Appendix D. Calibration Certificates



OUALITY 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.

AH020038

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07 February 2018

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai 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

15M100005

Date of Received

Feb 06, 2018

Date of Calibration

Feb 06, 2018 to Feb 06, 2018

Date of Next Calibration(a)

May 06, 2018

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H+ B APHA 21e 4500-O G

Dissolved Oxygen 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	3.97	-0.03	Satisfactory
7.42	7.35	-0.07	Satisfactory
10.01	10.03	+0.02	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
14.0	13.9	-0.1	Satisfactory
26.0	25.7	-0.3	Satisfactory
33.0	32.7	-0.3	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

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 QPT or quoted form relevant international standards.

APPROVED SIGNATORY:



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

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.02	+0.02	Satisfactory
1.95	1.99	+0.04	Satisfactory
3.68	3.72	+0.04	Satisfactory
6.26	6.19	-0.07	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (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	143.1	-2.0	Satisfactory
0.01	1412	1401	-0.8	Satisfactory
0.1	12890	12762	-1.0	Satisfactory
0.5	58670	57936	-1.3	Satisfactory
1.0	111900	109009	-2.6	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.02	+0.2	Satisfactory
20	19.88	-0.6	Satisfactory
30	29.65	-1.2	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1	**	
10	10.3	+3.0	Satisfactory
20	20.4	+2.0	Satisfactory
100	104.2	+4.2	Satisfactory
800	789.7	-1.3	Satisfactory

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

~ END OF REPORT ~

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

⁽⁸⁾ 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.



QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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AH020039

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai 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

16H104233

Date of Received

Feb 06, 2018

Date of Calibration

Feb 06, 2018 to Feb 06, 2018

Date of Next Calibration(a)

May 06, 2018

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B APHA 21e 4500-O G

Dissolved Oxygen 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	4.04	+0.04	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	10.08	+0.07	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
14.0	13.6	-0.4	Satisfactory
26.0	25.8	-0.2	Satisfactory
33.0	32.5	-0.5	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.

The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted form relevant international standards.

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.05	+0.05	Satisfactory
1.95	1.99	+0.04	Satisfactory
3.68	3.73	+0.05	Satisfactory
6.26	6.21	-0.05	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (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	150.6	+2.5	Satisfactory
0.01	1412	1377	-2.5	Satisfactory
0.1	12890	12598	-2.3	Satisfactory
0.5	58670	57622	-1.8	Satisfactory
1.0	111900	107426	-4.0	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.92	-0.8	Satisfactory
20	19.79	-1.1	Satisfactory
30	29.80	-0.7	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1		
10	10.6	+6.0	Satisfactory
20	19.4	-3.0	Satisfactory
100	95.9	-4.1	Satisfactory
800	790.1	-1.2	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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.

⁽Displayed Reading) presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.



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AH020040

Date of Issue

07 February 2018

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai 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

16H104234

Date of Received

Feb 06, 2018

Date of Calibration

Feb 06, 2018 to Feb 06, 2018

Date of Next Calibration(a)

May 06, 2018

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H+ B APHA 21e 4500-O G

Dissolved Oxygen 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	10.05	+0.04	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
14.0	13.9	-0.1	Satisfactory
26.0	26.1	+0.1	Satisfactory
33.0	32.8	-0.2	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

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 QPT or quoted form relevant international standards.

APPROVED SIGNATORY:



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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.07	+0.07	Satisfactory
1.95	1.90	-0.05	Satisfactory
3.68	3.66	-0.02	Satisfactory
6.26	6.22	-0.04	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (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	149.9	+2.0	Satisfactory
0.01	1412	1362	-3.5	Satisfactory
0.1	12890	12536	-2.7	Satisfactory
0.5	58670	58006	-1.1	Satisfactory
1.0	111900	107622	-3.8	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.95	-0.5	Satisfactory
20	19.86	-0.7	Satisfactory
30	29.88	-0.4	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1		
10	9.8	-2.0	Satisfactory
20	19.8	-1.0	Satisfactory
100	96.1	-3.9	Satisfactory
800	785.4	-1.8	Satisfactory

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

~ END OF REPORT ~

[&]quot;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

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai 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

17E100747

Date of Received

Feb 01, 2018

Date of Calibration

Feb 01, 2018 to Feb 01, 2018

Date of Next Calibration(a)

May 01, 2018

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter - 11 - + 250C Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B APHA 21e 4500-O G

Dissolved Oxygen Conductivity at 25°C

APHA 21e 2510 B

Salinity Turbidity APHA 21e 2520 B 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	4.08	+0.08	Satisfactory
7.42	7.48	+0.06	Satisfactory
10.01	10.03	+0.02	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
14.0	13.8	-0.2	Satisfactory
26.0	25.8	-0.2	Satisfactory
33.0	33.1	+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

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(d) "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 QPT or quoted form relevant international standards.

