

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2026-01-22 18:24:59

Date of Next Testing: 2029-01-21 18:24:59

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

CAS Number: 25322-68-3

Specifications & Purity: UltraBio™, Ultra pure, 2000

Lot #: A2616295

SKU #: **P615477**

Version: **2**

Analysis #: **604674**

Storage Temperature: Room temperature

| Parameter                          | Limit Values    | Result           |
|------------------------------------|-----------------|------------------|
| Aluminium(Al)                      | 0-5 (ppm)       | 2.50000 ppm      |
| Arsenic(As)                        | 0-0.1 (ppm)     | 0.05000 ppm      |
| Barium(Ba)                         | 0-5 (ppm)       | 2.10 ppm         |
| Bismuth(Bi)                        | 0-5 (ppm)       | 3.00 ppm         |
| Cadmium(Cd)                        | 0-5 (ppm)       | 1.95 ppm         |
| Calcium(Ca)                        | 0-10 (ppm)      | 1.50 ppm         |
| Chloride(Cl-)                      | 0-50 (ppm)      | 25.00 ppm        |
| Chromium(Cr)                       | 0-5 (ppm)       | 3.90 ppm         |
| Cobalt(Co)                         | 0-5 (ppm)       | 4.10 ppm         |
| Copper(Cu)                         | 0-5 (ppm)       | 2.20 ppm         |
| Hydroxyl value                     | 51-59 (mgKOH/g) | 52.00000 mgKOH/g |
| Iron(Fe)                           | 0-5 (ppm)       | 1.98 ppm         |
| Lead(Pb)                           | 0-5 (ppm)       | 2.11 ppm         |
| Lithium(Li)                        | 0-5 (ppm)       | 3.09 ppm         |
| Magnesium(Mg)                      | 0-5 (ppm)       | 0.80 ppm         |
| Manganese(Mn)                      | 0-5 (ppm)       | 3.20 ppm         |
| Melting point                      | 50-53 (°C)      | 53.00000 °C      |
| Molecular Number Mn (GPC-Analysis) | Report Result   | 1627.00000       |
| Molecular Weight Mp (GPC-Analysis) | Report Result   | 1769.00000       |
| Molecular Weight Mw (GPC-Analysis) | Report Result   | 1789.00000       |
| Molecular Weight Mz (GPC-Analysis) | Report Result   | 1955.00000       |
| Molybdenum(Mo)                     | 0-5 (ppm)       | 2.09 ppm         |
| Nickel(Ni)                         | 0-5 (ppm)       | 0.95 ppm         |
| PH(Solution)                       | 5.5-7.0         | 6.30000          |

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| Parameter                                                | Limit Values                                    | Result                                          |
|----------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Polydispersity Index(PDI)(GPC-Analysis)                  | Report Result                                   | 1.10000                                         |
| Potassium(K)                                             | 0-200 (ppm)                                     | 50.00 ppm                                       |
| Sodium(Na)                                               | 0-200 (ppm)                                     | 50.00 ppm                                       |
| Strontium(Sr)                                            | 0-5 (ppm)                                       | 2.30 ppm                                        |
| Total sulfur as SO <sub>4</sub> (ICP)                    | 0-50 (ppm)                                      | 6.50 ppm                                        |
| Traces Peroxide(As H <sub>2</sub> O <sub>2</sub> )       | 0-10 (ppm)                                      | 3.00000 ppm                                     |
| Sulfated Ash                                             | 0-0.2 (%)                                       | 0.00000 %                                       |
| UV-ABS.at 260 nm                                         | 0-0.1                                           | 0.10000                                         |
| UV-ABS.at 280 nm                                         | 0-0.04                                          | 0.00000                                         |
| Viscosity(50% in H <sub>2</sub> O , 20°C)                | 47-75 (mPa·S)                                   | 51.00000 mPa·S                                  |
| Water by Karl Fischer                                    | 0-1 (%)                                         | 0.30 %                                          |
| Zinc(Zn)                                                 | 0-5 (ppm)                                       | 2.10 ppm                                        |
| Appearance(P615477)                                      | Colorless or White Powder or Crystals or Flakes | Colorless or White Powder or Crystals or Flakes |
| Infrared spectrum                                        | Conforms to Structure                           | Conforms to Structure                           |
| metal trace analysis (icp)                               | corresponds to requirements                     | CORRESPONDS TO REQUIREMENTS                     |
| Residue (filter test)                                    | no residue                                      | no residue                                      |
| solubility,1.500 G IN 30 ML H <sub>2</sub> O clear, pass |                                                 | Pass                                            |
| colorless                                                |                                                 |                                                 |



John Su  
QA & QC Manager