



ATLANTA WAREHOUSE

3939 Royal Drive, Ste 224 and 226
Kennesaw, GA 30144

UTAH WAREHOUSE

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

CERTIFICATE OF ANALYSIS

Date: 4/28/2015

P.O. 1656

Product: Glycerin 99.7% USP/K

Lot #: G150307-1W

Production Date: 3/7/2015

Expiration Date: 3/7/2016

CLP #: 15-05059

<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 37: 2014 (197F)
Identification B				
- Diethylene Glycol	%	<0.10	0.10 max	USP 37: 2014
- Ethylene Glycol	%	<0.10	0.10 max	USP 37: 2014
Identification C				
(Confirmation of Glycerin by GC)		Conform	Conform	USP 37: 2014
Glycerine Content	%	99.8	99.7 min	USP 37: 2014
Inorganic Impurities:				
- Chloride	ppm	<10	10 max	USP 37: 2014 (221)
- Sulfate	ppm	<20	20 max	USP 37: 2014 (221)
- Heavy Metal as Pb	ppm	< 5	5 max	USP 37: 2014 (231)
- Residue on Ignition	%	0.006	0.01 max	USP 37: 2014 (281)
Organic Impurities:				
- Related Compounds				
- Individual Impurities	%	NIL	0.10 max	USP 37: 2014
- Total Impurities	%	NIL	1.0 max	USP 37: 2014
- Chlorinated Compounds	ppm	<30	30 max	USP 37: 2014
Fatty Acids & Esters				
(as mL of 0.5N NaOH/50 g)		0.24	1 max	USP 37: 2014
Specific Gravity @ 25		1.2614	1.2612 min	USP 37: 2014 (841)
Moisture Content	%	0.14	0.3 max	USP 37: 2014 (921)
Color	APHA	5	10 max	AOCS Ra 9-65