

Air Quality

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Representative ForTung Lo Hang	Site ID:	AM1	Date:	06-Jul-2023
Serial No.:	1105	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P _a) (mm Hg):	754.9	Actual Temperature during Calibration (T _a) (deg K):	294.0
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Calibration Orifice

Model:	TE-5025A	Slope (m _c):	2.10188
Serial No.:	4166	Intercept (b _c):	-0.35800
Calibration Due Date:	19-Jun-24	Corr. Coeff:	0.99998

Calibration Data

Plate or Test #	ΔH ₂ O (in)	Qa, X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	12.60	1.865	52.0	52.18
13	10.20	1.695	46.0	46.16
10	8.00	1.521	42.0	42.14
7	5.00	1.238	34.0	34.12
5	3.00	0.997	26.0	26.09

Sampler Calibration Relationship (Qa on x-axis, IC on y-axis)

m = 29.3019 b = -2.7348 Corr. Coeff = 0.9985

Calculations

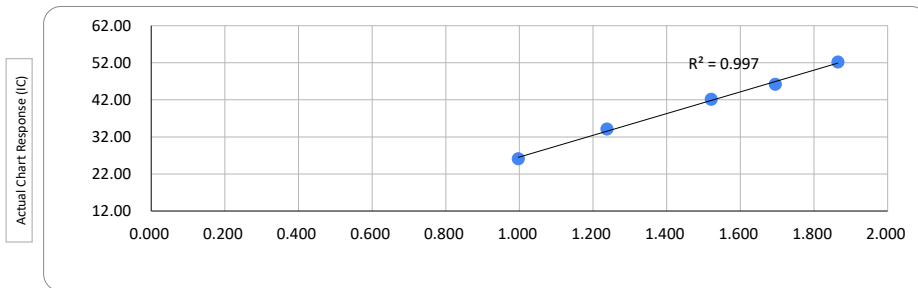
$$Q_a = 1/m_c \cdot [\text{Sqrt}(\Delta H_2O \cdot (P_a/P_{std}) \cdot (T_{std}/T_a)) - b_c]$$

$$IC = I \cdot (\text{Sqrt}(P_a/P_{std}) \cdot (T_{std}/T_a))$$

Q_a = actual flow rate
 IC = corrected chart response
 I = actual chart response
 m_c = calibrator slope
 b_c = calibrator intercept

m = sampler slope
 b = sampler intercept
 T_{std} = 298 deg K
 P_{std} = 760 mm Hg
 T_a = actual temperature during calibration (deg K)
 P_a = actual pressure during calibration (mm Hg)

Flow Rate Chart



Standard Flow Rate (m³/min)

Checked by: Tandy Tse Senior Consultant, Environmental

Date: 06-Jul-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Representative For Heung Yuen Wai	Site ID:	AM2	Date:	06-Jul-2023
Serial No.:	1106	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P _a) (mm Hg):	754.9	Actual Temperature during Calibration (T _a) (deg K):	294.0
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Calibration Orifice

Model:	TE-5025A	Slope (m _c):	2.10188
Serial No.:	4166	Intercept (b _c):	-0.35800
Calibration Due Date:	19-Jun-24	Corr. Coeff:	0.99998

Calibration Data

Plate or Test #	ΔH ₂ O (in)	Qa, X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	12.00	1.824	61.0	61.21
13	10.30	1.702	55.0	55.19
10	8.00	1.521	48.0	48.16
7	5.20	1.259	41.0	41.14
5	3.00	0.997	33.0	33.11

Sampler Calibration Relationship (Qa on x-axis, IC on y-axis)

m = 32.9874 b = -0.4203 Corr. Coeff = 0.9946

Calculations

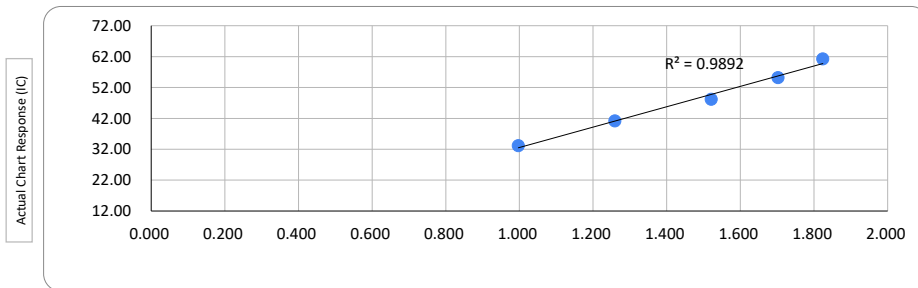
$$Q_a = 1/m_c \cdot [\text{Sqrt}(\Delta H_2O \cdot (P_a/P_{Std}) \cdot (T_{Std}/T_a)) - b_c]$$

$$IC = I \cdot (\text{Sqrt}(P_a/P_{Std}) \cdot (T_{Std}/T_a))$$

Q_a = actual flow rate
 IC = corrected chart response
 I = actual chart response
 m_c = calibrator slope
 b_c = calibrator intercept

m = sampler slope
 b = sampler intercept
 T_{Std} = 298 deg K
 P_{Std} = 760 mm Hg
 T_a = actual temperature during calibration (deg K)
 P_a = actual pressure during calibration (mm Hg)

