for example:

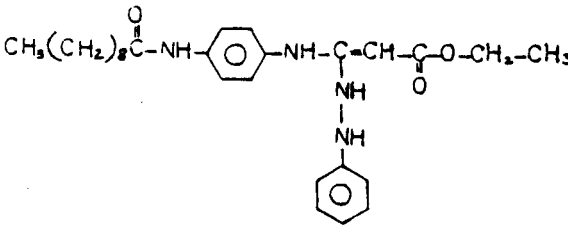


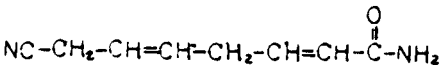


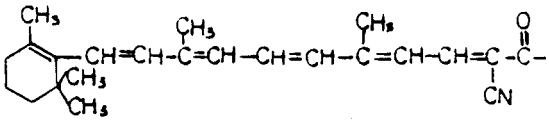
54 This subclass is indented under subclass 51. Compounds which contain a -CN group or a $-NH-NH_2$ group, wherein substitution may be made for hydrogen only.

(1) Note. This subclass contains, for example:



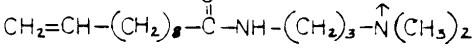


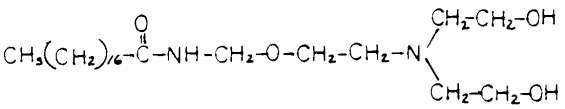




55 This subclass is indented under subclass 51. Compounds which contain halogen or plural oxygens, i.e., oxygen in addition to the carboxamide oxygen.

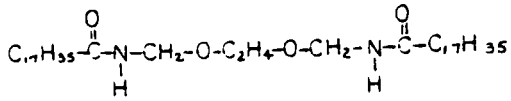
(1) Note. This subclass contains, for example:

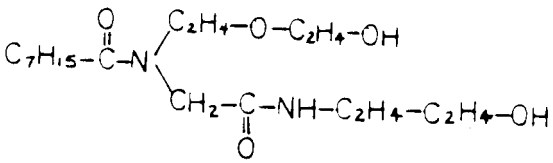




56 This subclass is indented under subclass 55. Compounds which contain at least two carboxamide groups.

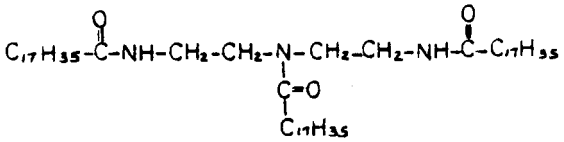
(1) Note. This subclass contains, for example:





57 This subclass is indented under subclass 56. Compounds which contain three or more carboxamide group.

(1) Note. This subclass contains, for example:



58 This subclass is indented under subclass 56. Compounds which contain a -O- group or nitrogen in addition to those in the two carboxamide groups.

59 This subclass is indented under subclass 55. Compounds wherein the additional oxygen is in a O- group.

60 This subclass is indented under subclass 55. Compounds wherein the additional oxygen is in a nitro group or in a group composed of two or more oxyalkylene groups bonded directly to each other.

61 This subclass is indented under subclass 35. Compounds which contain plural oxygens, i.e., oxygen in addition to the carboxamide oxygen.

62 This subclass is indented under subclass 61. Compounds which contain halogen.

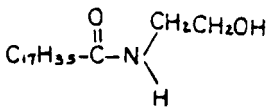
63 This subclass is indented under subclass 61. Compounds which contain a -O- group.

64 This subclass is indented under subclass 61. Compounds which contain two or more oxyalkylene groups; i.e., -O-Alkyl-, bonded directly to each other.

65 This subclass is indented under subclass 61. Compounds wherein the oxygen is bonded directly to a ring.

66 This subclass is indented under subclass 61. Compounds which contain an hydroxyalkyl group bonded directly to the carboxamide nitrogen through a carbon of the group.

(1) Note. This subclass contains, for example:



67 This subclass is indented under subclass 35. Compounds which contain halogen.

68 This subclass is indented under subclass 35. Processes which are directed to the preparation, recovery, or treatment of a fatty acid amide.

69 This subclass is indented under subclass 68. Processes which are directed to the formation of the carboxamide group; e.g., by reacting a fatty acid, salt, ester, acid halide, or anhydride with ammonia or an amino nitrogen containing compound.

70 This subclass is indented under subclass 68. Processes which are directed to separating the fatty acid amide from impurities or from the reaction mixture.

71 This subclass is indented under subclass 1. Compounds which contain a metal having a specific gravity greater than four.

