

**Subpart C—Coatings, Films and
Related Substances**

§ 172.210 Coatings on fresh citrus fruit.

Coatings may be applied to fresh citrus fruit for protection of the fruit in accordance with the following conditions:

(a) The coating is applied in the minimum amount required to accomplish the intended effect.

(b) The coating may be formulated from the following components, each used in the minimum quantity required to accomplish the intended effect:

(1) Substances generally recognized as safe for the purpose or previously sanctioned for the purpose.

(2) One or more of the following:

§ 172.215

21 CFR Ch. I (4-1-05 Edition)

Component	Limitations
Fatty acids	Complying with § 172.860.
Oleic acid derived from tall oil fatty acids	Complying with § 172.862.
Partially hydrogenated rosin	Catalytically hydrogenated to a maximum refractive index of 1.5012 at 100 °C. Color of WG or paler.
Pentaerythritol ester of maleic anhydride-modified wood rosin.	Acid number of 134-145; drop-softening point of 127 °C-173 °C; saponification number of less than 280; and a color of M or paler.
Do	Acid number of 176-186; drop-softening point of 110 °C-118 °C; saponification number of less than 280; and a color of M or paler.
Polyethylene glycol	Complying with § 172.820. As a defoamer and dispersing adjuvant.
Polyhydric alcohol diesters of oxidatively refined (Gersthofen process) montan wax acids.	Complying with § 178.3770 of this chapter and having a dropping point of 77 to 83 °C (170.6 to 181.4 °F), as determined by ASTM Method D566-76 (Reapproved 1982), "Standard Test Method for Dropping Point of Lubricating Grease," which is incorporated by reference (Copies are available from the American Society for Testing and Materials, 1916 Race St., Philadelphia, PA 19103, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html) using as a solvent xylene-ethyl alcohol in a 2:1 ratio instead of toluene-ethyl alcohol in a 2:1 ratio.
Sodium lauryl sulfate	Complying with § 172.822. As a film former.
Wood rosin	Color of K or paler.

(3) In lieu of the components listed in paragraph (b) (2) and (4) of this section, the following copolymer and one or more of the listed adjuvants.

Component	Limitations
Vinyl chloride-vinylidene chloride copolymer	As an aqueous dispersion containing a minimum of 75 percent water when applied.
Polyethylene glycol	Complying with § 172.820. As a defoamer and dispersing adjuvant.
Polyvinylpyrrolidone	As an adjuvant.
Potassium persulfate	Do.
Propylene glycol alginate	Do.
Sodium decylbenzenesulfonate	Do.

(4) In lieu of the components listed in paragraph (b) (2) and (3) of this section, the following rosin derivative and either or both of the listed adjuvants:

Component	Limitations
Calcium salt of partially dimerized rosin	Having a maximum drop-softening point of 197 °C and a color of H or paler. It is prepared by reaction with not more than 7 parts hydrated lime per 100 parts of partially dimerized rosin. The partially dimerized rosin is rosin that has been dimerized by sulfuric acid catalyst to a drop-softening point of 95 °C to 105 °C and a color of WG or paler.
Petroleum naphtha	As adjuvant. Complying with § 172.250.
Sperm oil	As adjuvant.

[42 FR 14491, Mar. 15, 1977; 49 FR 5747, Feb. 15, 1984, as amended at 51 FR 2693, Jan. 21, 1986; 52 FR 18911, May 20, 1987; 61 FR 14245, Apr. 1, 1996]

Subpart F—Flavoring Agents and Related Substances

§ 172.510 Natural flavoring substances and natural substances used in conjunction with flavors.

Natural flavoring substances and natural adjuvants may be safely used in food in accordance with the following conditions.

(a) They are used in the minimum quantity required to produce their intended physical or technical effect and in accordance with all the principles of good manufacturing practice.

(b) In the appropriate forms (plant parts, fluid and solid extracts, concretes, absolutes, oils, gums, balsams, resins, oleoresins, waxes, and distillates) they consist of one or more of the following, used alone or in combination with flavoring substances and adjuvants generally recognized as safe in food, previously sanctioned for such use, or regulated in any section of this part.

