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	01346
Product	Boc-L-glutamine 4-nitrophenyl ester
Lot Number	000424-140419-30607
	Boc-L-Gln-ONp
CAS Number	15387-45-8
Molecular Formula	$C_{16}H_{21}N_3O_7$
Molecular Weight	367.4
Appearance	White powder
Solubility	Clear solution (0.3g in 2 ml DMF)
Melting Point	144.0-145.9 °C
Water Content (Karl Fisher)	0.144%
Optical Rotation	[a] _D ²⁰ = -33.9° (C=1 in DMF)
Infrared Spectrum	Conforms to structure
Analysis by Mass Spectra	Conforms to standard
Loss on Drying	0.49% (70 °C, 2 hr)
¹ H NMR	Conforms to structure
Purity by HPLC	98.46%
Storage	Store at 0-8 °C

Certificate of Analysis

Catalog Number: 01346

Lot Number: 000424-140419-30607

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

letumer.

Bala Kumar Quality Control Manager