72 This subclass is indented under subclass 71. Compound wherein the heavy metal is titanium, zirconium, or cerium.

73 This subclass is indented under subclass 71. Compounds wherein the heavy metal is lead or tin.

74 This subclass is indented under subclass 71. Compounds wherein the heavy metal is iron, cobalt, nickel, copper, silver, or gold.

75 This subclass is indented under subclass 71. Compounds wherein the heavy metal is zinc, cadmium, or mercury.

76 This subclass is indented under subclass 1. Compounds which contain aluminum.

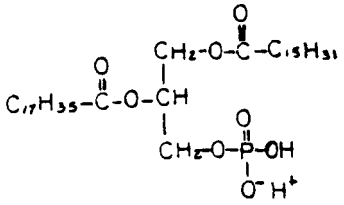
77 This subclass is indented under subclass 1. Compounds which contain boron, selenium, or silicon.

78 This subclass is indented under subclass 1. Compounds which contain phosphorus.

79 This subclass is indented under subclass 78. Compounds which are phosphoric acid glycerol esters containing a fatty acid moiety.

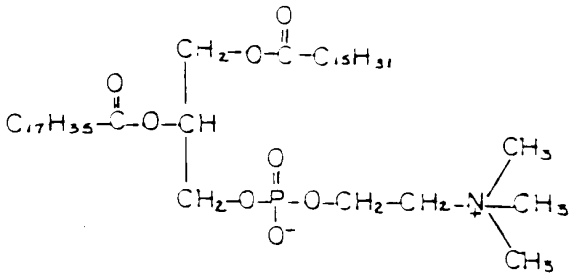
(1) Note. Glycerophosphates are complex lipids which on hydrolysis yield glycerol, fatty acid, and phosphoric acid or an inorganic phosphate.

(2) Note. This subclass contains, for example:



80 This subclass is indented under subclass 79. Compounds which contain nitrogen.

(1) Note. This subclass contains, for example:



81 This subclass is indented under subclass 80. Compounds which contain halogen or sulfur.

82 This subclass is indented under subclass 80. Processes which are directed to the preparation of nitrogen containing glycerophosphates.

83 This subclass is indented under subclass 80. Processes which include separating the compound from impurities or the reaction mixture.

84 This subclass is indented under subclass 78. Compounds which contain nitrogen.

85 This subclass is indented under subclass 1. Compounds which contain sulfur.

86 This subclass is indented under subclass 85. Processes wherein the sulfur containing compound is treated with or prepared in a reaction utilizing sulfur chloride.

87 This subclass is indented under subclass 85. Processes wherein the sulfur containing compound is treated with or prepared in a reaction utilizing elemental sulfur.

88 This subclass is indented under subclass 85. Compounds which contain oxygen bonded directly to sulfur.

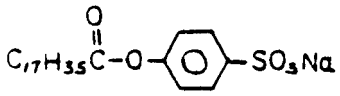
(1) Note. Included herein are sulfonated or sulfated oils.

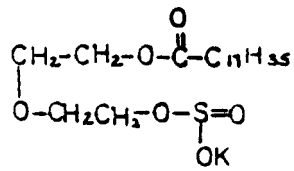
89 This subclass is indented under subclass 88. Compounds which are sulfo-aromatic fatty acids prepared by the action of sulfuric acid on an aromatic hydrocarbon such as naphthalene, and a fatty compound, such as castor oil or oleic acid.

(1) Note. Twitchell reagent and Pfeilring reagent are fat hydrolysis catalysts.

90 This subclass is indented under subclass 88. Compounds wherein the sulfoxy is in the alcohol moiety.

(1) Note. This subclass contains, for example:

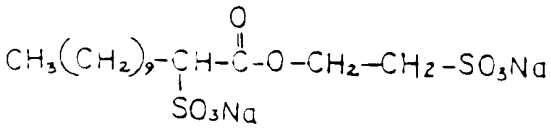




91 This subclass is indented under subclass 90. Compounds which contain nitrogen bonded directly to carbon in the alcohol moiety.

92 This subclass is indented under subclass 90. Compounds wherein-S(=O)(=O)-O-X is attached indirectly through a single carbon or carbon chain to the single bonded oxygen of the -O- group, wherein X is hydrogen or a cation.

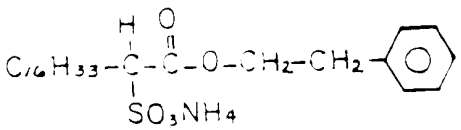
(1) Note. This subclass contains, for example:



93 This subclass is indented under subclass 90. Processes which include separating the compound from impurities or from the reaction mixture.

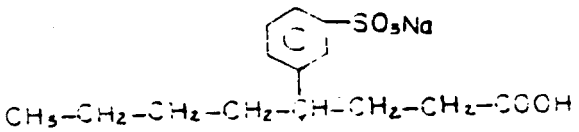
94 This subclass is indented under subclass 88. Compounds which contain nitrogen.

(1) Note. This subclass contains, for example:



95 This subclass is indented under subclass 88. Compounds which contain a carbocyclic ring in the acid moiety.

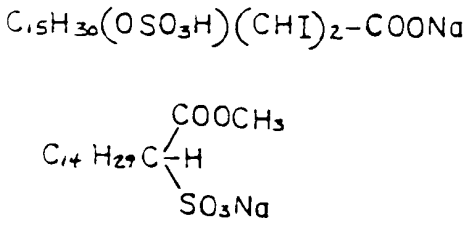
(1) Note. This subclass contains, for example:



96 This subclass is indented under subclass 88. Compounds which contain a sulfonic acid or a sulfate monoester substituent, or a salt or ester of the substituent.

97 This subclass is indented under subclass 96. Compounds which are metal salts.

(1) Note. This subclass contains, for example:



98 This subclass is indented under subclass 96. Processes which are directed to preparing the compound by reacting anhydrous sulfur trioxide.

99 This subclass is indented under subclass 96. Processes wherein the compound is prepared by a sulfonation reaction which is carried out in the presence of (1) a lower carboxylic acid (i.e., the uninterrupted carbon chain in the acid moiety contains fewer than seven carbons), (2) an anhydride thereof, (3) an acid halide thereof, or (4) a phosphorus containing material.

100 This subclass is indented under subclass 96. Processes which are directed to separating the compound from impurities or from the reaction mixture.

101 This subclass is indented under subclass 85. Compounds which contain -S- Carbon, -SH or -SM where M is a metal.

102 This subclass is indented under subclass 101. Compounds which contain two or more sulfur atoms.

103 This subclass is indented under subclass 1. Compounds which contain nitrogen.

SEE OR SEARCH THIS CLASS, SUBCLASS:

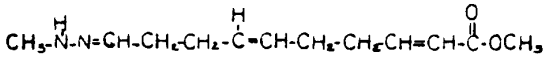
184+, for the purification of fatty compounds wherein a nitrogen containing compound is utilized.

SEE OR SEARCH CLASS:

558, Organic Compounds, subclasses 303+ for higher fatty acid nitriles.

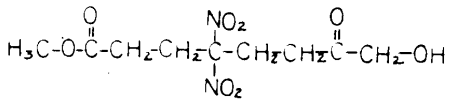
104 This subclass is indented under subclass 103. Compounds which contain two or more nitrogen atoms.

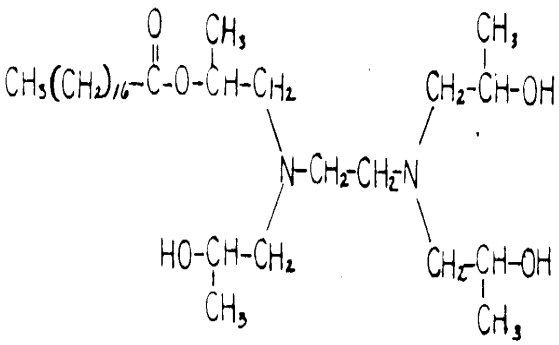
(1) Note. This subclass contains, for example:



105 This subclass is indented under subclass 104. Compounds which contain oxygen in addition to the oxygens of the -C(=O)O- group.

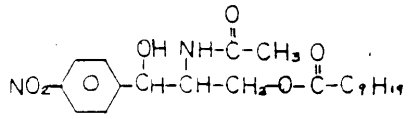
(1) Note. This subclass contains, for example:





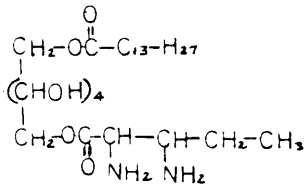
106 This subclass is indented under subclass 105. Compounds wherein the additional oxygen is in a carboxamide group.

(1) Note. This subclass contains, for example:



107 This subclass is indented under subclass 105. Compounds wherein the additional oxygen is in a C(=O)O- group.

(1) Note. This subclass contains, for example:



108 This subclass is indented under subclass 103. Compounds which contain oxygen in addition to the oxygens of the -C(=O)O- group.

109 This subclass is indented under subclass 108. Compounds which contain two or more oxygens in addition to the oxygens of the -C(=O)O- group.

110 This subclass is indented under subclass 109. Compounds wherein the additional oxygens are in a -C(=O)O- group.

111 This subclass is indented under subclass 109. Compounds which contain a -N(=O)(=O) or -C(=O)-- group.

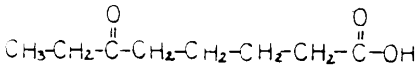
112 This subclass is indented under subclass 108. Compounds which contain a -C(=O)--, -CN or -N=C=O group.

