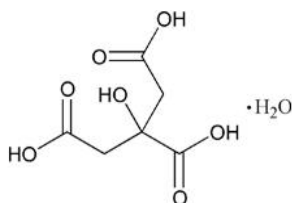




Citric Acid Monohydrate



Description

Citric Acid Monohydrate is used as an Acidulate, Food additive, Pharmaceutical application and also as a Preservative.

Specifications (USP)

TESTS	SPECIFICATIONS
Description	Colorless, translucent crystals, or white, granular to fine, crystalline powder. Efflorescent in dry air.
Solubility	Very soluble in water; Freely soluble in alcohol; very slightly soluble in ether.
Identification	By Infrared absorption. Dry the substance to be examined at 105 ^o for 2 hours.
Clarity of solution	The test solution shows the same clarity as that of water.
Color of solution	The test solution is not more intensely colored than standard solution A, B or C, or water.
Water	Between 7.5 and 9.0%
Residue on ignition	Not more than 0.1 % determined on 1.0 g
Readily carbonizable substances	The color of the acid is not darker than that of a similar volume of Matching Fluid K in a matching tube, the tubes being observed vertically against a white background.
Sulfate	Not more than 0.015%
Heavy metals	Not more than 0.001%
Limit of oxalic acid	Not more than 0.036%
Assay	99.5% to 100.5%. (On Anhydrous basis)



Specifications (BP)

TESTS	SPECIFICATIONS
Appearance	White or almost white, crystalline powder; colourless crystals or granules, efflorescent.
Solubility	Very soluble in water; Freely soluble in ethanol (96 per cent).
Identification	<i>First identification B, E.</i>
	<i>Second Identification A,C, D, E.</i>
	(A) The solution is strongly acidic.
	(B) By IR. Dry the substance to be examined and the reference substance at 100 – 105 ⁰ C for 2 h.
	(C) A red colour develops.
	(D) A white precipitate is formed.
(E) Water.	
Appearance of solution	The Solution is clear and not more intensely coloured than reference solution Y ₇ , BY ₇ or GY ₇ . (Method II)
Readily carbonisable Substances	The solution is not more intensely coloured than a mixture of 1 ml of red primary solution and 9 ml of yellow primary solution.
Oxalic acid	Not more than 360 ppm.
Sulphates	Not more than 150 ppm
Heavy metals	Not more than 10 ppm
Water	7.5% to 9.0%, determined on 0.500 g.
Sulphated ash	Not more than 0.1%, determined on 1.0 g
Assay	99.5 % to 100.5 % , (on Anhydrous basis)



Specifications (IP)

TESTS	SPECIFICATIONS
Description	Colourless crystals or a white, crystalline powder; slightly efflorescent in warm, dry air.
Solubility	Very soluble in water; Freely soluble in ethanol (95%); sparingly soluble in ether.
Identification	Determine by infrared absorption spectrophotometry.
(A)	Compare the spectrum with that obtained with citric acid monohydrate RS or with the reference spectrum of citric acid monohydrate. Dry the substance under examination and the reference substance at 105 ^o for 2 hour.
(B)	Gives reaction A of citrates, (A) A white precipitate soluble in 6M acetic acid.
(C)	10 percent w/v solution is strongly acidic.
Appearance of solution	The solution is clear and not more intensely coloured than reference solution YS7, BYS7 or GYS7.
Arsenic	Not more than 1 ppm
Barium	Any opalescence produced is not more intense than that of a mixture of 5 ml of solution A and 5 ml of distilled water.
Calcium	Not more than 200 ppm
Heavy metals	Not more than 10 ppm
Iron	Not more than 50 ppm
Chloride	Not more than 50 ppm
Sulphate	Not more than 150 ppm
Oxalic acid	Any pink colour produced is not more intense than that produced by carrying out the test using 0.2ml of oxalic acid dissolved in 4 ml of water.
Readily carbonisable Substances	Any colour produced is not more intense than that of the mixture of 1.0 ml of CCS and 9.0 ml of FCS.
Sulphated ash	Not more than 0.1%
Water	7.5 to 9.0%, determined on 0.5 g.
Assay	99.0% to 101.0% (On Anhydrous Basis)



Application and Effects

It is mainly used for the purpose of making the juices and also in confectioneries so that the products last longer as 90 days