



INDOFINE Chemical Company, Inc.

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Certificate of Analysis

| | |
|-------------------|--|
| Catalogue Number | 04-1197 |
| Lot Number | 000424-130510-35101 |
| Product | N^α-Fmoc-L-asparagine Fmoc-L-Asn-OH Fmoc-(S)-2-aminosuccinic acid 4-amide |
| CAS Number | 71989-16-7 |
| Molecular Formula | C ₁₉ H ₁₈ N ₂ O ₅ |
| Molecular Weight | 354.4 |

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|-----------------------------|--|
| Appearance | White powder |
| Melting Point | 175.5-176.8 °C |
| Water Content (Karl Fisher) | 0.496% |
| Optical Rotation | [α] _D ²⁰ = -12.1° (C = 1 in DMF) |
| Infrared Spectrum | Conforms to structure |
| Analysis by Mass Spectra | Conforms to standard |
| Loss on Drying | 0.36% (80 °C for 2 hr) |
| ¹ H NMR | Conforms to structure |
| D-Enantiomer | Not detectable |
| Purity by HPLC | 98.88% |
| Purity by TLC | 98% |
| Storage | Store at 0-8 °C |