APPROVED SIGNATORY:



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

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.03	0.03	Satisfactory
1.95	1.88	-0.07	Satisfactory
3.68	3.61	-0.07	Satisfactory
6.26	6.20	-0.06	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (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	144.2	-1.8	Satisfactory
0.01	1412	1383	-2.1	Satisfactory
0.1	12890	12603	-2.2	Satisfactory
0.5	58670	57995	-1.2	Satisfactory
1.0	111900	109400	-2.2	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.82	-1.8	Satisfactory
20	19.81	-1.0	Satisfactory
30	29.74	-0.9	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1		
10	10.1	1.0	Satisfactory
20	20.4	2.0	Satisfactory
100	103.2	3.2	Satisfactory
800	781.2	-2.3	Satisfactory

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

~ END OF REPORT ~

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QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

AH020041

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai 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

Feb 06, 2018

Date of Calibration

Feb 06, 2018 to Feb 06, 2018

Date of Next Calibration(a)

May 06, 2018

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>

Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B APHA 21e 4500-O G

Dissolved Oxygen 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	4.08	+0.08	Satisfactory	
7.42	7.47	+0.05	Satisfactory	
10.01	10.07	+0.06	Satisfactory	

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
14.0	13.8	-0.2	Satisfactory
26.0	25.7	-0.3	Satisfactory
33.0	32.6	-0.4	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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 the acceptance criteria applicable for similar equipment used by QPT or quoted form relevant international standards.

APPROVED SIGNATORY:



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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

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.02	+0.02	Satisfactory
1.95	1.93	-0.02	Satisfactory
3.68 3.59		-0.09	Satisfactory
6.26	6.24	-0.02	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (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	143.6	-2.2	Satisfactory
0.01	1412	1394	-1.3	Satisfactory
0.1	12890	12770	-0.9	Satisfactory
0.5	58670	57972	-1.2	Satisfactory
1.0	111900	109332	-2.3	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	-1.1	Satisfactory
20	19.76	-1.2	Satisfactory
30	29.70	-1.0	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1		
10	9.6	-4.0	Satisfactory
20	19.6	-2.0	Satisfactory
100	96.5	-3.5	Satisfactory
800	779.6	-2.6	Satisfactory

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

~ END OF REPORT ~

⁽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.



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

CALIBRATION REPORT

Test Report No. : AH020097-R

Date of Issue

: 04 April 2018

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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

6761161

Serial Number

: 10N60623

Date of Received

: Feb 15, 2018

Date of Calibration

: Feb 22, 2018

Date of Next Calibration(a)

: May 22, 2018

PART C - CALIBRATION REQUESTED

Parameter

Reference Method

Accuracy Test

In-house Method (Gravimetric Method)

~ Continued On Next Page ~

Remark(s): -

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

APPROVED SIGNATORY:

LAM Ho-yee, Emma Assistant Laboratory Manager



Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

CALIBRATION REPORT

Test Report No.

: AH020097-R

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PART D - RESULT(b),(c)

Water temperature: 20.4 °C Relative humidity: 58%

z-Factor: 1.0030

		Nomina	al volume (mL) at	interval	×
Trial	3	3	3	3	3
	Range: (1-4)	Range: (16-19)	Range: (23-26)	Range: (34-37)	Range: (42-45)
1	2.9889	2.9855	2.9859	2.9900	2.9797
2	2.9874	2.9838	2.9834	2.9795	2.9865
3	2.9861	2.9812	2.9845	2.9826	2.9830
4	2.9925	2.9842	2.9831	2.9845	2.9824
5	2.9869	2.9832	2.9767	2.9816	2.9830
6	2.9912	2.9831	2.9761	2.9798	2.9831
7	2.9810	2.9859	2.9854	2.9887	2.9858
8	2.9863	2.9902	2.9929	2.9781	2.9825
9	2.9889	2.9822	2.9846	2.9775	2.9892
10	2.9862	2.9816	2.9841	2.9790	2.9861
Average	2.9875	2.9841	2.9837	2.9821	2.9841
Standard deviation	0.0032	0.0026	0.0047	0.0044	0.0027
Calculated volume (mL)	2.9965	2.9930	2.9926	2.9911	2.9931
Error (%)	-0.1166	-0.2319	-0.2460	-0.2975	-0.2306
RSD (%)	0.1057	0.0881	0.1580	0.1457	0.0911

Acceptance Criteria (d)

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

~ END OF REPORT ~

The results relate only to the tested sample as received

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated



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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.

