



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

Information of Calibrated Equipment

Verification Test Date:	23-Feb-25	to	2-Mar-25	Next Verification Test Date:	23-Feb-26
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	851816				
Our Report Reference No.:	RPT-25-HVS-0103				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

Standard Equipment Information

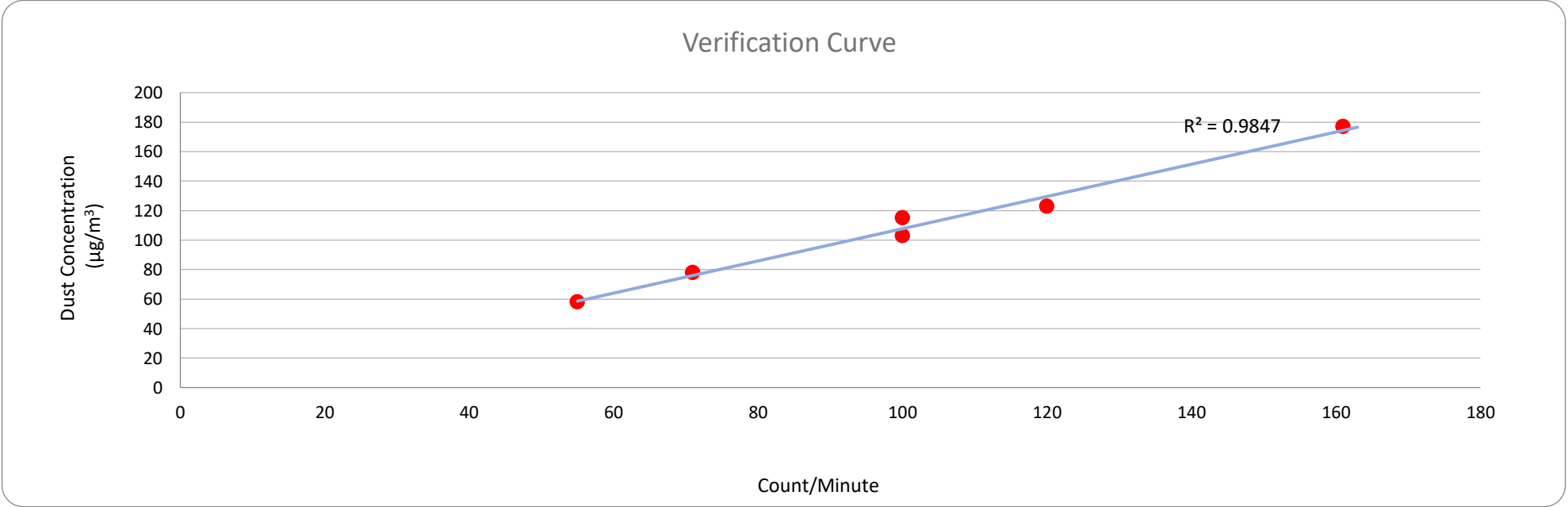
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	10-Feb-25	2-Dec-24
Next Calibration Date:	9-Apr-25	2-Dec-25

Equipment Verification Result

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration (µg/m³) y-axis
1	23/02/2025	5385.00	5388.00	180.00	12780	71	78
2	23/02/2025	5388.00	5391.00	180.00	28980	161	177
3	23/02/2025	5394.00	5397.00	180.00	18000	100	115
4	2/03/2025	5397.00	5400.00	180.00	9900	55	58
5	2/03/2025	5400.00	5403.00	180.00	18000	100	103
6	2/03/2025	5403.00	5406.00	180.00	21600	120	123

Linear Regression of y on x

Slope, K factor:	1.0922	Intercept:	-1.4901	*Correlation Coefficient, R:	0.9923
Verification Test Result:	Strong Correlation, Results were accepted.			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



Operated By: Andy Li
Project Technician, Environmental

Date: 04-03-2025

Checked By: Vega Wong
Senior Consultant, Environmental

Date: 04-03-2025

Certification of Calibration

Information of Unit-under-test (UUT)

Date of Calibration:	15-Aug-2025 and 21-Aug-2025	Next Calibration Date:	15-Aug-26
UUT Manufacturer:	Sibata	UUT Model No.:	LD-5R
UUT Serial No.:	882106	Report Reference No.:	RPT-25-HVS-0163
Calibration Location:	Tung Chung East		

Information of Reference Equipment

Reference Equipment Manufacturer:	Tisch Environmental	Tisch Environmental
Reference Equipment Model No.:	TE-5170X	TE-5025A
Reference Equipment Serial No.:	1086	3465
Last Calibration Date:	15-Aug-25	2-Dec-24
Next Calibration Date:	15-Oct-25	2-Dec-25

