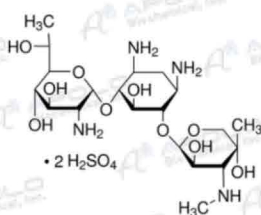


CERTIFICATE OF ANALYSIS

Product Name: G-418 Sulfate

Chemical Structure:



Lot Number: ASL1365

CAT Number: APL-7007

CAS Registry Number: 108321-42-2

Molecular Formula: $\text{C}_{20}\text{H}_{40}\text{N}_4\text{O}_{10} \cdot 2\text{H}_2\text{SO}_4$

Molecular Weight: 692.7

Storage: 4°C (Protect from light)

Analysis Data

Item	Specification	Results
Assay		
TLC	$\geq 98.0\%$ (≤ 3 spots)	98.0%
HPLC	$\geq 90.0\%$	91.3%
Appearance	White powder	Pass
Water	$\leq 8.0\%$	6.5%
Solubility (100 mg/mL in H_2O)	Colorless solution	Pass
Potency (Dry basis)	≥ 700 U/mg	763 U/mg
Optical rotation (at 25°C)	$+104^\circ \sim +121^\circ$	$+118^\circ$
Heavy metals (as Pb)	≤ 20 ppm	< 20 ppm
NH_4^+	$\leq 1.0\%$	$< 1.0\%$
pH	5.0~6.0	5.8
Absorbance		
A_{280} (1 mg/mL)	≤ 0.015	0.002
A_{570} (100 mg/mL)	≤ 0.010	0.007

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Jennifer LaBrecque

Jennifer LaBrecque 12/04/2021
Quality Assurance Manager

Conclusion: The above product meets the specifications of APOLLO