113 This subclass is indented under subclass 103. Compounds which contain a -CN group.

114 This subclass is indented under subclass 103. Processes which are directed to the preparation, recovery or treatment of a nitrogen containing fatty compound.

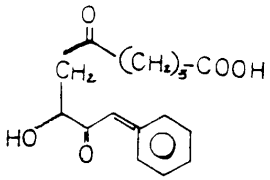
115 This subclass is indented under subclass 1. Compounds which contain, in addition to the carbonyl of the -C(=O)O- group, a carbonyl group, i.e., -C(=O)-, in the acid moiety.

(1) Note. This subclass contains, for example:



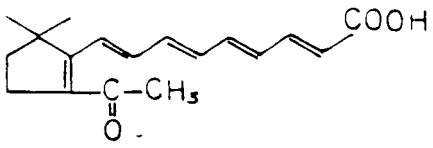
116 This subclass is indented under subclass 115. Compounds which contain a benzene ring in the acid moiety.

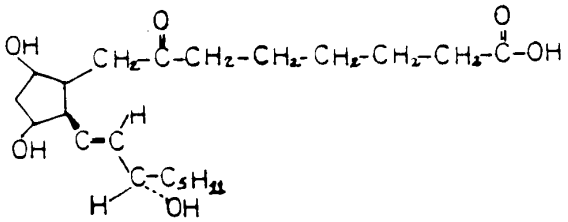
(1) Note. This subclass contains, for example:



117 This subclass is indented under subclass 115. Compounds which contain an alicyclic ring in the acid moiety.

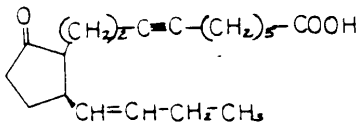
(1) Note. This subclass contains, for example:





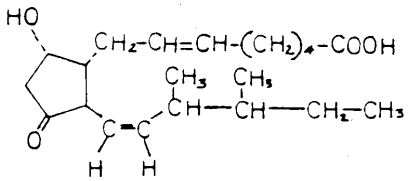
118 This subclass is indented under subclass 117. Compounds wherein the carbon of the additional carbonyl is a ring carbon.

(1) Note. This subclass contains, for example:



119 This subclass is indented under subclass 118. Compounds which contain an additional oxygen bonded directly to the ring.

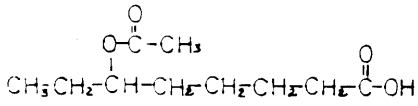
(1) Note. This subclass contains, for example:



120 This subclass is indented under subclass 115. Compounds wherein hydrogen is bonded directly to the additional carbonyl, i.e., aldehyde containing.

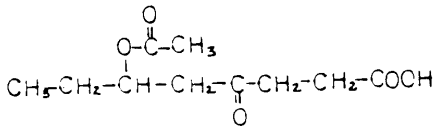
121 This subclass is indented under subclass 115. Compounds wherein the additional carbonyl is in a -C(=O)O- group.

(1) Note. This subclass contains, for example:



122 This subclass is indented under subclass 121. Compounds which contain, in addition to the carbonyl of the -C(=O)O- group, two or more carbonyls in the acid moiety, at least one of which is in a -C(=O)O- group.

(1) Note. This subclass contains, for example:



123 This subclass is indented under subclass 115. Compounds which contain halogen or at least two additional carbonyls in the acid moiety.

124 This subclass is indented under subclass 1. Processes which are directed to the chemical preparation of a fatty compound.

125 This subclass is indented under subclass 124. Processes wherein an optically inactive fatty compound with a double bond is treated to effect a spatial rearrangement of the atoms therein, such as converting elaidic acid (trans -9- octadecenoic acid) to oleic acid (cis -9- octadecenoic acid).

126 This subclass is indented under subclass 124. Processes wherein a fatty compound containing ethylenic unsaturation is treated to cause a double bond to shift to another position.

127 This subclass is indented under subclass 124. Processes which are directed to forming a double or triple bond in a compound, such as by dehydration.

128 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by reacting an organic compound (usually an unsaturated hydrocarbon) with (1) carbon monoxide, (2) carbon dioxide, or (3) a carbon oxide and hydrogen or water.

129 This subclass is indented under subclass 128. Processes utilizing a phosphorus or sulfur containing material, e.g., as a catalyst or promoter.

130 This subclass is indented under subclass 128. Processes utilizing a halogen containing material.

131 This subclass is indented under subclass 128. Processes utilizing a Group VIII metal containing material.

132 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by oxidation.

