

**§ 173.70 Chloromethylated aminated styrene-divinylbenzene resin.**

Chloromethylated aminated styrene-divinylbenzene copolymer (CAS Reg. No. 60177-39-1) may be safely used in food in accordance with the following prescribed conditions:

(a) The additive is an aqueous dispersion of styrene-divinylbenzene copolymers, first chloromethylated then aminated with trimethylamine, having an average particle size of not more than 2.0 microns.

(b) The additive shall contain no more than 3.0 percent nonvolatile, soluble extractives when tested as follows: One hundred grams of the additive is centrifuged at 17,000 r/min for 2 hours. The resulting clear supernatant is removed from the compacted solids and concentrated to approximately 10 grams on a steam bath. The 10-gram sample is again centrifuged at 17,000 r/min for 2 hours to remove any residual insoluble material. The supernatant from the second centrifugation is then removed from any compacted solids and dried to constant residual weight using a steam bath. The percent nonvolatile solubles is obtained by dividing the weight of the dried residue by the weight of the solids in the original resin dispersion.

(c) The additive is used as a decolorizing and clarification agent for treatment of refinery sugar liquors and juices at levels not to exceed 500 parts of additive solids per million parts of sugar solids.

[50 FR 29209, July 18, 1985]

**§ 173.73 Sodium polyacrylate.**

Sodium polyacrylate (CAS Reg. No. 9003-04-7) may be safely used in food in accordance with the following prescribed conditions:

(a) The additive is produced by the polymerization of acrylic acid and subsequent hydrolysis of the polyacrylic acid with an aqueous sodium hydroxide solution. As determined by a method entitled "Determination of Weight Average and Number Average Molecular Weight of Sodium Polyacrylate", which is incorporated by reference in accordance with 5 U.S.C. 552(a), the additive has—

(1) A weight average molecular weight of 2,000 to 2,300; and

(2) A weight average molecular weight to number average molecular weight ratio of not more than 1.3. Copies of the method are available from the Center for Food Safety and Applied Nutrition (HFS-200), Food and Drug Administration, 200 C Street SW., Washington, DC 20204, or available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.

(b) The additive is used to control mineral scale during the evaporation of beet sugar juice or cane sugar juice in the production of sugar in an amount not to exceed 3.6 parts per million by weight of the raw juice.

[53 FR 39456, Oct. 7, 1988; 53 FR 49823, Dec. 9, 1988]

**§ 173.75 Sorbitan monooleate.**

Sorbitan monooleate may be safely used in accordance with the following prescribed conditions:

(a) The additive is produced by the esterification of sorbitol with commercial oleic acid.

(b) It meets the following specifications:

(1) Saponification number, 145-160.

(2) Hydroxyl number, 193-210.

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

(1) As an emulsifier in polymer dispersions that are used in the clarification of cane or beet sugar juice or liquor in an amount not to exceed 7.5 percent by weight in the final polymer dispersion.

(2) The additive is used in an amount not to exceed 0.70 part per million in sugar juice and 1.4 parts per million in sugar liquor.

[51 FR 11720, Apr. 7, 1986]

**Subpart B—Enzyme Preparations and Microorganisms**

**§ 173.110 Amyloglucosidase derived from *Rhizopus niveus*.**

Amyloglucosidase enzyme product, consisting of enzyme derived from *Rhizopus niveus*, and diatomaceous silica as a carrier, may be safely used in food in accordance with the following conditions:

(a) *Rhizopus niveus* is classified as follows: Class, Phycomycetes; order, Mucorales; family, Mucoraceae; genus, *Rhizopus*; species, *niveus*.

(b) The strain of *Rhizopus niveus* is nonpathogenic and nontoxic in man or other animals.

(c) The enzyme is produced by a process which completely removes the organism *Rhizopus niveus* from the amyloglucosidase.

(d) The additive is used or intended for use for degrading gelatinized starch into constituent sugars, in the production of distilled spirits and vinegar.

(e) The additive is used at a level not to exceed 0.1 percent by weight of the gelatinized starch.

**§ 173.120 Carbohydrase and cellulase derived from *Aspergillus niger*.**

Carbohydrase and cellulase enzyme preparation derived from *Aspergillus niger* may be safely used in food in accordance with the following prescribed conditions:

(a) *Aspergillus niger* is classified as follows: Class, Deuteromycetes; order, Moniliales; family, Moniliaceae; genus, *Aspergillus*; species, *niger*.

(b) The strain of *Aspergillus niger* is nonpathogenic and nontoxic in man or other animals.

(c) The additive is produced by a process that completely removes the organism *Aspergillus niger* from the carbohydrase and cellulase enzyme product.

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

(1) For removal of visceral mass (bellies) in clam processing.

(2) As an aid in the removal of the shell from the edible tissue in shrimp processing.

(e) The additive is used in an amount not in excess of the minimum required to produce its intended effect.

**§ 173.130 Carbohydrase derived from *Rhizopus oryzae*.**

Carbohydrase from *Rhizopus oryzae* may be safely used in the production of dextrose from starch in accordance with the following prescribed conditions:

(a) *Rhizopus oryzae* is classified as follows: Class, Phycomycetes; order,

Mucorales; family, Mucoraceae; genus, *Rhizopus*; species, *Rhizopus oryzae*.

(b) The strain of *Rhizopus oryzae* is nonpathogenic and nontoxic.

(c) The carbohydrase is produced under controlled conditions to maintain nonpathogenicity and nontoxicity, including the absence of aflatoxin.

(d) The carbohydrase is produced by a process which completely removes the organism *Rhizopus oryzae* from the carbohydrase product.

(e) The carbohydrase is maintained under refrigeration from production to use and is labeled to include the necessity of refrigerated storage.

**§ 173.135 Catalase derived from *Micrococcus lysodeikticus*.**

Bacterial catalase derived from *Micrococcus lysodeikticus* by a pure culture fermentation process may be safely used in destroying and removing hydrogen peroxide used in the manufacture of cheese, in accordance with the following conditions.

(a) The organism *Micrococcus lysodeikticus* from which the bacterial catalase is to be derived is demonstrated to be nontoxic and nonpathogenic.

(b) The organism *Micrococcus lysodeikticus* is removed from the bacterial catalase prior to use of the bacterial catalase.

(c) The bacterial catalase is used in an amount not in excess of the minimum required to produce its intended effect.

**§ 173.140 Esterase-lipase derived from *Mucor miehei*.**

Esterase-lipase enzyme, consisting of enzyme derived from *Mucor miehei* var. *Cooney et Emerson* by a pure culture fermentation process, with maltodextrin or sweet whey as a carrier, may be safely used in food in accordance with the following conditions:

(a) *Mucor miehei* var. *Cooney et Emerson* is classified as follows: Class, Phycomycetes; subclass, Zygomycetes; order, Mucorales; family, Mucoraceae; genus, *Mucor*; species, *miehei*; variety *Cooney et Emerson*.

(b) The strain of *Mucor miehei* var. *Cooney et Emerson* is nonpathogenic and nontoxic in man or other animals.