



IOI GROUP

PAN CENTURY OLEOCHEMICALS SDN. BHD.

(168193-W)



SIRM
MS ISO 9001
REGISTRATION NO. AR 0215

Certificate of Analysis

Page 1 of 2

Date : 20/10/2010
Product : GLYCERINE 99.5% MIN USP (K)
Lot No : BGPXWC0239
SO No : CO-SW-10-0032
Certificate No : GLY2143/2010

Sample Date : 09/10/2010
Manufacturing Date : 09/10/2010
Expire Date : 08/10/2012

ANALYSIS RESULTS

Test Parameters	Test Results	Specifications	Unit	Test Method
Glycerina				
Identification B	Passes	Passes	-	USP 31
Identification A	Passes	Passes	-	USP 31
Specific Gravity @25/25°C	1.2618	1.2606 Min	-	USP 31
Glycerol Content	99.8	99.5 Min	%	USP 31
Colour	5	5 Max	APHA	In-house Method based on ASTM D1209
Residue On Ignition	<0.01	0.01 Max	%	USP 31
Chloride	<10	10 Max	ppm	USP 31
Sulphate	<20	20 Max	ppm	USP 31
Arsenic	<0.1	1.5 Max	ppm	AAS
Heavy Metals as Pb	<5	5 Max	ppm	USP 31
Chlorinated Compounds	<30	30 Max	ppm	USP 31
Fatty Acids & Esters (0.5N NaOH)	0.20	1.0 Max	ml	USP 31
Water Content (Karl Fischer)	0.15	0.5 Max	%	USP 31
Diethylene Glycol & Related Compounds				
Diethylene Glycol	<0.1	0.1 Max	%	USP 31
Other Impurities	<1	1.0 Max	%	USP 31



VÉRIFIÉ → L (2P)

2011-01-16

Certificate of Analysis

Date : 20/10/2010
Product : GLYCERINE 99.6% MIN USP (K)
Lot No : BGPXWC0239
SO No : CO-SW-10-0032
Certificate No : GLY2143/2010

Sample Date : 09/10/2010
Manufacturing Date : 09/10/2010
Expire Date : 08/10/2012

ANALYSIS RESULTS

Test Parameters	Test Results	Specifications	Unit	Test Method
Residual solvents	Passes	Passes	-	USP 31

P/O NO: V1009264/ CDLO-1051



Issued by shipper / manufacturer
CERTIFIED BY:

M. Ubayadulla

Ubayadulla B Yusof
Senior Chemist