

# Chem-Impex International, Inc.

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825 Dillon Drive

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## Certificate of Analysis

<b>Catalogue Number</b>	11962
<b>Product</b>	<b>Fmoc-L-glutamic acid <math>\gamma</math>-methyl ester</b>
<b>Lot Number</b>	000424-191112-366141 Fmoc-L-Glu(OMe)-OH
<b>CAS Number</b>	145038-50-2
<b>Molecular Formula</b>	C <sub>21</sub> H <sub>21</sub> NO <sub>6</sub>
<b>Molecular Weight</b>	383.36

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<b>Appearance</b>	White powder
<b>Solubility</b>	Clear solution (0.3 g in 2 mL MeOH)
<b>Melting Point</b>	117.2 - 117.9 °C
<b>Elemental Analysis (Found)</b>	< 5% (C, H, N)
<b>Water Content (Karl Fisher)</b>	0.36%
<b>Optical Rotation</b>	[ $\alpha$ ] <sub>D</sub> <sup>20</sup> = -10.6 ° (C=2 in MeOH)
<b>Infrared Spectrum</b>	Conforms to structure
<b>Analysis by Mass Spectra</b>	Conforms to standard
<b>Loss on Drying</b>	0.28% (50 °C, 2h)
<b><sup>1</sup>H NMR</b>	Conforms to structure
<b>Chiral HPLC</b>	100% (ee)
<b>D-Enantiomer</b>	Not detected
<b>Purity by HPLC</b>	99.31%
<b>Purity by TLC</b>	> 98%
<b>Storage</b>	Store at 0 - 8 °C

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**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**