L(+)-TARTARIC ACID

Prepared at the 53rd JECFA (1999) and published in FNP 52 Add 7 (1999), superseding specifications prepared at the 21st JECFA (1977), published in NMRS 57 (1977) and in FNP 52 (1992). An ADI of 0-30 mg/kg bw was established at the 17th JECFA (1973) and reconfirmed at the 21st JECFA (1977)

SYNONYMS INS No. 334

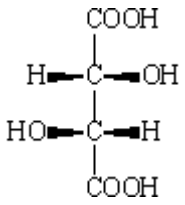
DEFINITION

Chemical names L-Tartaric acid, L-2,3-dihydroxybutanedioic acid, L-2,3-dihydroxysuccinic acid

C.A.S. number 87-69-4

Chemical formula $C_4H_6O_6$

Structural formula



Formula weight 150.09

Assay Not less than 99.5% on the dried basis

DESCRIPTION Colourless or translucent crystals, or white, fine to granular, crystalline powder; odourless

FUNCTIONAL USES Synergist for antioxidants, acid, sequestrant, flavouring agent

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Very soluble in water; freely soluble in ethanol

Specific rotation (Vol. 4 A 1 in 10 solution is dextrorotatory

Test for tartrate (Vol. 4) Passes test

PURITY

Loss on drying (Vol. 4) Not more than 0.5% (over P_2O_5, 3 h)

Specific rotation (Vol. 4) [alpha] 20, D: Between +11.5° and +13.5°

Sulfated ash (Vol. 4) Not more than 0.1%
Test 2 g of the sample (Method I)

Sulfates (Vol. 4)	Not more than 0.05% 0.4 g of the sample meets the requirements of the Limit Test using 0.2 mg of sulfate ion (SO_4) in the control
Oxalate	Nearly neutralize 10 ml of a 1 in 10 solution of the sample with ammonia TS, and add 10 ml of calcium sulfate TS. No turbidity is produced
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 accurately about 2 g of the dried sample, dissolve in 40 ml of water, add phenolphthalein TS, and titrate with 1 N sodium hydroxide. Each ml of 1 N sodium hydroxide is equivalent to 75.04 mg of $C_4H_6O_6$.