# Annex G1

# Calibration Certificates for Water Quality



# 專業化驗有限公司 QUALITY PRO TEST-CONSULT LIMITED

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-BC060025

**Date of Issue** 

: 06 June 2023

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## **PART A - CUSTOMER INFORMATION**

Enovative Environmental Service Ltd.

Flat 2207, Yu Fun House Yu Chui Court, Shatin

New Territories (HK) Hong Kong

**PART B - SAMPLE INFORMATION** 

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

S/N: 16H104233

Date of Received:

02 June 2023

Date of Calibration:

02 June 2023

Date of Next Calibration :

01 September 2023

Request No.:

D-BC060025

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

**Test Parameter** 

Reference Method

pH value

APHA 21e 4500 H+

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 21e 4500 O

Turbidity Conductivity APHA 21e 2130 B

APHA 21e 2510 B

## **PART D - CALIBRATION RESULT**

# (1) pH value

Target ( pH unit )	Display Reading ( pH unit )	Tolerance	Result
4.00	4.07	0.07	Satisfactory
7.42	7.49	0.07	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
10	10.0	0.0	Satisfactory
25	25.0	0.0	Satisfactory
45	45.0	0.0	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	10.09	0.90	Satisfactory
20	20.38	1.90	Satisfactory
30	30.33	1.10	Satisfactory

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

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AUTHORIZED SIGNATORY:

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Assistant Manager (Chemical Testing)

Test Report No.

: R-BC060025

**Date of Issue** 

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## (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
7.12	7.15	0.03	Satisfactory
4.61	4.39	-0.22	Satisfactory
1.57	1.27	-0.30	Satisfactory
0.16	0.56	0.40	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	0.10		Satisfactory
10	9.84	-1.60	Satisfactory
20	20.11	0.50	Satisfactory
100	107.60	7.60	Satisfactory
800	798.22	-0.20	Satisfactory

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

## (6) Conductivity

Expected Reading ( μS/cm at 25°C )	Display Reading	Tolerance (%)	Result
146.9	148.7	1.23	Satisfactory
1412	1491	5.59	Satisfactory
12890	12677	-1.65	Satisfactory
58670	59440	1.31	Satisfactory
111900	113112	1.08	Satisfactory

Tolerance of Conductivity 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.
- '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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Test Report No.

: R-BB120080

**Date of Issue** 

: 20 December 2022

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#### PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Flat 2207, Yu Fun House Yu Chui Court, Shatin

New Territories (HK) Hong Kong

## **PART B - SAMPLE INFORMATION**

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

17E100747

Date of Received

20 December 2022

Date of Calibration :

20 December 2022

Date of Next Calibration :

19 March 2023

Request No.:

D-BB120080

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

**Test Parameter** 

Reference Method

pH value

APHA 21e 4500 H+

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 21e 4500 O

Turbidity

APHA 21e 2130 B

Conductivity

APHA 21e 2510 B

# **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	10.06	0.05	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
15	14.9	-0.1	Satisfactory
30	30.0	0.0	Satisfactory
45	49.9	4.9	Satisfactory

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

## (3) Salinity

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Expected Reading ( g/L )	Display Reading (g/L)	Tolerance (%)	Result
10	9.94	-0.60	Satisfactory
20	20.21	1.05	Satisfactory
30	30.20	0.67	Satisfactory

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

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AUTHORIZED SIGNATORY:

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: R-BB120080

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## (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
9.37	9.60	0.23	Satisfactory
7.08	6.64	-0.44	Satisfactory
4.84	4.48	-0.36	Satisfactory
3.10	2.81	-0.29	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	0.10		Satisfactory
10	9.85	-1.50	Satisfactory
20	19.77	-1.20	Satisfactory
100	99.16	-0.80	Satisfactory
800	796.62	-0.40	Satisfactory

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

## (6) Conductivity

Expected Reading ( μS/cm at 25°C )	Display Reading	Tolerance ( % )	Result
146.9	151.2	2.93	Satisfactory
1412	1366	-3.26	Satisfactory
12890	13610	5.59	Satisfactory
58670	56516	-3.67	Satisfactory
111900	111612	-0.26	Satisfactory

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

# Remark(s)

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BC030055

**Date of Issue** 

: 20 March 2023

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#### PART A - CUSTOMER INFORMATION

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

## PART B - SAMPLE INFORMATION

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

S/N: 21G105356

Date of Received :

17 March 2023

Date of Calibration :

17 March 2023

Date of Next Calibration:

16 June 2023

Request No.:

D-BC030055

# PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

**Test Parameter** 

Reference Method

pH value

APHA 21e 4500 H+

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 21e 4500 O

Turbidity

APHA 21e 2130 B

Conductivity

APHA 21e 2510 B

## PART D - CALIBRATION RESULT

## (1) pH value

Target ( pH unit )	Display Reading (pH unit)	Tolerance	Result
4.00	4.04	0.04	Satisfactory
7.42	7.46	0.04	Satisfactory
10.01	10.14	0.13	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
15	15.0	0.0	Satisfactory
30	30.0	0.0	Satisfactory
40	39.9	-0.1	Satisfactory

Tolerance of Temperature should be less than  $\pm\,2.0$  (  $^{\circ}C$  )

## (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.10	1.00	Satisfactory
20	19.82	-0.90	Satisfactory
30	30.55	1.83	Satisfactory

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

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Test Report No.

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# (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading (mg/L)	Tolerance	Result
8.17	8.31	0.14	Satisfactory
5.28	5.29	0.01	Satisfactory
1.86	1.56	-0.30	Satisfactory
0.30	0.39	0.09	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	0.10		Satisfactory
10	9.86	-1.4	Satisfactory
	19.73	-1.4	Satisfactory
100	98.87	-1.1	Satisfactory
800	790.41	-1.2	Satisfactory

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

## (6) Conductivity

Expected Reading ( μS/cm at 25°C )	Display Reading	Tolerance (%)	Result
146.9	148.7	1.23	Satisfactory
1412	1511	7.01	Satisfactory
12890	12994	0.81	Satisfactory
58670	60395	2.94	Satisfactory
111900	111890	-0.01	Satisfactory

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

## Remark(s)

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