

Certificate of Analysis

Date of Testing: 2024-02-22 10:03:41

Date of Next Testing: 2026-02-21 10:03:41

Product Name: **L-Pyroglutamic Acid Methyl Ester**

CAS Number: 4931-66-2

Specifications & Purity: >97.0%(GC)

Lot #: D2221041

SKU #: **M138905**

Analysis: **322243**

Storage Temperature: Argon charged

Parameter	Limit Values	Result
Density (20°C)	1.247-1.252	1.25
Specific Rotation $[\alpha]_{20/D}(c=1 \text{ in EtOH})$	9-12 (°)	10.30°
Refractive index $n_{20/D}$	1.484-1.488	1.49
Purity(GC)	97-100 (%)	97.25 %
Appearance (M138905)	Colorless to Yellow Liquid	Colorless to Yellow Liquid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager