

Annex F1

Calibration Certificates for
Surface Water Quality
Monitoring Equipment



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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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CLIENT: ALS TECHNICHEM (HK) PTY LTD
ADDRESS: 11/F., CHUNG SHUN KNITTING CENTRE,
1-3 WING YIP STREET, KWAI CHUNG, N.T.

WORK ORDER: HK2329476
SUB-BATCH: 0
LABORATORY: HONG KONG
DATE RECEIVED: 24-Jul-2023
DATE OF ISSUE: 01-Aug-2023

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.: [HORIBA]/ [U-52G]

Serial No./ Equipment No.: [NVAE080GT]/ [N/A]

Date of Calibration: 31-July-2023

GENERAL COMMENTS

This report superseded any previous report(s) with same work order number.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

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CLIENT: ALS TECHNICHEM (HK) PTY LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [HORIBA]/ [U-52G]
Serial No./ Equipment No.: [NVAE080GT]/ [N/A]
Date of Calibration: 31-July-2023 Date of Next Calibration: 31-October-2023

PARAMETERS:

Conductivity

Method Ref: APHA (23rd edition), 2510B

Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)
146.9	140	-4.7
6667	6490	-2.7
12890	12000	-6.9
58670	55300	-5.7
	Tolerance Limit (%)	± 10.0

Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.61	2.77	+0.16
5.27	5.36	+0.09
7.20	7.23	+0.03
	Tolerance Limit (mg/L)	± 0.20

pH Value

Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.02	+0.02
7.0	7.02	+0.02
10.0	9.98	-0.02
	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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PARAMETERS:

Turbidity

Method Ref: APHA (23rd edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.8	-5.0
40	42.7	+6.8
80	75.1	-6.1
400	400	+0.0
800	859	+7.4
	Tolerance Limit (%)	±10.0

Salinity

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.38	-6.2
20	18.78	-6.1
30	28.53	-4.9
	Tolerance Limit (%)	±10.0

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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)
11.0	12.02	+1.0
25.5	26.00	+0.5
37.0	37.04	+0.0
	Tolerance Limit (°C)	±2.0

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