

Annex F1

Calibration Certificates for  
Surface Water Quality  
Monitoring Equipment



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	BEN TAM	WORK ORDER:	HK2115892
CLIENT:	ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING		
ADDRESS:	RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	21-Apr-2021
		DATE OF ISSUE:	28-Apr-2021

### 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:	27-April-2021

### GENERAL COMMENTS

This is the Final Report and supersedes any preliminary report with this batch number.

Mr Chan Siu Ming, Vico  
Manager - Inorganic

*This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.*

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2115892  
 SUB-BATCH: 0  
 DATE OF ISSUE: 28-Apr-2021  
 CLIENT: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING

Equipment Type: Multifunctional Meter  
 Brand Name/ Model No.: [YSI]/ [Professional DSS]  
 Serial No./ Equipment No.: [17B102764/17B100758]/ [EQW019]  
 Date of Calibration: 27-April-2021                      Date of Next Calibration: 27-July-2021

**PARAMETERS:**

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

Expected Reading ( $\mu\text{S/cm}$ )	Displayed Reading ( $\mu\text{S/cm}$ )	Tolerance (%)
146.9	153.2	+4.3
6667	6371	-4.4
12890	12944	+0.4
58670	58393	-0.5
Tolerance Limit (%)		$\pm 10.0$

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.52	3.50	-0.02
5.94	5.87	-0.07
7.12	7.08	-0.04
Tolerance Limit (mg/L)		$\pm 0.20$

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

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.10	+0.10
7.0	7.16	+0.16
10.0	9.89	-0.11
Tolerance Limit (pH unit)		$\pm 0.20$

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 - Inorganic

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2115892  
 SUB-BATCH: 0  
 DATE OF ISSUE: 28-Apr-2021  
 CLIENT: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING

Equipment Type: Multifunctional Meter  
 Brand Name/ Model No.: [YSI]/ [Professional DSS]  
 Serial No./ Equipment No.: [17B102764/17B100758]/ [EQW019]  
 Date of Calibration: 27-April-2021                      Date of Next Calibration: 27-July-2021

**PARAMETERS:**

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.64	--
4	4.04	+1.0
40	38.66	-3.4
80	80.07	+0.1
400	392.82	-1.8
800	802.32	+0.3
	Tolerance Limit (%)	±10.0

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.02	--
10	10.56	+5.6
20	19.50	-2.5
30	30.30	+1.0
	Tolerance Limit (%)	±10.0

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 - Inorganic

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2115892  
SUB-BATCH: 0  
DATE OF ISSUE: 28-Apr-2021  
CLIENT: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [Professional DSS]  
Serial No./ Equipment No.: [17B102764/17B100758]/ [EQW019]  
Date of Calibration: 27-April-2021 Date of Next Calibration: 27-July-2021

## 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)
10.5	10.3	-0.2
21.0	20.8	-0.2
40.5	40.1	-0.4
	Tolerance Limit (°C)	±2.0

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 - Inorganic