Common name	Scientific name	Limitations
Aloe	<i>Aloe perryi</i> Baker, <i>A. barbadensis</i> Mill., <i>A. ferox</i> Mill., and hybrids of this sp. with <i>A. africana</i> Mill. and <i>A. spicata</i> Baker.	
Althea root and flowers	<i>Althea officinalis</i> L.	
Amyris (West Indian sandalwood)	<i>Amyris balsamifera</i> L.	

Common name	Scientific name	Limitations
Angola weed	<i>Roccella fuciformis</i> Ach	In alcoholic beverages only
Arnica flowers	<i>Arnica montana</i> L., <i>A. fulgens</i> Pursh, <i>A. sororia</i> Greene, or <i>A. cordifolia</i> Hooker.	Do.
Artemisia (wormwood)	<i>Artemisia</i> spp	Finished food thujone free ¹
Artichoke leaves	<i>Cynara scolymus</i> L	In alcoholic beverages only
Benzoin resin	<i>Styrax benzoin</i> Dryander, <i>S. paralleloneurus</i> Perkins, <i>S. tonkinensis</i> (Pierre) Craib ex Hartwich, or other spp. of the Section <i>Anthostyrax</i> of the genus <i>Styrax</i> .	
Blackberry bark	<i>Rubus</i> , Section <i>Eubatus</i> .	
Boldus (boldo) leaves	<i>Peumus boldus</i> Mol	Do.
Boronia flowers	<i>Boronia megastigma</i> Nees.	
Bryonia root	<i>Bryonia alba</i> L., or <i>B. dioica</i> Jacq	Do.
Buchu leaves	<i>Barosma betulina</i> Bartl. et Wendl., <i>B. crenulata</i> (L.) Hook. or <i>B. serratifolia</i> Willd.	
Buckbean leaves	<i>Menyanthes trifoliata</i> L	Do.
Cajeput	<i>Melaleuca leucadendron</i> L. and other <i>Melaleuca</i> spp.	
Calumba root	<i>Jateorhiza palmata</i> (Lam.) Miers	Do.
Camphor tree	<i>Cinnamomum camphora</i> (L.) Nees et Eberm	Safrole free
Cascara sagrada	<i>Rhamnus purshiana</i> DC.	
Cassie flowers	<i>Acacia farnesiana</i> (L.) Willd.	
Castor oil	<i>Ricinus communis</i> L.	
Catechu, black	<i>Acacia catechu</i> Willd.	
Cedar, white (aborvitae), leaves and twigs	<i>Thuja occidentalis</i> L	Finished food thujone free ¹
Centuary	<i>Centaurium umbellatum</i> Gilib	In alcoholic beverages only
Cherry pits	<i>Prunus avium</i> L. or <i>P. cerasus</i> L	Not to exceed 25 p.p.m. prussic acid
Cherry-laurel leaves	<i>Prunus laurocerasus</i> L	Do.
Chestnut leaves	<i>Castanea dentata</i> (Marsh.) Borkh.	
Chirata	<i>Swertia chirata</i> Buch.-Ham	In alcoholic beverages only
Cinchona, red, bark	<i>Cinchona succirubra</i> Pav. or its hybrids	In beverages only; not more than 83 p.p.m. total cinchona alkaloids in finished beverage
Cinchona, yellow, bark	<i>Cinchona ledgeriana</i> Moens, <i>C. calisaya</i> Wedd., or hybrids of these with other spp. of <i>Cinchona</i> .	Do.
Copaiba	South American spp. of <i>Copaifera</i> L.	
Cork, oak	<i>Quercus suber</i> L., or <i>Q. occidentalis</i> F. Gay	In alcoholic beverages only
Costmary	<i>Chrysanthemum balsamita</i> L	Do.
Costus root	<i>Saussurea lappa</i> Clarke.	
Cubeb	<i>Piper cubeba</i> L. f.	
Currant, black, buds and leaves	<i>Ribes nigrum</i> L.	
Damiana leaves	<i>Turnera diffusa</i> Willd.	
Davana	<i>Artemisia pallens</i> Wall.	
Dill, Indian	<i>Anethum sowa</i> Roxb. (<i>Peucedanum graveolens</i> Benth et Hook., <i>Anethum graveolens</i> L.).	
Dittany (fraxinella) roots	<i>Dictamnus albus</i> L	Do.
Dittany of Crete	<i>Origanum dictamnus</i> L	
Dragon's blood (dracorubin)	<i>Daemonorops</i> spp.	
Elder tree leaves	<i>Sambucus nigra</i> L	In alcoholic beverages only; not to exceed 25 p.p.m. prussic acid in the flavor
Elecampane rhizome and roots	<i>Inula helenium</i> L	In alcoholic beverages only
Elemi	<i>Canarium commune</i> L. or <i>C. luzonicum</i> Miq.	
Erigeron	<i>Erigeron canadensis</i> L.	
Eucalyptus globulus leaves	<i>Eucalyptus globulus</i> Labill.	
Fir ("pine") needles and twigs	<i>Abies sibirica</i> Ledeb., <i>A. alba</i> Mill., <i>A. sachalinensis</i> Masters or <i>A. mayriana</i> Miyabe et Kudo.	
Fir, balsam, needles and twigs	<i>Abies balsamea</i> (L.) Mill.	
Galanga, greater	<i>Alpinia galanga</i> Willd	Do.
Galbanum	<i>Ferula galbaniflua</i> Boiss. et Buhse and other <i>Ferula</i> spp.	
Gambir (catechu, pale)	<i>Uncaria gambir</i> Roxb.	
Genet flowers	<i>Spartium junceum</i> L.	
Gentian rhizome and roots	<i>Gentiana lutea</i> L.	

