

Diammonium Citrate

Diammonium Hydrogen Citrate — High-Purity Reagent Grade | Catalogue No. ASC-8020

1. Product Overview

Diammonium Citrate (Diammonium Hydrogen Citrate) is the diammonium salt of citric acid, supplied as a high-purity white powder with a characteristic weak ammoniacal odour. It is widely used across analytical chemistry, food formulation, and agricultural testing applications. In analytical chemistry, it is a standard component of matrix solutions for MALDI-TOF mass spectrometry and is used in the determination of citrate-soluble phosphate in fertilizers. In food applications, it functions as a flavour enhancer, pH control agent, and sequestrant.

2. Chemical & Physical Information

Product Name	Diammonium Citrate (Diammonium Hydrogen Citrate)
Catalogue Number	ASC-8020
CAS Number	3012-65-5
Chemical Formula	$C_6H_{14}N_2O_7$
Molecular Weight	226.18 g/mol
EC Number	221-146-3
Appearance	White powder, with ammoniacal odour
Solubility	Soluble in water
Storage	Preserve in well-closed containers

3. Synonyms

Ammonium citrate dibasic; di-Ammonium hydrogen citrate; Citric acid ammonium salt; Citric acid, diammonium salt; Diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate.

4. Typical Applications

Category	Typical Use
Analytical chemistry	Component of matrix solutions for MALDI-TOF mass spectrometry; buffer/reagent applications
Agricultural testing	Determination of citrate-soluble phosphate content in fertilizers
Food formulation	Flavour enhancer, pH control agent, and sequestrant

Category	Typical Use
Pharmaceutical/laboratory	General laboratory reagent for citrate buffer preparation

5. Typical Specifications

Parameter	Specification
Description	White powder, with ammoniacal odour
Solubility	Soluble in water
Identification	Complies; ammoniacal odour
Chloride	Not more than 0.002%
Sulphate	Not more than 0.02%
Heavy metals	Not more than 0.001%
pH	4.5 to 5.5
Residue on ignition	Not more than 0.1%
Assay	98.5% to 101.0%

Exact analytical values for a given shipment are provided in the batch-specific Certificate of Analysis.

6. Storage & Stability

- Preserve in well-closed containers.
- Store in a cool, dry place, protected from moisture.
- Stable under recommended storage conditions.

7. Intended Use

Supplied as a high-purity reagent grade raw material suitable for laboratory, analytical, and formulation use where permitted by local regulation. Refer to the Safety Data Sheet before use.

8. Quality & Supply Assurance

- Supplied with Certificate of Analysis (COA) for every batch
- Consistent batch-to-batch quality
- Technical support available from AuSaMicS Life Science

9. Literature & References

1. United States Pharmacopeia – National Formulary (USP-NF) monograph: Diammonium Hydrogen Citrate.
2. Association of Official Analytical Chemists (AOAC) method for citrate-soluble phosphate determination in fertilizers.

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