

## **ANNEX H**

### **CALIBRATION CERTIFICATES FOR MARINE WATER QUALITY MONITORING EQUIPMENT**



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	SAMUEL LAI	WORK ORDER:	HK2201956
CLIENT:	EGS (ASIA) LTD		
ADDRESS:	15/F., NORTH POINT INDUSTRIAL BUILDING, 499 KING'S ROAD, NORTH POINT, HONG KONG	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	14-Jan-2022
		DATE OF ISSUE:	17-Jan-2022

### SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source. The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards. The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [6920V2-M]
Serial No./ Equipment No.:	[16L100580]/ [MPP57]
Date of Calibration:	14-January-2022

### GENERAL COMMENTS

This is the Final Report and supersedes any previous report(s) with this reference.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2201956  
 SUB-BATCH: 0  
 DATE OF ISSUE: 17-Jan-2022  
 CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter  
 Brand Name/ Model No.: [YSI]/ [6920V2-M]  
 Serial No./ Equipment No.: [16L100580]/ [MPP57]  
 Date of Calibration: 14-January-2022

PARAMETERS:

Dissolved Oxygen Method Ref: APHA (21st edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.29	2.24	-0.05
5.99	5.98	-0.01
7.35	7.26	-0.09
Tolerance Limit (mg/L)		±0.20

pH Value Method Ref: APHA (21st edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.95	-0.05
7.0	7.10	+0.10
10.0	9.91	-0.09
Tolerance Limit (pH unit)		±0.20

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

Ms. Lin Wai Yu, Iris  
 Assistant Manager - Inorganic

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2201956  
 SUB-BATCH: 0  
 DATE OF ISSUE: 17-Jan-2022  
 CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter  
 Brand Name/ Model No.: [YSI]/ [6920V2-M]  
 Serial No./ Equipment No.: [16L100580]/ [MPP57]  
 Date of Calibration: 14-January-2022

PARAMETERS:

Turbidity Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.2	--
4	4.0	+0.0
40	39.9	-0.3
80	79.5	-0.6
	Tolerance Limit (%)	±10.0

Salinity Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	10.33	+3.3
20	20.09	+0.4
30	31.10	+3.7
	Tolerance Limit (%)	±10.0

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

Ms. Lin Wai Yu, Iris  
 Assistant Manager - Inorganic

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2201956  
SUB-BATCH: 0  
DATE OF ISSUE: 17-Jan-2022  
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [6920V2-M]  
Serial No./ Equipment No.: [16L100580]/ [MPP57]  
Date of Calibration: 14-January-2022

## PARAMETERS:

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
13.0	13.32	+0.3
20.5	21.72	+1.2
42.0	42.89	+0.9
	Tolerance Limit (°C)	±2.0

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

A handwritten signature in blue ink, appearing to read 'Iris'.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganic



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

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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

<u>Test Parameter</u>	<u>Reference Method</u>
Turbidity	APHA 21e 2130B
Conductivity	APHA 21e 2510B
Dissolved oxygen	APHA 21e 4500 O
pH value	APHA 21e 4500 H+
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	10.09	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

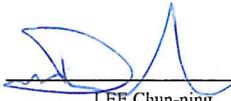
EXPECTED READING ( MS/CM AT 25°C )	DISPLAY READING	TOLERANCE ( % )	RESULT
146.9	149.71	1.91	Satisfactory
1412	1471	4.18	Satisfactory
12890	12690	-1.55	Satisfactory
58670	57736	-1.59	Satisfactory
111900	110653	-1.11	Satisfactory

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

#### (3) Dissolved oxygen

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AUTHORIZED  
SIGNATORY:



LEE Chun-ning

Assistant Manager (Chemical Testing)



## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BB030068  
Date of Issue : 21 March 2022  
Page No. : 2 of 2

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  $\pm 10.0$  (%)

### (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)

- 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.

--- END OF REPORT ---



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BB030069  
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: 16H104234  
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
pH value	APHA 21e 4500 H+
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

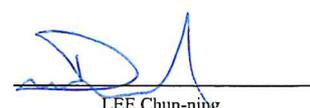
EXPECTED READING ( MS/CM AT 25°C )	DISPLAY READING	TOLERANCE ( % )	RESULT
146.9	152.1	3.54	Satisfactory
1412	1472	4.25	Satisfactory
12890	12618	-2.11	Satisfactory
58670	57412	-2.14	Satisfactory
111900	110616	-1.15	Satisfactory

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

#### (3) Dissolved oxygen

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AUTHORIZED  
SIGNATORY:

  
LEE Chun-ning  
Assistant Manager (Chemical Testing)



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Page No. : 2 of 2

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)

- 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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