

PRODUCT IDENTIFICATION



Product Name: Citric Acid Monohydrate - ACS Reagent Grade

CAS Number: 5949-29-1

Molecular Formula: $C_6H_{10}O_8$

Molecular Weight: 210.14 g/mol

Grade: Reagent Grade

Purity / Concentration: Not Available

Synonyms: Not Available

PRODUCT OVERVIEW

Citric Acid Monohydrate ACS Reagent Grade is a high-purity crystalline powder designed for rigorous laboratory and analytical applications. Featuring a precise 8.6% water content and minimal impurities, such as non-detected lead and calcium levels, this chemical ensures consistent and reliable experimental results.

Grade Significance: ACS Reagent Grade signifies that the product meets or exceeds the strict purity standards established by the American Chemical Society, ensuring it is suitable for critical analytical and research work.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Density	%	91.9	91	91.9	GC or density
Color (APHA)	APHA	100.0	99	100.0	APHA
Residue On Ignition	%	0.01	0	0.05	Ignition
Water Karl Fischer	%	8.6	0	9	Karl Fischer
Arsenic As	ppm	0.01	0	1	ICP-MS
Calcium	%	ND	0	0.01	Per specification
Lead Pb	ppm	ND	0	1	ICP-MS
Particle Size	μm	10	0	20	Sieve Analysis
Turbidity	NTU	0.5	0	3	EPA 180.1

Values based on 1 batch tested. ND = Not Detected.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White crystalline powder	Form	Crystal
Boiling Point	175°C (347°F)	Melting / Freezing Point	135°C (275°F)
Flash Point	385°C (725°F)	Solubility	Highly soluble in water, moderate in alcohol
Molecular Formula	$C_6H_{10}O_8$	Molecular Weight	210.14 g/mol

APPLICATIONS

1. **Analytical Chemistry** — Used as a primary reagent for titration, buffering, and standardizing chemical solutions in laboratory settings.
2. **Pharmaceutical Manufacturing** — Serves as a critical excipient and pH adjustment agent for developing stable medicinal formulations.
3. **Metal Finishing** — Utilized in precision cleaning and passivation processes to remove oxide layers from metal surfaces.
4. **Food and Beverage R&D** — Acts as a high-purity acidulant and preservative for testing shelf-life stability and flavor profiles.
5. **Water Treatment** — Employed in laboratory-scale water testing to sequester metal ions and maintain specific pH levels for accurate analysis.

STORAGE & HANDLING

To maintain its chemical integrity, Citric Acid Monohydrate must be stored in a cool, dry, and well-ventilated area to prevent moisture absorption and clumping. Proper containment is essential to minimize the risk of skin, eye, and respiratory irritation associated with handling this reagent.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 55 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Warning**



Hazard Statements:

- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H335: May cause respiratory irritation

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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