

Annex F1

Calibration Certificates for  
Surface Water Quality  
Monitoring Equipment



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

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

**WORK ORDER:** HK2314693  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 18-Apr-2023  
**DATE OF ISSUE:** 24-Apr-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.: [S1SXKFT0/RSV50V1T]/ [N/A]  
Date of Calibration: 18-April-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This report superseded any previous report(s) with same work order number.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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Date of Calibration: 18-April-2023 Date of Next Calibration: 18-July-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	145	-1.3
6667	6580	-1.3
12890	13100	+1.6
58670	54600	-6.9
	Tolerance Limit (%)	$\pm 10.0$

### Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.52	2.50	-0.02
5.61	5.50	-0.11
7.08	6.91	-0.17
	Tolerance Limit (mg/L)	$\pm 0.20$

### pH Value

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

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.81	-0.19
7.0	6.94	-0.06
10.0	10.09	+0.09
	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.

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## PARAMETERS:

### Turbidity

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.00	--
4	4.0	+0.0
40	38.5	-3.8
80	87.0	+8.8
400	395	-1.3
800	757	-5.4
	Tolerance Limit (%)	±10.0

### Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.01	--
10	9.95	-0.5
20	20.06	+0.3
30	30.02	+0.1
	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)
10.0	9.61	-0.4
24.5	23.78	-0.7
42.0	40.93	-1.1
	Tolerance Limit (°C)	±2.0

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