

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

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Amendment Test Report No. : R-BC090067
Amendment Test Report Date of Issue : 20 September 2023
Superseded Test Report No. : D-BC080079
Superseded Test Report Date of Issue : 25 August 2023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 : PPHNOMXY
 Date of Received : 22 August 2023
 Date of Calibration : 22 August 2023
 Date of Next Calibration : 21 November 2023
 Request No. : D-BC080079

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Test Parameter</u>	<u>Reference Method</u>
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	4.16	0.16	Satisfactory
7.42	7.56	0.14	Satisfactory
10.01	9.92	-0.09	Satisfactory

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

(2) Temperature

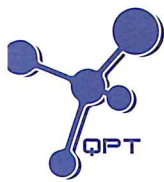
Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
18	19.15	1.15	Satisfactory
28	27.79	-0.21	Satisfactory
37	36.58	-0.42	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

**AUTHORIZED
SIGNATORY:**

LEE Chun-ning
Assistant Manager



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Amendment Test Report No. : R-BC090067
Amendment Test Report Date of Issue : 20 September 2023
Superseded Test Report No. : D-BC080079
Superseded Test Report Date of Issue : 25 August 2023
Page No. : 2 of 2

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.11	1.10	Satisfactory
20	21.27	6.35	Satisfactory
30	32.28	7.60	Satisfactory

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

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.50	7.88	0.38	Satisfactory
6.31	6.76	0.45	Satisfactory
1.11	1.29	0.18	Satisfactory
0.07	0.00	-0.07	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.98	--	Satisfactory
10	10.7	7.00	Satisfactory
20	20.7	3.50	Satisfactory
100	107	7.00	Satisfactory
800	807	0.90	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 ---



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

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

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)

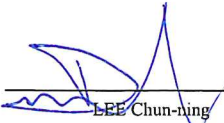
(3) Salinity

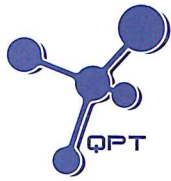
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.87	-1.30	Satisfactory
20	21.00	5.00	Satisfactory
30	30.20	0.67	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED
SIGNATORY:


LEE Chun-ning
Assistant Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong

Email: info@qualityprotest.com; Website: www.qualityprotest.com

Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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

(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 ---