Common name	Scientific name	Limitations
Gentian, stemless	<i>Gentiana acaulis</i> L.	Do.
Germander, chamaedrys	<i>Teucrium chamaedrys</i> L.	Do.
Germander, golden	<i>Teucrium polium</i> L.	Do.
Guaiac	<i>Guaiacum officinale</i> L., <i>G. santum</i> L., <i>Buhsia sarmienti</i> Lor.	
Guarana	<i>Paullinia cupana</i> HBK.	
Haw, black, bark	<i>Viburnum prunifolium</i> L.	
Hemlock needles and twigs	<i>Tsuga canadensis</i> (L.) Carr. or <i>T. heterophylla</i> (Raf.) Sarg.	
Hyacinth flowers	<i>Hyacinthus orientalis</i> L.	
Iceland moss	<i>Cetraria islandica</i> Ach.	Do.
Imperatoria	<i>Peucedanum ostruthium</i> (L.) Koch (<i>Imperatoria ostruthium</i> L.).	
Iva	<i>Achillea moschata</i> Jacq.	Do.
Labdanum	<i>Cistus</i> spp.	
Lemon-verbena	<i>Lippia citriodora</i> HBK.	Do.
Linaloe wood	<i>Bursera delpechiana</i> Poiss. and other <i>Bursera</i> spp.	
Linden leaves	<i>Tilia</i> spp.	Do.
Lovage	<i>Levisticum officinale</i> Koch.	
Lungmoss (lungwort)	<i>Sticta pulmonacea</i> Ach.	
Maidenhair fern	<i>Adiantum capillus-veneris</i> L.	Do.
Maple, mountain	<i>Acer spicatum</i> Lam.	
Mimosa (black wattle) flowers	<i>Acacia decurrens</i> Willd. var. <i>dealbata</i> .	
Mullein flowers	<i>Verbascum phlomoides</i> L. or <i>V. thapsiforme</i> Schrad.	Do.
Myrrh	<i>Commiphora molmol</i> Engl., <i>C. abyssinica</i> (Berg) Engl., or other <i>Commiphora</i> spp.	
Myrtle leaves	<i>Myrtus communis</i> L.	Do.
Oak, English, wood	<i>Quercus robur</i> L.	Do.
Oak, white, chips	<i>Quercus alba</i> L.	
Oak moss	<i>Evernia prunastri</i> (L.) Ach., <i>E. furfuracea</i> (L.) Mann, and other lichens.	Finished food thujone free ¹
Olibanum	<i>Boswellia carteri</i> Birdw. and other <i>Boswellia</i> spp.	
Opopanax (bisabolmyrrh)	<i>Opopanax chironium</i> Koch (true opopanax) of <i>Commiphora erythraea</i> Engl. var. <i>liabrescens</i> .	
Orris root	<i>Iris germanica</i> L. (including its variety <i>florentina</i> Dykes) and <i>I. pallida</i> Lam.	
Pansy	<i>Viola tricolor</i> L.	In alcoholic beverages only
Passion flower	<i>Passiflora incarnata</i> L.	
Patchouly	<i>Pogostemon cablin</i> Benth. and <i>P. heyneanus</i> Benth.	
Peach leaves	<i>Prunus persica</i> (L.) Batsch	In alcoholic beverages only; not to exceed 25 p.p.m. prussic acid in the flavor
Pennyroyal, American	<i>Hedeoma pulegioides</i> (L.) Pers.	
Pennyroyal, European	<i>Mentha pulegium</i> L.	
Pine, dwarf, needles and twigs	<i>Pinus mugo</i> Turra var. <i>pumilio</i> (Haenke) Zenari.	
Pine, Scotch, needles and twigs	<i>Pinus sylvestris</i> L.	
Pine, white, bark	<i>Pinus strobus</i> L.	In alcoholic beverages only
Pine, white, oil	<i>Pinus palustris</i> Mill., and other <i>Pinus</i> spp.	
Poplar buds	<i>Populus balsamifera</i> L. (<i>P. tacamahacca</i> Mill.), <i>P. canadensis</i> Ait., or <i>P. nigra</i> L.	Do.
Quassia	<i>Picrasma excelsa</i> (Sw.) Planch, or <i>Quassia amara</i> L.	
Quebracho bark	<i>Aspidosperma quebracho-blanco</i> Schlecht, or (<i>Quebrachia lorentzii</i> (Griseb)).	<i>Schinopsis lorentzii</i> (Griseb.) Engl.
Quillaia (soapbark)	<i>Quillaja saponaria</i> Mol.	
Red saunders (red sandalwood)	<i>Pterocarpus san alinus</i> L.	In alcoholic beverages only
Rhatany root	<i>Krameria triandra</i> Ruiz et Pav. or <i>K. argentea</i> Mart.	
Rhubarb, garden root	<i>Rheum rhabonticum</i> L.	Do.
Rhubarb root	<i>Rheum officinale</i> Baill., <i>R. palmatum</i> L., or other spp. (excepting <i>R. rhabonticum</i> L.) or hybrids of <i>Rheum</i> grown in China.	
Roselle	<i>Hibiscus sabdariffa</i> L.	Do.
Rosin (colophony)	<i>Pinus palustris</i> Mill., and other <i>Pinus</i> spp.	Do.
St. Johnswort leaves, flowers, and caulis	<i>Hypericum perforatum</i> L.	Hypericin-free alcohol distillate form only; in alcoholic beverages only
Sandalwood, white (yellow, or East Indian)	<i>Santalum album</i> L.	
Sandarac	<i>Tetraclinis articulata</i> (Vahl.), Mast	In alcoholic beverages only