133 This subclass is indented under subclass 132. Process utilizing ozone.

134 This subclass is indented under subclass 132. Processes wherein molecular oxygen is utilized as the oxidizing agent.

135 This subclass is indented under subclass 134. Processes wherein a catalyst containing a metal having a specific gravity greater than four (4) is utilized.

136 This subclass is indented under subclass 135. Processes wherein the heavy metal is cobalt.

137 This subclass is indented under subclass 135. Processes wherein the heavy metal is manganese.

138 This subclass is indented under subclass 132. Processes utilizing a peroxy containing material as the oxidizing agent.

139 This subclass is indented under subclass 132. Processes utilizing nitric acid as the oxidizing agent.

140 This subclass is indented under subclass 132. Processes utilizing a chromium containing compound as the oxidizing agent.

141 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by the addition of hydrogen in the presence of a catalyst.

(1) Note. Included herein are processes utilizing sodium borohydride, nascent hydrogen, etc., as a reducing agent.

142 This subclass is indented under subclass 141. Processes which include esterification or molecular rearrangement before, during or after hydrogenation.

143 This subclass is indented under subclass 141. Processes wherein conversion of a functional group occurs during the course of hydrogenation (addition of hydrogen).

(1) Note. Some examples of hydrogenolysis are conversion of an oxo carbonyl group to hydroxy; of a hydroxy group to hydrogen, etc.

144 This subclass is indented under subclass 141. Processes which include two or more hydrogenation steps or a continuous hydrogenation process.

145 This subclass is indented under subclass 141. Processes wherein reaction conditions are selected and controlled to produce a high percentage of desired products.

146 This subclass is indented under subclass 141. Processes wherein two or more materials containing a metal having a specific gravity greater than four (4) are utilized.

147 This subclass is indented under subclass 141. Processes utilizing an additional treating agent.

148 This subclass is indented under subclass 124. Processes directed to preparing the fatty compound from a reactant which contains an oxygen containing heterocyclic ring.

149 This subclass is indented under subclass 148. Processes wherein the oxygen containing heterocyclic ring is oxirane, i.e., ethylene oxide.

150 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by reacting an organic halogen containing compound.

151 This subclass is indented under subclass 150. Processes wherein the organic halogen containing reactant has a -C(=O)- group bonded directly to the halogen (i.e., carboxylic acid halide).

152 This subclass is indented under subclass 150. Processes which include utilizing a carboxylic acid salt reactant, in addition to the organic halogen containing compound.

153 This subclass is indented under subclass 150. Processes wherein a metal containing material is utilized; this metal may be a part of or in addition to the organic halogen containing reactant.

154 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by reacting a nitrogen, phosphorus or sulfur containing material.

155 This subclass is indented under subclass 154. Processes wherein an inorganic sulfur containing material is utilized.

156 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by reacting a Group IA or Group IIA light metal containing material.

(1) Note. The Group IA and IIA light metals are Li, Na, K, Rb, Cs, Be, Mg, Ca, Sr, and Ba.

SEE OR SEARCH THIS CLASS, SUBCLASS:

195+, for the purification of a fatty compound by treating with a Group IA or Group IIA light metal containing compound.

SEE OR SEARCH CLASS:

252, Compositions, subclass 367.1 for processes of making soap from mixtures of fats from different sources.

157 This subclass is indented under subclass 156. Processes wherein at least two different fatty materials are utilized or a fatty material and an additional organic material are utilized.

158 This subclass is indented under subclass 156. Processes which include utilizing (1) elemental metal, (2) an inorganic boron, halogen, phosphorus, silicon, or sulfur containing compound, or (3) an additional metal containing compound.

159 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared by reacting an inorganic halogen containing compound.

160 This subclass is indented under subclass 124. Processes wherein a fatty acid compound is produced by the reaction of water with a fatty material (fat splitting).

161 This subclass is indented under subclass 124. Processes wherein the fatty compound is prepared from a reactant which contains a -C(=O)O- group.

162 This subclass is indented under subclass 161. Processes wherein a moiety containing carbon and hydrogen only is bonded to the -C(=O)O- containing reactant.

163 This subclass is indented under subclass 161. Processes wherein the single bonded oxygen of the -C(=O)O- group is bonded directly to an additional carbon, which carbon may be single bonded to any atom but may be multiple bonded only to carbon (i.e., a carboxylic acid ester).

164 This subclass is indented under subclass 163. Processes which include a carboxylic acid anhydride as an additional reactant, i.e., reactant containing a -C(=O)-O-C(=O)- group.

165 This subclass is indented under subclass 163. Processes which include as an additional reactant a carboxylic acid; i.e., reactant containing a -C(=O)-OH group.

