Safety data for l-tartaric acid

Click here for data on tartaric acid in student-friendly format, from the HSci project

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Glossary of terms on this data sheet.

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers.

General

Synonyms: 2,3-dihydroxybutanedioic acid, dextrotartaric acid, 2,3-dihydrosuccinic acid, 1,2-dihydroxyethane-1,2-dicarboxylic acid, (+)-tartaric acid, (R,R)-(+)-tartatic acid, 3-hydroxymalic acid
Use: cooking, brewing
Molecular formula: $C_4H_6O_6$
CAS No: 87-69-4
EC No: 201-766-0

Physical data

Appearance: white crystals
Melting point: 170 - 172 C
Boiling point:
Vapour density: 5.18 g/l
Vapour pressure:
Specific gravity:
Flash point: 150 C
Explosion limits:
Autoignition temperature: 797 F

Stability

Stable. Incompatible with oxidizing agents, bases, reducing agents. Combustible.

Toxicology

May be harmful by inhalation, ingestion or skin absorption. Irritant.

Toxicity data

(The meaning of any abbreviations which appear in this section is given

here.)
IVN-MUS LD50 485 mg kg^{-1}

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)
R36 R37 R38.

Transport information

Non-hazardous for air, sea and road freight.

Personal protection

Minimize contact.

Safety phrases

(The meaning of any safety phrases which appear in this section is given here.)
S26 S36.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

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 $+11.5^{o}$ and $+13.5^{o}$
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 $C_4H_6O_6$.