# Annex G1

# Calibration Certificates for Water Quality



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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB030068

**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: 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 APHA 21e 4500 H+

pH value

APHA 21e 2520B

Salinity 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

(1) Turbland			
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  $\pm$  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  $\pm$  10.0 (%)

## (3) Dissolved oxygen

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AUTHORIZED SIGNATORY:

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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  $\pm 0.5$  ( 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  $\pm 0.2$  (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  $\pm 2.0$  (°C)

## Remark(s)

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB030069

**Date of Issue** 

: 21 March 2022

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#### PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

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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 18 March 2022

Date of Calibration :
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 APHA 21e 4500 H+

pH value 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  $\pm 10.0$  (%)

#### (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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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  $\pm 0.5$  ( 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  $\pm$  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  $\pm$  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  $\pm 2.0$  ( °C )

#### Remark(s)

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BA120147

Date of Issue

: 30 December 2021

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#### PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

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New Territories (HK) Hong Kong

Attn:

#### PART B - SAMPLE INFORMATION

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

17E100747

Date of Received:

24 December 2021

Date of Calibration :

24 December 2021

Date of Next Calibration:

23 March 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+ APHA 21e 2520B

Salinity 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	0.10		Satisfactory
10	9.88	-1.2	Satisfactory
20	19.79	-1.1	Satisfactory
100	100.26	0.3	Satisfactory
800	808.37	1.0	Satisfactory

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

#### (2) Conductivity

DISPLAY READING ( MS/CM AT	TOLERANCE (%	RESULT
25°C)	)	196
151.2	2.92	Satisfactory
1348	-4.53	Satisfactory
12591	-2.32	Satisfactory
57734	-1.60	Satisfactory
111592	-0.28	Satisfactory
	25°C) 151.2 1348 12591 57734	25°C) ) 151.2 2.92 1348 -4.53 12591 -2.32 57734 -1.60

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

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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#### (3) Dissolved oxygen

EXPECTED READING ( MG/L )	DISPLAY READING (MG/L)	TOLERANCE (MG/L)	RESULT
7.65	7.76	0.11	Satisfactory
6.09	6.17	0.08	Satisfactory
3.20	3.28	0.08	Satisfactory
0.78	0.56	-0.22	Satisfactory

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

## (4) 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	10.13	0.12	Satisfactory

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

#### (5) Salinity

EXPECTED READING ( G/L )	DISPLAY READING (G/L)	TOLERANCE (%)	RESULT
10	9.93	-0.70	Satisfactory
20	19.89	-0.55	Satisfactory
30	30.20	0.67	Satisfactory

Tolerance of Salinity should be less than  $\pm 0.0$  (%)

#### (6) Temperature

READING OF REF. THERMOMETER (°C)	DISPLAY READING (°C)	TOLERANCE (°C)	RESULT
10	9.9	-0.1	Satisfactory
20	20.0	0.0	Satisfactory
40	40.0	0.0	Satisfactory

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

#### Remark(s)

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BA120148

**Date of Issue** 

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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:

21G105356

Date of Received:

24 December 2021 24 December 2021

Date of Calibration:

# Date of Next Calibration:

23 March 2022

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

**Test Parameter** 

Reference Method

Turbidity

APHA 21e 2130B

Conductivity

APHA 21e 2510B APHA 21e 4500 O

Dissolved oxygen

APHA 21e 4500 H+

pH value 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	0.10		Satisfactory
10	9.81	-1.9	Satisfactory
20	19.82	-0.9	Satisfactory
100	100.22	0.2	Satisfactory
800	810.23	1.3	Satisfactory

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

## (2) Conductivity

EXPECTED READING (MS/CM AT 25°C)	DISPLAY READING ( MS/CM AT	TOLERANCE (%	RESULT
	25°C)	)	
146.9	150.3	2.31	Satisfactory
1412	1369	-3.05	Satisfactory
12890	12488	-3.12	Satisfactory
58670	57746	-1.57	Satisfactory
111900	111426	-0.42	Satisfactory

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

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**Date of Issue** 

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#### (3) Dissolved oxygen

EXPECTED READING ( MG/L )	DISPLAY READING (MG/L)	TOLERANCE (MG/L)	RESULT
7.65	7.80	0.15	Satisfactory
6.09	6.20	0.11	Satisfactory
3.20	3.33	0.13	Satisfactory
0.78	0.56	-0.22	Satisfactory

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

## (4) pH value

TARGET (PH UNIT)	DISPLAY READING (PH UNIT)	TOLERANCE	RESULT
4.00	4.03	0.03	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.11	0.10	Satisfactory

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

## (5) Salinity

EXPECTED READING ( G/L )	DISPLAY READING (G/L)	TOLERANCE (%)	RESULT
10	9.93	-0.70	Satisfactory
20	19.88	-0.60	Satisfactory
30	30.19	0.63	Satisfactory

Tolerance of Salinity should be less than  $\pm 0.0$  (%)

## (6) Temperature

READING OF REF. THERMOMETER (°C)	DISPLAY READING (°C)	TOLERANCE (°C)	RESULT
10	9.9	-0.1	Satisfactory
20	20.0	0.0	Satisfactory
40	40.0	0.0	Satisfactory

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

#### Remark(s)

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