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647 West Billinis Road, Unit 1
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DATE : 12/02/2017

# 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 : FEBRUARY 04, 2017; FEBRUARY 05, 2017; FEBRUARY 06, 2017

BEST BEFORE : FEBRUARY 04, 2019; FEBRUARY 05, 2019; FEBRUARY 06, 2019

VESSEL : MSC LUCIA V.HC705R / MAERSK SANA V.705W

PI NO : 100216RK2760

CONTAINER / BATCH NO : TEMU2545670 (G170204-6W); MEDU6194760 (G170205-1W);
TCLU3035138 (G170206-4W); MEDU2491138 (G170206-5W).

BUYER'S PO NUMBER: PD111816HOU

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 | |
| 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) | | 0.32 | 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) |