**TALIWORKS ANALYTICAL LABORATORY SDN. BHD.** (207862-H)

38, JALAN SS 21/35, DAMANSARA UTAMA, 47400 PETALING JAYA

SELANGOR DARUL EHSAN, MALAYSIA.

Tel: 603-7727 0246, 7727 2667 Fax: 603-7729 2798

**CERTIFICATE OF ANALYSIS**

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YOUR P.O.NO. : 4520/21  
OUR REF. : TAL/ECTSB/4/2021  
REGISTRATION NO. : TAL/0438/2021  
ACCOUNTS NO. : TAL 423  
COMPANY : **ECOCLEAN TECHNOLOGY SDN.BHD.**  
12A-02, 03 & 03A, Wisma Zelan,  
Jalan Tasik Permaisuri 2,  
Bandar Tun Razak, Cheras,  
56000 Kuala Lumpur.

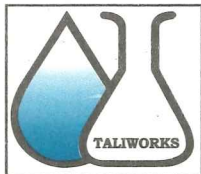
**ATTENTION** : **Mr. Lee Teck Ngu**  
DESCRIPTION OF SAMPLE : Raw Water  
SAMPLING POINT & TIME : As Described Below  
SAMPLING DATE : 13th October 2021  
DATE RECEIVED : 13th October 2021  
DATE ISSUED : 27th October 2021

On analysis of the sample(s) submitted, the following results were obtained :

**PART I - (1) INLET (Before Jar Test)**

NO.	PARAMETER	UNIT	METHOD REF. NO.: APHA-	RESULTS
1	pH	-	4500-H <sup>+</sup> B	7.2 @ 26.6°C
2	BIOCHEMICAL OXYGEN DEMAND @ 20 °C For 5 Days	mg/L	5210 B & 4500-O G	28.8
3	CHEMICAL OXYGEN DEMAND	mg/L	5220 B	33
4	TOTAL SUSPENDED SOLIDS	mg/L	2540 D	3
5	AMMONIA as N	mg/L	4500-NH <sub>3</sub> B & F	5.47
6	DISSOLVED OXYGEN	mg/L	4500-O G	<0.5
7	OIL & GREASE	mg/L	5520 B	0.4



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**PART II - JAR TEST**

Flash mixing time : 3 min @ 250rpm

Flocculation time : 12 min @ 40rpm

**JAR TEST : SET NO. 1**

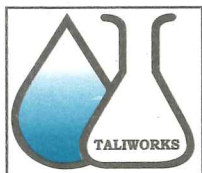
SEQUENCE OF CHEMICAL DOSING	JAR NO.1	JAR NO.2
<b>FLOCCULANT AID</b>		
Chemical Conc. of soln., % Polymer <u>0.1</u> (Amount chemical used , in "ppm ")	1.0	2.0
<b>OBSERVATION</b>		
Floc type	Fluffy Floc	Fluffy Floc
Floc size (mm)	0.3 - 0.5	0.3 - 0.5
Floc settling time (minute)	10	10
<b>SUPERNATANT QUALITY</b>		
pH	7.7	7.7
Colour, Apparent (CU)	140	148
Turbidity (NTU)	11.3	11.9
UV-254 (Abs/m)	7.78	6.56

**OBSERVATION & REMARKS :**

Settled water was produced based on Jar No. 2 for water quality test (after Jar Test).

Polymer sample is provided by customer.



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**PART II - JAR TEST**

Flash mixing time : 3 min @ 250rpm

Flocculation time : 12 min @ 40rpm

**JAR TEST : SET NO. 2**

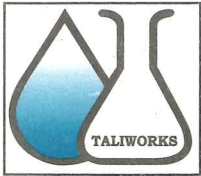
SEQUENCE OF CHEMICAL DOSING	JAR NO.1	JAR NO.2
<b>FLOCCULANT AID</b>		
Chemical Conc. of soln., %		
Organo-Floc (CFD 20) 0.1	1.0	2.0
(Amount chemical used , in "ppm")		
<b>OBSERVATION</b>		
Floc type	Fluffy Floc	Fluffy Floc
Floc size (mm)	0.3 - 0.5	0.3 - 0.5
Floc settling time (minute)	10	10
<b>SUPERNATANT QUALITY</b>		
pH	7.7	7.7
Colour, Apparent (CU)	135	136
Turbidity (NTU)	13.1	12.3
UV-254 (Abs/m)	9.83	9.50

**OBSERVATION & REMARKS :**

Settled water was produced based on Jar No. 2 for water quality test (after Jar Test).

Polymer sample is provided by customer.



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**PART III - AFTER JAR TEST****(1) Settled Water -2ppm Polymer**

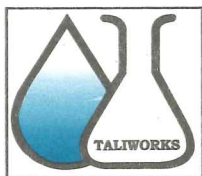
NO.	PARAMETER	UNIT	METHOD REF. NO.: APHA-	RESULTS
1	BIOCHEMICAL OXYGEN DEMAND @ 20 °C For 5 Days	mg/L	5210 B & 4500-O G	7.8
2	CHEMICAL OXYGEN DEMAND	mg/L	5220 B	24
3	TOTAL SUSPENDED SOLIDS	mg/L	2540 D	9
4	AMMONIA as N	mg/L	4500-NH <sub>3</sub> B & F	5.28
6	OIL & GREASE	mg/L	5520 B	0.4

**(2) Settled Water - 2ppm Organo-Floc CPD 20**

NO.	PARAMETER	UNIT	METHOD REF. NO.: APHA-	RESULTS
1	BIOCHEMICAL OXYGEN DEMAND @ 20 °C For 5 Days	mg/L	5210 B & 4500-O G	9.8
2	CHEMICAL OXYGEN DEMAND	mg/L	5220 B	24
3	TOTAL SUSPENDED SOLIDS	mg/L	2540 D	<2
4	AMMONIA as N	mg/L	4500-NH <sub>3</sub> B & F	5.38
5	OIL & GREASE	mg/L	5520 B	0.3







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(ECTSB/4/2021)

### NOTE:

- 1 "< " denotes " less than"
- 2 " \* " denotes " Sub-contracted and accredited."
- 3 Biochemical Oxygen Demand analysis started on : 15th October 2021.
- 4 The sample(s) (as received) is properly stored in the sampling container.
- 5 All the laboratory analysis is performed from 13/10/2021 to 23/10/2021 (exclude for the subcontracted analysis).
- 6 This Test Report is prepare based on the tests requested and on the specific sample(s) as received for analysis.

### METHOD REFERENCE

- 1 Standard Methods for the Examination of Water and WasteWater (2005) 21st Edition, APHA,AWWA, WEF.
- 2 Operation and Control of Water Treatment Processes, Charles R. Cox, World Health Organization, Geneva 1964.

TAN SIEW SIEW  
HEAD OF LABORATORY  
(SAMM APPROVED SIGNATORY)  
IKM NO.: M/2546/4372/03/07

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