



Certificate of Analysis

CHEMWORLD
885 WOODSTOCK ROAD SUITE 430-111
ROSWELL, GA 30075

Order Number 4468
Ship Date 9/30/2014
Vehicle Number

Estimated Quantity
Delivery No.

Product Name **Propylene Glycol USP Kosher**

Test Details

Parameter	Results	Unit	Specifications	
			Min	Max
Lot 142614275				
Manufacturing Date	9/18/2014			
Purity, Assay	99.99	Wt %	99.5	
Appearance	PASS		Pass	
Acidity, as Acetic Acid	0.0006	Wt.%		0.005
Water	0.00	Wt.%		0.200
Color	2	Pt-Co		10
Sulfate	< 60	ppm		60
Heavy Metals as Pb	< 1.0	ppm		5
Identification, matches IR scan	PASS		PASS	
Residual Solvents	PASS		PASS	
Chlorides	< 0.10	ppm		1
Iron	< 0.02	ppm		0.5
Infrared Spectrum	PASS		PASS	
Specific Gravity @25	1.0357	Deg C	1.035	1.037
Residue on Ignition	0.0010	ppm		70
Distillation IBP @ 760 mmHg	187.0	°C	185	
Distillation DP @ 760 mmHg	188	°C		189
Refractive Index @20 C	1.4328	Deg C	1.4310	1.4340
Oxidizing Substances	PASS		PASS	
Reducing Substances	PASS		PASS	
Lead	(1)	ppm (1)		1
Limit on DEG	< 0.001	wt%		0.10
Limit on EG	< 0.001	wt%		0.10

Notes: (1) Agreed Specification limits – no results reported

Product meets or exceeds all requirements of the United States Pharmacopeia (USP), European Pharmacopeia (EP) and the Food Chemicals Codex (FCC)

Lot Number and Traceability

Traceability may be maintained through the lot number indicated in this document.

The shelf life of propylene glycol USP when stored and handled under appropriate conditions is at least one year from manufacturing date. Subsequent handling and/or repackaging by intermediates may affect shelf life. In general, the user should determine the suitability of any chemical, no matter what the shelf life or length of time of storage. Each user should establish the suitability of any product for his intended use.

Print Date: 9/30/14