This Class 554 is considered to be an integral part of Class 260 (see the Class 260 schedule for the position of this Class in schedule hierarchy). This Class retains all pertinent definitions and class lines of Class 260.

ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)

1. Fatty compounds having an acid moiety which contains the carbonyl of a carboxylic acid, salt, ester, or amide group bonded directly to one end of an acyclic chain of at least seven (7) uninterrupted carbons, wherein any additional carbonyl 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 via ionic bonding.

2. With preservative or stabilizer.

3. Oxygen containing hetero ring in preservative or stabilizer.

4. Phosphorus containing preservative or stabilizer.

5. Nitrogen containing preservative or stabilizer.

6. Sulfur containing preservative or stabilizer.

7. Phenolic preservative or stabilizer.

8. Extraction directly from animal or plant source material (e.g., recovery from garbage, fish offal, slaughter house waste, whole fish, olive fruit, etc.).

9. Legume, nut, or seed source material (e.g., peanut, soya bean, rice bran, etc.).

10. Fatty or sugar containing treating agent utilized (e.g., miscella, molasses, lecithin, cocoa butter used; heated cashew oil used to extract more oil from cashew nuts; using soap as emulsifier, etc.).

11. Carbon dioxide, peroxy, sulfur, nitrogen, or metal containing treating agent utilized.

12. Organic solvent extraction.

13. Halogen or oxygen in the solvent (e.g., carbon tetrachloride, ethanol, etc.).

14. Plural diverse solvents utilized together or sequentially (e.g., solvent is mixture of acetone and hexane, ethyl and isopropyl alcohols, etc.).

15. Steam or water added.

16. Vacuum or pressure utilized (e.g., normally gaseous hydrocarbon solvent kept liquid under pressure, etc.).

17. Steam or water added or vacuum utilized.

18. Fish liver source material.

19. Sulfur, silicon, nitrogen, or metal containing treating agent utilized (e.g., salt or brine, clay, lime, etc.).

20. Organic solvent extraction.

21. Halogen or oxygen in the solvent (e.g., trichloroethylene, alcohol, etc.).

22. Vacuum utilized.

23. Steam or water added (e.g., wet rendering, etc.).

24. Chemical modification of oils to improve their drying properties and products thereof.

25. Polymerization process and product thereof (e.g., thermal polymerization, oxidative polymerization, etc.).

26. Additional organic compound utilized (e.g., as catalyst, promoter, etc.).
The additional organic compound is an ethylenically unsaturated hydrocarbon monomer (e.g., butadiene, cyclopentadiene, styrene, etc.).

Inorganic material utilized

Esterification or molecular rearrangement (e.g., intra- or inter-esterification, etc.)

Dehydration or carbon to carbon unsaturation formation (e.g., dehydrating hydroxylated fatty acids or oils, forming conjugated unsaturation by dehydrogenation, dehalogenation, dehydrohalogenation, etc.)

Heavy metal containing compound utilized (e.g., as catalyst, promoter, etc.)

Sulfur containing compound utilized

Group IA or IIA light metal containing compound utilized

The carbonyl is part of a carboxamide group (i.e., fatty acid amides)

Additional carbonyl in the acid moiety

Noncarbon atom bonded directly to the additional carbonyl

Heavy metal or aluminum containing

Boron, silicon, selenium, or tellurium containing

Phosphorus containing

Additional nitrogen containing

Sulfur containing

The sulfur is bonded directly to the carboxamide nitrogen or to an additional nitrogen (e.g., sulfonamide, sulffamic acid, etc.)

Sulfox containing

Ring bonded directly to the sulfox

Additional nitrogen containing

Containing \(-\text{C(=O)O-}\) group (e.g., carboxylic acid, ester, salt, etc.)

Additional carboxamide containing

The carboxamide nitrogen and a \(-\text{S(=O)(=O)O-X}\) group attached to each other by an acyclic chain which consists of carbons, wherein \(X\) is hydrogen or a metal (e.g., taurides, etc.)

Sulfox in acid moiety

Additional nitrogen containing

Quaternary ammonium containing

Amidino or guanidino containing

Cyano or hydrazino containing

Halogen or additional oxygen containing (e.g., isocyanate containing, etc.)

Additional carboxamide group containing (e.g., carboxamides, ureas, etc.)

Plural additional carboxamide groups containing

Additional nitrogen or \(-\text{C(=O)O-}\) group containing

Containing \(-\text{C(=O)O-}\) group

Nitro containing or plural oxyalkylene groups bonded directly to each other

Additional oxygen containing (e.g., amides of ricinoleic acid, etc.)

Halogen containing

Containing \(-\text{C(=O)O-}\) group

Plural oxyalkylene groups bonded directly to each other

Oxygen bonded directly to a ring

Hydroxyalkyl substituent on the amido nitrogen

Halogen containing

Processes

Amidation

Purification or recovery

Heavy metal containing (e.g., As, Cr, Mn, Sb, V, etc.)

