

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-07-28 16:36:22  
Date of Next Testing: 2027-07-27 16:36:22  
Product Name: (2-Hydroxypropyl)- $\beta$ -cyclodextrin  
CAS Number: 128446-35-5  
Specifications & Purity:  $\geq 97\%$   
Lot #: G2319497  
SKU #: H108813  
Version: 2  
Analysis #: 008408

Parameter	Limit Values	Result
Purity(HPLC)	97-100 (%)	99.34100 %
Specific Rotation [a] <sub>D</sub> 20/D(c=1 in H <sub>2</sub> O)	120-135 (°)	134.60°
Water by Karl Fischer	0-7.5 (%)	3.83 %
beta-cyclodextrin (dry basis)	0-2 (%)	1.20 %
NMR (degree of substitution)	2-6	4.00
Appearance (H108813)	White to Off-White Powder	White to Off-White Powder
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless to Very Faint Yellow, Clear, 2g plus 5ml	pass	Pass



John Su  
QA & QC Manager