

# Chem-Impex International, Inc.

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**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

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## Certificate of Analysis

<b>Catalogue Number</b>	02478
<b>Product</b>	<b>Fmoc-D-aspartic acid <math>\beta</math>-tert-butyl ester</b>
<b>Lot Number</b>	000424-210120-36502 Fmoc-D-Asp(OtBu)-OH
<b>CAS Number</b>	112883-39-3
<b>Molecular Formula</b>	C <sub>23</sub> H <sub>25</sub> NO <sub>6</sub>
<b>Molecular Weight</b>	411.5

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<b>Appearance</b>	White powder
<b>Solubility</b>	Clear solution (0.3 g in 2 mL DMF)
<b>Melting Point</b>	145.7 - 147.8 °C
<b>Elemental Analysis (Found)</b>	< 5% (C, H, N)
<b>Water Content (Karl Fisher)</b>	0.22%
<b>Kaiser Test</b>	< 0.05%
<b>Optical Rotation</b>	[ $\alpha$ ] <sub>D</sub> <sup>20</sup> = 24.5 ° (C=1 in DMF)
<b>Infrared Spectrum</b>	Conforms to structure
<b>Analysis by Mass Spectra</b>	Conforms to standard
<b>Loss on Drying</b>	0.32% (70 °C, 2h)
<b><sup>1</sup>H NMR</b>	Conforms to structure
<b>Chiral HPLC</b>	99.92% (ee)
<b>L-Enantiomer</b>	0.0785%
<b>Purity by HPLC</b>	99.92%
<b>Purity by TLC</b>	> 98%
<b>Storage</b>	Store at 0 - 8 °C

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Lot Number: 000424-210120-36502

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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**