

Annex F1

Calibration Certificates for  
Surface Water Quality  
Monitoring Equipment



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR BEN TAM	WORK ORDER:	HK2207536
CLIENT:	ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING	SUB-BATCH:	0
ADDRESS:	RM A 20/F, GOLD KING INDUSTRIAL BUILDING, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	LABORATORY:	HONG KONG
		DATE RECEIVED:	25-Feb-2022
		DATE OF ISSUE:	11-Mar-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 "Next Calibration Date" is recommended according to best practice principle as practised 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:	Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [Professional DSS]
Serial No./ Equipment No.:	[17B102764/17B100758]/ [EQW019]
Date of Calibration:	11-March-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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**WORK ORDER:** HK2207536  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 11-Mar-2022  
**CLIENT:** ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING

**Equipment Type:** Multifunctional Meter  
**Brand Name/ Model No.:** [YSI]/ [Professional DSS]  
**Serial No./ Equipment No.:** [17B102764/17B100758]/ [EQW019]  
**Date of Calibration:** 11-March-2022                      **Date of Next Calibration:** 11-June-2022

**PARAMETERS:**

Conductivity                      Method Ref: APHA (21st edition), 2510B

Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)
146.9	145.5	-1.0
6667	6376	-4.4
12890	12403	-3.8
58670	54159	-7.7
Tolerance Limit (%)		±10.0

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.91	3.82	-0.09
5.70	5.61	-0.09
8.51	8.42	-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	3.94	-0.06
7.0	7.05	+0.05
10.0	9.96	-0.04
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.

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 Assistant Manager - Inorganic

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**Equipment Type:** Multifunctional Meter  
**Brand Name/ Model No.:** [YSI]/ [Professional DSS]  
**Serial No./ Equipment No.:** [17B102764/17B100758]/ [EQW019]  
**Date of Calibration:** 11-March-2022                      **Date of Next Calibration:** 11-June-2022

**PARAMETERS:**

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.00	--
4	4.39	+9.7
40	38.09	-4.8
80	78.50	-1.9
400	405.88	+1.5
800	748.97	-6.4
	<b>Tolerance Limit (%)</b>	<b>±10.0</b>

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	10.09	+0.9
20	20.95	+4.8
30	31.07	+3.6
	<b>Tolerance Limit (%)</b>	<b>±10.0</b>

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

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CLIENT: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [Professional DSS]  
Serial No./ Equipment No.: [17B102764/17B100758]/ [EQW019]  
Date of Calibration: 11-March-2022 Date of Next Calibration: 11-June-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)
14.5	14.5	+0.0
22.5	21.8	-0.7
43.5	42.3	-1.2
	Tolerance Limit (°C)	±2.0

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