

# Chem-Impex International, Inc.

---

Tel: (630) 766-2112

E-mail: sales@chemimpex.com

Shipping and Correspondence:

935 Dillon Drive

Wood Dale, IL 60191

Fax: (630) 766-2218

Web site: www.chemimpex.com

Manufacturing site:

825 Dillon Drive

Wood Dale, IL 60191

---

## Certificate of Analysis

<b>Catalogue Number</b>	00157
<b>Lot Number</b>	000102
<b>Product</b>	<b>L-Glutamine</b> L-Gln-OH
<b>CAS Number</b>	56-85-9
<b>Molecular Formula</b>	C <sub>5</sub> H <sub>10</sub> N <sub>2</sub> O <sub>3</sub>
<b>Molecular Weight</b>	146.15

---

<b>Appearance</b>	White crystalline powder
<b>Heavy Metals</b>	≤ 10 ppm
<b>Arsenic (As<sub>2</sub>O<sub>2</sub>)</b>	≤ 1 ppm
<b>Anion</b>	Chloride: ≤ 0.05% Sulfate: ≤ 0.05%
<b>Cation</b>	Iron: ≤ 10 ppm
<b>pH</b>	4.75-6.0
<b>Optical Rotation</b>	[α] <sub>D</sub> <sup>20</sup> = + 6 ± 2 °
<b>Loss on Drying</b>	≤ 0.1%
<b>Other Amino Acids</b>	≤ 0.5%
<b>Residue On Ignition</b>	≤ 0.1%
<b>Assay (anhydrous basis)</b>	≥ 99%
<b>Storage</b>	Store at RT
<b>Additional Information</b>	Identity: To Pass Test State of solution: ≥ 98%
<b>Remarks</b>	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