

Certificate of Analysis

Date of Testing: 2024-11-16 15:24:37

Date of Next Testing: 2027-11-16 15:24:37

Product Name: **Poly(ethylene glycol)**

CAS Number: 25322-68-3

Specifications & Purity: UltraBio™, Ultra pure, BioReagent, 400

Lot #: K2414291

SKU #: **P615470**

Version: **2**

Analysis #: **431446**

Parameter	Limit Values	Result
Density(D20/4°C)	1.125-1.127	1.13
Refractive index n20/D	1.466-1.468	1.47
Water by Karl Fischer	0-1 (%)	0.10 %
Sulfated Ash	0-0.2 (%)	0.00000 %
Viscosity(neat/20 °C)	105-152 (mPa·S)	113.00000 mPa·S
Hydroxyl value	267-295 (mgKOH/g)	281.00 mgKOH/g
Trace peroxide(As H2O2)	0-200 (ppm)	9.30000 ppm
Aluminum(Al)	0-5 (ppm)	1.30 ppm
Bismuth(Bi)	0-5 (ppm)	2.10 ppm
Calcium(Ca)	0-10 (ppm)	1.36 ppm
Cadmium(Cd)	0-5 (ppm)	2.10 ppm
Cobalt(Co)	0-5 (ppm)	1.69 ppm
Chromium(Cr)	0-5 (ppm)	3.20 ppm
Copper(Cu)	0-5 (ppm)	0.15 ppm
Iron(Fe)	0-5 (ppm)	0.32 ppm
Potassium(K)	0-200 (ppm)	12.30 ppm
Lithium(Li)	0-5 (ppm)	2.11 ppm
Magnesium(Mg)	0-5 (ppm)	1.33 ppm
Manganese(Mn)	0-5 (ppm)	2.32 ppm
Molybdenum(Mo)	0-5 (ppm)	2.11 ppm
Sodium(Na)	0-300 (ppm)	12.22 ppm
Nickel(Ni)	0-5 (ppm)	1.45 ppm
Lead(Pb)	0-5 (ppm)	1.66 ppm
Strontium(Sr)	0-5 (ppm)	2.14 ppm
Zinc(Zn)	0-5 (ppm)	3.20 ppm
Total sulfur as SO4 (ICP)	0-50 (ppm)	20.30 ppm

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14078 Meridian Parkway, Riverside, CA. 92518

Parameter	Limit Values	Result
Chloride (Cl-)	0-50 (ppm)	21.30 ppm
PH(50 mg/mL in H2O)	5.5-7	5.50000
UV - ABS. AT 260 NM(50 mg/mL in H2O)	0-0.06	0.02000
UV - ABS. AT 280 NM(50 mg/mL in H2O)	0-0.03	0.01000
Barium(Ba)	0-5 (ppm)	1.22 ppm
Arsenic Traces	0-0.1 (ppm)	0.10000 ppm
Appearance(P615470)	Colorless Viscous Liquid or Semi-Solid or Paste or Solid	Colorless Viscous Liquid or Semi-Solid or Paste or Solid
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in H2O,colorless and clear(50 mg/mL)	Pass	Pass
Residue (filter test)	no residue	no residue



John Su
QA & QC Manager