



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 JANUARY 2017

CERTIFICATE OF ANALYSIS

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

PACKING : IN 250KG NEW LINED STEEL DRUMS, PALLETIZED

BUYER'S PO NUMBER : PD2017HOU

MANUFACTURING DATE : JANUARY 01, 2017

BEST BEFORE : JANUARY 01, 2019

VESSEL : MSC GIANNA V.HC652R/CLEMENTINE MAERSK V.652W

PI NO : 100216RK2188

CONTAINER / BATCH NO : MEDU 2328060 (G170101-6W); MSCU 3530839 (G170101-5W)

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)		0.30	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)

Certified Correct,



Jusuf Goharmin

QC Head

07/01/17