



# INDOFINE Chemical Company, Inc.

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## Certificate of Analysis

Catalogue Number 04-1414  
Lot Number 000424-171008-36005  
Product **Fmoc-D-valine**

Fmoc-D-Val-OH

CAS Number 84624-17-9  
Molecular Formula  $C_{20}H_{21}NO_4$

Molecular Weight 339.4

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Appearance	White powder
Solubility	Clear solution (0.3 g in 2 mL DMF)
Melting Point	145.2 - 153.5 °C
Elemental Analysis (Found)	< 5% (C, H, N)
Water Content (Karl Fisher)	0.14%
Kaiser Test	< 0.05%
Optical Rotation	$[\alpha]_D^{20} = 18.9^\circ$ (C = 1 in DMF)
Infrared Spectrum	Conforms to structure
Analysis by Mass Spectra	Conforms to standard
Loss on Drying	0.04% (65 °C, 2h)
$^1H$ NMR	Conforms to structure
L-Enantiomer	0.0338%
Purity by HPLC	99.94%
Purity by TLC	> 98%
Chiral Purity	99.96% (ee)
Storage	Store at 0-8 °C

Prepared by:  
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