Calibration of 1-Hour TSP Result

Calibration Point	Results from UUT	Results from Standard Equipment
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Reference Concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	105	106
2	131	128
3	120	117
4	154	150
5	143	139
6	119	115
Average	129	126

Linear Regression of Y on X

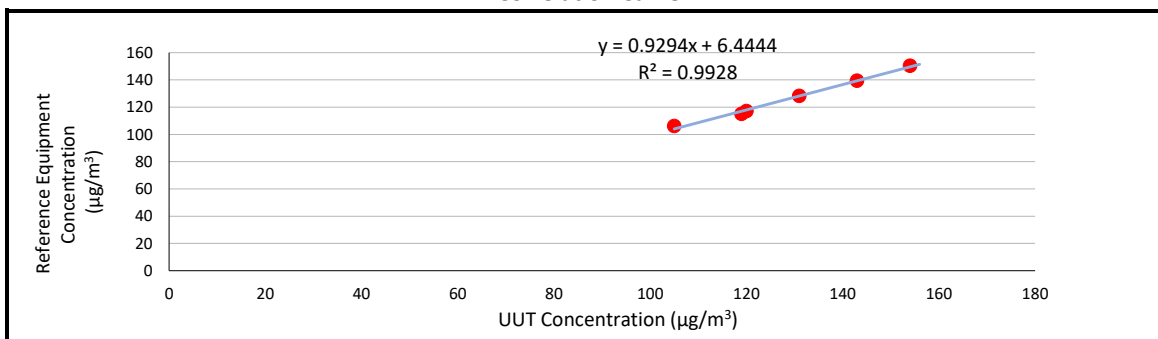
Slope, mv: 0.9294	Intercept: 6.4444	*Correlation Coefficient: 0.9964
Verification Test Result: Strong Correlation, Results were accepted.		

* If the Correlation Coefficient < 0.90, check and recalibrate.

Set Calibration Factor

Particulate Concentration by Reference Equipment ($\mu\text{g}/\text{m}^3$):	126
Particulate Concentration by UUT ($\mu\text{g}/\text{m}^3$):	129
Measuring Time, (min):	60
K Factor = High Volume Sampler / UUT, ($\mu\text{g}/\text{m}^3$):	0.98

Correlation Curve



Operated By: Andy Li
Project Technician,
Environmental

Signature: 

Date: 28-08-2025

Checked By: Joe Ho
Lead Consultant,
Environmental

Signature: 

Date: 28-08-2025

Certificate of Calibration

for

Description: **Sound Level Meter**
Manufacturer: **RION**
Type No.: **NL-53 (Serial No.: 01130783)**
Microphone: **UC-59 (Serial No.: 25498)**
Preamplifier: **NH-25 (Serial No.:33674)**

Submitted by:

Customer: **Aurecon Hong Kong Limited**
Address: **Unit 1608, 16/F, Tower B, Manulife Financial Centre,
223-231 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong**

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

- ☒ **Within (31.5Hz – 4kHz)**
☐ **Outside**

the allowable tolerance.

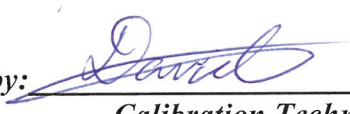
The test equipment used for calibration are traceable to National Standards via:

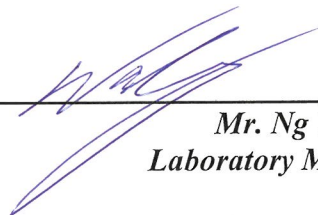
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 26 February 2025

Date of calibration: 27 February 2025

Date of NEXT calibration: 26 February 2026

Calibrated by: 
Calibration Technician

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

Date of issue: 27 February 2025

Certificate No.: APJ24-154-CC002



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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: 25.8 °C
Air Pressure: 1006 hPa
Relative Humidity: 54.9 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	Ref
				104		104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	Ref
		Slow				94.0	±0.3

Certificate No.: APJ24-154-CC002



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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dB	SPL	94	31.5	94.2	± 2.0
				63	94.1	± 1.5
				125	94.1	± 1.5
				250	94.0	± 1.4
				500	94.0	± 1.4
				1000	94.0	Ref
				2000	93.6	± 1.6
				4000	92.5	± 1.6

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	94	31.5	54.7	-39.4 ± 2.0
				63	67.9	-26.2 ± 1.5
				125	78.0	-16.1 ± 1.5
				250	85.4	-8.6 ± 1.4
				500	90.8	-3.2 ± 1.4
				1000	94.0	Ref
				2000	94.8	$+1.2 \pm 1.6$
				4000	93.5	$+1.0 \pm 1.6$

