Certificate of Analysis

Product Name:	VYCERIN™ GL88 - ACS GRADE	Product Code:	CGL88.K2.24
Product Grade:	99.7% Glycerin ACS, USP	Customer Reference:	
Order Number:		Customer P.O.:	
Lot Number:		Date of Manufacture:	14/Apr/2019
		Recommended Reval. Date:	12 months
Order Quantity (lbs):	40000	Vehicle:	

Based on quarterly testing, we certify that this product complies with current ACS and USP requirements; Chlorides (as Cl) <10ppm, Chlorinated Compounds (as Cl) <30 ppm/ Heavy Metals (as Pb) <2ppm/ Passes ID tests (IR Scan, Chromatographic retention time), Residual Solvents; Diethylene glycol, Ethylene glycol and other impurities.

Component Names	Results	Units	Specification	SOP Ref.
Acidity	0.2	mL	Result <=0.6	6.01 CHI gen
Sulfate, ACS limit	Less than 0.001%		Less than 0.001%	6.33
Silver Nitrate Test	Colorless, No Precipitate			6.30
Appearance	Clear colorless liquid			4.01
Residue after Ignition	0.003	%	Result <=0.005	6.05
APHA Color	8.0		Result <=10.0	6.10
Substances Darkened by H2SO4	Pass		Pass	6.18
Fatty Acid Esters as Butyric	0.4	mL HCl	Result <=2.3	6.13
Fatty Acids & Esters	0.3	mL NaOH	Result <=1.0	6.12
% Glycerin ACS GC, Anhydrous	99.9		Result >=99.5	6.06
Glycerin by SMP - USP	99.8	%	99.5 <= Result <=100.0	6.20
Acrolein and Glucose	Pass		Pass	6.02
Water	0.1	%	Result <=0.5	1.19
Neutral to Litmus	Pass		Pass	6.24
Odor General Description	Characteristic			6.26
Specific Gravity @25 °C	1.2614		Result >=1.2613	6.32
Glycerin by Sp. Gr.	99.8	%	Result >=99.7	6.32

Approver Name: Syed Ali   QC Supervisor
Date Approved: 15/Apr/2019

ISO 9001:2015 Certified since 1993