

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-09-28 10:08:45
 Date of Next Testing: 2026-09-27 10:08:45
 Product Name: (2-Hydroxypropyl)- β -cyclodextrin
 CAS Number: 128446-35-5
 Specifications & Purity: $\geq 97\%$
 Lot #: I2222836
 SKU #: H108813
 Version: 2
 Analysis #: 099881
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D}(c=1 \text{ in H}_2\text{O})$	120-135 (°)	131.99500 °
Water by Karl Fischer	0-7.5 (%)	6.77340 %
beta-cyclodextrin (dry basis)	0-2 (%)	1.30000 %
NMR (degree of substitution)	2-6	4.50000
Purity(HPLC)	97-100 (%)	99.52600 %
Appearance (H108813)	White to Off-White Powder	White to Off-White Powder
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H ₂ O , Colorless to Very Faint Yellow, Clear, 2g plus 5ml	pass	Pass



John Su
QA & QC Manager