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Product: Glycerine 99.7% PF Vegetable, Kosher (OU)
Batch No.: VG200217
Date of manufacture: October 2016
Expiry Date: December 2018

CERTIFICATE OF ANALYSIS

TEST DESCRIPTION	MINIMUM	MAXIMUM	RESULT	METHOD OF ANALYSIS
Appearance	Clear	Clear	Pass	European Pharmacopoeia
Smell	Absent	Absent	Absent	European Pharmacopoeia
Assay (%)	99.7		99.8	European Pharmacopoeia
Turbidity		3	0.2	European Pharmacopoeia
Esters (ml 0.1m HCl solution)	8.00		8.59	European Pharmacopoeia
Colour (APHA)		10	1	ISO 6271
Water (%)		0.3	0.032	European Pharmacopoeia
Refractive Index @ 20°C	1.473	1.474	1.474	European Pharmacopoeia
Density @ 20°C (g/cm ³)	1.260		1.2621	European Pharmacopoeia
Acidity (ml 0.1m NaOH solution)		0.20	0.06	European Pharmacopoeia
Aldehydes (ppm)		10	1	European Pharmacopoeia
Halogenated Compounds (ppm)		30	1	European Pharmacopoeia
Sugars	Negative		Negative	European Pharmacopoeia
Chlorides (mg/kg)		10	1	European Pharmacopoeia
Acroleine, Glucose, Ammonium compounds	Negative		Negative	E422
Assay	99.7		99.8	European Pharmacopoeia



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Arsenic	Max 2	ICP-MS
Mercury	Max 1	ICP-MS
Cadmium	Max 1	ICP-MS
Lead	Max 2	ICP-MS
Sulphated Ash (%)	Max 0.01	European Pharmacopoeia
Impurity A	Max 0.1	European Pharmacopoeia
Any other impurity retention time less Glyc	Max 0.1	European Pharmacopoeia
Total of impruity retention time greater Glyc	Max 0.5	European Pharmacopoeia
Butanetriols	Max 0.2	GC/MS
Acroleine	Confirms	E422 (heating)
Fatty Acids and Esters	Max 0.1	Calculated as Butyric Acid
3-MCPD	Max 0.1	GC/MS

The goods detailed above and the tests specified have been provided by the manufacturer of the product as supplied to Lubrisolve Engineering Solutions Ltd.

The following statements are those provided by the manufacturer of the product.

This product is manufactured from vegetable raw materials, 100% rapeseed origin. Kosher certified. Free from GMO.

This product is approved for food use according to EC directives 89/107/EC, 95/2/EC, 96/77/EC (E422).

This product is manufactured to meet or exceed all requirements of the United States Pharmacopeia, the European Pharmacopeia and the requirements of the EU Regulation 231/2012 for food additives (Glycerol E422).

Lubrisolve Engineering Solutions Ltd makes the limited warranty that at the date of delivery this product will be free from defects in materials and workmanship.

No warranty of merchantability, fitness for any use, or any other warranty is expressed or to be implied, regarding the accuracy of this data. The results to be obtained from the use thereof, or the hazards connected with the use of this product.

Lubrisolve Engineering Solutions Ltd. assumes no liability for any alleged ineffectiveness of the product or any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is solely attributable to negligence on the part of Lubrisolve Engineering Solutions Ltd.



The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties.

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