

SFC Umwelttechnik GmbH, Julius Welser Straße 15, 5020 Salzburg, Austria

To

WHOM IT MAY CONCERN

Salzburg, 2016-01-08

Betr./ Subj. / objet: **Certificate about Effluent Quality of C-MEM Water Treatment**

Application: C-MEM lake water treatment

Date of test: October 2015

Quantity of treated water: up to 2 m³/day

Water Source: Kandaw Gyi Lake / Myanmar



SFC Umwelttechnik GmbH
Julius-Welser-Straße 15
5020 Salzburg, Austria

T +43 662 43 49 02
F +43 662 43 49 02-8
office@sfcu.at
www.sfcu.at

Firmenbuchgericht: Salzburg
Firmenbuchnr.: FN 39751 h
UID-Nr.: ATU 39099809
DVR-Nr.: 1031996

Bank: Salzburger Sparkasse
IBAN: AT62 2040 4000 0007 7511
BIC: SBGSAT2S

Raw Water (Kandaw Gyi Lake):



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E (Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



W1015 098



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client Mingalar Myanmar
Nature of Water Pond Water (Raw)
Location Kandawgyi
Date and Time of collection 7.10.2015
Date and Time of arrival at Laboratory 7.10.2015
Date and Time of commencing examination 8.10.2015
Date and Time of completing 10.10.2015

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.4		6.5 - 8.5
Colour (True)	75	TCU	15 TCU
Turbidity	103	NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness	46	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness		mg/l as CaCO ₃	
Magnesium Hardness		mg/l as CaCO ₃	
Total Alkalinity		mg/l as CaCO ₃	
Phenolphthalein Alkalinity		mg/l as CaCO ₃	
Carbonate (CaCO ₃)		mg/l as CaCO ₃	
Bicarbonate (HCO ₃)		mg/l as CaCO ₃	
Iron	0.98	mg/l	0.3 mg/l
Chloride (as CL)	12	mg/l	250 mg/l
Sodium chloride (as NaCL)		mg/l	
Sulphate (as SO ₄)	Nil	mg/l	200 mg/l
Total Solids	180	mg/l	1500 mg/l
Suspended Solids		mg/l	
Dissolved Solids	64	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo

Name: B.Sc (Chemistry)
Chemist

(a division of WEG Co.,Ltd.) **ISO TECH Laboratory**

Approved by

Signature: Soe Thn

Name: a.B (Civil) 1980
Technical Officer

ISO TECH Laboratory

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-73225175, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
 B.Sc Engg: (Civil), Dip S.E (Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
 Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 2 of 2

W1015 098

WATER QUALITY TEST RESULTS FORM

Client Mingalar Myanmar
 Nature of Water Pond Water (Raw)
 Location Kandawgyi
 Date and Time of collection 7.10.2015
 Date and Time of arrival at Laboratory 7.10.2015
 Date and Time of commencing examination 8.10.2015
 Date and Time of completing 10.10.2015

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	°C	
Fluoride (F)	mg/l	1.5 mg/l
Lead (as Pb)	mg/l	0.01 mg/l
Arsenic (As)	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	1.4 mg/l	50 mg/l
Chlorine (Residual)	mg/l	
Ammonia (NH ₃)	mg/l	
Ammonium (NH ₄)	mg/l	
Dissolved Oxygen (DO)	mg/l	
Chemical Oxygen Demand (COD)	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	mg/l	
Cyanide (CN)	mg/l	0.07 mg/l
Zinc (Zn)	mg/l	3 mg/l
Copper (Cu)	mg/l	2 mg/l
Silica (Si)	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: *Hein*
 Name: **Zaw Hein Oo**
B.Sc (Chemistry)
Chemist
ISO TECH Laboratory

Approved by

Signature: *Saw Chin*
 Name: **Saw Chin**
B.E (Civil) 1980
Technical Officer,
ISO TECH Laboratory

(a division of WEG Co.,Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-73225175, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

Treated Water after Installation of C-MEM



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg: (Civil), Dip S.E (Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012
Effective Date - 01-12-2012

Issue No - 1.0/Page 1 of 2

W1015 097

WATER QUALITY TEST RESULTS FORM

Client Mingalar Myanmar
Nature of Water Pond Water (Treated)
Location Kandawgyi
Date and Time of collection 7.10.2015
Date and Time of arrival at Laboratory 7.10.2015
Date and Time of commencing examination 8.10.2015
Date and Time of completing 10.10.2015

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	6.9		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	1	NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness	44	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness		mg/l as CaCO ₃	
Magnesium Hardness		mg/l as CaCO ₃	
Total Alkalinity		mg/l as CaCO ₃	
Phenolphthalein Alkalinity		mg/l as CaCO ₃	
Carbonate (CaCO ₃)		mg/l as CaCO ₃	
Bicarbonate (HCO ₃)		mg/l as CaCO ₃	
Iron	0.03	mg/l	0.3 mg/l
Chloride (as CL)	8	mg/l	250 mg/l
Sodium chloride (as NaCL)		mg/l	
Sulphate (as SO ₄)	Nil	mg/l	200 mg/l
Total Solids	63	mg/l	1500 mg/l
Suspended Solids		mg/l	
Dissolved Solids	62	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: [Signature]

Name: Zaw Hein Oo

B.Sc (Chemistry)

Chemist

(a division of WEG Co.,Ltd.)

ISO TECH Laboratory

Approved by

Signature: [Signature]

Name: Soe Thit

a.E (Civil) 1980

Technical Officer

ISO TECH Laboratory

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-73225175, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
 B.Sc Engg: (Civil), Dip S.E (Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
 Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTI-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 2 of 2

W1015 097

WATER QUALITY TEST RESULTS FORM

Client Mingalar Myanmar
 Nature of Water Pond Water (Treated)
 Location Kandawgyi
 Date and Time of collection 7.10.2015
 Date and Time of arrival at Laboratory 7.10.2015
 Date and Time of commencing examination 8.10.2015
 Date and Time of completing 10.10.2015

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)		°C	
Fluoride (F)	0.3	mg/l	1.5 mg/l
Lead (as Pb)	Nil	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	Nil	mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia (NH ₃)		mg/l	
Ammonium (NH ₄)		mg/l	
Dissolved Oxygen (DO)		mg/l	
Chemical Oxygen Demand (COD)		mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)		mg/l	
Cyanide (CN)	Nil	mg/l	0.07 mg/l
Zinc (Zn)	Nil	mg/l	3 mg/l
Copper (Cu)	Nil	mg/l	2 mg/l
Silica (Si)		mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: *Zaw Hein Oo*
 Name: **Zaw Hein Oo**
B.Sc (Chemistry)
Chemist
ISO TECH Laboratory

Approved by

Signature: *Soe Fnn*
 Name: **Soe Fnn**
B.Sc (Civil) 1980
Technical Officer
ISO TECH Laboratory

(a division of WEG Co.,Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-73225175, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com