

Certificate of Analysis

Date of Testing: 2025-03-24 18:17:05

Date of Next Testing: 2028-03-23 18:17:05

Product Name: (S)-(+)-(3,5-Dioxa-4-phospha-cyclohepta[2,1-a;3,4-a"]dinaphthalen-4-yl)morpholine

CAS Number: 185449-81-4

Specifications & Purity: $\geq 96\%$, $\geq 99\%$ (ee)

Lot #: C2511276

SKU #: S281989

Version: 1

Analysis #: 161609

Storage Temperature: Argon charged

Parameter	Limit Values	Result
Enantiomeric Excess	99-100 (%)	99.20000 %
Purity(HPLC area)	96-100 (%)	96.55 %
NMR Spectrum 1H	Conforms to Structure	Conforms to Structure
31P NMR spectrum	Conforms to structure	Conforms to Structure



John Su
QA & QC Manager