

## Certificate of Analysis

Date of Testing: 2022-12-13 15:39:42  
Date of Next Testing: 2026-12-12 15:39:42  
Product Name: **γ-Cyclodextrin**  
CAS Number: 17465-86-0  
Specifications & Purity: 98%  
Lot #: L2206516  
SKU #: **C103968**  
**Analysis: 148131**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Water by Karl Fischer	0-12 (%)	9.22 %
Purity(HPLC)	98-100 (%)	99.67600 %
Specific Rotation [α] <sub>20</sub> /D(c=1 in H <sub>2</sub> O in as anhydride)	176-180 (°)	179.98 °
Appearance (C103968)	white powder	White powder
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in 1 M NH <sub>4</sub> OH , Colorless,Clear to Very Slightly Hazy,50 mg/mL	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager