



DimIN 2014 doo Beograd – Čukarica

Stevana Đurđevića Trošarinca 3/33

PIB: 108400694

Telefon: +381644558471

Certificate 5654832

Date: 17.01.2018

Certificate of Analysis

Material: PROPYLENE GLYCOL USP/EP

Batch: 1I071923D3

Mfgd: 15.01.2018

Expires: 15.01.2020

It is hereby certified that the material indicated above has been inspected and tested in accordance with the conditions and requirements of the contract or purchase order and, unless agreed otherwise conforms in all respects to the specification relevant thereto and it meets all requirements of the current United States Pharmacopoeia, current Food Chemical Codex, current European Pharmacopoeia and current Pharmacopoeia of Japan.

Feature	Units	Results Limits			Method
		1I071920D3	Minimum	Maximum	
Assay	%	99,93	99,80	----	Current USP
Acidity	mL	0,02	----	0,20	Current UMP
Chlorides	ppm	< 70	----	70	Current USP M
Heavy Metals	ppm	< 5,0	----	5,0	Current USP M
Residue on Ignition per 50g	mg	1,04	----	3,50	Current USP M
Specific Gravity - @ 25/25degC	-	1,036	1,035	1,037	Current USP M
Sulfate	ppm	< 60	----	60	Current USP M
Water Content	%	0,006	----	0,2	Current USP
IDENTIFICATION TEST A					
Identification matches IR scan		Passes			Current USP M
IDENTIFICATION TEST B					
Ethylene Glycol		Passes			Current USP
Diethylene Glycol		Passes			Current USP
IDENTIFICATION TEST C					
Identification Matches GC Scan		Passes			Current USP

Acidity	mL	0,01	----	0,05	Current EP M
Boiling Point	degC	185	184	189	Current EP M
Clarity		Passes			Current EP M
Color		Passes			Current EP M
Heavy Metals	ppm	< 5,0	----	5,0	Current EP M
Melting Point	degC	126	121	128	Current EP O
Oxidizing	mL	0,04	----	0,20	Current EP M



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Substances 0.05M sodium thiosulfate

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Feature	Units	Results		Limits		Method
		1I071920D3		Minimum	Maximum	
Reducing Substances		Passes				Current EP M
Refractive Index @ 20degC	-	1,433		1,431	1,433	Current EP M
Relative Density @ 20/20degC	-	1,038		1,035	1,040	Current EP M
Sulfated Ash	%	0,0016		----	0,0100	Current EP M
Water Content	%	0,006		----	0,2	Current EP
Assay	%	99,93		99,80	----	Current FCC
Acidity		Passes				Current FCC M
Appearance		Passes				Current FCC
clear & colorless						
Distillation, IBP	degC	186,6		185,0	----	Current FCC M
Distillation, DP	degC	187,4		----	189,0	Current FCC M
Lead (Pb)	ppm	< 1,0		----	1,0	Current FCC M
Identification		Passes				Current FCC M
matches IR scan						
Residue on Ignition	%	0,0019		----	0,0070	Current FCC M
Specific Gravity @ 25/25degC	-	1,036		1,035	1,037	Current FCC M
Water Content	%	0,006		----	0,2	Current FCC
Acidity		Passes				Current JP M
Arsenic	ppm	< 2,0		----	2,0	Current JP M
Chlorides	%	< 0,007		----	0,007	Current JP M
Distilling Range	% vol	95		95	----	Current JP M
184 - 189 degC						
Glycerine (Odor)		Passes				Current JP M
Heavy Metals	ppm	< 5,0		----	5,0	Current JP M
Melting Point	degC	177		174	178	Current JP O
Odor		Passes				Current JP M
Residue on Ignition	%	0,0021		----	0,0050	Current JP M
Specific Gravity @ 20/20degC	-	1,038		1,035	1,040	Current JP M
Sulfate	%	< 0,002		----	0,002	Current JP M
Water Content	%	0,006		----	0,500	Current JP
Acidity	%	0,0002		----	0,0020	DOWM 101370
As Acetic Acid						



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Appearance			Passes		Visual
Clear, free of suspended matter					
Chlorides	ppm	<	0,5	----	1,0 DOWM 101867
Color, Pt-Co	-		2	----	10 ASTM D5386
Dimer, Trimer & Higher Polymers	%		0,058	----	0,100 DOWM 100687
Ethylene Glycol	%	<	0,0080	----	0,0080 DOWM 100687
Diethylene Glycol	%	<	0,0080	----	0,0080 DOWM 100687

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Feature	Units	1I071920D3	Results Limits		Method
			Minimum	Maximum	
Iron	ppm	0,04	----	0,30	ASTM E202
Odor		Passes			Olfactory
practically odorless					
Spec. Grav. @ 20C	-	1,0382	1,0376	1,0389	ASTM D4052 M

SOURCE OF ANALYSIS

M Quarterly Sample

O Annual Sample

Note:

Values reported for Assay, Ethylene Glycol and Diethylene Glycol under USP and for Assay under FCC are obtained using the validated Dow

GC Method DOWM 100687.

Plant Quality Coordinator

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