166 This subclass is indented under subclass 165. Processes wherein the carboxylic acid reactant contains plural-C(=O)OH groups or has an -OH group in the acid moiety.

167 This subclass is indented under subclass 163. Processes which include a reactant containing an -OH group bonded directly to carbon, which carbon may be single bonded to any atom but may be multiple bonded only to carbon (e.g., an alcohol, phenol, etc.).

168 This subclass is indented under subclass 167. Processes wherein the reactant contains two or more of the hydroxy groups.

169 This subclass is indented under subclass 163. Processes wherein glycerol esters, i.e., glycerides, are treated, (e.g., by heat, with catalyst, etc.) to cause the rearrangement of the -

C(=O)O- groups, resulting in a different ester or mixture of esters.

(1) Note. Glycerides, or glycerol esters, are depicted thusly, as illustrated, below, wherein R= the same or different fatty acid radical.

170 This subclass is indented under subclass 161. Processes which include an additional reactant, which reactant contains an -OH group bonded directly to carbon, which carbon may be single bonded to any atom but may be multiple bonded only to carbon (e.g., an alcohol, phenol, etc.).

171 This subclass is indented under subclass 170. Processes wherein the alcohol reactant contains a ring.

172 This subclass is indented under subclass 170. Processes wherein the alcohol reactant is a polyhydric alcohol, i.e., contains plural -OH groups.

173 This subclass is indented under subclass 172. Processes wherein the polyhydric alcohol is glycerol; i.e.,

174 This subclass is indented under subclass 1. Processes wherein the hydrogen of a -C(=O)OH group of a free fatty acid is replaced by a carbon atom, which carbon may be single bonded to any atom but multiple bonded only to carbon, to reduce the free fatty acid content of the fatty compound source material or to facilitate separation of the constituents of the mixture.

175 This subclass is indented under subclass 1. Processes which are directed to the purification, recovery, deodorization, decolorization, or color stabilization of fatty compounds.

176 This subclass is indented under subclass 175. Processes wherein a fatty compound is treated to remove a metal or metal compound therefrom.

(1) Note. This subclass contains patents wherein the claims specify the removal of a metal or a metal compound, as well as patents with broad claims wherein the disclosure is limited to the removal of a metal or a metal compound.

177 This subclass is indented under subclass 175. Processes wherein waste materials, such as foots, textile treating liquors, spent absorbents, filter cake, sewage, sludge, soapstock, or other industrial wastes are utilized as the source material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

8, for the extraction of fatty compounds from garbage, fish offal, or slaughterhouses wastes.

SEE OR SEARCH CLASS:

502, Catalyst, Solid Sorbent, or Support Therefor: Product or Process of Making, subclasses 20+ for processes directed to the recovery of spent sorbents.

178 This subclass is indented under subclass 177. Processes wherein a metal oxide, hydroxide, carbonate, or bicarbonate is utilized as a treating agent.

179 This subclass is indented under subclass 177. Processes which include utilizing an organic or inorganic acid or anhydride as a treating agent.

180 This subclass is indented under subclass 177. Processes wherein a hydrocarbon or a halohydrocarbon is utilized as a treating agent.

(1) Note. A hydrocarbon is composed solely of carbon and hydrogen, and a halohydrocarbon of carbon, hydrogen and halogen.

181 This subclass is indented under subclass 175. Processes wherein impurities are oxidized from a mixture containing fatty compounds.

182 This subclass is indented under subclass 181. Processes wherein a peroxy containing treating agent is utilized.

183 This subclass is indented under subclass 181. Processes wherein air, gaseous oxygen or a halogen containing compound is utilized as a treating agent.

184 This subclass is indented under subclass 175. Processes wherein a nitrogen containing compound is utilized as a treating agent.

185 This subclass is indented under subclass 184. Processes wherein an organic nitrogen containing treating agent is utilized.

186 This subclass is indented under subclass 185. Processes wherein the organic nitrogen containing treating agent contains a urea (i.e., --) or nitro (i.e., $-NO_2$) group.

187 This subclass is indented under subclass 175. Processes wherein a sulfur containing treating agent is utilized.

188 This subclass is indented under subclass 187. Processes wherein the sulfur containing treating agent is sulfuric acid (i.e., H_2SO_4) or sulfurous acid (i.e., H_2SO_3).

189 This subclass is indented under subclass 187. Processes wherein an inorganic sulfur containing treating agent is utilized.

190 This subclass is indented under subclass 175. Processes wherein a boron or phosphorus containing treating agent is utilized.

191 This subclass is indented under subclass 175. Processes wherein a sorbent material, such as activated carbon, clay, or synthetic resin, is utilized.

