

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-08-07 10:51:40

Date of Next Testing: 2027-08-06 10:51:40

Product Name: **N-Carbobenzoxy-L-pyroglutamic Acid**

CAS Number: 32159-21-0

Specifications & Purity: $\geq 98\%$

Lot #: H2303655

SKU #: **P111011**

Version: **1**

Analysis #: **188690**

Storage Temperature: Store at -20°C

Parameter	Limit Values	Result
Melting point	139-143 (°C)	139.70000 °C
Purity(HPLC)	98-100 (%)	99.76600 %
Specific Rotation $[\alpha]_{20/D}(c=1 \text{ in MeOH})$	-37--34 (°)	-36.98000 °
Appearance (P111011)	White to Off-White Powder or Crystals	White to Off-White Powder or Crystals
Solubility in MeOH , Clear Colorless(100 mg/ml)	pass	Pass
Proton NMR spectrum	Conforms to structure	Conforms to Structure



John Su
QA & QC Manager