

# Chem-Impex International, Inc.

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## Certificate of Analysis

|                          |   |
|--------------------------|---|
| <b>Catalogue Number</b>  | 04429   |
| <b>Product</b>           | <b>L-Glutamic acid <math>\gamma</math>-benzyl ester <math>\alpha</math>-amide hydrochloride</b> |
| <b>Lot Number</b>        | 000129-07022  |
|                          | L-Glu(OBzl)-NH <sub>2</sub> •HCl  |
|                          | L-Isoglutamine benzyl ester hydrochloride   |
| <b>CAS Number</b>        | 63091-89-4  |
| <b>Molecular Formula</b> | C <sub>12</sub> H <sub>16</sub> N <sub>2</sub> O <sub>3</sub> •HCl                              |
| <b>Molecular Weight</b>  | 272.5   |

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|---------------------------|--|
| <b>Appearance</b>         | White crystalline powder   |
| <b>Melting Point</b>      | 183-185 °C   |
| <b>Optical Rotation</b>   | [ $\alpha$ ] <sub>D</sub> <sup>20</sup> = +16° (C=1 in MeOH)                         |
| <b>Assay by titration</b> | 99.6%  |
| <b>Purity by HPLC</b>     | 99.8%  |
| <b>Purity by TLC</b>      | Traces of impurities   |
| <b>Storage</b>            | Store at 0-8°C   |
| <b>Remarks</b>            | See material safety data sheet for additional information<br>For laboratory use only |

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



**Bala Kumar**  
Quality Control Manager