

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-07-18 10:31:34

Date of Next Testing: 2027-07-17 10:31:34

Product Name: (2-Hydroxypropyl)- β -cyclodextrin

CAS Number: 128446-35-5

Specifications & Purity: $\geq 97\%$

Lot #: G2311064

SKU #: H108813

Version: 2

Analysis #: 008408

Storage Temperature: Room temperature

Parameter	Limit Values	Result
Purity(HPLC)	97-100 (%)	99.34100 %
Specific Rotation $[\alpha]_{20/D(c=1 \text{ in H}_2\text{O})}$	120-135 (°)	134.59900 °
Water by Karl Fischer	0-7.5 (%)	3.83090 %
beta-cyclodextrin (dry basis)	0-2 (%)	1.20000 %
NMR (degree of substitution)	2-6	4.00000
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