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## ATLANTA WAREHOUSE

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## UTAH WAREHOUSE

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

DATE : 20/02/2016

### CERTIFICATE OF ANALYSIS

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

PACKING : IN 250KG NEW LINED STEEL DRUMS PALLETIZED

CONTAINER / BATCH NO : TRLU 8911187 (G160206-5W)

PRODUCTION DATE : FEBRUARY 06, 2016

EXPIRY DATE : FEBRUARY 06, 2018

PI NO : 16/GR0141  
BUYER'S PO NUMBER PD012216SAV  
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 38 : 2015 (197F) |
| Identification B                                  |             |               |                      |                      |
| - Diethylene Glycol                               | %           | <0.10         | 0.10 max             | USP 38: 2015         |
| - Ethylene Glycol                                 | %           | <0.10         | 0.10 max             | USP 38: 2015         |
| Identification C                                  |             |               |                      |                      |
| (Confirmation of Glycerin by GC)                  |             | Conform       | Conform              | USP 38: 2015         |
| Glycerine Content                                 | %           | 99.8          | 99.7 min             | USP 38 : 2015        |
| Inorganic Impurities :                            |             |               |                      |                      |
| - Chloride  | ppm         | <10           | 10 max               | USP 38: 2015 (221)   |
| - Sulfate   | ppm         | <20           | 20 max               | USP 38: 2015 (221)   |
| - Heavy Metal as Pb                               | ppm         | < 5           | 5 max                | USP 38: 2015 (231)   |
| - Residue on Ignition                             | %           | 0.006         | 0.01 max             | USP 38: 2015 (281)   |
| Organic Impurities :                              |             |               |                      |                      |
| - Related Compounds                               |             |               |                      |                      |
| - Individual Impurities                           | %           | NIL           | 0.10 max             | USP 38: 2015         |
| - Total Impurities                                | %           | NIL           | 1.0 max              | USP 38: 2015         |
| - Chlorinated Compounds                           | ppm         | <30           | 30 max               | USP 38: 2015         |
| Fatty Acids & Esters<br>(as mL of 0.5N NaOH/50 g) |             | 0.28          | 1 max                | USP 38: 2015         |
| Specific Gravity @ 25                             |             | 1.2614        | 1.2612 min           | USP 38: 2015 (841)   |
| Moisture Content                                  | %           | 0.14          | 0.3 max              | USP 38: 2015 (921)   |
| Color   | APHA        | 5             | 10 max               | AOCS Ea 9-65         |