

SODIUM L(+)-TARTRATE

Prepared at the 7th JECFA (1963), published in NMRS 35 (1964) and in FNP 52 (1992). Metal and arsenic specifications revised at the 63rd JECFA (2004) (identical to those listed for potassium sodium L(+)-tartrate). An ADI of 0-30 mg/kg bw was established at the 17th JECFA (1973) and reconfirmed at the 21st JECFA (1977).

SYNONYMS Sodium dextro-tartrate; INS No. 335(ii)

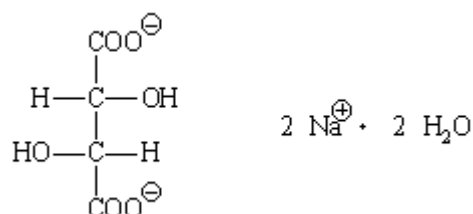
DEFINITION

Chemical names Disodium L-tartrate, disodium (+)-tartrate, disodium (+)-2,3-dihydroxybutanedioic acid

C.A.S. number 868-18-8

Chemical formula $C_4H_4Na_2O_6 \cdot 2H_2O$

Structural formula



Formula weight 230.8

Assay Not less than 99% after drying

DESCRIPTION Transparent, colourless and odourless crystals

FUNCTIONAL USES Sequestrant and stabilizer in meat products and sausage casings

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) One gram is soluble in 3 ml of water; insoluble to ethanol

Test for tartrate (Vol. 4) Passes test

Test for sodium (Vol. 4) Passes test

PURITY

Loss on drying (Vol. 4) Not more than 17% and not less than 14% (150°, 3 h)

pH (Vol. 4) 7.0 - 7.5 (1 in 10 solution)

Oxalate Add 5 drops of dilute acetic acid TS and 2 ml of calcium chloride TS to 10 ml of a 10% solution of sodium tartrate. No turbidity is

produced within 1 h.

Lead (Vol. 4)

Not more than 2 mg/kg

Determine using an AAS/ICP-AES technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on principles of methods described in Volume 4 (under "General Methods, Metallic Impurities").

METHOD OF ASSAY Weigh 1.500 g of the dried sample into a tared porcelain crucible, ignite gently at first, until the salt is thoroughly carbonized, protecting the carbonized salt from contact with the flame at all times. Cool the crucible, place in a glass beaker and break up the carbonized mass with a glass rod. Without removing the glass rod or the crucible, add 50 ml of water, 50 ml of 0.5 N sulfuric acid, cover the beaker, and boil the solution for 30 min. Filter, and wash with hot water until the last washing is neutral to litmus. Cool the combined filtrate and washings, add methyl orange TS, and titrate the excess acid with 0.5 N sodium hydroxide. Each ml of 0.5 N sulfuric acid is equivalent to 0.0485 g of $C_4H_4Na_2O_6$.

Alternative method of assay:

Weigh 0.4500 g of the dried sample and transfer to a 250-ml beaker. Add 100 ml of glacial acetic acid, and stir the solution (e.g. with a magnetic stirrer) until the sample is dissolved. Titrate the solution with 0.1 N perchloric acid in glacial acetic acid, adding the titrant in 0.2-ml increments as the end-point is neared, and determine the end-point by the potentiometric method. Each ml of 0.1 N perchloric acid is equivalent to 0.0097 g of $C_4H_4Na_2O_6$.