



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: MR K.W.FAN  
CLIENT: ENVIROTECH SERVICES CO.  
ADDRESS: RM113, 1/F, MY LOFT, 9 HOI WING ROAD,  
TUEN MUN, N.T. HONG KONG

WORK ORDER: HK2152127  
SUB-BATCH: 0  
LABORATORY: HONG KONG  
DATE RECEIVED: 17-Dec-2021  
DATE OF ISSUE: 22-Dec-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.: [HORIBA]/ [U-53]  
Serial No./ Equipment No.: [KP23RRSM]/ [N/A]  
Date of Calibration: 20-December-2021

### GENERAL COMMENTS

This is the Final Report and supersedes any previous report(s) with this reference.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

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Equipment Type: Multifunctional Meter  
 Brand Name/ Model No.: [HORIBA]/ [U-53]  
 Serial No./ Equipment No.: [KP23RRSM]/ [N/A]  
 Date of Calibration: 20-December-2021      Date of Next Calibration: 20-March-2022

PARAMETERS:

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

Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)
146.9	151	+2.8
6667	6180	-7.3
12890	12700	-1.5
58670	53700	-8.5
	Tolerance Limit (%)	±10.0

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.91	3.99	+0.08
5.85	5.76	-0.09
8.56	8.48	-0.08
	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	4.05	+0.05
7.0	6.92	-0.08
10.0	9.93	-0.07
	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.

Ms. Lin Wai Yu, Iris  
 Assistant Manager - Inorganic

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 Serial No./ Equipment No.: [KP23RRSM]/ [N/A]  
 Date of Calibration: 20-December-2021

Date of Next Calibration: 20-March-2022

PARAMETERS:

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.32	--
4	4.07	+1.8
40	41.7	+4.3
80	82.3	+2.9
400	419	+4.8
800	820	+2.5
	Tolerance Limit (%)	±10.0

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.02	--
10	9.93	-0.7
20	19.91	-0.4
30	29.23	-2.6
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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 Assistant Manager - Inorganic

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CLIENT: ENVIROTECH SERVICES CO.

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Brand Name/  
Model No.: [HORIBA]/ [U-53]  
Serial No./  
Equipment No.: [KP23RRSM]/ [N/A]  
Date of Calibration: 20-December-2021

Date of Next Calibration: 20-March-2022

## 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	10.08	-0.4
21.0	20.32	-0.7
39.5	38.76	-0.7
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganic

Report No. : 221149WA220558



Page 1 of 3

**Report on Calibration of HORIBA Multifunction Meter****Information Supplied by Client**

Client : ENVIROTECH SERVICE COMPANY

Client's address : RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T.,  
HONG KONG**Calibration Item**Description : Multifunctional Meter  
Manufacturer : HORIBA  
Model : U-5000  
Serial No. : -  
Equipment No. : LUAVCDWU**Laboratory Information**

Lab. sample ID : WA220558/1

Date sample received : 18/03/2022

Date of calibration : 21/03/2022

Next calibration date : 20/06/2022

Test method used : In-house comparison method

*Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.*

Report No. : 221149WA220558

Page 2 of 3

**Results :**

**A. pH calibration**

pH value at 25°C			
Theoretical	Measured	Deviation (pH value)	Maximum acceptable Deviation (pH value)
4.0	3.90	-0.10	±0.20
7.0	7.01	+0.01	
10.0	10.00	0.00	

**B. Salinity calibration**

Salinity, ppt			
Theoretical	Measured	Deviation (%)	Maximum acceptable Deviation (%)
0	0.03	-	±10.0
10	10.70	+7.0	
20	20.89	+4.5	
30	30.80	+2.7	
40	40.65	+1.6	

**C. Dissolved Oxygen calibration**

Dissolved oxygen content, mg/L			
Theoretical	Measured	Deviation (mg/L)	Maximum acceptable Deviation (mg/L)
4.85	4.89	+0.04	±0.20
6.95	6.80	-0.15	
8.26	8.41	+0.15	

Certified by : Chan Hoi Yan  
 Approved Signatory : CHAN Hoi Yan, Winnie  
 Assistant Manager

Date : 24-3-2022

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Report No. : 221149WA220558

Page 3 of 3

**Results :**

**D. Temperature calibration**

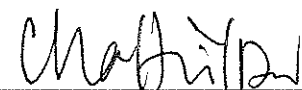
Temperature, °C			
Thermometer reading	Measured	Deviation (°C)	Maximum acceptable Deviation (°C)
10.5	10.21	-0.29	±2.0
20.3	20.53	+0.23	
40.2	39.99	-0.21	

**E. Turbidity calibration**

Turbidity, N.T.U.			
Theoretical	Measured	Deviation (%)	Maximum acceptable Deviation (%)
0	0.18	-	±10.0
4	3.98	-0.5	
40	39.5	-1.3	
80	80.6	+0.8	
400	398	-0.5	
800	803	+0.4	

**F. Conductivity calibration**

Conductivity, µS/cm			
Theoretical	Measured	Deviation (%)	Maximum acceptable Deviation (%)
146.9	152	+3.5	±10.0
1408	1520	+8.0	
6667	6530	-2.1	
12890	13500	+4.7	
24820	25100	+1.1	

Certified by :   
Approved Signatory : CHAN Hoi Yan, Winnie  
Assistant Manager

Date : 24-3-2022

**\*\* End of Report \*\***

*Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.*