[Code of Federal Regulations]
[Title 20, Volume 3, Parts 170 to 199]
[Revised as of April 1, 1996]
From the U.S. Government Printing Office via GPO Access
[CITE: 21CFR173.310]

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TITLE 21--FOOD AND DRUGS

CHAPTER I--FOOD AND DRUG ADMINISTRATION, DEPARTMENT OF HEALTH AND HUMAN SERVICES (CONTINUED)

PART 173--SECONDARY DIRECT FOOD ADDITIVES PERMITTED IN FOOD FOR HUMAN CONSUMPTION--Table of Contents

Subpart D--Specific Usage Additives

Sec. 173.310 Boiler water additives.

Boiler water additives may be safely used in the preparation of steam that will contact food, under the following conditions:

(a) The amount of additive is not in excess of that required for its functional purpose, and the amount of steam in contact with food does not exceed that required to produce the intended effect in or on the food.

(b) The compounds are prepared from substances identified in paragraphs (c) and (d) of this section, and are subject to the limitations, if any, prescribed:

(c) List of substances:

Substances	Limitations
Acrylamide-sodium acrylate resin...	Contains not more than 0.05 percent by weight of acrylamide monomer.
Acrylic acid/2-acrylamido-2-methyl propane sulfonic acid copolymer having a minimum weight average molecular weight of 9,900 and a minimum number average molecular weight of 5,700 as determined by a method entitled ``Determination of Weight Average and Number Average Molecular Weight of 60/40 AA/AMPS" (October 23, 1987), which is incorporated by reference in accordance with 5 U.S.C. 552(a). Copies may be obtained from the Center for Food Safety and Applied Nutrition (HFS-200), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, or may be examined at the Office of the	Total not to exceed 20 parts per million (active) in boiler feedwater.

	Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.
Ammonium alginate	.....
Cobalt sulfate (as catalyst)	.....
1-hydroxyethylidene-1,1-diphosphonic acid (CAS Reg. No. 2809-21-4) and its sodium and potassium salts.	.....
Lignosulfonic acid	.....
Monobutyl ethers of polyethylene-polypropylene glycol produced by random condensation of a 1:1 mixture by weight of ethylene oxide and propylene oxide with butanol.	Minimum mol. wt. 1,500.
Poly(acrylic acid-co-hypophosphite), sodium salt (CAS Reg. No. 71050-62-9), produced from a 4:1 to a 16:1 mixture by weight of acrylic acid and sodium hypophosphite.	Total not to exceed 1.5 parts per million in boiler feed water. Copolymer contains not more than 0.5 percent by weight of acrylic acid monomer (dry weight basis).
Polyethylene glycol	As defined in Sec. 172.820 of this chapter.
Polymaleic acid [CAS Reg. No. 26099-09-2], and/or its sodium salt. [CAS Reg. No. 30915-61-8 or CAS Reg. No. 70247-90-4].	Total not to exceed 1 part per million in boiler feed water (calculated as the acid).
Polyoxypropylene glycol	Minimum mol. wt. 1,000.
Potassium carbonate	.....
Potassium tripolyphosphate	.....
Sodium acetate	.....
Sodium alginate	.....
Sodium aluminate	.....
Sodium carbonate	.....
Sodium carboxymethylcellulose	Contains not less than 95 percent sodium carboxymethylcellulose on a dry-weight basis, with maximum substitution of 0.9 carboxymethylcellulose groups per anhydroglucose unit, and with a minimum viscosity of 15 centipoises for 2 percent by weight aqueous solution at 25 C; by method prescribed in the ``Food Chemicals Codex,'' 3d Ed. (1981), pp. 280-282, which is incorporated by reference. Copies may be obtained from the National Academy Press, 2101 Constitution Ave. NW., Washington, DC 20418, or may be examined at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.
Sodium glucoheptonate	Less than 1 part per million

cyanide in the sodium glucoheptonate.

Sodium hexametaphosphate..... .....
Sodium humate..... .....
Sodium hydroxide..... .....
Sodium lignosulfonate..... .....
Sodium metabisulfite..... .....
Sodium metasilicate..... .....

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Sodium nitrate..... .....
Sodium phosphate (mono-, di-, tri-) .....
Sodium polyacrylate..... .....
Sodium polymethacrylate..... .....
Sodium silicate..... .....
Sodium sulfate..... .....
Sodium sulfite (neutral or alkaline). .....
Sodium tripolyphosphate..... .....
Tannin (including quebracho extract). .....
Tetrasodium EDTA..... .....
Tetrasodium pyrophosphate..... .....

Substances	Limitations
Cyclohexylamine.....	Not to exceed 10 parts per million in steam, and excluding use of such steam in contact with milk and milk products.
Diethylaminoethanol.....	Not to exceed 15 parts per million in steam, and excluding use of such steam in contact with milk and milk products.
Hydrazine.....	Zero in steam.
Morpholine.....	Not to exceed 10 parts per million in steam, and excluding use of such steam in contact with milk and milk products.
Octadecylamine.....	Not to exceed 3 parts per million in steam, and excluding use of such steam in contact with milk and milk products.
Trisodium nitrilotriacetate.....	Not to exceed 5 parts per million in boiler feedwater; not to be used where steam will be in contact with milk

and milk products.

(e) To assure safe use of the additive, in addition to the other information required by the Act, the label or labeling shall bear:

(1) The common or chemical name or names of the additive or additives.

(2) Adequate directions for use to assure compliance with all the provisions of this section.

[42 FR 14526, Mar. 15, 1977, as amended at 45 FR 73922, Nov. 7, 1980; 45 FR 85726, Dec. 30, 1980; 48 FR 7439, Feb. 22, 1983; 49 FR 5748, Feb. 15, 1984; 49 FR 10106, Mar. 19, 1984; 50 FR 49536, Dec. 3, 1985; 53 FR 15199, Apr. 28, 1988; 54 FR 31012, July 26, 1989; 55 FR 12172, Apr. 2, 1990; 61 FR 14245, Apr. 1, 1996]