Appendix 2.1	Calibration Certificates of Impact Water Quality Monitoring Equipment



Unit 10, 5/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

Test Report No.

: R-BD030061

**Date of Issue** 

: 19 March 2024

Page No.

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#### PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

#### **PART B - SAMPLE INFORMATION**

Name of Equipment:

YSI ProDSS Multi Parameters

Manufacturer:

YSI

Serial Number:

15M101091

Date of Received:

14 March 2024

Date of Calibration:

Date of Next Calibration:

18 March 2024 18 June 2024

Request No.:

D-BD030061

#### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

**Test Parameter** 

Reference Method

pH value

APHA 21e 4500-H+ B

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520 B

Dissolved oxygen

APHA 23e 4500-O G (Membrane Electrode Method)

Turbidity

APHA 21e 2130 B (Nephelometric Method)

### PART D - CALIBRATION RESULT

#### (1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.98	-0.02	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	9.86	-0.15	Satisfactory

Tolerance of pH value should be less than  $\pm$  0.2 (pH unit)

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
16.0	16.5	0.5	Satisfactory
24.0	23.1	-0.9	Satisfactory
35.5	35.1	-0.4	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.38	-6.20	Satisfactory
20	18.65	-6.75	Satisfactory
30	29.05	-3.17	Satisfactory

Tolerance of Salinity should be less than  $\pm$  10.0 ( % )

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AUTHORIZED SIGNATORY:

LEE Chun-ning
Assistant Manager



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### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.41	8.13	-0.28	Satisfactory
6.11	5.88	-0.23	Satisfactory
2.56	2.40	-0.16	Satisfactory
0.83	0.41	-0.42	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm$  0.5 ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance (%)	Result
0	0.88		Satisfactory
10	10.88	8.8	Satisfactory
20	21.14	5.7	Satisfactory
100	106.45	6.5	Satisfactory
800	761.97	-4.8	Satisfactory

Tolerance of Turbidity should be less than  $\pm$  10.0 ( % )

#### 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.
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--- END OF REPORT ---



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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BD010030

**Date of Issue** 

: 25 January 2024

Page No.

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#### PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

22C106561

Date of Received:

22 January 2024

Date of Calibration:

24 January 202424 April 2024

Date of Next Calibration : Request No. :

D-BD010030

#### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

**Test Parameter** 

Reference Method

pH value

APHA 21e 4500-H+ B

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520 B

Dissolved oxygen

APHA 23e 4500-O G (Membrane Electrode Method)

Turbidity

APHA 21e 2130 B (Nephelometric Method)

#### PART D - CALIBRATION RESULT

### (1) pH value

Target ( pH unit )	Display Reading (pH unit)	Tolerance	Result
4.00	4.02	0.02	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.05	0.04	Satisfactory

Tolerance of pH value should be less than  $\pm$  0.2 ( pH unit )

#### (2) Temperature

Reading of Ref. thermometer (°C)	Display Reading ( °C )	Tolerance	Result
33	34.1	1.1	Satisfactory
19	18.7	-0.3	Satisfactory
11	11.5	0.5	Satisfactory

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

#### (3) Salinity

Expected Reading ( g/L )	Display Reading (g/L)	Tolerance (%)	Result
10	10.19	1.90	Satisfactory
20	21.27	6.35	Satisfactory
30	30.21	0.70	Satisfactory

Tolerance of Salinity should be less than  $\pm 10.0$  (%)

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BD010030

**Date of Issue** 

: 25 January 2024

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#### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.60	8.89	0.29	Satisfactory
5.33	5.70	0.37	Satisfactory
3.40	3.50	0.10	Satisfactory
0.34	0.26	-0.08	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

#### (5) Turbidity

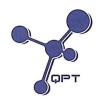
Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.50		Satisfactory
10	9.88	-1.2	Satisfactory
20	18.35	-8.2	Satisfactory
100	95.10	-4.9	Satisfactory
800	736.55	-7.9	Satisfactory

Tolerance of Turbidity should be less than  $\pm~10.0$  ( % )

#### Remark(s)

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BD040041

**Date of Issue** 

: 16 April 2024

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#### **PART A - CUSTOMER INFORMATION**

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

#### **PART B - SAMPLE INFORMATION**

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

22C106561

Date of Received:

10 April 2024

Date of Calibration:

16 April 2024

Date of Next Calibration:

15 July 2024

Request No.:

D-BD040041

#### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

**Test Parameter** 

Reference Method

pH value

APHA 21e 4500-H+ B

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520 B

Dissolved oxygen

APHA 23e 4500-O G (Membrane Electrode Method)

Turbidity

APHA 21e 2130 B (Nephelometric Method)

### **PART D - CALIBRATION RESULT**

#### (1) pH value

Target ( pH unit )	Display Reading ( pH unit )	Tolerance	Result
4.00	4.14	0.14	Satisfactory
7.42	7.56	0.14	Satisfactory
10.01	10.09	0.08	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
11.0	11.1	0.1	Satisfactory
26.0	25.1	-0.9	Satisfactory
40.0	38.7	-1.3	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

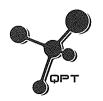
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.68	-3.20	Satisfactory
20	19.27	-3.65	Satisfactory
30	28.85	-3.83	Satisfactory

Tolerance of Salinity should be less than  $\pm 10.0$  (%)

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

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#### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.14	8.59	0.45	Satisfactory
5.35	5.12	-0.23	Satisfactory
2.92	2.72	-0.20	Satisfactory
0.32	0.26	-0.06	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

#### (5) Turbidity

Expected Reading ( NTU )	Display Reading (NTU)	Tolerance (%)	Result
0	0.88		Satisfactory
10	9.62	-3.8	Satisfactory
20	18.76	-6.2	Satisfactory
100	98.45	-1.6	Satisfactory
800	770.86	-3.6	Satisfactory

Tolerance of Turbidity should be less than  $\pm 10.0$  (%)

#### 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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