

Certificate of Analysis

Gracefruit |Ltd

Glycerine 99.7% (bulk) (GMP+ & ROO) (Rape Oil origin, Non GMO, Kosher)

Batch: 201738507F18A

Production Date: 22nd September 2017

Expiry Date: 21st September 2019

EINECS: 200-289-5

Analysis	Unit	Min	Max	Result	Method of Analysis
Appearance		Colourless		Colourless	European Pharmacopoeia
Appearance of Solution		Clear		pass	European Pharmacopoeia
Smell		Absent		absent	European Pharmacopoeia
Esters	ml 0.1M HCl-solution	8.0		8.98	European Pharmacopoeia
Colour (APHA)	Hazen		10	3	ISO 6271
Water	%(m/m)		0.3	0.03	European Pharmacopoeia
Refractive index at 20°C		1.471	1.474	1.473	European Pharmacopoeia
Density at 20°C	g/cm ³	1.260		1.261	European Pharmacopoeia
Acidity	ml 0.1M NaOH-solution		0.2	0.01	European Pharmacopoeia
Aldehydes	mg/kg		10	Meets spec	European Pharmacopoeia
Halogenated Compounds	mg/kg		30	Meets Spec	European Pharmacopoeia
Chlorides	mg/kg		10	Meets spec	European Pharmacopoeia
Sugars		Negative		Negative	European Pharmacopoeia
Acroleine, Glucose, Ammonium compounds		Negative		Negative	REG (EU) 231/2012 no E422

Assay	%(m/m)	99,7	99,8	European Pharmacopoeia
Compliance with the items listed below is assured through regular monitoring analyses performed at a external lab				
Arsenic	mg/kg		max 0,1	DIN EN 15763
Mercury	mg/kg		max 0,1	SOP M 2567
Cadmium	mg/kg		max 1	DIN EN 15763
Lead	mg/kg		max 0,1	DIN EN 15763
Sulphated Ash	%(m/m)		max 0,01	European Pharmacopoeia
Impurity A	%(m/m)		max 0,1	European Pharmacopoeia
Any other impurity retention less Glyc	%(m/m)		max 0,1	European Pharmacopoeia
Total of all impurities retention time greater Glyc	%(m/m)		max 0,5	European Pharmacopoeia
Butanetriols	%(m/m)		max 0,2	GC/MS
Acroleine			Confirms	REG (EU) 231/2012 NO E422
Fatty acids & esters	%		max 0.1	Calculated as butyric acid
3-MCPD	mg/kg		max 0.1	GC/MS

This product complies with the requirements of the latest version of the European Pharmacopoeia, USP and the requirements of the EU Regulation 231/2012 for food additives (Glycerol (E422)).