## Chem-Impex International, Inc.

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935 Dillon Drive 825 Dillon Drive

Wood Dale, IL 60191 Wood Dale, IL 60191

## Certificate of Analysis

Catalogue Number 31108

Product L-Cysteine hydrochloride monohydrate from

non-animal source

**Lot Number** 001192-161120

L-Cys-OH•HCl•H<sub>2</sub>O

**CAS Number** 7048-04-6

Molecular Formula C<sub>3</sub>H<sub>7</sub>NO<sub>2</sub>S•HCl•H<sub>2</sub>O

**Molecular Weight** 175.63

**Appearance** White crystals or crystalline powder

**Heavy Metals** < 10 ppm (as Pb)

Anion Chloride (Cl<sup>-</sup>): 20.16%

Sulfate ( $SO_4^{2-}$ ): < 0.020%

Cation Ammonium  $(NH_4^+)$ : < 0.020%

Iron (Fe): < 10 ppm Arsenic (As<sub>2</sub>O<sub>3</sub>): < 1 ppm

**pH** 1.7

**Optical Rotation**  $[a]_D^{20} = +6.0^{\circ}$ 

Infrared Spectrum Conforms to structure

**Transmission** 99.4% **Loss on Drying** 10.4%

Other Amino Acids Not detectable

**Residue On Ignition** 0.05%

**Assay by titration** 99.4% (anhydrous basis)

Storage Store at RT

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Catalog Number: 31108 Lot Number: 001192-161120

Remarks

See material safety data sheet for additional information

For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Bala Kumar

**Quality Control Manager**