

ORIGINAL



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## CERTIFICATE OF ANALYSIS

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**Product Name : PGUSP****Lot No : D12031UP****Manufacturing Date : 2020-10-23****Expiry Date : 2022-10-22****www.kttchemical.com**

| Property                  | Specification | Test Result | Test Method             |
|---------------------------|---------------|-------------|-------------------------|
| Identification , -        | Pass          | Pass        | Current USP             |
| Appearance , -            | Clear         | Clear       | Visible                 |
| MPG , wt. %               | Min. 99.8     | 99.98       | Current USP/ASTM E 202  |
| EG , ppm                  | Max. 50       | 0           | Current USP             |
| DEG , ppm                 | Max. 50       | 0           | Current USP             |
| Residue on Ignition , ppm | Max. 20       | 5.0         | Current USP             |
| Chloride , ppm            | Max. 1        | LT 0.1      | Current USP             |
| Sulfate , ppm             | Max. 10       | 0.0         | Current USP             |
| Heavy Metals as Pb , ppm  | Max. 1        | LT1.0       | Current USP             |
| Sp.Gr , 20/20 c           | 1.037 - 1.039 | 1.038       | Current USP/ASTM D 4052 |
| Sp.Gr(USP) , 25/25 c      | 1.035 - 1.037 | 1.036       | Current USP/ASTM D 4052 |
| Acidity , ml              | Max. 0.05     | 0.02        | Current USP/ASTM D 1613 |
| Water , ppm               | Max. 700      | 80          | Current USP/ASTM E 203  |
| Fe , ppm                  | Max. 0.1      | 0.02        | ASTM E 394              |
| Color , APHA              | Max. 10       | 2.0         | ASTM D 1209             |
| IBP , DegC                | Min. 186      | 186.2       | ASTM D 1078             |
| DP , DegC                 | Max. 189      | 187.4       | ASTM D 1078             |

\*LT : Less Than

I certify the above statements are true and correct.

**Date Recorded : 2020-10-26****Quality Assurance Manager : J. H. C H A**

차주현