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBC	SPL	94	31.5	91.2	-3.0 ± 2.0
				63	93.3	-0.8 ± 1.5
				125	93.9	-0.2 ± 1.5
				250	94.1	-0.0 ± 1.4
				500	94.0	-0.0 ± 1.4
				1000	94.0	Ref
				2000	93.4	-0.2 ± 1.6
				4000	91.7	-0.8 ± 1.6



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
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 No.: APJ24-154-CC002



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Certificate of Calibration

for

Description: Sound Level Meter
Manufacturer: RION
Type No.: NL-53 (Serial No.: 01130784)
Microphone: UC-59 (Serial No.: 24908)
Preamplifier: NH-25 (Serial No.: 33675)

Submitted by:

Customer: Aurecon Hong Kong Limited
Address: Unit 1608, 16/F, Tower B, Manulife Financial Centre,
223-231 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong

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

- ☒ Within (31.5Hz – 4kHz)
☐ 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: 26 February 2025

Date of calibration: 27 February 2025

Date of NEXT calibration: 26 February 2026

Calibrated by: David
Calibration Technician

Certified by: Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 27 February 2025

Certificate No.: APJ24-154-CC003



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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: 25.8 °C
Air Pressure: 1006 hPa
Relative Humidity: 54.9 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

Certificate No.: APJ24-154-CC003



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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	94	31.5	94.2	±2.0
				63	94.2	±1.5
				125	94.2	±1.5
				250	94.1	±1.4
				500	94.1	±1.4
				1000	94.0	Ref
				2000	93.7	±1.6
				4000	92.5	±1.6

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	31.5	54.9	-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	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	94.9	+1.2 ±1.6
				4000	93.5	+1.0 ±1.6

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	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	94.1	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.5	-0.2 ±1.6
				4000	91.7	-0.8 ±1.6

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	± 0.05
	125 Hz	± 0.10
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
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 No.: APJ24-154-CC003



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Certificate of Calibration

for

Description: Sound Level Meter
Manufacturer: RION
Type No.: NL-53 (Serial No.: 01130785)
Microphone: UC-59 (Serial No.: 25374)
Preamplifier: NH-25 (Serial No.: 33676)

Submitted by:

Customer: Aurecon Hong Kong Limited
Address: Unit 1608, 16/F, Tower B, Manulife Financial Centre,
223-231 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong

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

- ☒ Within (31.5Hz – 4kHz)
☐ 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: 26 February 2025

Date of calibration: 27 February 2025

Date of NEXT calibration: 26 February 2026

Calibrated by: David
Calibration Technician

Certified by: Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 27 February 2025

Certificate No.: APJ24-154-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: 25.8°C
Air Pressure: 1006 hPa
Relative Humidity: 54.9 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

Certificate No.: APJ24-154-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	94	31.5	94.3	±2.0
				63	94.1	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.0	±1.4
				1000	94.0	Ref
				2000	93.7	±1.6
				4000	92.6	±1.6

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	31.5	54.8	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
				125	78.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
				500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	94.9	+1.2 ±1.6
				4000	93.6	+1.0 ±1.6

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	31.5	91.2	-3.0 ±2.0
				63	93.3	-0.8 ±1.5
				125	93.9	-0.2 ±1.5
				250	94.1	-0.0 ±1.4
				500	94.1	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.5	-0.2 ±1.6
				4000	91.8	-0.8 ±1.6

Certificate No.: APJ24-154-CC001



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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
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 No.: APJ24-154-CC001



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Certificate of Calibration

for

Description: *Sound Level Calibrator*

Manufacturer: *RION*

Type No.: *NC-75*

Serial No.: *35124527*

Submitted by:

Customer: *Aurecon Hong Kong Limited*

Address: *Unit 1608, 16/F, Tower B, Manulife Financial Centre,
223-231 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong*

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

☒ **Within**

☐ **Outside**

the allowable tolerance.

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

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

Date of receipt: 19 November 2024

Date of calibration: 20 November 2024

Date of NEXT calibration: 19 November 2025

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 20 November 2024



Certificate No.: APJ23-154-CC006

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1. Calibration Precautions:

- 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 Specifications:

Calibration check

3. Calibration Conditions:

Air Temperature: 24.2 °C
Air Pressure: 1006 hPa
Relative Humidity: 61.2 %

4. Calibration Equipment:

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

5. Calibration Results**5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	93.8

6. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

Note:

The values given in this certification only related to the values measured at the time of the calibration.



