



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

MICHIGAN WAREHOUSE
25991 Northline Commerce Dr.
Unit 504 Taylor, MI 48180

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

DATE : 05 NOVEMBER 2016

CERTIFICATE OF ANALYSIS

QUANTITY/COMMODITY : 40 MT (160 DRUMS)
GLYCERINE - USP/KOSHER 99.7% MIN

PACKING : IN 250KG NEW LINED STEEL DRUMS, PALLETIZED

MANUFACTURING DATE : OCTOBER 30, 2016

BEST BEFORE : OCTOBER 30, 2018

VESSEL : MSC GIANNA V.HC643R / MAERSK STRALSUND V.643N

PI NO : 100216RK1906

BUYER'S PO NUMBER:PD100616SAV

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

| Parameter | Unit | Result | Specification | Test Method |
|----------------------------------|------|-------------|---------------|----------------------|
| 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 | % | 0.007 | 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 | % | 0.12 | 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) |

