

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2024-09-02 10:34:19
Date of Next Testing: 2027-09-02 10:34:19
Product Name: **Poly(ethylene glycol)**
CAS Number: 25322-68-3
Specifications & Purity: BioUltra, 1,500(average M.W.1300-1600)
Lot #: H2423357
SKU #: **P615500**
Version: **2**
Analysis #: **356754**
Storage Temperature: Room temperature

Parameter	Limit Values	Result
Melting point	44-50 (°C)	49.50000 °C
Water by Karl Fischer	0-1 (%)	0.28 %
Sulfated Ash	0-0.2 (%)	0.11000 %
Aluminium(Al)	0-5 (ppm)	0.00000 ppm
Barium(Ba)	0-5 (ppm)	0.00 ppm
Bismuth(Bi)	0-5 (ppm)	0.00 ppm
Calcium(Ca)	0-10 (ppm)	0.00 ppm
Cadmium(Cd)	0-5 (ppm)	0.00 ppm
Cobalt(Co)	0-5 (ppm)	0.00 ppm
Chromium(Cr)	0-5 (ppm)	0.00 ppm
Copper(Cu)	0-5 (ppm)	0.00 ppm
Iron(Fe)	0-5 (ppm)	0.00 ppm
Potassium(K)	0-200 (ppm)	0.00 ppm
Lithium(Li)	0-5 (ppm)	0.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Manganese(Mn)	0-5 (ppm)	0.00 ppm
Molybdenum(Mo)	0-5 (ppm)	0.00 ppm
Nickel(Ni)	0-5 (ppm)	0.00 ppm
Lead(Pb)	0-5 (ppm)	0.00 ppm
Strontium(Sr)	0-5 (ppm)	0.00 ppm
Zinc(Zn)	0-5 (ppm)	0.00 ppm
Total sulfur as SO4 (ICP)	0-50 (ppm)	0.00 ppm
Chloride (Cl-)	0-50 (ppm)	0.00 ppm
pH(25°C 5% aqueous solution)	5.5-7.0	6.89800
UV-ABS.at 260 nm	0-0.09	0.01600

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Parameter	Limit Values	Result
UV-ABS.at 280 nm	0-0.03	0.00600
Mole Weight, Average	1300-1600	1595.00000
viscosity(100°C)	25-32 (mm ² /s)	29.00000 mm ² /s
Hydroxyl value	70-80 (mgKOH/g)	70.10 mgKOH/g
traces peroxide (as H ₂ O ₂)	0-10 (ppm)	10.00000 ppm
Sodium(Na)	0-200 (ppm)	194.00 ppm
Appearance(P615500)	Colorless or White powder or crystals or flakes or waxy solid	Colorless or White powder or crystals or flakes or waxy solid
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility(1.500g in 30 ml H ₂ O),clear colorless	Pass	Pass
Residue (filter test)	no residue	no residue
Proton NMR spectrum	Conforms to Structure	Conforms to Structure

John Su
QA & QC Manager