



專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC090091
Date of Issue : 28 September 2023
Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited
Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment : HORIBA U-53
Manufacturer : HORIBA
Serial Number : PORBNFNT
Date of Received : 25 September 2023
Date of Calibration : 27 September 2023
Date of Next Calibration : 26 December 2023
Request No. : D-BC090091

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H ⁺ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21e 2130 B (Nephelometric Method)

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.02	0.02	Satisfactory
7.42	7.48	0.06	Satisfactory
10.01	10.05	0.04	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
15	14.67	-0.33	Satisfactory
27	26.97	-0.03	Satisfactory
36	35.83	-0.17	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)

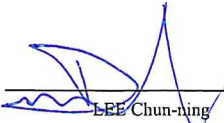
(3) Salinity

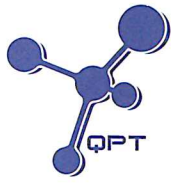
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.87	-1.30	Satisfactory
20	21.00	5.00	Satisfactory
30	30.20	0.67	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

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AUTHORIZED
SIGNATORY:


LEE Chun-ning
Assistant Manager



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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.79	8.14	0.35	Satisfactory
5.91	6.08	0.17	Satisfactory
3.85	3.78	-0.07	Satisfactory
1.70	1.29	-0.41	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

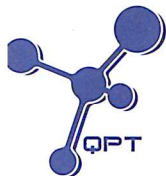
Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.18	--	Satisfactory
10	9.71	-2.9	Satisfactory
20	20.7	3.5	Satisfactory
100	104	4.0	Satisfactory
800	769	-3.9	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

--- END OF REPORT ---



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC120001
 Date of Issue : 05 December 2023
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PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited
 Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment : HORIBA U-53
 Manufacturer : HORIBA
 Serial Number : PPHNOMXY
 Date of Received : 30 November 2023
 Date of Calibration : 04 December 2023
 Date of Next Calibration : 03 March 2024
 Request No. : D-BC120001

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H ⁺ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21c 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21c 2130 B (Nephelometric Method)

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.10	0.10	Satisfactory
7.42	7.44	0.02	Satisfactory
10.01	9.92	-0.09	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
36	36.77	0.77	Satisfactory
25	26.77	1.77	Satisfactory
15	16.26	1.26	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.00	0.00	Satisfactory
20	21.07	5.35	Satisfactory
30	32.30	7.67	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

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AUTHORIZED
SIGNATORY:


 LEE Chun-ning
 Assistant Manager



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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.99	7.66	-0.33	Satisfactory
5.00	4.68	-0.32	Satisfactory
2.58	2.21	-0.37	Satisfactory
0.10	0.07	-0.03	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.62	--	Satisfactory
10	9.29	-7.1	Satisfactory
20	21.30	6.5	Satisfactory
100	105.00	5.0	Satisfactory
800	850.00	6.3	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

Remark(s)

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