

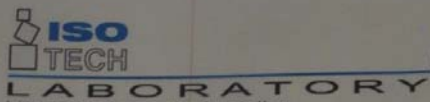
# Certificate about effluent quality of AQUALOOP-Membrane Mingalar river water treatment

Application:AL-Membrane Mingalar river water treatment


Date of test: October 2015

Quantity of treated water: up to 2 m<sup>3</sup>/day


## Raw water (River Water):



**ISO TECH LABORATORY**  
Laboratory Technical Consultant: U Saw Christopher Maung  
B.Sc Engg. (ChE), Dip S.E (Dist) Lecturer of YIT (Rat), Consultant (Y.C.D.C), LWSE 001  
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



**W1015 107**



**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	River Water (Raw)		
Location	သီပေါမြစ်		
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**

pH	6.6		6.5 - 8.5
Colour (True)	180	TCU	15 TCU
Turbidity	375	NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness	50	mg/l as CaCO <sub>3</sub>	500 mg/l as CaCO <sub>3</sub>
Calcium Hardness		mg/l as CaCO <sub>3</sub>	
Magnesium Hardness		mg/l as CaCO <sub>3</sub>	
Total Alkalinity		mg/l as CaCO <sub>3</sub>	
Phenolphthalein Alkalinity		mg/l as CaCO <sub>3</sub>	
Carbonate (CaCO <sub>3</sub> )		mg/l as CaCO <sub>3</sub>	
Bicarbonate (HCO <sub>3</sub> )		mg/l as CaCO <sub>3</sub>	
Iron	5.72	mg/l	0.3 mg/l
Chloride (as Cl)	4	mg/l	250 mg/l
Sodium chloride (as NaCl)		mg/l	
Sulphate (as SO <sub>4</sub> )	Nil	mg/l	200 mg/l
Total Solids	345	mg/l	1500 mg/l
Suspended Solids		mg/l	
Dissolved Solids	58	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	

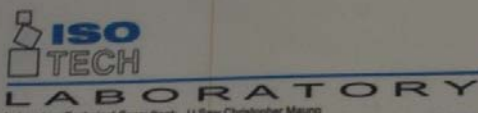
**WHO Drinking Water Guideline (Geneva - 1993)**

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

<p><b>Tested by</b> Signature: <u>Zaw Hein Oo</u> Name: <u>Zaw Hein Oo</u> B.Sc. (Chemistry) Chemist (a division of WEG Co., Ltd.) ISO TECH Laboratory</p>	<p><b>Approved by</b> Signature: <u>Sue Lin</u> Name: <u>Sue Lin</u> B.Sc. (Civil) 1986 Technical Office, ISO TECH Laboratory</p>
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## Treated water after installation of AQUALOOP-Membrane




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**ISO-TECH  
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### WATER QUALITY TEST RESULTS FORM


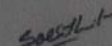
Client	Mingalar Myanmar
Nature of Water	River Water (Treated)
Location	၂၆၀၂၅၀၂၅၀၂၅
Date and Time of collection	7.10.2015
Date and Time of arrival at Laboratory	7.10.2015
Date and Time of commencing examination	8.10.2015
Date and Time of completing	10.10.2015

**Results of Water Analysis**


pH	6.4		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	2	NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness	48	mg/l as CaCO <sub>3</sub>	500 mg/l as CaCO <sub>3</sub>
Calcium Hardness		mg/l as CaCO <sub>3</sub>	
Magnesium Hardness		mg/l as CaCO <sub>3</sub>	
Total Alkalinity		mg/l as CaCO <sub>3</sub>	
Phenolphthalein Alkalinity		mg/l as CaCO <sub>3</sub>	
Carbonate (CaCO <sub>3</sub> )		mg/l as CaCO <sub>3</sub>	
Bicarbonate (HCO <sub>3</sub> )		mg/l as CaCO <sub>3</sub>	
Iron	0.05	mg/l	0.3 mg/l
Chloride (as CL)	3	mg/l	250 mg/l
Sodium chloride (as NaCL)		mg/l	
Sulphate (as SO <sub>4</sub> )	Nil	mg/l	200 mg/l
Total Solids	56	mg/l	1500 mg/l
Suspended Solids		mg/l	
Dissolved Solids	53	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	

**WHO Drinking Water Guideline  
(Geneva - 1993)**

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


<p>Tested by</p> <p>Signature: </p> <p>Name: <u>Zaw Hein Oo</u> <u>B.Sc (Chemistry)</u> <u>Chemist</u></p> <p>(a division of WEG Co.,Ltd.) <b>ISO TECH Laboratory</b></p>	<p>Approved by</p> <p>Signature: </p> <p>Name: <u>See Inn</u> <u>B.Sc (Civil) 1980</u> <u>Technical Officer</u> <b>ISO TECH Laboratory</b></p>
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### WATER QUALITY TEST RESULTS FORM

Client _____	Mingalar Myanmar
Nature of Water _____	River Water (Treated)
Location _____	မိလိကမြို့နယ်
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)

Parameter	Result	Unit	Guideline
Temperature (°C)		°C	
Fluoride (F)	0.1	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 <sub>3</sub> )	Nil	mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia (NH <sub>3</sub> )		mg/l	
Ammonium (NH <sub>4</sub> )		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	

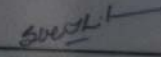
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**Tested by**

Signature: 

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

**Approved by**

Signature: 

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

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