Common name	Scientific name	Limitations
Sarsaparilla	<i>Smilax aristolochiaefolia</i> Mill., (Mexican sarsaparilla), <i>S. regelii</i> Killip et Morton (Honduras sarsaparilla), <i>S. febrifuga</i> Kunth (Ecuadorean sarsaparilla), or undetermined <i>Smilax</i> spp. (Ecuadorean or Central American sarsaparilla).	
Sassafras leaves	<i>Sassafras albidum</i> (Nutt.) Nees	Safrole free
Senna, Alexandria	<i>Cassia acutifolia</i> Delile.	
Serpentaria (Virginia snakeroot)	<i>Aristolochia serpentaria</i> L.	In alcoholic beverages only Do.
Simaruba bark	<i>Simaruba amara</i> Aubl.	
Snakeroot, Canadian (wild ginger)	<i>Asarum canadense</i> L.	
Spruce needles and twigs	<i>Picea glauca</i> (Moench) Voss or <i>P. mariana</i> (Mill.) BSP.	
Storax (styrax)	<i>Liquidambar orientalis</i> Mill. or <i>L. styraciflua</i> L.	
Tagetes (marigold)	<i>Tagetes patula</i> L., <i>T. erecta</i> L., or <i>T. minuta</i> L. (<i>T.</i> <i>glandulifera</i> Schrank).	As oil only
Tansy	<i>Tanacetum vulgare</i> L.	In alcoholic beverages only; finished alcoholic beverage thujone free ¹
Thistle, blessed (holy thistle)	<i>Oniscus benedictus</i> L.	In alcoholic beverages only
<i>Thymus capitatus</i> (Spanish "origanum")	<i>Thymus capitatus</i> Hoffmg. et Link.	
Tolu	<i>Myroxylon balsamum</i> (L.) Harms.	
Turpentine	<i>Pinus palustris</i> Mill. and other <i>Pinus</i> spp. which yield terpene oils exclusively.	
Valerian rhizome and roots	<i>Valeriana officinalis</i> L.	
Veronica	<i>Veronica officinalis</i> L.	Do.
Vervain, European	<i>Verbena officinalis</i> L.	Do.
Vetiver	<i>Vetiveria zizanioides</i> Stapf	Do.
Violet, Swiss	<i>Viola calcarata</i> L.	
Walnut husks (hulls), leaves, and green nuts	<i>Juglans nigra</i> L. or <i>J. regia</i> L.	
Woodruff, sweet	<i>Asperula odorata</i> L.	In alcoholic beverages only
Yarrow	<i>Achillea millefolium</i> L.	In beverages only; fin- ished beverage thujone free ¹
Yerba santa	<i>Eriodictyon californicum</i> (Hook, et Arn.) Torr.	
Yucca, Joshua-tree	<i>Yucca brevifolia</i> Engelm.	
Yucca, Mohave	<i>Yucca schottigera</i> Roezl ex Oertgies (<i>Y. mohavensis</i> Sarg.).	

