



# INDOFINE Chemical Company, Inc.

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## Certificate of Analysis

Catalogue Number 04-1151  
Product **Fmoc-D-alanine**

Lot Number 000424-160815-35002  
Fmoc-D-Ala-OH

CAS Number 79990-15-1  
Molecular Formula  $C_{18}H_{17}NO_4$

Molecular Weight 311.3

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Appearance	White powder
Solubility	Clear solution (0.3 g in 2 mL DMF)
Melting Point	152.6-153.4 °C
Water Content (Karl Fisher)	2.879%
Optical Rotation	$[\alpha]_D^{20} = +18.2^\circ$ (C=1 in DMF)
Infrared Spectrum	Conforms to structure
Analysis by Mass Spectra	Conforms to standard
Loss on Drying	0.38% (60 °C, 2 hr)
$^1H$ NMR	Conforms to structure
L-Enantiomer	Not detectable
Purity by HPLC	99.52%
Purity by TLC	> 98%
Chiral Purity	100% (ee)
Storage	Store at 0-8 °C

Prepared by:  
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VP