

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-11-11 15:41:24
 Date of Next Testing: 2026-11-10 15:41:24
 Product Name: (2-Hydroxypropyl)- γ -cyclodextrin(HP- γ -CD)
 CAS Number: 128446-34-4
 Specifications & Purity: average Mw ~1,580
 Lot #: K2204541
 SKU #: H102030
 Version: 0
 Analysis #: 117459
 Storage Temperature: Room temperature, Desiccated, Cool

Parameter	Limit Values	Result
Purity(Cyclodextrine Content Cal.)	98-100 (%)	99.87000 %
PH(2% in Water)	6-9	7.39000
Propylene glycol	0-0.1 (%)	0.03600 %
Unsubstituted Cyclodextrine	0-1.5 (%)	1.05200 %
Absorbance(220-350nm, 2 % in H ₂ O)	0-0.5	0.04300
Loss on drying	0-5 (%)	0.00000 %
Heavy metals	0-5 (ppm)	0.67000 ppm
Volatile Impurities (decan)	0-50 (ppm)	25.58000 ppm
Absorbance(350-660nm, 2 % in H ₂ O)	0-0.5	0.00100
Molar Substitution	0.5-0.7	0.63500
Ignition Residue	0-0.1 (%)	0.10000 %
Appearance (H102030)	White to Off-White Solid, Powder, or Crystals	White to Off-White Solid, Powder, or Crystals
Infrared spectrum	Conforms to Structure	Conforms to Structure



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A handwritten signature in black ink that reads "John Su".

John Su
QA & QC Manager