

ANNEX H

CALIBRATION CERTIFICATES FOR MARINE WATER QUALITY MONITORING EQUIPMENT



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BB030069
Date of Issue : 21 March 2022
Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House Yu Chui Court, Shatin
New Territories (HK) Hong Kong
Attn :

PART B - SAMPLE INFORMATION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : S/N: 16H104234
Date of Received : 18 March 2022
Date of Calibration : 18 March 2022
Date of Next Calibration : 17 June 2022

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Test Parameter</u>	<u>Reference Method</u>
Turbidity	APHA 21e 2130B
Conductivity	APHA 21e 2510B
Dissolved oxygen	APHA 21e 4500 O
pH value	APHA 21e 4500 H+
Salinity	APHA 21e 2520B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure

PART D - CALIBRATION RESULT

(1) Turbidity

EXPECTED READING (NTU)	DISPLAY READING (NTU)	TOLERANCE (%)	RESULT
0	0.05	--	Satisfactory
10	10.20	2.0	Satisfactory
20	19.77	-1.2	Satisfactory
100	104.21	4.2	Satisfactory
800	792.60	-0.9	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

(2) Conductivity


EXPECTED READING (MS/CM AT 25°C)	DISPLAY READING	TOLERANCE (%)	RESULT
146.9	152.1	3.54	Satisfactory
1412	1472	4.25	Satisfactory
12890	12618	-2.11	Satisfactory
58670	57412	-2.14	Satisfactory
111900	110616	-1.15	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

(3) Dissolved oxygen

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AUTHORIZED
SIGNATORY:


LEE Chun-ning
Assistant Manager (Chemical Testing)



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Page No. : 2 of 2

EXPECTED READING (MG/L)	DISPLAY READING (MG/L)	TOLERANCE (MG/L)	RESULT
8.08	8.25	0.17	Satisfactory
4.8	5.00	0.20	Satisfactory
1.8	1.74	-0.06	Satisfactory
0.08	0.5	0.42	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(4) pH value

TARGET (PH UNIT)	DISPLAY READING (PH UNIT)	TOLERANCE	RESULT
4.00	4.08	0.08	Satisfactory
7.42	7.47	0.05	Satisfactory
10.01	9.90	-0.11	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(5) Salinity

EXPECTED READING (G/L)	DISPLAY READING (G/L)	TOLERANCE (%)	RESULT
10	9.93	-0.70	Satisfactory
20	19.81	-0.95	Satisfactory
30	30.12	0.40	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

(6) Temperature

READING OF REF. THERMOMETER (°C)	DISPLAY READING (°C)	TOLERANCE (°C)	RESULT
10	10	0	Satisfactory
20	20	0	Satisfactory
48	48	0	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)

Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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PART A - CUSTOMER INFORMATION

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Attn :

PART B - SAMPLE INFORMATION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : S/N: 16H104233
Date of Received : 18 March 2022
Date of Calibration : 18 March 2022
Date of Next Calibration : 17 June 2022

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
Turbidity	APHA 21e 2130B
Conductivity	APHA 21e 2510B
Dissolved oxygen	APHA 21e 4500 O
pH value	APHA 21e 4500 H+
Salinity	APHA 21e 2520B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure

PART D - CALIBRATION RESULT

(1) Turbidity

EXPECTED READING (NTU)	DISPLAY READING (NTU)	TOLERANCE (%)	RESULT
0	0.05	--	Satisfactory
10	10.09	0.9	Satisfactory
20	19.68	-1.6	Satisfactory
100	104.79	4.79	Satisfactory
800	793.41	-0.82	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

(2) Conductivity

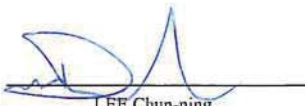
EXPECTED READING (MS/CM AT 25°C)	DISPLAY READING	TOLERANCE (%)	RESULT
146.9	149.71	1.91	Satisfactory
1412	1471	4.18	Satisfactory
12890	12690	-1.55	Satisfactory
58670	57736	-1.59	Satisfactory
111900	110653	-1.11	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

(3) Dissolved oxygen

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AUTHORIZED
SIGNATORY:


LEE Chun-ning

Assistant Manager (Chemical Testing)



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EXPECTED READING (MG/L)	DISPLAY READING (MG/L)	TOLERANCE (MG/L)	RESULT
8.08	8.23	0.15	Satisfactory
4.8	4.92	0.12	Satisfactory
1.8	1.81	0.01	Satisfactory
0.08	0.33	0.25	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(4) pH value

TARGET (PH UNIT)	DISPLAY READING (PH UNIT)	TOLERANCE	RESULT
4.00	4.09	0.09	Satisfactory
7.42	7.49	0.07	Satisfactory
10.01	9.87	-0.14	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(5) Salinity

EXPECTED READING (G/L)	DISPLAY READING (G/L)	TOLERANCE (%)	RESULT
10	9.9	-1.00	Satisfactory
20	19.83	-0.85	Satisfactory
30	30.33	1.10	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

(6) Temperature

READING OF REF. THERMOMETER (°C)	DISPLAY READING (°C)	TOLERANCE (°C)	RESULT
10	10	0	Satisfactory
20	20	0	Satisfactory
48	48	0	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)

Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
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