Appendix D. Calibration Certificates

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ120104
Date of Issue : 31 December 2020

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	17H105557
Date of Received	:	Dec 02, 2020
Date of Calibration	:	Dec 02, 2020
Date of Next Calibration[a]	:	Mar 01, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H^+ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.05	0.05	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	9.92	-0.09	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.0	0.0	Satisfactory
20	20.0	0.0	Satisfactory
40	40.1	0.1	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
(b) The results relate only to the calibrated equipment as received
(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
(e) The "Tolerance Limit" mentioned is referenced to YSI product specifications.

LEE Chun-ning, Desmond
Senior Chemist

This report supersedes the previous report number # AJ120009 dated 02 Dec 2020

專業化驗有限公司
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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ120104
Date of Issue : 31 December 2020

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.06	0.40	0.34	Satisfactory
1.80	1.36	-0.44	Satisfactory
5.14	4.70	-0.44	Satisfactory
8.44	8.60	0.16	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	157.0	6.88	Satisfactory
0.01	1412	1376	-2.55	Satisfactory
0.1	12890	12854	-0.28	Satisfactory
0.5	58670	57630	-1.77	Satisfactory
1.0	111900	111802	-0.09	Satisfactory

Tolerance limit of conductivity should be less than ±10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.08	0.80	Satisfactory
20	20.10	0.50	Satisfactory
30	30.52	1.73	Satisfactory

Tolerance limit of salinity should be less than ±10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.08	--	Satisfactory
10	9.89	-1.1	Satisfactory
20	19.96	-0.2	Satisfactory
100	107.74	7.7	Satisfactory
800	798.46	-0.2	Satisfactory

Tolerance limit of turbidity should be less than ±10.0 (%)

~ END OF REPORT ~

Remark(s): -

[f] "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

[g] 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

Report No. : AJ120103
Date of Issue : 31 December 2020

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	18A104824
Date of Received	:	Dec 02, 2020
Date of Calibration	:	Dec 02, 2020
Date of Next Calibration[a]	:	Mar 01, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H^+ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.03	0.03	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	9.91	-0.10	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.0	0.0	Satisfactory
20	20.1	0.1	Satisfactory
40	40.1	0.1	Satisfactory

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

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Remark(s): -

[a] *The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.*
[b] *The results relate only to the calibrated equipment as received*
[c] *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
[d] *"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.*
[e] *The "Tolerance Limit" mentioned is referenced to YSI product specifications.*

LEE Chun-ning, Desmond
Senior Chemist

This report supersedes the previous report number # AJ120010 dated 02 Dec 2020

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ120103
Date of Issue : 31 December 2020

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.06	0.46	0.40	Satisfactory
1.80	1.42	-0.38	Satisfactory
5.14	4.80	-0.34	Satisfactory
8.44	8.70	0.26	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	159.0	8.24	Satisfactory
0.01	1412	1384	-1.98	Satisfactory
0.1	12890	12846	-0.34	Satisfactory
0.5	58670	57821	-1.45	Satisfactory
1.0	111900	111884	-0.01	Satisfactory

Tolerance limit of conductivity should be less than ±10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.89	-1.10	Satisfactory
20	19.88	-0.60	Satisfactory
30	29.74	-0.87	Satisfactory

Tolerance limit of salinity should be less than ±10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.11	--	Satisfactory
10	10.13	1.3	Satisfactory
20	20.20	1.0	Satisfactory
100	108.72	8.7	Satisfactory
800	796.13	-0.5	Satisfactory

Tolerance limit of turbidity should be less than ±10.0 (%)

~ END OF REPORT ~

Remark(s): -

[f] "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

[g] 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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CALIBRATION REPORT

Test Report No. : AJ110143
Date of Issue : 30 November 2020

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin,
New Territories, Hong Kong
Attn: Mr. Thomas Wong

PART B – SAMPLE INFORMATION

Description of Samples	:	Titrette® bottle-top burette, 50mL
Brand Name	:	BRAND
Model Number	:	1224B90
Serial Number	:	10N64701
Date of Received	:	Nov 30, 2020
Date of Calibration	:	Nov 30, 2020
Date of Next Calibration[a]	:	Feb 28, 2021

PART C – CALIBRATION REQUESTED

Parameter[b]	Reference Method
Accuracy Test	In-house Method (Gravimetric Method)

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Remark(s): -

[a] *The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.*

[b] *All chemical and microbiological tests were performed at unit 10-5/F and unit 10-14/F respectively of the company address stated above.*

LEE Chun-ning Desmond
Senior Chemist

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CALIBRATION REPORT

Test Report No. : AJ110143
Date of Issue : 30 November 2020

PART D – RESULT[c],[d]

Water temperature: 23.2°C
Environmental conditions of the calibration:
Relative humidity: 51%
Z-Factor: 1.0036
Nominal volume: 3.0ml

Trial	Range: (1-4)	Range: (16-19)	Range: (23-26)	Range: (34-37)	Range: (42-45)
1	2.9803	2.9793	2.9824	2.9964	2.9886
2	3.0005	2.9977	3.0017	2.9678	2.9851
3	2.9716	2.9881	2.9777	2.9805	2.9777
4	2.9855	3.0005	2.9895	2.9707	2.9848
5	2.9890	2.9924	2.9811	2.9796	2.9902
6	2.9968	2.9876	2.9788	2.9767	2.9809
7	2.9929	2.9889	2.9917	3.0002	2.9785
8	2.9926	2.9788	2.9846	2.9873	2.9758
9	2.9888	2.9875	2.9999	2.9803	2.9801
10	2.9761	2.9919	2.9948	2.9734	2.9877
Average (g)	2.9874	2.9893	2.9882	2.9813	2.9829
Standard deviation	0.0091	0.0069	0.0086	0.0106	0.0050
Converted volume (mL)	2.9982	3.0000	2.9990	2.9920	2.9937
Error (%)	-0.0612	0.0010	-0.0341	-0.2659	-0.2107
RSD (%)	0.3051	0.2305	0.2882	0.3530	0.1674

Acceptance Criteria [e]

Accuracy (%Error)	< ±1%	< ±1%	< ±1%	< ±1%	< ±1%
Precision (%RSD)	< 1%	< 1%	< 1%	< 1%	< 1%

~ END OF REPORT ~

Remark(s): -
[c] *The results relate only to the tested sample as received*
[d] *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
[e] *The "acceptance criteria" is applicable for similar equipment used by QPT or quoted from relevant international standards.*