

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

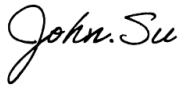
Date of Testing: 2023-09-18 16:35:32  
 Date of Next Testing: 2026-09-17 16:35:32  
 Product Name: **Poly(ethylene glycol)**  
 CAS Number: 25322-68-3  
 Specifications & Purity: BioUltra, 300  
 Lot #: I2315250  
 SKU #: **P615494**  
**Analysis:** **268909**  
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Refractive index n <sub>20</sub> /D	1.464-1.466	1.47
Water content	0-1.0 (%)	0.01 %
Rotation Viscosity(20°C , neat)	88-100 (mPa·S)	92.60000 mPa·S
Aluminum(Al)	0-5 (ppm)	0.00 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)	0.03 ppm
Manganese(Mn)	0-5 (ppm)	0.00 ppm
Molybdenum(Mo)	0-5 (ppm)	0.00 ppm
Sodium(Na)	0-200 (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
Chloride (Cl-)	0-50 (ppm)	7.00 ppm
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-50 (ppm)	0.00 ppm
UV - ABS. AT 260 NM(50 mg/mL in H <sub>2</sub> O)	0-0.06	0.00200
UV - ABS. AT 280 NM(50 mg/mL in H <sub>2</sub> O)	0-0.03	0.00000

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Parameter	Limit Values	Result
PH(50 mg/mL in H <sub>2</sub> O)	5.5-7	5.79400
Molecular Weight	285-315	310.00
Hydroxyl value	356-394 (mgKOH/g)	356.20 mgKOH/g
Trace peroxide(As H <sub>2</sub> O <sub>2</sub> )	0-10 (ppm)	8.00000 ppm
Arsenic(As)	0-0.1 (ppm)	0.00050 ppm
Appearance(P615494)	Colorless Liquid or Viscous Liquid	Colorless liquid or viscous liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure

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

John Su  
QA & QC Manager