AH030026

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai New Territories, Hong Kong Attn: Mr. Thomas WONG

PART B - DESCRIPTION

Name of Equipment

YSI 6920 v2 (Multi-Parameters)

Manufacturer

YSI (a xylem brand)

Serial Number

0001C6A7

Date of Received

Mar 02, 2018

Date of Calibration

Mar 02, 2018 to Mar 02, 2018

Date of Next Calibration(a)

Jun 02, 2018

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B

Dissolved Oxygen Conductivity at 25°C APHA 21e 4500-O G 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)	et (pH unit) Displayed Reading(d) (pH Unit) Toleran		Results	
4.00	3.95	-0.05	Satisfactory	
7.42	7.39	-0.03	Satisfactory	
10.01	10.06	+0.05	Satisfactory	

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer	Displayed Reading (°C)	Tolerance (°C)	Results
18.0	17.9	-0.1	Satisfactory
22.0	21.9	-0.1	Satisfactory
36.0	35.9	-0.1	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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.

The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted form relevant international standards.

APPROVED SIGNATORY:

LAM Ho-yee, Emma Assistant Laboratory Manager



Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.13	+0.13	Satisfactory
2.44	2.40	-0.04	Satisfactory
5.84	4 5.77 -0.07		Satisfactory
7.06	6.99	-0.07	Satisfactory
8.53	8.50	-0.03	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (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	143.2	-2.5	Satisfactory
0.01	1412	1429	+1.2	Satisfactory
0.1	12890	12730	-1.2	Satisfactory
0.5	58670	58276	-0.7	Satisfactory
1.0	111900	109414	-2.2	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.97	-0.3	Satisfactory
20	19.89	-0.5	Satisfactory
30	29.84	-0.5	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1	 	R==
10	9.5	-0.5	Satisfactory
20	19.4	-3.0	Satisfactory
100	94.7	-5.3	Satisfactory
800	779	-2.6	Satisfactory

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

~ END OF REPORT ~

Remark(s):
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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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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Rm 811, Hin Pui House, Hin Keng Estate, Tai Wai New Territories, Hong Kong Attn: Mr. Thomas WONG

PART B - DESCRIPTION

Name of Equipment

YSI 6920 (Multi-Parameters)

Manufacturer

YSI (a xylem brand)

Serial Number

000109DF

Date of Received

Mar 02, 2018

Date of Calibration

Mar 02, 2018 to Mar 02, 2018

Date of Next Calibration(a)

Jun 02, 2018

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B

Dissolved Oxygen Conductivity at 25°C APHA 21e 4500-O G APHA 21e 2510 B

Salinity

APHA 21e 2520 B

Turbidity

APHA 21e 2130 B

Temperature

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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	3.97	-0.03	Satisfactory
7.42	7.46	+0.04	Satisfactory
10.01	10.08	+0.07	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer	Displayed Reading (°C)	Tolerance (°C)	Results
18.0	17.9	-0.1	Satisfactory
22.0	21.9	-0.1	Satisfactory
36.0	35.9	-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.

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(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted form relevant international standards.

APPROVED SIGNATORY:

LAM Ho-yee, Emma Assistant Laboratory Manager



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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.16	+0.16	Satisfactory
2.44	2.38	-0.06	Satisfactory
5.84	5.77	-0.07	Satisfactory
7.06	6.98	-0.08	Satisfactory
8.53	8.48	-0.05	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (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	144	-2.0	Satisfactory
0.01	1412	1422	+0.7	Satisfactory
0.1	12890	12716	-1.3	Satisfactory
0.5	58670	57921	-1.3	Satisfactory
1.0	111900	109891	-1.8	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.92	-0.8	Satisfactory
20	19.90	-0.5	Satisfactory
30	29.78	-0.7	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1		
10	9.7	-3.0	Satisfactory
20	19.6	-2.0	Satisfactory
100	96.4	-3.6	Satisfactory
800	782	-2.2	Satisfactory

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

~ END OF REPORT ~

<u>Remark(s): -</u>

⁽Displayed Reading) presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.

⁽⁸⁾ 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.