Food and Drug Administration, HHS

§ 184.1007 Aconitic acid.


(c) The ingredient is used as a curing and pickling agent as defined in §170.3(o)(5) of this chapter; flavor enhancer as defined in §170.3(o)(11) of this chapter; flavoring agent and adjuvant as defined in §170.3(o)(12) of this chapter; pH control agent as defined in §170.3(o)(23) of this chapter; as a solvent and vehicle as defined in §170.3(o)(27) of this chapter; and as a boiler water additive complying with §173.310 of this chapter.

(d) The ingredient is used in food at levels not to exceed current good manufacturing practice in accordance with §184.1(b)(1). Current good manufacturing practice results in a maximum level as served, of 0.25 percent for baked goods as defined in §170.3(n)(1) of this chapter; 0.8 percent for cheeses as defined in §170.3(n)(5) of this chapter and dairy product analogs as defined in §170.3(n)(10) of this chapter; 0.5 percent for chewing gum as defined in §170.3(n)(6) of this chapter; 9.0 percent for condiments and relishes as defined in §170.3(n)(8) of this chapter; 0.5 percent for fats and oils as defined in §170.3(n)(12) of this chapter; 3.0 percent for gravies and sauces as defined in §170.3(n)(24) of this chapter; 0.6 percent for meat products as defined in §170.3(n)(29) of this chapter; and 0.15 percent or less for all other food categories. The ingredient may also be used in boiler water additives at levels not to exceed current good manufacturing practice.

(e) Prior sanctions for this ingredient different from the uses established in this section do not exist or have been waived.

§ 184.1007 Aconitic acid.

(a) Aconitic acid (1,2,3-propenetricarboxylic acid (C₆H₆O₆), CAS Reg. No. 000499–12–7) occurs in the leaves and tubers of Aconitum napellus L. and other Ranunculaceae. Transaconitic acid can be isolated during sugarcane processing, by precipitation as the calcium salt from cane sugar or molasses. It may be synthesized by sulfuric acid dehydration of citric acid, but not by the methanesulfonic acid method.

(b) The ingredient meets the following specifications:

(1) **Assay.** Not less than 98.0 percent of C₆H₆O₆, using the “Food Chemicals Codex,” 4th ed. (1996), pp. 102–103, test for citric acid, which is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, and a molecular weight of 174.11. Copies of the material incorporated by reference are available from the National Academy Press, Box 285, 2101 Constitution Ave., NW., Washington, DC 20055 (Internet address http://www.nap.edu), or may be examined at the Center for Food Safety and Applied Nutrition’s Library, Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, 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.

(2) **Melting point.** Not less than 195 °C and the determination results in decomposition of aconitic acid.

(3) **Heavy metals (as Pb).** Not more than 10 parts per million.

(4) **Arsenic (as As).** Not more than 3 parts per million.

(5) **Orotate.** Passes test.

(6) **Readily carbonizable substances.** Passes the test for citric acid of the “Food Chemicals Codex,” 4th ed. (1996), pp. 102–103, which is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The availability of this incorporation by reference is given in paragraph (b)(1) of this section.

(7) **Residue on ignition.** Not more than 0.1 percent as determined by the “Food Chemicals Codex,” 4th ed. (1996), pp. 102–103, test for citric acid, which is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.
§ 184.1009 Adipic acid.

(a) Adipic acid (C_6H_{10}O_4, CAS Reg.
No. 00124–04–9) is also known as 1,4-
butanedicarboxylic acid or hexane-
dioic acid. It is prepared by nitric acid
oxidation of cyclohexanol or
cyclohexanone or a mixture of the two.
(b) The ingredient meets the speci-
fications of the Food Chemicals Codex,
3d Ed. (1981), p. 11, which is incor-
porated by reference. Copies are avail-
able from the National Academy Press,
2101 Constitution Ave., NW., Wash-
ington, DC 20418, or available for in-
spection 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.), and the following
additional specifications:

(1) The adipic acid is converted to its
 corresponding amide. The amide is pu-
rified by recrystallization from water
or aqueous ethanol. The melting range
of the amide is 219° to 220 °C.
(2) The adipic acid is converted to its
 corresponding bis-p-p-bromophenacyl
ester. The ester is purified by recrys-
tallization from ethanol. The melting
range of the ester is 153° to 154 °C.
(3) The ingredient is used as a fla-
voring agent as defined in §170.3(o)(12)
of this chapter; leavening agent as de-
fined in §170.3(o)(17) of this chapter;
and pH control agent as defined in
§170.3(o)(23) of this chapter.
(d) The ingredient is used in foods at
levels not to exceed current good manu-
facturing practice in accordance with
§184.1(b)(1). Current good manufac-
turing practice results in maximum
levels, as served, of 0.05 percent for
baked goods as defined in §170.3(n)(1) of
this chapter; 0.005 percent for non-
alcoholic beverages as defined in
§170.3(n)(3) of this chapter; 5.0 percent
for condiments and relishes as defined
in §170.3(n)(8) of this chapter; 0.45 per-
cent for dairy product analogs as de-
fining in §170.3(n)(10) of this chapter; 0.3
percent for fats and oil as defined in
§170.3(n)(12) of this chapter; 0.0004 per-
cent for frozen dairy desserts as defined
in §170.3(n)(20) of this chapter; 0.55 per-
cent for gelatin and puddings as de-
fining in §170.3(n)(22) of this chapter; 0.1
percent for gravies as defined in
§170.3(n)(24) of this chapter; 1.3 percent
for snack foods as defined in
§170.3(n)(37) of this chapter; and 0.02
percent or less for all other food cat-
egories.
(e) Prior sanctions for adipic acid dif-
ferent from the uses established in this
section do not exist or have been
waived.

FR 5610, Feb. 14, 1984; 64 FR 1759, Jan. 12,
1999]

§ 184.1011 Alginic acid.

(a) Alginic acid is a colloidal, hydro-
philic polysaccharide obtained from
certain brown algae by alkaline extrac-
tion.
(b) The ingredient meets the speci-
fications of the Food Chemicals Codex,
3d Ed. (1981), p. 13, which is incor-
porated by reference. Copies are avail-
able from the National Academy Press,
2101 Constitution Ave., NW., Wash-
ington, DC 20418, or available for in-
spection at the National Archives and
Records Administration (NARA). For
information on the availability of this
material at NARA, call 202–741–6030, or