Chem-Impex International, Inc.

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Certificate of Analysis

Catalogue Number	12392
Lot Number	000424-150626-36655
Product	Fmoc-D-glutamic acid γ-allyl ester
	Fmoc-D-Glu(OAll)-OH
	Fmoc-D-glutamic acid 5-allyl ester
CAS Number	204251-33-2
Molecular Formula	C ₂₃ H ₂₃ NO ₆
Molecular Weight	409.4
Appearance	White powder
Solubility	Clear soluiton (0.3 g in 2 mL DMF)
Melting Point	128.8-130.4 °C
Water Content (Karl	0.692%
Fisher)	
Optical Rotation	$[a]_{D}^{20} = +17.7^{\circ} (C=1 \text{ in DMF})$
Infrared Spectrum	Conforms to structure
Analysis by Mass Spectra	Conforms to structure
Loss on Drying	0.40% (50 °C, 2h)
¹ H NMR	Conforms to structure
L-Enantiomer	0.0179%
Purity by HPLC	99.40%
Chiral Purity	99.98% (ee)
Storage	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

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Bala Kumar Quality Control Manager