Flow Rate Chart



Standard Flow Rate (m³/min)

Checked by: Tandy Tse Senior Consultant, Environmental

Date: 06-Jul-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Representative For Wo Keng Shan Tsuen	Site ID:	AM3	Date:	06-Jul-2023
Serial No.:	1856	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	754.9	Actual Temperature during Calibration (T_a) (deg K):	294.0
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Calibration Orifice

Model:	TE-5025A	Slope (m_c):	2.10188
Serial No.:	4166	Intercept (b_c):	-0.35800
Calibration Due Date:	19-Jun-24	Corr. Coeff:	0.99998

Calibration Data

Plate or Test #	ΔH_2O (in)	Qa, X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	12.70	1.872	54.0	54.18
13	10.40	1.710	50.0	50.17
10	8.10	1.529	44.0	44.15
7	5.20	1.259	36.0	36.12
5	3.10	1.011	29.0	29.10

Sampler Calibration Relationship (Qa on x-axis, IC on y-axis)

$m = \underline{\hspace{2cm} 29.5749 \hspace{2cm}}$

 $b = \underline{\hspace{2cm} -0.9086 \hspace{2cm}}$

 Corr. Coeff = $\underline{\hspace{2cm} 0.9995 \hspace{2cm}}$

Calculations

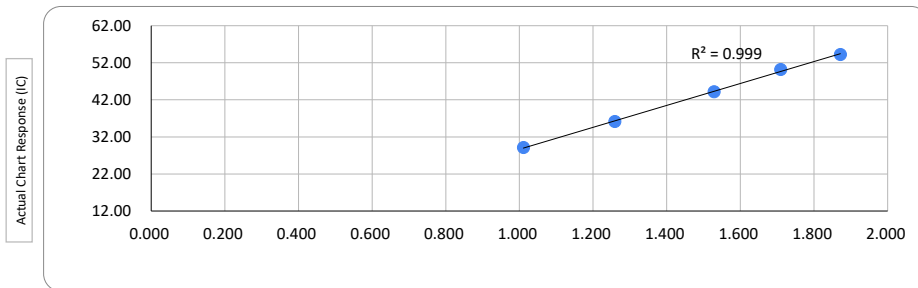
$$Q_a = 1/m_c \cdot [\text{Sqrt}(\Delta H_2O \cdot (P_a/P_{std}) \cdot (T_{std}/T_a)) - b_c]$$

$$IC = I \cdot (\text{Sqrt}(P_a/P_{std}) \cdot (T_{std}/T_a))$$

Q_a = actual flow rate
 IC = corrected chart response
 I = actual chart response
 m_c = calibrator slope
 b_c = calibrator intercept

m = sampler slope
 b = sampler intercept
 T_{std} = 298 deg K
 P_{std} = 760 mm Hg
 T_a = actual temperature during calibration (deg K)
 P_a = actual pressure during calibration (mm Hg)

Flow Rate Chart



Standard Flow Rate (m³/min)

Checked by: Tandy Tse
 Senior Consultant, Environmental

Date: 06-Jul-2023

Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Verification Test Date: 3-Dec-22 to 4-Dec-22
 Next Verification Test Date: 2-Dec-23
 Unit-under-Test- Model No. Sibata LD-5R
 Unit-under-Test Serial No. OZ4545
 Our Report Reference No. RPT-22-HVS-0026
 Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type	Tisch TSP HVS	Tisch HVS Calibrator	
Standard Equipment Model No.	TE-5170X	TE-5025A	
Equipment serial no.	MFC 1106	3465	
Last Calibration Date	1-Dec-22	28-Jun-22	
Next Calibration Date	31-Jan-23	27-Jun-23	

