



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: HK2343082
SUB-BATCH: 0
LABORATORY: HONG KONG
DATE RECEIVED: 28-Oct-2023
DATE OF ISSUE: 06-Nov-2023

GENERAL COMMENTS

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.

This report superseded any previous report(s) with same work order number.

EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

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.: [NVAE08GT]/ [N/A]

Date of Calibration: 06-November-2023

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

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Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [HORIBA]/ [U-52G]
Serial No./ Equipment No.: [NVAE08GT]/ [N/A]
Date of Calibration: 06-November-2023 Date of Next Calibration: 06-February-2024

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 | 6250 | -6.3 |
| 12890 | 12500 | -3.0 |
| 58670 | 53600 | -8.6 |
| | Tolerance Limit (%) | ± 10.0 |

Dissolved Oxygen

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

| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
|-------------------------|--------------------------|------------------|
| 1.74 | 1.65 | -0.09 |
| 4.68 | 4.61 | -0.07 |
| 8.29 | 8.17 | -0.12 |
| | 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 | 3.93 | -0.07 |
| 7.0 | 6.95 | -0.05 |
| 10.0 | 10.00 | +0.00 |
| | 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 | 4.0 | +0.0 |
| 40 | 40.4 | +1.0 |
| 80 | 79.1 | -1.1 |
| 400 | 371 | -7.3 |
| 800 | 779 | -2.6 |
| | Tolerance Limit (%) | ±10.0 |

Salinity

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

| Expected Reading (ppt) | Displayed Reading (ppt) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.00 | -- |
| 10 | 9.36 | -6.4 |
| 20 | 18.80 | -6.0 |
| 30 | 27.92 | -6.9 |
| | Tolerance Limit (%) | ±10.0 |

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Equipment Type: Multifunctional Meter
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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) |
|-----------------------|------------------------|----------------|
| 6.5 | 6.77 | +0.3 |
| 24.0 | 24.83 | +0.8 |
| 47.5 | 46.27 | -1.2 |
| | Tolerance Limit (°C) | ±2.0 |

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