¹ As determined by using the method (or, in other than alcoholic beverages, a suitable adaptation thereof) in section 9.129 of the "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th Ed. (1980), which is incorporated by reference. Copies may be obtained from the Association of Official Analytical Chemists International, 481 North Frederic Ave., suite 500, Gaithersburg, MD 20877-2504, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

[42 FR 14491, Mar. 15, 1977, as amended at 43 FR 14644, Apr. 7, 1978; 49 FR 10104, Mar. 19, 1984; 54 FR 24897, June 12, 1989; 69 FR 24511, May 4, 2004]

of chewing gum in accordance with the following prescribed conditions:

(a) The food additive consists of one or more of the following substances that meet the specifications and limitations prescribed in this paragraph, used in amounts not to exceed those required to produce the intended physical or other technical effect.

§ 172.615 Chewing gum base.

The food additive chewing gum base may be safely used in the manufacture

MASTICATORY SUBSTANCES

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN

Family	Genus and species
Sapotaceae:	
Chicle	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Chiquibul	Manilkara zapotilla Gilly.
Crown gum	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Gutta hang kang	Palaquium leiocarpum Boerl. and Palaquium oblongifolium Burck.
Massaranduba balata (and the solvent-free resin extract of Massaranduba balata).	Manilkara huberi (Ducke) Chevalier.
Massaranduba chocolate	Manilkara solimoesensis Gilly.
Nispero	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Rosidinha (rosadinha)	Micropholis (also known as Sideroxylon) spp.
Venezuelan chicle	Manilkara williamsii Standley and related spp.
Apocynaceae:	
Jelulong	Dyera costulata Hook. F. and Dyera lowii Hook. F.
Leche caspi (sorva)	Couma macrocarpa Barb. Rodr.
Pendare	Couma macrocarpa Barb. Rodr. and Couma utilis (Mart.) Muell. Arg.
Perillo	Couma macrocarpa Barb. Rodr. and Couma utilis (Mart.) Muell. Arg.
Moraceae:	
Leche de vaca	Brosimum utile (H.B.K.) Pittier and Poulsenia spp.; also Lacmellea standleyi (Woodson), Monachino (Apocynaceae).
Niger gutta	Ficus platyphylla Del.
Tunu (tuno)	Castilla fallax Cook.
Euphorbiaceae:	
Chilte	Cnidioscolus (also known as Jatropa) elasticus Lundell and Cnidioscolus tepiquensis (Cost. and Gall.) McVaugh.
Natural rubber (smoked sheet and latex solids).	Hevea brasiliensis.