Verification Test No.	Date	Time			K-Factor K-Factor (K=C/R)	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m ³), (C)	
		Start-time	End-time	Elapsed Time (in min)					x-axis	y axis
1	3/12/2022	194.73	198.08	201.00	0.00120	51	10251	R222043/1	61	
2	3/12/2022	198.08	201.27	191.40	0.00102	34	6444	R222043/2	34	
3	3/12/2022	201.27	204.35	184.80	0.00111	44	8193	R222043/3	49	
4	4/12/2022	252.37	255.36	179.40	0.00122	55	9927	R222044/1	67	
5	4/12/2022	255.38	258.38	180.00	0.00120	52	9360	R222044/2	62	
6	4/12/2022	258.38	261.38	180.00	0.00112	63	11340	R222044/3	70	
					0.00114					

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.1

By Linear Regression of y on x:

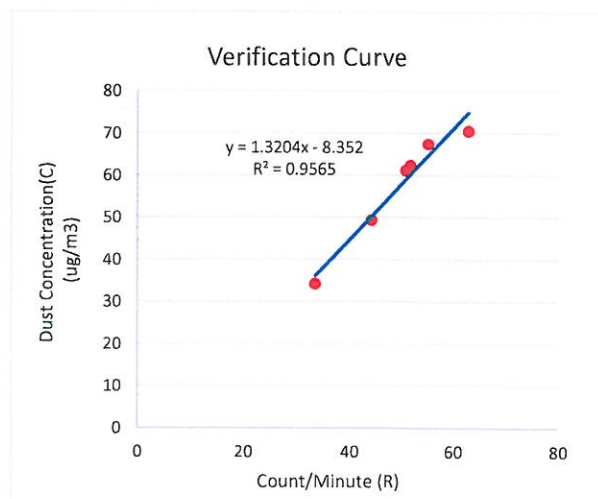
slope, mh= 1.3204

intercept, ch= -8.3520

*Correlation Coefficient, R= 0.9780

Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: 
 Technical Manager

Date: 05-12-2022

Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Verification Test Date: 3-Dec-22 to 4-Dec-22
 Next Verification Test Date: 2-Dec-23
 Unit-under-Test- Model No.: Sibata LD-5R
 Unit-under-Test Serial No.: 882106
 Our Report Reference No.: RPT-22-HVS-0027
 Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type	Tisch TSP HVS	Tisch HVS Calibrator	
Standard Equipment Model No.	TE-5170X	TE-5025A	
Equipment serial no.	MFC 1106	3465	
Last Calibration Date	1-Dec-22	28-Jun-22	
Next Calibration Date	31-Jan-23	27-Jun-23	

Verification Test No.	Date	Time			K-Factor K-Factor (K=C/R)	Counts/Minute (R) x-axis	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C) y axis
		Start-time	End-time	Elapsed Time (in min)					
1	3/12/2022	194.73	198.08	201.00	0.00123	50	9983	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	0.00092	37	7146	R222043/2	34
3	3/12/2022	201.27	204.35	184.80	0.00103	48	8870	R222043/3	49
4	4/12/2022	252.37	255.36	179.40	0.00108	62	11183	R222044/1	67
5	4/12/2022	255.38	258.38	180.00	0.00110	57	10260	R222044/2	62
6	4/12/2022	258.38	261.38	180.00	0.00108	65	11760	R222044/3	70
					0.00107				

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.1

By Linear Regression of y on x:

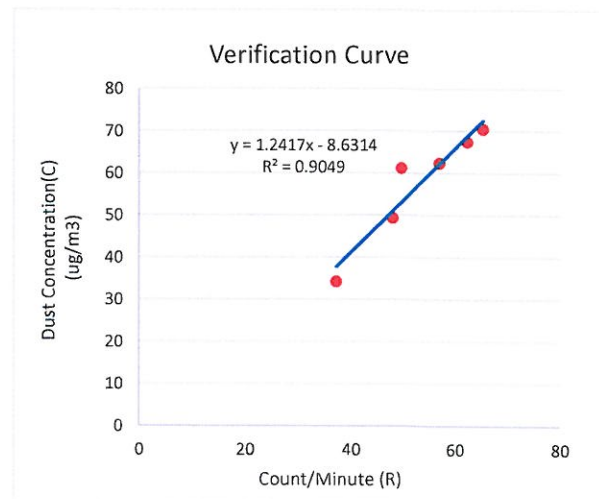
slope, mh= 1.2417

intercept, ch= -8.6314

*Correlation Coefficient, R= 0.9513

Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: IA
 Technical Manager

Date: 05-12-2022

Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Verification Test Date: 3-Dec-22 to 4-Dec-22
 Next Verification Test Date: 2-Dec-23
 Unit-under-Test- Model No. Sibata LD-5R
 Unit-under-Test Serial No. 882110
 Our Report Reference No. RPT-22-HVS-0025
 Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type	Tisch TSP HVS	Tisch HVS Calibrator	
Standard Equipment Model No.	TE-5170X	TE-5025A	
Equipment serial no.	MFC 1106	3465	
Last Calibration Date	1-Dec-22	28-Jun-22	
Next Calibration Date	31-Jan-23	27-Jun-23	

