

Uses	Limitations
In carbonated beverages as a flavor.	Not to exceed 83 parts per million, as quinine. Label shall bear a prominent declaration of the presence of quinine either by the use of the word "quinine" in the name of the article or through a separate declaration.

**§ 172.580 Safrole-free extract of sassafras.**

The food additive safrole-free extract of sassafras may be safely used in accordance with the following prescribed conditions:

(a) The additive is the aqueous extract obtained from the root bark of the plant *Sassafras albidum* (Nuttall) Nees (Fam. Lauraceae).

(b) It is obtained by extracting the bark with dilute alcohol, first concentrating the alcoholic solution by vacuum distillation, then diluting the concentrate with water and discarding the oily fraction.

(c) The purified aqueous extract is safrole-free.

(d) It is used as a flavoring in food.

**§ 172.585 Sugar beet extract flavor base.**

Sugar beet extract flavor base may be safely used in food in accordance with the provisions of this section.

(a) Sugar beet extract flavor base is the concentrated residue of soluble sugar beet extractives from which sugar and glutamic acid have been recovered, and which has been subjected to ion exchange to minimize the concentration of naturally occurring trace minerals.

(b) It is used as a flavor in food.

**§ 172.590 Yeast-malt sprout extract.**

Yeast-malt sprout extract, as described in this section, may be safely

used in food in accordance with the following prescribed conditions:

(a) The additive is produced by partial hydrolysis of yeast extract (derived from *Saccharomyces cerevisiae*, *Saccharomyces fragilis*, or *Candida utilis*) using the sprout portion of malt barley as the source of enzymes. The additive contains a maximum of 6 percent 5' nucleotides by weight.

(b) The additive may be used as a flavor enhancer in food at a level not in excess of that reasonably required to produce the intended effect.

**Subpart G—Gums, Chewing Gum Bases and Related Substances**

**§ 172.610 Arabinogalactan.**

Arabinogalactan may be safely used in food in accordance with the following conditions:

(a) Arabinogalactan is a polysaccharide extracted by water from Western larch wood, having galactose units and arabinose units in the approximate ratio of six to one.

(b) It is used in the following foods in the minimum quantity required to produce its intended effect as an emulsifier, stabilizer, binder, or bodying agent: Essential oils, nonnutritive sweeteners, flavor bases, nonstandardized dressings, and pudding mixes.

**§ 172.615 Chewing gum base.**

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

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.

MASTICATORY SUBSTANCES—Continued

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN

Family	Genus and species
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:	
Jelutong .....	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 .....	Cnidoscopus (also known as Jatropa) elasticus Lundell and Cnidoscopus 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 Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.
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.

PLASTICIZING MATERIALS (SOFTENERS)

Glycerol ester of partially dimerized rosin .....	Having an acid number of 3–8, a drop-softening point of 109 °C–119 °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 drop-softening point of 79 °C–88 °C, and a color of N or paler.
Glycerol ester of polymerized rosin .....	Having an acid number of 3–12, a melting-point range 80 °C–126 °C, and a color of M or paler.
Glycerol ester of gum rosin .....	Having an acid number of 5–9, a drop-softening point of 88 °C–96 °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 drop-softening point of 102 °C–110 °C, and a color of K or paler.
Pentaerythritol ester of gum or wood rosin .....	Having an acid number of 6–16, a drop-softening point of 109 °C–116 °C, and a color of M or paler.
Rice bran wax .....	Complying with § 172.890.
Stearic acid .....	Complying with § 172.860.

MASTICATORY SUBSTANCES—Continued

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN

Family	Genus and species
Sodium and potassium stearates .....	Complying with § 172.863.
TERPENE RESINS	
Synthetic resin .....	Consisting of polymers of $\alpha$ pinene, $\beta$ 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 $\alpha$ -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]

**§ 172.620 Carrageenan.**

The food additive carrageenan may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the refined hydrocolloid prepared by aqueous extraction from the following members of the families Gigartineaceae and Solieriaceae of the class Rhodophyceae (red seaweed):

*Chondrus crispus.*

*Chondrus ocellatus.*  
*Eucheuma cottonii.*  
*Eucheuma spinosum.*  
*Gigartina acicularis.*  
*Gigartina pistillata.*  
*Gigartina radula.*  
*Gigartina stellata.*

(b) The food additive conforms to the following conditions:

(1) It is a sulfated polysaccharide the dominant hexose units of which are galactose and anhydrogalactose.

(2) Range of sulfate content: 20 percent to 40 percent on a dry-weight basis.

(c) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(d) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the additive, carrageenan.

**§ 172.623 Carrageenan with polysorbate 80.**

Carrageenan otherwise meeting the definition and specifications of § 172.620 (a) and (b) and salts of carrageenan otherwise meeting the definition of § 172.626(a) may be safely produced with the use of polysorbate 80 meeting the specifications and requirements of