



**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: 07 OCTOBER 2017

**CERTIFICATE OF ANALYSIS**

QUANTITY/COMMODITY : 20 MT (80 DRUMS)  
GLYCERINE - USP/KOSHER 99.7% MIN

PACKING : IN 250KG NEW LINED STEEL DRUMS, PALLETIZED

BUYER'S PO NUMBER : TK04162017LA

MANUFACTURING DATE : SEPTEMBER 28, 2017

BEST BEFORE : SEPTEMBER 28, 2018

VESSEL : MSC GIANNA V.HC739R/MAERSK EDMONTON V.741N

PI NO : 100217RK2691-C

CONTAINER / BATCH NO : MSCU 2710306 (G170928-4W)

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

<u>Parameter</u>	Unit	Result	Specification	Test Method
Appearance		Transparent	Transparent	Visual
Identification A (IR)		Conform	Conform	USP 40 : 2017 (197F)
Identification B				
- Diethylene Glycol	%	<0.10	0.10 max	USP 40: 2017
- Ethylene Glycol	%	<0.10	0.10 max	USP 40: 2017
Identification C				
(Confirmation of Glycerin by GC)		Conform	Conform	USP 40: 2017
Glycerine Content	%	99.8	99.7 min	USP 40 : 2017
Inorganic Impurities :				
- Chloride Content	ppm	<10	10 max	USP 40: 2017 (221)
- Sulfate Content	ppm	<20	20 max	USP 40: 2017 (221)
- Residue on Ignition	%	0.007	0.01 max	USP 40: 2017 (281)
Organic Impurities :				
- Related Compounds				
- Individual Impurities	%	NIL	0.10 max	USP 40: 2017
- Total Impurities	%	NIL	1.0 max	USP 40: 2017
- Chlorinated Compounds	ppm	<30	30 max	USP 40: 2017
Fatty Acids & Esters				
(as mL of 0.5N NaOH/50 g)		0.25	1 max	USP 40: 2017
Color (mL FeCl3)	-	<0.4	0.4 max	USP 40: 2017
Specific Gravity @ 25		1.2614	1.2612 min	USP 40: 2017 (841)
Moisture Content	%	0.11	0.3 max	USP 40: 2017 (921)
Color	APHA	5	10 max	AOCS Ea 9-65
Heavy Metal as Pb	ppm	< 5	5 max	USP 40 : 2017 (231)