Verification Test No.	Date	Time			K-Factor	Counts/Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m ³), (C)	
		Start-time	End-time	Elapsed Time (in min)					K-Factor (K=C/R)	x-axis
1	3/12/2022	194.73	198.08	201.00	0.00101	61	12194	R222043/1	61	
2	3/12/2022	198.08	201.27	191.40	0.00089	38	7337	R222043/2	34	
3	3/12/2022	201.27	204.35	184.80	0.00108	46	8439	R222043/3	49	
4	4/12/2022	252.37	255.36	179.40	0.00110	61	11003	R222044/1	67	
5	4/12/2022	255.38	258.38	180.00	0.00112	56	10080	R222044/2	62	
6	4/12/2022	258.38	261.38	180.00	0.00104	68	12180	R222044/3	70	
					0.00104					

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.0

By Linear Regression of y on x:

slope, mh= 1.1984

intercept, ch= -8.3267

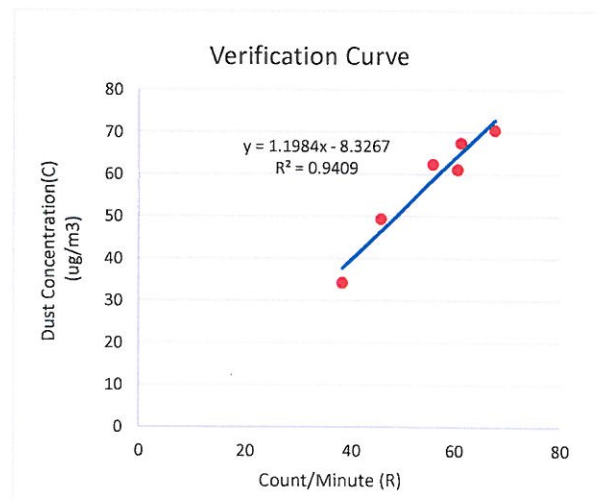
*Correlation Coefficient, R= 0.9700

Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.

Verified By: 
 Technical Manager

Date: 05-12-2022





Website www.acuityhk.com
 Unit E, 12/F, Ford Glory Plaza
 No: 37-39 Wing Hong Street,
 Cheung Sha Wan, Kowloon
 Tel: (852) 2698 6833
 Fax: (852) 2698 9383

Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Verification Test Date: 3-Dec-22 to 4-Dec-22
 Next Verification Test Date: 2-Dec-23
 Unit-under-Test- Model No. Sibata LD-5R
 Unit-under-Test Serial No. 942532
 Our Report Reference No. RPT-22-HVS-0024
 Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type	Tisch TSP HVS	Tisch HVS Calibrator	
Standard Equipment Model No.	TE-5170X	TE-5025A	
Equipment serial no.	MFC 1106	3465	
Last Calibration Date	1-Dec-22	28-Jun-22	
Next Calibration Date	31-Jan-23	27-Jun-23	

Verification Test No.	Date	Time			K-Factor K-Factor (K=C/R)	Counts/ Minute (R) x-axis	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C) y axis
		Start-time	End-time	Elapsed Time (in min)					
1	3/12/2022	194.73	198.08	201.00	0.00111	55	11122	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	0.00093	37	7082	R222043/2	34
3	3/12/2022	201.27	204.35	184.80	0.00110	45	8316	R222043/3	49
4	4/12/2022	252.37	255.36	179.40	0.00113	60	10704	R222044/1	67
5	4/12/2022	255.38	258.38	180.00	0.00120	52	9360	R222044/2	62
6	4/12/2022	258.38	261.38	180.00	0.00104	68	12180	R222044/3	70
					0.00108				

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.1

By Linear Regression of y on x:

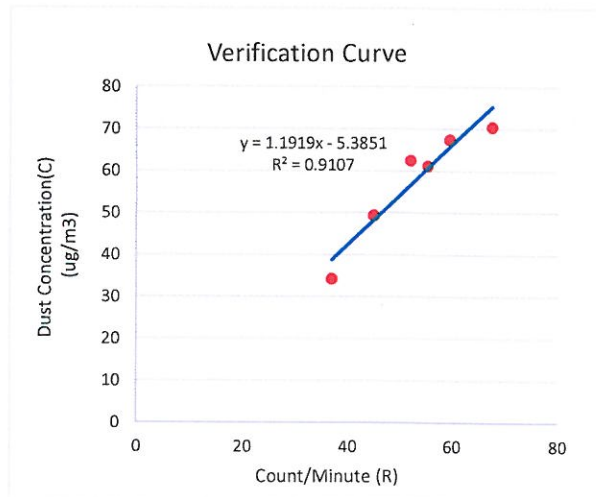
slope, mh= 1.1919

intercept, ch= -5.3851

*Correlation Coefficient, R= 0.9543

Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: [Signature]
 Technical Manager

