
Citric Acid Anhydrous, USP/FCC

(Excipient/Food Use)
020410, 020420, 020440

Acidulant

Archer Daniels Midland Co. Technical Services

Phone: 800-637-5843

Description

Citric acid anhydrous is widely used in the food, beverage, and pharmaceutical industries to impart a clean, refreshing tartness. Its prime use is as an acidulant, but it is also used as sequestrant of metal ions to give protection from the development of off-flavors and off-odors in certain foodstuffs.

A major industrial use of citric acid is in the manufacture of ecologically compatible detergents. It is also used in chemical cleaning, concrete admixtures, plasticizers, and a range of other applications.

General Characteristics

Formula	$H_3C_6H_5O_7$
Molecular Weight	192.13
Solubility (g/100 ml at 25°C)	
In Water	162
In Alcohol	59.1
Taste	Tart

Standard Specifications

Appearance	Free-flowing, colorless, translucent crystals or as a white granular to fine crystalline powder.
Odor	None
Identification	Meets USP/FCC
Clarity of Solution	Meets USP
Color of Solution	Meets USP
Assay (anhydrous basis)	99.5 to 100.5%
Water	Maximum 0.5%
Residue on Ignition	Maximum 0.05%
Limit of Oxalic Acid Sulfate	Maximum 0.036%
Heavy Metals (as lead)	Maximum 5.0 ppm
Lead	Maximum 0.5 ppm
Readily Carbonizable Substances	Not darker than matching fluid K.
Tridodecylamine	Not Applicable. ADM does not use solvent extraction process.
Oxalate	Passes Test

Ingredients

Citric Acid

Storage & Shelf Life

Storage below 75°F and 55% relative humidity in tightly sealed container is recommended.

This product is very stable and has been given a 3 year "best by" date. It is recommended to retest after 3 years.

Granulations

	US Sieves (microns)
Granular	On No. 16 (1180 μ), maximum 2% Through No. 50 (300 μ), maximum 10%
Fine Granular	On No. 30 (600 μ), maximum 3% Through No. 100 (150 μ), maximum 5%
Powder	On No. 60 (250 μ), Maximum 2% Through No. 200 (75 μ), minimum 50%

Packaging & Packaging Code

Granular	50 lb. bags	020410-0H
	25 kg bags	020410-2P
	250 lb. drums	020410-5S
Fine Granular	1000 kg totes	020410-9R
	50 lb. bags	020420-0H
	25 kg bags	020420-2P
Powder	250 lb. drums	020420-5S
	1000 kg totes	020420-9R
	200 lb. drums	020440-2S

Regulatory Status

This Food Additive complies with all the compendial requirements of the U.S. Pharmacopeia, Food Chemical Codex, Code of Federal Regulations, European Pharmacopoeia, British Pharmacopoeia, Japanese Pharmacopoeia, and W.H.O./F.A.O. Food Additive Specification.

CAS Number: 77-92-9

CA-001-130514



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www.adm.com

800-637-5843

specialtyproducts@adm.com

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