Synthetic	Specifications
Butadiene-styrene rubber	Basic polymer.
Isobutylene-isoprene copolymer (butyl rubber).	Do.
Paraffin	Synthesized by Fischer-Tropsch process from carbon monoxide and hydrogen which are catalytically converted to a mixture of paraffin hydrocarbon. Lower molecular weight fractions are removed by distillation. The residue is hydrogenated and further treated by percolation through activated charcoal. The product has a congealing point of 93°-99 °C as determined by ASTM method D938-71 (Reapproved 1981), "Standard Test Method for Congealing Point of Petroleum Waxes, Including Petrolatum," a maximum oil content of 0.5 percent as determined by ASTM method D721-56T, "Tentative Method of Test for Oil Content of Petroleum Waxes," and an absorptivity of less than 0.01 at 290 millimicrons in decahydronaphthalene at 88 °C as determined by ASTM method D2008-80, "Standard Test Method for Ultraviolet Absorbance and Absorptivity of Petroleum Products," which are incorporated by reference. Copies may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia, PA 19103, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html .
Petroleum wax	Complying with § 172.886.
Petroleum wax synthetic	Complying with § 172.888.
Polyethylene	Molecular weight 2,000-21,000.
Polyisobutylene	Minimum molecular weight 37,000 (Flory).
Polyvinyl acetate	Molecular weight, minimum 2,000.

MASTICATORY SUBSTANCES—Continued

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN

Family	Genus and species
PLASTICIZING MATERIALS (SOFTENERS)	
Glycerol ester of partially dimerized rosin	Having an acid number of 3-8, a minimum drop-softening point of 109 °C, and a color of M or paler.
Glycerol ester of partially hydrogenated gum or wood rosin.	Having an acid number of 3-10, a minimum drop-softening point of 79 °C, and a color of N or paler.
Glycerol ester of polymerized rosin	Having an acid number of 3-12, a minimum melting-point of 80 °C, and a color of M or paler.
Glycerol ester of gum rosin	Having an acid number of 5-9, a minimum drop-softening point of 88 °C, and a color of N or paler. The ester is purified by steam stripping.
Glycerol ester of tall oil rosin	Having an acid number of 2-12, a softening point (ring and ball) of 80°-88 °C, and a color of N or paler. The ester is purified by steam stripping.
Glycerol ester of wood rosin	Having an acid number of 3-9, a drop-softening point of 88 °C-96 °C, and a color of N or paler. The ester is purified by steam stripping.
Lanolin	
Methyl ester of rosin, partially hydrogenated	Having an acid number of 4-8, a refractive index of 1.5170-1.5205 at 20 °C, and a viscosity of 23-66 poises at 25 °C. The ester is purified by steam stripping.
Pentaerythritol ester of partially hydrogenated gum or wood rosin.	Having an acid number of 7-18, a minimum drop-softening point of 102 °C, and a color of K or paler.
Pentaerythritol ester of gum or wood rosin	Having an acid number of 6-16, a minimum drop-softening point of 109 °C, and a color of M or paler.
Rice bran wax	Complying with § 172.890.
Stearic acid	Complying with § 172.860.
Sodium and potassium stearates	Complying with § 172.863.
TERPENE RESINS	
Synthetic resin	Consisting of polymers of α pinene, β pinene, and/or dipentene; acid value less than 5, saponification number less than 5, and color less than 4 on the Gardner scale as measured in 50 percent mineral spirit solution.
Natural resin	Consisting of polymers of α -pinene; softening point minimum 155 °C, determined by U.S.P. closed-capillary method, United States Pharmacopeia XX (1980) (page 961).
ANTIOXIDANTS	
Butylated hydroxyanisole	Not to exceed antioxidant content of 0.1% when used alone or in any combination.
Butylated hydroxytoluene	Do.
Propyl gallate	Do.
MISCELLANEOUS	
Sodium sulfate	
Sodium sulfide	Reaction-control agent in synthetic polymer production.

(b) In addition to the substances listed in paragraph (a) of this section, chewing gum base may also include substances generally recognized as safe in food.

(c) To assure safe use of the additive, in addition to the other information required by the act, the label and labeling of the food additive shall bear the name of the additive, "chewing gum base." As used in this paragraph, the term "chewing gum base" means the manufactured or partially manufactured nonnutritive masticatory substance comprised of one or more of the

ingredients named and so defined in paragraph (a) of this section.

[42 FR 14491, Mar. 15, 1977, as amended at 45 FR 56051, Aug. 22, 1980; 49 FR 5747, Feb. 15, 1984; 49 FR 10105, Mar. 19, 1984; 66 FR 38153, July 23, 2001; 66 FR 53711, Oct. 24, 2001]

§ 172.860 Fatty acids.