Date: 05-12-2022

**RECALIBRATION
DUE DATE:
June 19, 2024**

Certificate of Calibration

Calibration Certification Information			
Cal. Date: June 19, 2023	Rootsmeter S/N: 438320	Ta: 294	°K
Operator: Jim Tisch		Pa: 754.9	mm Hg
Calibration Model #: TE-5025A	Calibrator S/N: 4166		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4500	3.2	2.00
2	3	4	1	1.0260	6.4	4.00
3	5	6	1	0.9170	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7240	12.8	8.00

Data Tabulation					
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
1.0025	0.6914	1.4190	0.9958	0.6867	0.8826
0.9983	0.9730	2.0068	0.9915	0.9664	1.2481
0.9961	1.0863	2.2436	0.9894	1.0790	1.3955
0.9951	1.1346	2.3532	0.9883	1.1270	1.4636
0.9897	1.3670	2.8380	0.9830	1.3578	1.7651
QSTD	m=	2.10188	QA	m=	1.31616
	b=	-0.03580		b=	-0.02227
	r=	0.99998		r=	0.99998

Calculations			
Vstd=	$\Delta Vol \left(\frac{Pa - \Delta P}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)$	Va=	$\Delta Vol \left(\frac{Pa - \Delta P}{Pa} \right)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH:	calibrator manometer reading (in H2O)
ΔP:	rootsmeter manometer reading (mm Hg)
Ta:	actual absolute temperature (°K)
Pa:	actual barometric pressure (mm Hg)
b:	intercept
m:	slope

RECALIBRATION
US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Noise

Certificate of Calibration

for

Description: *Sound Level Meter*
Manufacturer: *NTi Audio*
Type No.: *XL2 (Serial No.: A2A-13661-E0)*
Microphone: *ACO 7052 (Serial No.:68914)*
Preamplifier: *NTi Audio MA220 (M2211) (Serial No.:6282)*

Submitted by:

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

Upon receipt for calibration, the instrument was found to be:

- Within (31.5Hz – 8kHz)**
 Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 20 August 2022

Date of calibration: 22 August 2022

Date of NEXT calibration: 21 August 2023

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 22 August 2022

Certificate No.: APJ22-071-CC001



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1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature: 23.4 °C
 Air Pressure: 1005 hPa
 Relative Humidity: 68.5 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94	1000	93.8	±0.4	

Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94	1000	93.8	Ref	
			104		103.8	±0.3	
			114		114.0	±0.3	

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94	1000	93.8	Ref	
		Slow			93.8	±0.3	

Certificate No.: APJ22-071-CC001



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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dB	SPL	Fast	94	31.5	93.9	±2.0
					63	94.0	±1.5
					125	93.9	±1.5
					250	93.8	±1.4
					500	93.8	±1.4
					1000	93.8	Ref
					2000	93.4	±1.6
					4000	93.0	±1.6
					8000	92.2	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA	SPL	Fast	94	31.5	54.6	-39.4 ±2.0
					63	67.7	-26.2 ±1.5
					125	77.8	-16.1 ±1.5
					250	85.2	-8.6 ±1.4
					500	90.6	-3.2 ±1.4
					1000	93.8	Ref
					2000	94.6	+1.2 ±1.6
					4000	94.0	+1.0 ±1.6
					8000	91.2	-1.1 +2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBC	SPL	Fast	94	31.5	90.9	-3.0 ±2.0
					63	93.1	-0.8 ±1.5
					125	93.7	-0.2 ±1.5
					250	93.8	-0.0 ±1.4
					500	93.8	-0.0 ±1.4
					1000	93.8	Ref
					2000	93.3	-0.2 ±1.6
					4000	92.2	-0.8 ±1.6
					8000	89.3	-3.0 +2.1; -3.1

5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



Certificate of Calibration

for

Description: *Sound Level Meter*
Manufacturer: *NTi Audio*
Type No.: *XL2 (Serial No.: A2A-13548-E0)*
Microphone: *ACO 7052 (Serial No.:73912)*
Preamplifier: *NTi Audio M2211 MA220 (Serial No.:5735)*

Submitted by:

