Chem-Impex International, Inc.

Tel: (630) 766-2112 Fax: (630) 766-2218

E-mail: sales@chemimpex.com Web site: www.chemimpex.com

Shipping and Correspondence: Manufacturing site:

935 Dillon Drive 825 Dillon Drive Wood Dale, IL 60191 Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number 00236

Product L-Ornithine hydrochloride

Lot Number 001192-151027

L-Orn-OH•HCl

(S)-2,5-Diaminopentanoic acid hydrochloride

CAS Number 3184-13-2

Molecular Formula C₅H₁₂N₂O₂•HCl

Molecular Weight 168.6

Appearance White to off-white crystalline powder

Heavy Metals < 10 ppm

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

Cation Ammonium (NH₄+): < 0.020%

Iron (Fe): < 10 ppm Arsenic (As₂O₃): < 1 ppm

pH 5.1

Optical Rotation $[a]^{20}D = +23.5^{\circ}$

Loss on Drying 0.15%

Other Amino Acids Not detected

Residue On Ignition0.03%Assay (anhydrous basis)99.20%StorageStore at RT

Additional Information State of solution (Transmittance): 99.3%

Certificate of Analysis

Catalog Number: 00236 Lot Number: 001192-151027

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