Certificate No.: APJ23-154-CC006

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Certificate of Calibration

for

Description: *Sound Level Calibrator*

Manufacturer: *RION*

Type No.: *NC-75*

Serial No.: *35124528*

Submitted by:

Customer: *Aurecon Hong Kong Limited*

Address: *Unit 1608, 16/F, Tower B,
Manulife Financial Centre,
223-231 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong*

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

☒ **Within**

☐ **Outside**

the allowable tolerance.

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

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

Date of receipt: 12 February 2025

Date of calibration: 13 February 2025

Date of NEXT calibration: 12 February 2026

Calibrated by: *David*
Calibration Technician

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

Date of issue: 13 February 2025

Certificate No.: APJ24-145-CC002



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1. Calibration Precautions:

- 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 Specifications:

Calibration check

3. Calibration Conditions:

Air Temperature: 24.3 °C
Air Pressure: 1006 hPa
Relative Humidity: 68.2 %

4. Calibration Equipment:

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

5. Calibration Results**5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	94.1

6. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

Note:

The values given in this certification only related to the values measured at the time of the calibration.

Certificate No.: APJ24-145-CC002



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Certificate of Calibration

for

Description: *Sound Level Calibrator*

Manufacturer: *RION*

Type No.: *NC-75*

Serial No.: *34524163*

Submitted by:

Customer: *Aurecon Hong Kong Limited*

Address: *Unit 1608, 16/F, Tower B,
Manulife Financial Centre,
223-231 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong*

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

- ☒ **Within**
☐ **Outside**

the allowable tolerance.

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

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

Date of receipt: 23 July 2025

Date of calibration: 24 July 2025

Date of NEXT calibration: 23 July 2026

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 24 July 2025

Certificate No.: APJ25-045-CC004



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1. Calibration Precautions:

- 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 Specifications:

Calibration check

3. Calibration Conditions:

Air Temperature: 24.6 °C
Air Pressure: 1006 hPa
Relative Humidity: 67.2 %

4. Calibration Equipment:

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

5. Calibration Results**5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	93.8

6. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

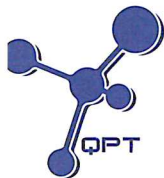
Note:

The values given in this certification only related to the values measured at the time of the calibration.

Certificate No.: APJ25-045-CC004



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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-BE080098

Date of Issue : 20 August 2025

Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit 1608, 16/F, Tower B, Manulife Fin. Centre 223 - 231 Wai Yip Street, Kwun Tong,

Kowloon (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment : YSI ProDSS Multi Parameters

Manufacturer : YSI

Serial Number : 15M101091

Date of Received : 15 August 2025

Date of Calibration : 18 August 2025

Date of Next Calibration : 14 November 2025

Request No. : D-BE080098

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

pH value

Temperature

Dissolved oxygen

Conductivity

Salinity

Turbidity

Reference Method

APHA 21e 4500-H⁺ B

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure

APHA 23e 4500-O G (Membrane Electrode Method)

APHA 21e 2510 B

APHA 21e 2520 B

APHA 21e 2130 B (Nephelometric Method)

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance (pH unit)	Result
4.00	3.93	-0.07	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	9.89	-0.12	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance (°C)	Result
13.3	13.4	0.1	Satisfactory
24.6	24.6	0	Satisfactory
34.8	34.6	-0.2	Satisfactory

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

(3) Dissolved oxygen

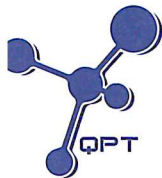
Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance (mg/L)	Result
7.41	7.59	0.18	Satisfactory
5.20	5.38	0.18	Satisfactory
3.91	3.98	0.07	Satisfactory
0.08	0.32	0.24	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED
SIGNATORY:

FUNG Yuen-ching
Laboratory Manager



專業化驗有限公司

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(4) Conductivity

Expected Reading ($\mu\text{S/cm}$ at 25°C)	Display Reading ($\mu\text{S/cm}$ at 25°C)	Tolerance (%)	Result
146.9	160.3	9.1	Satisfactory
1412	1412	0	Satisfactory
12890	12596	-2.3	Satisfactory
58670	58120	-0.9	Satisfactory
111900	111080	-0.7	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.15	1.50	Satisfactory
20	20.01	0.05	Satisfactory
30	30.36	1.20	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance ^(a) (%)	Result
0	0.64	-	Satisfactory
10	9.75	-2.5	Satisfactory
20	20.06	0.3	Satisfactory
100	92.09	-7.9	Satisfactory
800	801.54	0.2	Satisfactory

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

^(a) For 0 NTU, Display Reading should be less than 1 NTU

Remark(s)

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

--- END OF REPORT ---