(1) Note. Included herein are processes wherein a mixture containing fatty compound(s) is treated with the sorbent to absorb fatty compound(s) or to absorb certain other fractions therefrom.

192 This subclass is indented under subclass 191. Processes wherein, in addition to the sorbent material, a Group IA or IIA metal oxide, hydroxide or carbonate is utilized as a treating agent.

193 This subclass is indented under subclass 191. Processes in which a solvent is utilized or whereby a fatty compound is separated from the sorbent material.

194 This subclass is indented under subclass 175. Processes utilizing a treating agent containing a metal having a specific gravity greater than four or aluminum.

195 This subclass is indented under subclass 175. Processes wherein the treating agent contains a Group IA or Group IIA light metal.

(1) Note. The Group IA light metals are Li, Na, K, Rb, Cs and the Group IIA light metals are Be, Mg, Ca, Sr, and Ba.

196 This subclass is indented under subclass 195. Processes which include utilizing a silicon containing treating agent.

(1) Note. The silicon containing agent may be in addition to the Group IA or IIA metal containing agent or the silicon and Group IA or IIA metal may be in the same agent.

197 This subclass is indented under subclass 195. Processes which include an inorganic halogen containing treating agent; the halogen may be in the same compound as the Group IA or IIA metal or the halogen containing compound may be an additional treating agent.

198 This subclass is indented under subclass 195. Processes wherein the fatty compound source material is a mixture including another specified organic treating agent, or wherein an organic treating agent is added to the source material.

199 This subclass is indented under subclass 198. Processes wherein the specified or added organic treating agent contains oxygen.

200 This subclass is indented under subclass 199. Processes wherein the organic oxygen containing treating agent is a carboxylic acid, carboxylic acid anhydride or carboxylic acid salt.

201 This subclass is indented under subclass 195. Processes wherein added water or steam (water vapor) is utilized.

202 This subclass is indented under subclass 195. Processes wherein a metal oxide or hydroxide is utilized.

203 This subclass is indented under subclass 202. Processes which include separation by centrifugation, i.e., fast rotation.

204 This subclass is indented under subclass 175. Processes wherein a carboxylic acid, carboxylic acid anhydride, or carboxylic acid halide is utilized as a treating agent.

205 This subclass is indented under subclass 175. Processes which include utilizing a gaseous or vaporous material to purify, recover, deodorize, decolor, or to stabilize the color of, the fatty compound.

206 This subclass is indented under subclass 175. Processes wherein an organic compound is utilized as solvent.

207 This subclass is indented under subclass 206. Processes wherein water is utilized.

208 This subclass is indented under subclass 206. Processes which involve (1) the change in solution from a dissolved, molten, liquid or gaseous state to a solid state of definite, ordered and characteristic shape (crystallization) or (2) the formation of solid particles in a solution with settling out (precipitation).

209 This subclass is indented under subclass 208. Processes wherein a halogen containing compound or material or a hydrocarbon is utilized as a solvent.

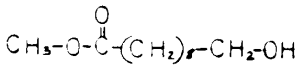
210 This subclass is indented under subclass 206. Processes wherein a halogen containing compound or material or a hydrocarbon is utilized as a solvent.

211 This subclass is indented under subclass 175. Processes which involve (1) the change in solution from a dissolved, molten, liquid or gaseous state to a solid state of definite, ordered and characteristic shape (crystallization) or (2) the formation of solid particles in a solution with settling out (precipitation).

212 This subclass is indented under subclass 175. Processes wherein an organic material is utilized.

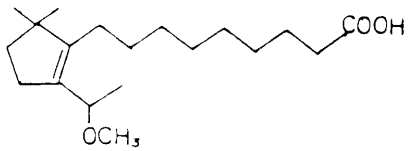
213 This subclass is indented under subclass 1. Compounds wherein the acid moiety contains oxygen in addition to those of the carboxylic acid, salt or ester group.

(1) Note. This subclass contains, for example:



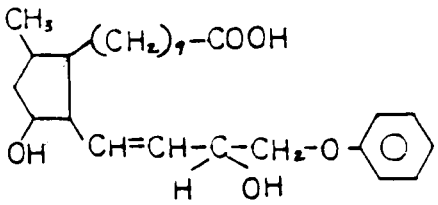
214 This subclass is indented under subclass 213. Compounds which contain an alicyclic ring in the acid moiety.

