

Product Data Sheet

Citric Acid Monohydrate

Description

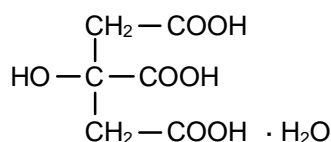
Citric Acid Monohydrate consists of colourless crystals or a white, granular to fine powder, practically odourless, with a strong acid taste.

Product identification

Product codes:

Granular: 04 3276 8

Fine Granular: 04 3277 6

Chemical name: 2-hydroxy-1,2,3-propanetricarboxylic acid monohydrate**Synonyms:** citric acid monohydrate**CAS No.:** 5949-29-1**EINECS:** 201-069-1**Empirical formula:** C₆H₈O₇ · H₂O**Molecular mass:** 210.14 g/mol

Specifications

Appearance: colourless crystals or white, granular to fine powder**Identity:** corresponds**Water (K. Fischer):** 8.1–8.7%**Extraneous matter:** passes test**Heavy metals:** max. 1 ppm**Arsenic:** max. 1 ppm**Lead:** max. 0.5 ppm**Mercury:** max. 1 ppm**Copper:** max. 1 ppm**Zinc:** max. 1 ppm**Iron:** max. 1 ppm**Barium:** max. 1 ppm**Calcium:** max. 10 ppm**Magnesium:** max. 1 ppm**Aluminium:** max. 0.2 ppm**Chlorides:** max. 5 ppm**Sulphates:** max. 30 ppm

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Oxalates: max. 10 ppm

Readily carbonizable substances: passes test

Related substances: passes test

Sulphated ash: meets USP requirements

Organic volatile impurities: meets USP requirements

Tridodecylamine: meets FCC requirements

Polycyclic aromatic hydrocarbons: meets JP requirements

Colour (500 g/L, T at 405 nm, 1 cm): min. 98%

Assay: 99.8–100.5%

Fineness (US standard sieves):

Granular

On No. 5 (4000 µm) max. 5%

Through No. 30 (595 µm) max. 10%

Fine Granular

On No. 20 (841 µm) max. 5%

Through No. 100 (149 µm) max. 5%

Solubility

Citric Acid Monohydrate is very soluble in water, freely soluble in ethanol and sparingly soluble in ether.

Stability and storage

Citric Acid Monohydrate may be stored for 36 months from the date of manufacture in the unopened original container. A relative humidity of 50% and a temperature range of 10–30 °C are the most suitable conditions for storage.

Temperatures above 35 °C should be avoided in order to prevent water migration and severe caking. The stacking of the Fine Granular form for long periods is not recommended.

Stability tests have shown that Citric Acid Monohydrate is chemically stable for at least five years in tightly closed containers under proper storage conditions.

Uses

As an acidulant, flavour enhancer and sequestering agent in processed food and beverages, and as a synergist in antioxidant mixtures.

For personal care preparations.

This product is not intended for use in the manufacture of sterile drug products. The purchaser assumes all responsibility for additional processing, testing, labelling and registration required for such use.

Compendial compliance

Citric Acid Monohydrate meets all requirements of the USP, FCC, Ph. Eur. and JP when tested according to these compendia.

Safety

This product is safe for the intended use. Avoid ingestion, inhalation of dust or direct contact by applying suitable protective measures and personal hygiene.

For full safety information and necessary precautions, please refer to the respective DSM Material Safety Data Sheet.

Legal notice

The information given in this publication is based on our current knowledge and experience, and may be used at your discretion and risk. It does not relieve you from carrying out your own precautions and tests. We do not assume any liability in connection with your product or its use. You must comply with all applicable laws and regulations, and observe all third party rights.

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