POTASSIUM SODIUM L(+)-TARTRATE

Prepared at the 7th JECFA (1963), published in NMRS 35 (1964) and in FNP 52 (1992). Metals and arsenic specifications revised at the 63rd JECFA (2004). An ADI of 0-30 mg/kg bw was established at the 17th JECFA (1973)

SYNONYMS Rochelle salt, Seignette salt, Potassium sodium dextro-tartrate; INS No. 337

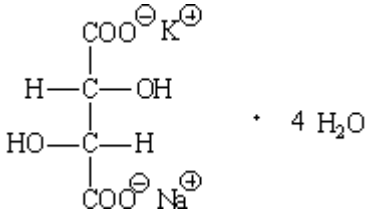
DEFINITION

Chemical names: Potassium sodium L-tartrate, potassium sodium (+)-tartrate, potassium sodium (+)-2,3-dihydroxybutanedioic acid

C.A.S. number: 304-59-6

Chemical formula: $C_4H_4KNaO_6 \cdot 4H_2O$

Structural formula:



Formula weight: 282.23

Assay: Not less than 99% after drying

DESCRIPTION Colourless crystals, or as a white, crystalline powder

FUNCTIONAL USES Sequestrant, stabilizer in cheese products, minced meat, and sausage casings

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4): One gram is soluble in 1 ml of water; insoluble to ethanol

Test for tartrate (Vol. 4): Passes test

Test for sodium (Vol. 4): Passes test

Test for potassium (Vol. 4): Passes test

PURITY

Loss on drying (Vol. 4): Not more than 26.0% and not less than 21.0% (150°, 3 h)

pH (Vol. 4): 6.5 - 7.5 (1 in 10 soln)

Oxalate

Add 3 drops of dilute acetic acid TS and 2 ml of calcium chloride TS to 10 ml of a 10% solution of potassium sodium tartrate. No turbidity is produced within 1 h.

Lead (Vol. 4)

Not more than 2 mg/kg
Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the method described in Volume 4, “Instrumental Methods.”

METHOD OF ASSAY

Weigh 1.500 g of the dried sample into a tared porcelain crucible and ignite. Heat gently at first, until the salt is thoroughly carbonized, protecting the carbonized salt from contact with the flame at all times. The final temperature must not be above that of a dull read heat. 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 0.05254 g of $C_4H_4KNaO_6$.