Jungbunzlauer

Product Information
Citric Acid Monohydrate

General Information

Citric acid is a natural occurring fruit acid, produced commercially by microbial fermentation of a carbohydrate substrate. Citric acid is the most widely used organic acid and pH-control agent in foods, beverages, pharmaceuticals and technical applications.

Chemical Data

Chemical Nomenclature	2-hydroxy-1,2,3-propanetri-carboxylic acid monohydrate
Chem. Formula	$C_6H_8O_7 \cdot H_2O$
Molar Mass	210.14 g/mol
pH (5 %)	1.85
Bulk Density	600 - 950 kg/m³
REACh No.	01-2119457026-42-0000
EC No.	201-069-1
CAS No.	5949-29-1
E-No.	E 330

Specification

Jungbunzlauer citric acid monohydrate is supplied in accordance with the current requirements of the US Pharmacopoeia (USP), the European Pharmacopoeia (Ph. Eur.), the Food Chemicals Codex (FCC), and the Commission Regulation (EU) No 231/2012.

Parameters	Jungbunzlauer Limits
Odour	typical, practically odourless
Identification	conforms
Appearance of solution	clear and colourless
Clarity of solution	conforms
Colour of solution	conforms
Readily carbonisable substances	conforms
Oxalic acid / oxalate	max. 100 mg/kg
Sulphate	max. 100 mg/kg
Heavy metals	max. 5 mg/kg
Arsenic	max. 1 mg/kg
Lead	max. 0.5 mg/kg
Mercury	max. 0.5 mg/kg
Calcium	max. 30 mg/kg
Iron	max. 3 mg/kg
Chloride	max. 5 mg/kg
Residue on ignition	max. 0.05 %
Sulphated ash	max. 0.05 %
Water	7.5 – 8.8 %
Assay	99.7 – 100.3 %

Characteristics

Citric acid monohydrate occurs as colourless crystals or as white, crystalline powder with a strongly acidic taste. It is efflorescent in dry air, very soluble in water, freely soluble in ethanol (96%) and sparingly soluble in ether.

Citric acid monohydrate is non-toxic and has a low reactivity. It is chemically stable if stored at ambient temperatures. In its monohydrate form citric acid is more hygroscopic than in its anhydrous form. The monohydrate is, therefore, more prone to caking than the anhydrous. Citric acid monohydrate is fully biodegradable and can be disposed of with regular waste or sewage.

Standard Granulations

Type	Particle size	Limits
N1560	> 1.25 mm < 0.40 mm	max. 5% max. 10%
N1500	> 1.25 mm < 0.20 mm	max. 5% max. 10%
F6000	> 0.63 mm < 0.20 mm	max. 10% max. 10%

Legal Aspects

In Europe, citric acid monohydrate is listed as generally permitted food additive (E 330) and may be added to all foodstuffs, following the "quantum satis" principle, as long as no special regulation restricts the use.
The US Food and Drug Administration (FDA) has affirmed citric acid as GRAS (generally recognized as safe) and permitted the use in food according to current GMP (CFR § 184.1033), without setting an upper limit.

Citric acid is classified and labelled according to GHS (Globally Harmonized System), implemented by the European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) as follows:

Pictogram:	Signal Word:	Hazard statement H319:	Precautionary statements: P264, P280, P305, P351, P338, P337, P313:
	Warning	Causes serious eye irritation.	Wash hands thoroughly after handling. Wear eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Standard Packaging and Storage

Jungbunzlauer citric acid monohydrate is available in 25 kg net PE bags or in 1000 kg net big bags with inner PE lining.
Citric acid monohydrate may be stored for at least 3 years in original or tightly closed containers. Storage at temperatures higher than 30°C and/or humidity higher than 70% should be avoided in order to prevent caking.

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Refer to the appropriate Safety Data Sheet for health, safety and environmental information

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