Annex F1

Calibration Certificates for Surface Water Quality Monitoring Equipment



ALS Technichem (HK) Pty Ltd

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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, SUB-BATCH: (

NO. 35-41 TAI LIN PAI ROAD, LABORATORY: HONG KONG KWAI CHUNG, N.T. 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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2115892

SUB-BATCH: (

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 (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)
146.9	153.2	+4.3
6667	6371	-4.4
12890	12944	+O.4
58670	58393	-0.5
	Tolerance Limit (%)	±10.0

Dissolved Oxygen

Method Ref: APHA (21st edition), 45000: 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)	±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)	±0.20

 $\hbox{Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless}$

of equipment precision or significant figures.

Mr Chan Siu Ming, Vico Manager - Inorganic

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2115892

SUB-BATCH: C

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./

[17B102764/17B100758]/ [EQW019]

Equipment No.:

Date of Calibration: 27-April-2021 Date of Next Calibration: 27-July-2021

PARAMETERS:

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

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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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2115892

SUB-BATCH: C

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./

[17B102764/17B100758]/ [EQW019]

Equipment No.:

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

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