

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

| | |
|--------------------------|---|
| Catalogue Number | 29933 |
| Lot Number | 000424-160423 |
| Product | D-Glutamic acid <i>ν</i>-<i>tert</i>-butyl ester α-amide |
| Molecular Formula | C ₉ H ₁₈ N ₂ O ₃ ·HCl |
| Molecular Weight | 238.72 |

| | |
|------------------------------------|--|
| Appearance | White powder |
| Solubility | Clear solution (1mmol in 2mL H ₂ O) |
| Melting Point | 200.1 - 205.5 °C |
| Water Content (Karl Fisher) | 0.98% |
| Optical Rotation | [α] _D ²⁰ = -17.5 ° (C=1 in H ₂ O) |
| Infrared Spectrum | Conforms to structure |
| Analysis by Mass Spectra | Conforms to standard |
| Loss on Drying | 0.78% (70°C , 2h) |
| ¹H NMR | Conforms to structure |
| L-Enantiomer | 0.0677% |
| Purity by HPLC | 99.54% |
| Storage | Store at 0 - 8 °C |
| 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