Titanium, zirconium, or cerium containing (Ti, Zr, or Ce)

Lead or tin containing (Pb or Sn)
Iron, cobalt, nickel, copper, silver, or gold containing (Fe, Co, Ni, Cu, Ag, or Au)

Zinc, cadmium, or mercury containing (Zn, Cd, or Hg)

Aluminum containing

Boron, selenium, or silicon containing

Phosphorus containing

Glycerophosphates (e.g., phosphatidic acids, phosphatidylinositol, etc.)

Nitrogen containing (e.g., cephalins, lecithins, etc.)

Halogen or sulfur containing

Processes of forming the compound

Purification on recovery

Nitrogen containing

Sulfur containing

Processes utilizing sulfur chloride

Processes utilizing elemental sulfur

Sulfoxy containing (e.g., sulfones, etc.)

Twitchell or Pfeilring reagent (i.e., product of sulfonation of fatty material in the presence of an aromatic hydrocarbon or phenol)

The sulfoxyl is in the alcohol moiety (e.g., sulfate esters of fatty acid monoglycerides, etc.)

Nitrogen bonded directly to carbon in the alcohol moiety

Having -S(=O)(=O)-O-X attached indirectly to the single bonded oxygen of the carboxyl group by a single carbon or a chain consisting of carbons, which chain or carbon may include a ring, wherein X is hydrogen or a cation (e.g., isethionates, etc.)

Purification or recovery

Nitrogen containing (e.g., sulfonamide containing, etc.)

Carbocyclic ring in the acid moiety

Carbon bonded directly to -S(=O)(=O)OH or to -O-S(=O)(=O)OH, wherein H may be replaced by a cation or by an ester forming group (e.g., sulfonic acid sulfate monoester, etc.)

Metal salt

Processes utilizing anhydrous sulfur trioxide (e.g., in gaseous form, in sulfur dioxide solution, etc.)

Processes of sulfonating in the presence of lower carboxylic acid, anhydride, acid halide, or phosphorus containing material

Purification or recovery

Thioether, thiol, or mercaptide containing

Plural sulfurs containing

Nitrogen containing

Plural nitrogens containing (e.g., guanidine, hydrazine, etc.)

Additional oxygen containing

The additional oxygen is in a carboxamide, carbamate, or urea group (e.g., chloramphenicol palmitate, etc.)

The additional oxygen is in a -C(=O)O- group

Additional oxygen containing (e.g., hydroxy, ether, etc.)

Plural additional oxygens containing

The additional oxygens are in a -C(=O)O- group

Nitro or carboxamide containing

Carboxamide, cyano, or isocyanate containing

Cyanate containing

Processes

Additional carbonyl in the acid moiety (e.g., oiticica oil, licanic acid, etc.)

Benzene ring in the acid moiety

Alicyclic ring in the acid moiety (e.g., prostaglandin analogs, etc.)
Oxygen double bonded directly to the ring (i.e., the carbon of the additional carbonyl is part of the ring; e.g., homo prostaglandins, etc.)

Additional oxygen bonded directly to the ring

Hydrogen bonded directly to the additional carbonyl (i.e., aldehyde containing)

The additional carbonyl is in a \(-\text{C}(=\text{O})\text{O}-\) group

Plural additional carboxyls in the acid moiety

Halogen or plural additional carboxyls in the acid moiety

Processes of forming the compound

Geometric isomer formation (e.g., cis-trans, syn-anti, etc.)

Double bond shift (e.g., conjugation, etc.)

Forming carbon to carbon unsaturation (i.e., forming a double or triple bond)

Carbonylation, carbonation, or hydroformylation

Phosphorus or sulfur containing material utilized

Halogen containing material utilized

Group VIII metal containing material utilized

Oxidation

Ozone utilized

Molecular oxygen utilized as oxidizing agent

Heavy metal containing catalyst utilized

Cobalt containing catalyst

Manganese containing catalyst

Peroxy containing material utilized as oxidizing agent

Nitric acid utilized as oxidizing agent

Chromium containing compound utilized as oxidizing agent (e.g., chromic acid, chromosulfuric acid, etc.)

Catalytic hydrogenation

Including esterification or inter-esterification (e.g., prior to, simultaneously with, or after hydrogenation, etc.)

Conversion of a functional group in the course of hydrogenation (e.g., hydrogenolysis, etc.)

Plural hydrogenation steps or continuous hydrogenation process

Selective hydrogenation (e.g., of polyunsaturated to monounsaturated, of acetylenic to ethylenic compound, etc.)

Plural heavy metal containing materials utilized

Additional treating agent utilized (e.g., as catalyst carrier or promoter, oil deodorizer, oil solvent, pretreatment agent, oil filtering aid, etc.)

Oxygen containing hetero ring reactant (e.g., succinic anhydride, etc.)

Oxirane containing reactant

Organic halogen containing reactant

The reactant contains carbonyl bonded directly to the halogen

Another reactant is a carboxylic acid salt

Metal containing material utilized (e.g., Grignard reagent, Friedel Crafts catalyst, etc.)

Nitrogen, phosphorus, or sulfur containing reactant

Inorganic sulfur containing reactant (e.g., utilizing sulfuric acid to decompose soap, etc.)