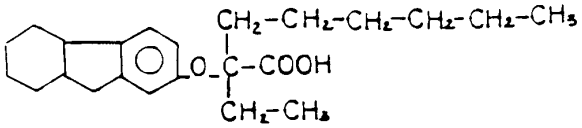
(1) Note. This subclass contains, for example:



215 This subclass is indented under subclass 214. Compounds which contain a benzene ring in the acid moiety.

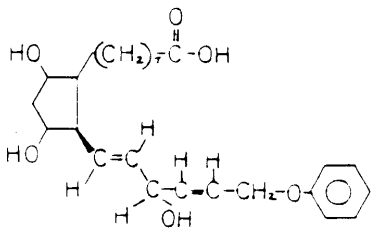
(1) Note. This subclass contains, for example:





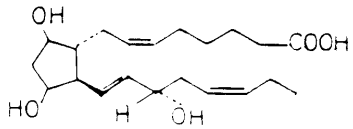
216 This subclass is indented under subclass 215. Compounds wherein two or more oxygens are bonded directly to the alicyclic ring.

(1) Note. This subclass contains, for example:



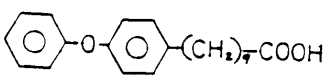
217 This subclass is indented under subclass 214. Compounds wherein two or more oxygens are bonded directly to the alicyclic ring.

(1) Note. This subclass contains, for example:



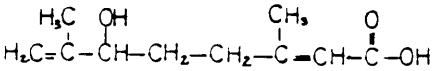
218 This subclass is indented under subclass 213. Compounds which contain a benzene ring in the acid moiety.

(1) Note. This subclass contains, for example:



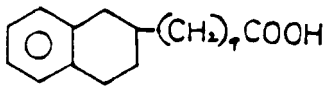
219 This subclass is indented under subclass 213. Compounds wherein the acid moiety contains an acyclic ethylenic double bond, or an acetylenic triple bond.

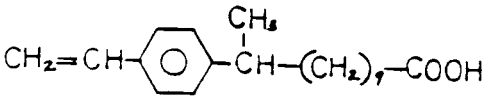
(1) Note. This subclass contains, for example:

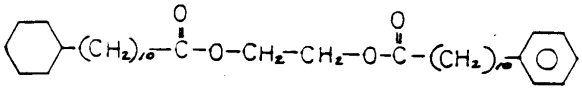


220 This subclass is indented under subclass 1. Compounds wherein the acid moiety contains a benzene ring.

(1) Note. This subclass contains, for example:

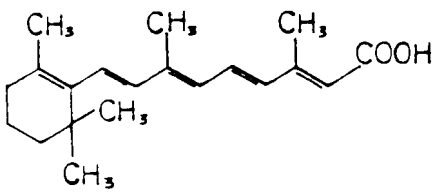






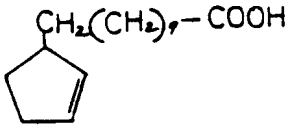
221 This subclass is indented under subclass 1. Compounds wherein the acid radical contains an alicyclic ring.

(1) Note. This subclass contains, for example:



222 This subclass is indented under subclass 221. Compounds wherein the alicyclic ring is a five-membered ring.

(1) Note. This subclass contains, for example:



223 This subclass is indented under subclass 1. Compounds wherein the acid moiety contains an acyclic ethylenic double bond or an acetylenic triple bond.

(1) Note. Products referred to as being unsaturated with no specificity regarding the degree of unsaturation are included in this subclass, as well as "named" products commonly known to possess unsaturation. Also included herein are products which consist of mixtures of saturated and unsaturated fatty acids and/or esters, unless a constituent of the mixture is provided for in a higher subclass, or a claim is directed to a specific constituent provided for elsewhere.

224 This subclass is indented under subclass 223. Compounds which contain two or more unsaturated linkages, which may be ethylenic double bonds, acetylenic triple bonds or a combination of double and triple bonds.

SEE OR SEARCH THIS CLASS, SUBCLASS:

24+, for products referred to as modified or synthetic drying oils or bodied oils which products may contain acyclic polyunsaturation in an acid moiety.

225 This subclass is indented under subclass 1. Compounds which contain halogen in the acid moiety.

226 This subclass is indented under subclass 225. Compounds which contain two or more halogens in the acid moiety.

227 This subclass is indented under subclass 1. Compounds wherein, in a fatty acid ester, the alcohol moiety contains, in addition to the esterified hydroxy group, another hydroxy group, wherein the hydrogen of the additional hydroxy group may be substituted by acyl, an alcoholate-forming group or a hydrocarbon radical.

228 This subclass is indented under subclass 227. Compounds wherein the polyoxy alcohol moiety also contains a carbocyclic ring.

229 This subclass is indented under subclass 1. Compounds wherein the alcohol moiety contains a carbocyclic ring.

230 This subclass is indented under subclass 1. Compounds wherein the alcohol moiety is acyclic and contains an ethylenic double bond or an acetylenic triple bond.

231 This subclass is indented under subclass 1. Compounds which contain halogen in the alcohol moiety.

END