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

Upon receipt for calibration, the instrument was found to be:

- Within (31.5Hz – 8kHz)**
- Outside**

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 2 February 2023

Date of calibration: 6 February 2023

Date of NEXT calibration: 5 February 2024

Calibrated by: _____
Calibration Technician

Certified by: _____
*Mr. Ng Yan Wa
Laboratory Manager*

Date of issue: 6 February 2023

Certificate No.: APJ22-124-CC001



1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature: 23.9 °C
 Air Pressure: 1006 hPa
 Relative Humidity: 47.9 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94	1000	94.1	±0.4	

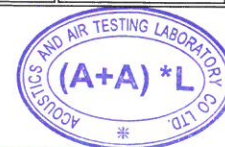
Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94	1000	94.1	Ref	
			104		104.1	±0.3	
			114		114.1	±0.3	

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94	1000	94.1	Ref	
		Slow			94.1	±0.3	

Certificate No.: APJ22-124-CC001



Page 2 of 4

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dB	SPL	94	Fast	31.5	94.1	±2.0
					63	94.2	±1.5
					125	94.1	±1.5
					250	94.1	±1.4
					500	94.2	±1.4
					1000	94.1	Ref
					2000	94.5	±1.6
					4000	95.2	±1.6
					8000	94.9	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA	SPL	94	Fast	31.5	54.8	-39.4±2.0
					63	68.0	-26.2±1.5
					125	78.0	-16.1±1.5
					250	85.5	-8.6±1.4
					500	91.0	-3.2±1.4
					1000	94.1	Ref
					2000	95.7	+1.2±1.6
					4000	96.2	+1.0±1.6
					8000	93.9	-1.1±2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBC	SPL	94	Fast	31.5	91.2	-3.0±2.0
					63	93.4	-0.8±1.5
					125	94.0	-0.2±1.5
					250	94.1	-0.0±1.4
					500	94.2	-0.0±1.4
					1000	94.1	Ref
					2000	94.3	-0.2±1.6
					4000	94.4	-0.8±1.6
					8000	92.0	-3.0 +2.1; -3.1

Certificate No.: APJ22-124-CC001



Page 3 of 4

5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.10
	250 Hz	± 0.05
	500 Hz	± 0.10
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



CALIBRATION CERTIFICATE

Product : SOUND CALIBRATOR
Type : NC-75
Serial number : 35124527
Manufacturer : RION CO., LTD.
Calibration quantities : Sound pressure level (with reference standard microphone)
Calibration method : Measured by specified secondary standard microphone
according to JCSS calibration procedure specified by RION.
Ambient conditions : Temperature 23.9 °C, Relative humidity 49 %,
Static pressure 100.6 kPa
Calibration date : 02/11/2022 (DD/MM/YYYY)
Calibration location : 3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan
RION CO., LTD. Calibration Room

We hereby certify that the results of this calibration were as follows.

Issue date : 09/11/2022 (DD/MM/YYYY)

Junichi Kawamura
Manager
Quality Assurance Section,
Quality Assurance Department,
Environmental Instrument Division,
RION CO., LTD.
3-20-41 Higashimotomachi, Kokubunji,
Tokyo 185-8533, Japan



This certificate is based on article 144 of the Measurement Law and indicates the result of calibration in accordance with measurement standards traceable to Primary Measurement Standards (National Standards) which realizes the physical units of measurement according to the International System of Units (SI).

The accreditation symbol is attestation of which the result of calibration is traceable to Primary Measurement Standards (National Standards).

The certificate shall not be reproduced except in full, without the written approval of the issuing laboratory.

The calibration laboratory who issued this calibration certificate conforms to ISO/IEC 17025:2017.

This calibration certificate was issued by the calibration laboratory accredited by IA Japan who is a signatory to the Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC). This (These) calibration result(s) may be accepted internationally through ILAC/APAC MRA.

CALIBRATION RESULT

1. Sound pressure level (with reference standard microphone)

Measured value	Expanded uncertainty *1
93.99 dB	0.09 dB

Specified secondary standard microphone:

Type : 4160
 Serial number : 2973341
 Reference Sound pressure : 2×10^{-5} Pa

*1 Defines an interval estimated to have a level of confidence of approximately 95 %.

Coverage factor $k=2$

Calibration result is the calibration value in ambient conditions during calibration.

