

# *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>	02448
<b>Product</b>	<b>Fmoc-L-proline</b>
<b>Lot Number</b>	000424-150201-35801 Fmoc-L-Pro-OH (S)-Fmoc-pyrrolidine-2-carboxylic acid
<b>CAS Number</b>	71989-31-6
<b>Molecular Formula</b>	C <sub>20</sub> H <sub>19</sub> NO <sub>4</sub>
<b>Molecular Weight</b>	337.4

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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>	114.5-115.5 °C
<b>Water Content (Karl Fisher)</b>	0.069%
<b>Kaiser Test</b>	< 0.05%
<b>Optical Rotation</b>	[α] <sub>D</sub> <sup>20</sup> = -34.0° (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>	0.15%
<b><sup>1</sup>H NMR</b>	Conforms to structure
<b>D-Enantiomer</b>	0.0109%
<b>Purity by HPLC</b>	99.44%
<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**