GEORGIA WAREHOUSE 3939 Royal Drive, Suite 139, Kennesaw, GA, 30144

MICHIGAN WAREHOUSE 25991 Northline Commerce Dr. **Unit 504 Taylor, MI 48180**

Lbs: 32640

Mfg Location: U.S.A.

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

		Page	Page 1 of 1
Title:	Propylene Glycol, USP/FCC K	Certificate o	of Analysis

November 15, 2017

Chemworld

Re: Certificate of Analysis

Propylene Glycol, USP/FCC Kosher

Excipient Use Only

PO No.: 11537

Lot No.: 17-318-09

Mfg Date:

11/14/17

Exp. Date:

11/14/19

Customer No.: N/A

BOL No.: 44150

Attn: Quality Control Manager

Test	Method	Specification	Result
Appearance	Organoleptic	Clear, colorless, viscous	PASS
		liquid	
Specific Gravity @ 25°C	USP <841>	1.035 - 1.037	1.036
Assay	USP	99.5% minimum	99.94
Identification A (IR)	USP <197F>	Meets requirements	PASS
Identification B, C (Limit of	USP	Meets requirements	PASS
DEG and EG)		-	
Chloride	USP <221>	Not more than 0.007% (70 ppm)	< 70 ppm
Heavy Metals	USP <231>	5 ppm maximum	PASS
Residue on Ignition	USP	Not more than 0.007% (70 ppm)	0.0029 %
Sulfate	USP <221>	Not more than 0.006% (60 ppm)	PASS
Residual Solvents	USP <467>	Meets requirements	PASS
Acidity	USP	0.20 ml 0.10N NaOH	0.01 ml
		maximum (NMT 2.0%)	
Water	ter USP <921> Method I Not more the		0.02
Lead	FCC	Not more than 1 mg/kg (1 ppm)	<1.0 mg
Distillation Range	FCC	185 – 189°C 187/188.2	

This product is excipient grade and not intended to be used as an active pharmaceutical ingredient or for specialist applications, such as parenteral, ocular, inhalation, open wound use, or applications that require sterile and/or pyrogen-free excipients. Propylene Glycol products sold by Chemworld.com are not for use in any application intended to produce vapor, fog, mist, smoke or aerosol, wherein there is a possibility of inhalation. Chemworld.com expressly disclaims any and all liabilities related to the use of Propylene Glycol in such applications. Refer to the MSDS materials provided with your product's shipment for additional information about proper use and potential hazards of these products.