

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-06-02 16:38:15

Date of Next Testing: 2024-05-22 16:38:15

Product Name: **Diethylenetriaminepentakis(methylphosphonic acid) (DTPMP)**

CAS Number: 15827-60-8

Specifications & Purity: 50% in water

Lot #: D2228131

SKU #: **D115349**

Version: **2**

Analysis #: **069742**

Storage Temperature: Room temperature

| Parameter                          | Limit Values                                                                                                                | Result                                                                                                                      |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| phosphorous acid                   | 0-3 (%)                                                                                                                     | 2.39000 %                                                                                                                   |
| Density (20°C)                     | 1.35-1.45 (g/ml)                                                                                                            | 1.42000 g/ml                                                                                                                |
| Iron(Fe)                           | 0-35 (ppm)                                                                                                                  | 11.32000 ppm                                                                                                                |
| pH                                 | 0-2                                                                                                                         | 1.05000                                                                                                                     |
| Refractive index n <sub>20/D</sub> | 1.468-1.478                                                                                                                 | 1.46810                                                                                                                     |
| Chloride (Cl <sup>-</sup> )        | 12-17 (%)                                                                                                                   | 15.36000 %                                                                                                                  |
| Purity (Titration by NaOH)         | 45-55(%)                                                                                                                    | 50.83000 %                                                                                                                  |
| Water by Karl Fischer              | 30-40 (%)                                                                                                                   | 39.56000 %                                                                                                                  |
| Appearance (D115349)               | Yellow to Very Dark Yellow and Brown-Yellow to Very Dark Brown-Yellow and Brown to Very Dark Brown Liquid or Viscous Liquid | Yellow to Very Dark Yellow and Brown-Yellow to Very Dark Brown-Yellow and Brown to Very Dark Brown Liquid or Viscous Liquid |
| Proton NMR spectrum                | Conforms to Structure                                                                                                       | Conforms to Structure                                                                                                       |



John Su  
QA & QC Manager