



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 : 20 MAY 2017

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 : APRIL 29, 2017

BEST BEFORE : APRIL 29, 2018

VESSEL : MSC CARLA 3 V.HC719R / CLEMENTINE MAERSK V.720W

PI NO : 100217RK0892-C

CONTAINER / BATCH NO : MEDU 2215206 (G170429-4W) ; MSCU 3198555 (G170429-5W)

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 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)		0.28	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	%	0.12	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)