

FT-67341A



INTERFINE CHEMICALS

ANALYTICAL SCIENCES

BIOCHROMATOGRAPHY

BIOSCIENCES

Citric Acid

Products Information

Name : **Citric Acid, anhydrous**
IUPAC name 2-Hydroxypropane-1,2,3-tricarboxylic acid

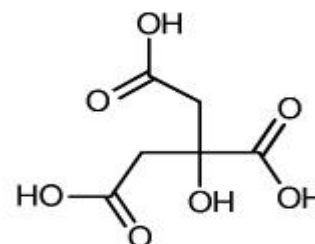
Cat. Number : **168789, 500g 168781, 1kg**

Name : **Citric Acid, anhydrous, ACS Grade**
IUPAC name 2-Hydroxypropane-1,2,3-tricarboxylic acid

Cat. Number : **67341A, 500g 67341B, 1kg 67341C, 2,5kg**

CAS: 77-92-9
EC Number 201-069-1

Structure : C₆H₈O₇
Molecular Weight : 192.13



Storage: Room temperature (z) Keep dry

Specifications **Citric Acid, anhydrous 168789**

Test	Specification
Appearance:	Fine white crystalline powder
Purity	≥99%

Specifications **Citric Acid, anhydrous 67341A**

Test	Specification
Appearance:	Fine white crystalline powder
Purity	≥99.5%

FT-67341A

Technical information

Melting point: 153 °C

Density: 1.66 g/cm³

Boiling point: 175 °C: Citric acid decomposes with loss of carbon dioxide above about 175 °C.

Solubility: soluble in Water (1174g/L at 10°C, 1809g/L at 30°C, 3825g/L at 80°C).

Citric acid also dissolves in absolute (anhydrous) ethanol (76 parts of citric acid per 100 parts of ethanol) at 15 °C.

Acidity properties:

Citric acid is a weak organic acid present naturally in living cell (as an intermediate in the citric acid cycle of the metabolism of all aerobic organisms). It occurs in large amounts in citrus fruits, and is used widely in industry as an acidifier, as a flavoring and chelating agent.

pKa values are 5.21, 4.28 and 2.92 at 25 °C (extrapolated to zero ionic strength).

Buffering properties:

Citric acid is a good buffering agent for solutions between about pH 2 and pH 8. It is popular in many buffers in many techniques, electrophoresis (SSC Buffer #), to stop reactions, for biopurifications, crystallography... In biological systems around pH 7, the two species present are the citrate ion and mono-hydrogen citrate ion. The pH of a 1 mM solution of citric acid will be about 3.2.

Other properties:

The citrate ion forms complexes with metallic cations. It forms complexes even with alkali metal cations. However, a chelate complex formed using all three carboxylate groups is generally less stable thermodynamically than smaller chelate rings. The hydroxyl group can be then deprotonated, forming part of a more stable 5-membered ring, as in ammonium ferric citrate. Esters such as triethyl citrate can be made.

These chelating properties drive usage as a cleaning agent.

Citric acid is also an antioxidant. This drives application in the food industry, in cosmetics.

Safety

Xi R38 S39 Irritant for skin, eyes.

Hazardous in case of eye contact (irritant: may cause corneal damage or blindness), of inhalation (lung irritant). Slightly hazardous in case of skin contact (can produce inflammation and blistering; chronic exposure can cause sensitization) or of ingestion. No known carcinogenic, mutagenic, teratogenic effect or development toxicity.

First aid measures:

* Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15

minutes. Cold water may be used. Get medical attention.

* Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

* Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

* Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

* Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear

Related product and documents

For any information, please contact Uptima -Interchim, Division BioSciences
uptima@interchim.com; Hotline : +33 (0)4 70 03 73 06

Disclaimer : Materials from Uptima are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. Uptima is not liable for any damage resulting from handling or contact with this product.

Rev.R04E