BE OUT OF JCSS CALIBRATION

1. Frequency

Measured value	Measurement uncertainty ($k=2$)
1000.0 Hz	2.7×10^{-4} Hz

Working measurement standard universal counter:

Type : 53132A
 Serial number : MY40005574
 (JCSS Calibration Certificate No. 2208001889940)

2. Total distortion

Measured value
0.2 %

Working measurement standard distortion meter:

Type : VA-2230A
 Serial number : 11076061
 (A2LA Calibration Certificate No. 1502-03109)

- closing -



AI

Calibration Certificate

Certificate No. **300737**

Page 1 of 2 Pages

Customer : Acuity Sustainability Consulting Limited

Address : Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, H.K.

Order No. : Q30320

Date of receipt : 2-Feb-23

Item Tested

Description : Hot Wire Anemometer

Manufacturer : RS PRO

I.D. : ASCL-EQ-111

Model : RS-90

Serial No. : 210722208

Test Conditions

Date of Test : 13-Feb-23

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : T03, Z04.

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S155	Std. Anemometer	206240	NIM-PRC
S223C	Std. Thermometer	205617	NIM-PRC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

Calibrated by : _____

James Yau

Approved by : _____

Steve Kwan

Date: 13-Feb-23

This Certificate is issued by:
Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646



Calibration Certificate

Certificate No. 300737

Page 2 of 2 Pages

Results :

1. Velocity

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
0.00	0.00	± (3 % of reading + 0.3 m/s)
2.50	2.43	
5.00	5.04	
10.00	10.07	
15.00	15.65	
19.00	19.87	

2. Temperature

Applied Value (°C)	UUT Reading (°C)	Mfr's Spec.
23.12	23.0	± 2 °C

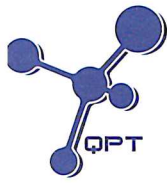
Remark : 1. UUT: Unit-Under-Test

2. Uncertainty : ± (0.9 % + 0.16 m/s) for Velocity, ± 0.1 °C for Temperature, for a confidence probability of not less than 95 %.

3. Atmospheric Pressure: 1 002 hPa

----- END -----

Water Quality



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-BC070089

Date of Issue : 31 July 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 : YSI ProDSS (Multi-Parameters)

Manufacturer : YSI (a xylem brand)

Serial Number : S/N: 22C106561

Date of Received : 26 July 2023

Date of Calibration : 26 July 2023

Date of Next Calibration : 25 October 2023

Request No. : D-BC070089

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	4.08	0.08	Satisfactory
7.42	7.36	-0.06	Satisfactory
10.01	10.09	0.08	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
14	14.8	0.8	Satisfactory
25	25.1	0.1	Satisfactory
36	36.3	0.3	Satisfactory

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

(3) Salinity

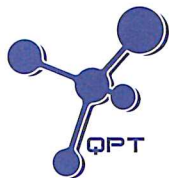
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.02	0.20	Satisfactory
20	20.63	3.15	Satisfactory
30	31.61	5.37	Satisfactory

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-BC070089
Date of Issue : 31 July 2023
Page No. : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.38	7.42	0.04	Satisfactory
6.30	6.38	0.08	Satisfactory
4.90	4.83	-0.07	Satisfactory
1.00	1.03	0.03	Satisfactory

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

(5) Turbidity

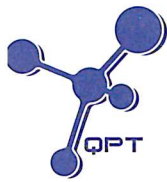
Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10	--	Satisfactory
10	9.88	-1.20	Satisfactory
20	21.25	6.30	Satisfactory
100	102.97	3.00	Satisfactory
800	787.11	-1.60	Satisfactory

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-BC050055

Date of Issue : 17 May 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 : 11 May 2023
Date of Calibration : 17 May 2023
Date of Next Calibration : 16 August 2023
Request No. : D-BC050055

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
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 21e 4500 O
Turbidity	APHA 21e 2130 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.14	0.14	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.06	0.05	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
16	17.5	1.5	Satisfactory
24	25.7	1.7	Satisfactory
32	32.3	0.3	Satisfactory

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

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.66	-3.40	Satisfactory
20	19.52	-2.40	Satisfactory
30	30.20	0.67	Satisfactory

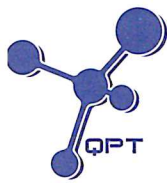
Tolerance of Salinity should be less than ± 10.0 (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED
SIGNATORY:


LEE Chun-ning

Assistant Manager (Chemical Testing)



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
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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC050055
Date of Issue : 17 May 2023
Page No. : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
8.22	7.88	-0.34	Satisfactory
4.31	3.90	-0.41	Satisfactory
1.81	1.37	-0.44	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	0.00	--	Satisfactory
10	10.8	8.00	Satisfactory
20	20.0	0.00	Satisfactory
100	106	6.00	Satisfactory
800	811	1.40	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 ---



Calibration Certificate

Certificate No. 210252

Page 1 of 2 Pages

Customer : Acuity Sustainability Consulting Limited

Address : Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, H.K.

