

Annex F7

# Calibration Certificates for Groundwater Monitoring Equipment



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR BEN TAM	WORK ORDER:	HK2228780
CLIENT:	ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS:	RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	25-Jul-2022
		DATE OF ISSUE:	29-Jul-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.:	[20J101862/ 15H103928]/ [EQW018]
Date of Calibration:	28-July-2022

### GENERAL COMMENTS

This report superseded any previous report(s) with same work order number.

Mr Chan Siu Ming, Vico  
Manager - Inorganics

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**WORK ORDER:** HK2228780  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 29-Jul-2022  
**CLIENT:** ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING

**Equipment Type:** Multifunctional Meter  
**Brand Name/ Model No.:** [YSI]/ [Professional DSS]  
**Serial No./ Equipment No.:** [20J101862/ 15H103928]/ [EQW018]  
**Date of Calibration:** 28-July-2022                      **Date of Next Calibration:** 28-October-2022

**PARAMETERS:**

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

Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)
146.9	158.0	+7.6
6667	6884	+3.3
12890	13531	+5.0
58670	58656	-0.0
	<b>Tolerance Limit (%)</b>	<b>±10.0</b>

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.96	2.94	-0.02
5.08	5.05	-0.03
7.51	7.51	+0.00
	<b>Tolerance Limit (mg/L)</b>	<b>±0.20</b>

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	7.12	+0.12
10.0	9.97	-0.03
	<b>Tolerance Limit (pH unit)</b>	<b>±0.20</b>

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

Mr Chan Siu Ming, Vico  
 Manager - Inorganics

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**Brand Name/ Model No.:** [YSI]/ [Professional DSS]  
**Serial No./ Equipment No.:** [20J101862/ 15H103928]/ [EQW018]  
**Date of Calibration:** 28-July-2022                      **Date of Next Calibration:** 28-October-2022

**PARAMETERS:**

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	-0.01	--
4	4.09	+2.3
40	38.89	-2.8
80	77.59	-3.0
400	422.82	+5.7
800	755.63	-5.5
	<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	10.34	+3.4
20	20.65	+3.2
30	30.62	+2.1
	<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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**Mr Chan Siu Ming, Vico  
 Manager - Inorganics**

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WORK ORDER: HK2228780  
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Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [Professional DSS]  
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Date of Calibration: 28-July-2022 Date of Next Calibration: 28-October-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)
9.0	8.4	-0.6
21.5	20.3	-1.2
38.0	37.1	-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 black ink, appearing to read 'Chan Siu Ming'.

Mr Chan Siu Ming, Vico  
Manager - Inorganics