The food additive fatty acids may be safely used in food and in the manufacture of food components in accordance with the following prescribed conditions:

(a) The food additive consists of one or any mixture of the following straight-chain monobasic carboxylic acids and their associated fatty acids manufactured from fats and oils derived from edible sources: Capric acid, caprylic acid, lauric acid, myristic acid, oleic acid, palmitic acid, and stearic acid.

(b) The food additive meets the following specifications:

(1) Unsaponifiable matter does not exceed 2 percent.

(2) It is free of chick-edema factor:

(i) As evidenced during the bioassay method for determining the chick-edema factor as prescribed in paragraph (c)(2) of this section; or

(ii) As evidenced by the absence of chromatographic peaks with a retention time relative to aldrin (RA) between 10 and 25, using the gas chromatographic-electron capture method prescribed in paragraph (c)(3) of this section. If chromatographic peaks are found with RA values between 10 and 25, the food additive shall meet the requirements of the bioassay method prescribed in paragraph (c)(2) of this section for determining chick-edema factor.

(c) For the purposes of this section:

(1) Unsaponifiable matter shall be determined by the method described in the 13th Ed. (1980) of the "Official Methods of Analysis of the Association of Official Analytical Chemists," which is incorporated by reference. Copies are available from the Association of Official Analytical Chemists International, 481 North Frederick Ave., suite 500, Gaithersburg, MD 20877-2504, or available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call

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202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(2) Chick-edema factor shall be determined by the bioassay method described in "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th Ed. (1980), sections 28.127-28.130, which is incorporated by reference. Copies may be obtained from the Association of Official Analytical Chemists International, 481 North Frederick Ave., suite 500, Gaithersburg, MD 20877-2504, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(3) The gas chromatographic-electron capture method for testing fatty acids for chick-edema shall be the method described in the "Journal of the Association of Official Analytical Chemists," Volume 50 (No. 1), pages 216-218 (1967), or the modified method using a sulfuric acid clean-up procedure, as described in the "Journal of the Association of the Official Analytical Chemists," Volume 51 (No. 2), pages 489-490 (1968), which are incorporated by reference. See paragraph (c)(2) of this section for availability of these references.

(d) It is used or intended for use as follows:

(1) In foods as a lubricant, binder, and as a defoaming agent in accordance with good manufacturing practice.

(2) As a component in the manufacture of other food-grade additives.

(e) To assure safe use of the additive, the label and labeling of the additive and any premix thereof shall bear, in addition to the other information required by the act, the following:

(1) The common or usual name of the acid or acids contained therein.

(2) The words "food grade," in juxtaposition with and equally as prominent as the name of the acid.

[42 FR 14491, Mar. 15, 1977, as amended at 47 FR 11837, Mar. 19, 1982; 49 FR 10105, Mar. 19, 1984; 54 FR 24897, June 12, 1989]

§ 172.861 Cocoa butter substitute from coconut oil, palm kernel oil, or both oils.

The food additive, cocoa butter substitute from coconut oil, palm kernel oil, or both oils, may be safely used in food in accordance with the following conditions:

(a) Cocoa butter substitute from coconut oil, palm kernel oil (CAS Reg. No. 85665-33-4), or both oils is a mixture of triglycerides. It is manufactured by esterification of glycerol with food-grade fatty acids (complying with § 172.860) derived from edible coconut oil, edible palm kernel oil, or both oils.

(b) The ingredient meets the following specifications:

Acid number: Not to exceed 0.5.
Saponification number: 220 to 260.
Iodine number: Not to exceed 3.
Melting range: 30 to 44 °C.

(c) The ingredient is used or intended for use as follows:

(1) As coating material for sugar, table salt, vitamins, citric acid, succinic acid, and spices; and

(2) In compound coatings, cocoa creams, cocoa-based sweets, toffees, caramel masses, and chewing sweets as defined in § 170.3 (n)(9) and (n)(38) of this chapter, except that the ingredient may not be used in a standardized food unless permitted by the standard of identity.

(d) The ingredient is used in accordance with current good manufacturing practice and in an amount not to exceed that reasonably required to accomplish the intended effect.

[56 FR 66970, Dec. 27, 1991; 57 FR 2814, Jan. 23, 1992]

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