Order No. : Q24081

Date of receipt : 31-Oct-22

Item Tested

Description : Flow Probe

Manufacturer : Global Water

Model : FP111

I.D. : --

Serial No. : 22K100859

Test Conditions

Date of Test : 7-Nov-22

Supply Voltage : --

Ambient Temperature : 23°C

Relative Humidity : 78%

Test Specifications

Calibration check.

Ref. Document/Procedure : V12

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S179	Std. Tape	201868	NIM-PRC
S136A	Stop Watch	201878	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Kin Wong

Approved by : 
Alan Chu

This Certificate is issued by:
Hong Kong Calibration Ltd.

Date: 7-Nov-22

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646



Calibration Certificate

Certificate No. 210252

Page 2 of 2 Pages

Results :

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
0.96	1.0	± 0.1 m/s

Remarks : 1. UUT : Unit-Under-Test

2. Uncertainty : ± 1 %, for a confidence probability of not less than 95%.

----- END -----

Landfill Gas

CERTIFICATION OF CALIBRATION



Date Of Calibration: 17-Aug-2022

Certificate Number: G508566_2/31066

Issued by: QED Environmental Systems Ltd.

Customer: Onuee Electronics Ltd
C3-E TCL Science Park No.1001 Zhong Shan Yuan Rd.
Nanshan Shenzhen 518052 CHINA

Description: Gas Analyser

Model: GEM5000

Serial Number: G508566

UKAS Accredited results:

Methane (CH ₄)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	4.9	0.072
15.0	14.9	0.13
60.0	59.6	0.42

Carbon Dioxide (CO ₂)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	5.0	0.074
15.0	14.9	0.13
40.0	40.0	0.29

Oxygen (O ₂)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
21.2	21.3	0.25

All concentrations are molar.

CH₄, CO₂ readings recorded at : 33.0 °C ± 2.5 °C

O₂ readings recorded at : 22.7 °C ± 2.5 °C

Barometric Pressure : 1002 mbar ± 4 mbar

Method of Test : The analyser is calibrated in a temperature controlled chamber using a series of reference gases, in compliance with procedure LP004.

Instrument has passed calibration as the measurement result is within the specification limit. The specification limit takes into account the measurement uncertainty.

The results relate only to the item calibrated

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance:114 IGC Instance:N/A

Page 1 of 2 | LP015GIUKAS-2.5

www.qedenv.com +44 (0) 333 800 0088 sales@qedenv.co.uk

QED Environmental Systems Ltd. Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QP, UNITED KINGDOM

Registered in England and Wales 1898734

CERTIFICATION OF CALIBRATION



Date Of Calibration: 17-Aug-2022

Certificate Number: G508566_2/31066

Issued by: QED Environmental Systems Ltd.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Calibrations marked 'Non-UKAS Accredited results' on this certificate have been included for completeness.

Non-UKAS accredited results after adjustment:

Barometer (mbar)	
Reference	Instrument Reading
1002	1002

Additional Gas Cells		
Gas	Certified Gas (ppm)	Instrument Reading (ppm)
H ₂ S	52.6	53

Date of Issue : 18-Aug-2022

Approved by Signatory

Keeley Knight

Laboratory Inspection

End of Certificate

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance: 114 IGC Instance: N/A

Page 2 of 2 | LP015GIUKAS-2.5

www.qedenv.com +44 (0) 333 800 0088 sales@qedenv.co.uk

QED Environmental Systems Ltd. Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QP, UNITED KINGDOM

Registered in England and Wales 1898734

Calibration Certificate

Customer Name Paul Y Construction Co. Ltd
 Model PS200
 Serial 373075
 Tested On 16 November, 2022
 Cal Expires 16 November, 2023

Audible Alarm PASS
 Visual Alarm PASS
 Calibrated For METHANE
 100% LEL Equivalent 4.4% by VOL

Overall Results PASS



Calibration Result

Gas Applied	Range	Reading	Calibrated	Result
Zero Air	% LEL	0	0	PASS
Zero Air	% O2	20.9	20.9	PASS
Zero Air	PPM CO	0	0	PASS
Zero Air	PPM H2S	0	0	PASS

Gas Applied	Range	Reading	Calibrated	Result
50% LEL Methane	% LEL	61	50	PASS
18% VOL Oxygen	% O2	17.8	N/A	PASS
100 PPM Carbon Monoxide	PPM CO	71	100	PASS
25 PPM Hydrogen Sulphide	PPM H2S	22	25	PASS

Calibrated By Ivan Lo :

