

Certificate of Analysis

Product Name:

L-Cysteine hydrochloride monohydrate, *PurReagent Plus*, meets analytical specification of EP, JP & USP, 98.5 - 101.0 %

Product No.: PSR19518
Lot No.: Sample COA
Brand: PureSynth
CAS No.: 7048-04-6
Molecular Formula: $C_3H_7NO_2S \cdot HCl \cdot H_2O$
Molecular Weight: 175.63 g/mol
Date of Mfg.: NA
Date of Exp.: NA

Test	Specification	Result
Appearance	White to almost white crystalline powder or colorless crystals	White Powder
Assay (By alkalimetric) (on dried basis)	98.5 - 101.0 %	99.75 %
pH (10 g/l, CO ₂ -free water)	1.3 - 2.3	1.5
Specific rotation (at 20/D, 80 g/l, HCl 250 mol/l, calc. on dried substance)	+5.5 to +7.0 °	+6.7 °
Specific rotation (at 25/D, 80 g/l, HCl 6 mol/l, calc. on dried substance)	+5.7 to +6.8 °	+6.4 °
Specific rotation (at 20/D, 80 g/l, HCl 6 mol/l, calc. on dried substance)	+6.0 to +7.5 °	+6.8 °
Sulfate (SO ₄)	NMT 200 ppm	< 200 ppm
Heavy metals (as Pb)	NMT 10 ppm	< 10 ppm
Fe (Iron)	NMT 10 ppm	< 10 ppm
Related substances (TLC)	Complies	Complies
Related Compounds, total (TLC)	NMT 0.5 %	< 0.5 %
Ninhydrin-positive substances (LC) (impurity A (570 nm))	NMT 0.5 %	< 0.5 %
Ninhydrin-positive substances (LC) (any ninhydrin-positive impurity)	NMT 0.2 %	< 0.2 %
Ninhydrin-positive substances (LC) (ammonium (570 nm))	NMT 0.02 %	< 0.02 %
Ninhydrin-positive substances (LC) (total impurities)	NMT 1.0 %	< 1.0 %
Sulfated ash (600 °C)	NMT 0.1 %	< 0.1 %
Loss on drying (Vacuum < 2.0 kPa, P ₂ O ₅ , 20 h)	8.5 - 12.0 %	10.5 %
Identification by IR	Conforms to structure	Conforms to structure

The Certificate of Analysis (COA) is valid only for the lot specified and within the product's shelf life. Retesting is recommended after the expiry date or if storage conditions are compromised. We guarantee a proper quality within our General Conditions of Sales. The conditions are subject to change without prior notice.
For queries on this COA, please contact our technical team at technical@pure-synth.com

Remarks:

This is to certify that the mentioned batch has been analysed at the time of quality release and has been found to be in compliance with prescribed specifications

The current Specification sheet may be available at www.pure-synth.com

Inspect on receipt

Storage Condition:

Store at a room temperature of and keep the container tightly closed.

PureSynth Research Chemicals GmbH

This is electronically-generated copy & is valid without a signature

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