



ATLANTA WAREHOUSE
3939 Royal Drive, Suite 139
Kennesaw, GA 30144

UTAH WAREHOUSE
647 West Billinis Road, Unit 1
Salt Lake City, Utah 84119

DATE : 05 JUNE 2016

CERTIFICATE OF ANALYSIS

QUANTITY/COMMODITY : 80 MT (320 DRUMS)
GLYCERINE - USP/KOSHER 99.7% MIN

PACKING : IN 250KG NEW LINED STEEL DRUMS PALLETIZED

MANUFACTURING DATE : MAY 19, 2016

BEST BEFORE : MAY 19, 2018

VESSEL : MSC HINA V. HC621R / SEA LAND EAGLE V.624E

PI NO : 100216RK0573

CONTAINER / BATCH NO : TCKU 3737570 (G160519-3W); MEDU 2607568 (G160519-4W);
MSCU 6734055 (G160519-5W); MEDU 3677723 (G160519-2W).

BUYER'S PO NUMBER : PD042616HOU

A COMPOSITE SAMPLE WAS DRAWN FROM THE ABOVE-MENTIONED CONSIGNMENT FOR ANALYSIS. ON ANALYSIS THE FOLLOWING RESULTS WERE OBTAINED :

| <u>Parameter</u> | <u>Unit</u> | <u>Result</u> | <u>Specification</u> | <u>Test Method</u> |
|---|-------------|---------------|----------------------|----------------------|
| Appearance | | Transparent | Transparent | Visual |
| Identification A (IR) | | Conform | Conform | USP 39 : 2016 (197F) |
| Identification B | | | | |
| - Diethylene Glycol | % | <0.10 | 0.10 max | USP 39: 2016 |
| - Ethylene Glycol | % | <0.10 | 0.10 max | USP 39: 2016 |
| Identification C | | | | |
| (Confirmation of Glycerin by GC) | | Conform | Conform | USP 39: 2016 |
| Glycerine Content | % | 99.8 | 99.7 min | USP 39 : 2016 |
| Inorganic Impurities : | | | | |
| - Chloride Content | ppm | <10 | 10 max | USP 39: 2016 (221) |
| - Sulfate Content | ppm | <20 | 20 max | USP 39: 2016 (221) |
| - Residue on Ignition | % | 0.006 | 0.01 max | USP 39: 2016 (281) |
| Organic Impurities : | | | | |
| - Related Compounds | | | | |
| - Individual Impurities | % | NIL | 0.10 max | USP 39: 2016 |
| - Total Impurities | % | NIL | 1.0 max | USP 39: 2016 |
| - Chlorinated Compounds | ppm | <30 | 30 max | USP 39: 2016 |
| Fatty Acids & Esters (as mL of 0.5N NaOH/50 g) | | 0.25 | 1 max | USP 39: 2016 |
| Color (mL FeCl3) | - | <0.4 | 0.4 max | USP 39: 2016 |
| Specific Gravity @ 25 | | 1.2614 | 1.2612 min | USP 39: 2016 (841) |
| Moisture Content | % | 0.13 | 0.3 max | USP 39: 2016 (921) |
| Color | APHA | 5 | 10 max | AOCS Ea 9-65 |
| Heavy Metal as Pb | ppm | < 5 | 5 max | USP 39 : 2016 (231) |