Group IA or IIA metal containing reactant (e.g., forming a soap from fat and alkali, i.e., saponification, etc.)

Organic material, in addition to a fatty material, utilized or plural diverse fatty materials utilized (e.g., as solvent, reaction promoter, etc.)
158 ....Inorganic boron, halogen, phosphorus, silicon, sulfur, elemental metal, or additional metal containing compound utilized (e.g., utilizing inorganic agent for "salting out", bleaching, purifying, etc.)

159 ...Inorganic halogen containing reactant

160 ...Hydrolyzing fatty material with water only

161 ...Reactant contains -C(=O)O- group (e.g., carboxylic acid, salt, anhydride, etc.)

162 ....Bonding a hydrocarbyl group to the -C(=O)O- containing reactant

163 ....The -C(=O)O- is part of an ester group

164 ......Another reactant is a carboxylic acid anhydride (i.e., contains -C(=O)-O-C(=O)-)

165 ......Another reactant is a carboxylic acid

166 .......Polycarboxylic or hydroxy acid (i.e., containing additional -C(=O)OH or an -OH group)

167 .......Another reactant contains alcoholic or phenolic hydroxy (e.g., methy ricinoleate, etc.)

168 .......Plural alcoholic or phenolic hydroxys (e.g., glycerol, castor oil, etc.)

169 .......Molecular rearrangement of the acid moieties of glyceride esters (e.g., random or directed low temperature intra- or inter-esterification of fats, oils, etc.)

170 .......Another reactant contains alcoholic or phenolic hydroxy

171 .......Ring in the hydroxy containing reactant

172 .......Plural hydroxys in the hydroxy containing reactant

173 ......Glycerol

174 ...Esterification of fatty material to reduce the amount of free fatty acid or to facilitate separation of constituents

175 ..Purification, recovery, deodorizing, decolorizing or color stabilizing

176 ...Metal containing contaminant removal (e.g., of colloidal elemental metal catalyst, of metal ions, etc.)

177 ...Recovering from industrial waste materials (e.g., foots, textile treating liquors, spent sorbents, filter cake, sewage, sludge, soapstock, etc.)

178 ....Metal oxide, hydroxide, carbonate, or bicarbonate treating agent

179 ....Organic or inorganic acid or anhydride treating agent (e.g., carbon dioxide, sulfur dioxide, etc.)

180 ....Hydrocarbon or halohydrocarbon treating agent

181 ....Oxidation of impurities

182 ....Peroxy containing treating agent

183 ....Air, gaseous oxygen, or halogen containing treating agent

184 ....Nitrogen containing compound treating agent

185 ....The treating agent is organic

186 ....Urea or nitro group containing

187 ....Sulfur containing treating agent

188 ....Sulfuric or sulfurous acid treating agent

189 ....The treating agent is inorganic

190 ....Boron or phosphorus containing treating agent

191 ....Sorbent material utilized (e.g., activated carbon, decolorizing clay, bentonite, synthetic resin, etc.)

192 ....And utilizing Group IA or IIA metal oxide, hydroxide, or carbonate treating agent (e.g., saponification, neutralization, etc.)

193 ....Removal of fatty material from the sorbent or solvent utilized

194 ....Heavy metal or aluminum containing treating agent
...Group IA or IIA light metal containing treating agent (i.e., Li, Na, K, Rb, Cs, or Be, Mg, Ca, Sr, Ba) [e.g., carbonates, etc.]

Silicon containing treating agent (e.g., sodium silicate, etc.)

Inorganic halogen containing treating agent

Organic treating agent added to or included with fatty material

The organic treating agent contains oxygen

Water or steam added

The treating agent is a metal oxide or hydroxide (e.g., lye, lime, caustic alkali, etc.)

Centrifugal separation

Carboxylic acid, anhydride, or acid halide treating agent

Gas or vapor treating agent (e.g., steam, carbon dioxide, hydrocarbon vapors, etc.)

Organic solvent utilized

Water utilized (e.g., solvent-solvent extraction, etc.)

With crystallization or precipitation (e.g., separation according to degree of saturation, etc.)

Halogen containing or hydrocarbon solvent

Halogen containing or hydrocarbon solvent

Crystallization or precipitation (e.g., separation according to degree of saturation, etc.)

Organic treating agent

Additional oxygen in the acid moiety (e.g., hydroxystearic acid, etc.)

Alicyclic ring in the acid moiety (e.g., prostaglandin analog, etc.)

Benzene ring in the acid moiety

Benzene ring in the acid moiety

The alicyclic ring is five-membered

Acyclic carbon-to-carbon unsaturation in the acid moiety

Plural carbon-to-carbon unsaturation in the acid moiety (e.g., polyunsaturated fatty acids, etc.)

Halogen in the acid moiety

Plural halogens in the acid moiety

Plural oxy groups in the alcohol moiety (e.g., triglycerides, ethylene glycol monostearate, 2-methoxy ethyl laurate, etc.)

Ring in the alcohol moiety

Ring in the alcohol moiety

Acyclic carbon-to-carbon unsaturation in the alcohol moiety

Halogen in the alcohol moiety

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS