

CERTIFICATE OF ANALYSIS

Material	GLYCEROL 99,5 % USP/FCC/EP
Chemical formula	C ₃ H ₈ O ₃
Batch	AZ005025
Packing	Bottles, cans
Mfg date	03.2023
Exp date	03.2024
Origin	Germany

Parameters	unit	min.	max.	Result
Assay	%	98,0	101,0	99,97
Identification (GC)		Pass		Pass
Appearance		Clear and colorless		Pass
Acidity and alkality	ml NaOH 0,1N	-	0,2	0,04
Refractive index	nD ₂₀	1,470	1,475	1,472
Aldehydes	ppm	-	10,0	10
Esters (ph. Eur)	ml HCL 0,1N	8,0	-	9,10
Impurities and related compounds (GC)		Pass		Pass
Impurities before glicerin peak	%	-	0,1	0,05
Impurities after glicerin peak	%	-	0,5	0,5
Diethyleneglycol (GC)	%	-	0,1	0,1
Fatty acids and esters		Pass		Pass
Halogenated compounds	ppm	-	35,0	35
Chlorinated compounds (as Cl)	ppm	-	30,0	30
Sugar		pass (Ph. Eur)		Pass
Chloride	ppm	-	10,0	10
Sulphate	ppm	-	20,0	≤ 20,0
Heavy metals	ppm	-	5,0	≤ 5,0
Lead	ppm	-	2,0	< 2,0
Arsenic	ppm	-	1,0	< 1,0
Cadmium	ppm	-	1,0	< 1,0
Mercury	ppm	-	1,0	< 1,0
Water	%	-	2,0	0,03
Sulphated ash	%	-	0,01	<0,01
Density as 20 °C	g/cm ³	1,260	1,264	1,262
Coloure ASTM D1209	APHA	-	10	9
Residue after ignition	ppm	-	70	< 70
Acrolein, glucose and NH ₃ combinations		Pass (Ph. Eur)		Pass
Aerobic plate account (APC)	cfu/g	-	100,0	< 100,0
Coliforms	cfu/g	-	10,0	< 10,0
Yeast and Mould	cfu/g	-	10,0	< 10,0

We certify that the results are consistent with a certificate of the manufacturer

The certificate was created electronically and is valid without signature.