

# Air Quality Monitoring Equipment

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

### Information of Calibrated Equipment

Verification Test Date:	<b>13-Sep-24</b>	to	<b>14-Sep-24</b>	Next Verification Test Date:	<b>12-Sep-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	851816				
Our Report Reference No.:	RPT-23-HVS-0067				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

### Standard Equipment Information

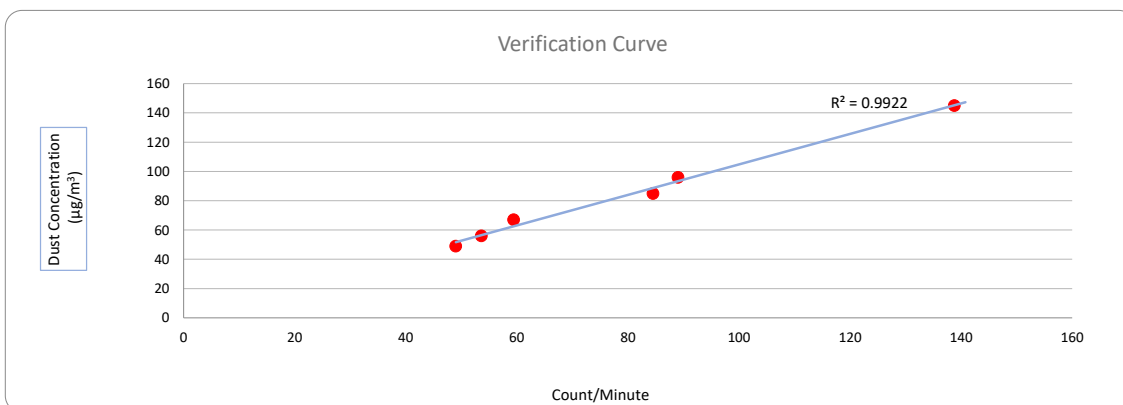
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	13-Sep-24	16-Jan-24
Next Calibration Date:	12-Sep-25	15-Jan-25

### 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 ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	28/11/23	8789.68	8792.68	180.00	16023	89	96
2	28/11/23	8792.68	8795.68	180.00	15213	85	85
3	28/11/23	8795.68	8798.68	180.00	8823	49	49
4	30/11/23	8798.68	8801.68	180.00	10698	59	67
5	30/11/23	8801.68	8804.68	180.00	24980	139	145
6	30/11/23	8804.68	8807.68	180.00	9653	54	56

### Linear Regression of y on x

Slope, K factor:	<b><u>1.0418</u></b>	Intercept:	<b><u>0.6307</u></b>	*Correlation Coefficient,R:	<b><u>0.9961</u></b>
Verification Test Result:	<b><u>Strong Correlation, Results were accepted.</u></b>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



Operated By:

Andy Li

Project Technician, Environmental

Date: 14-09-2024

Checked By:

Tandy Tse

Senior Consultant, Environmental

Date: 14-09-2024

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

### Information of Calibrated Equipment

Verification Test Date:	<b>13-Sep-24</b>	to	<b>14-Sep-24</b>	Next Verification Test Date:	<b>12-Sep-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	882106				
Our Report Reference No.:	RPT-23-HVS-0068				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

### Standard Equipment Information

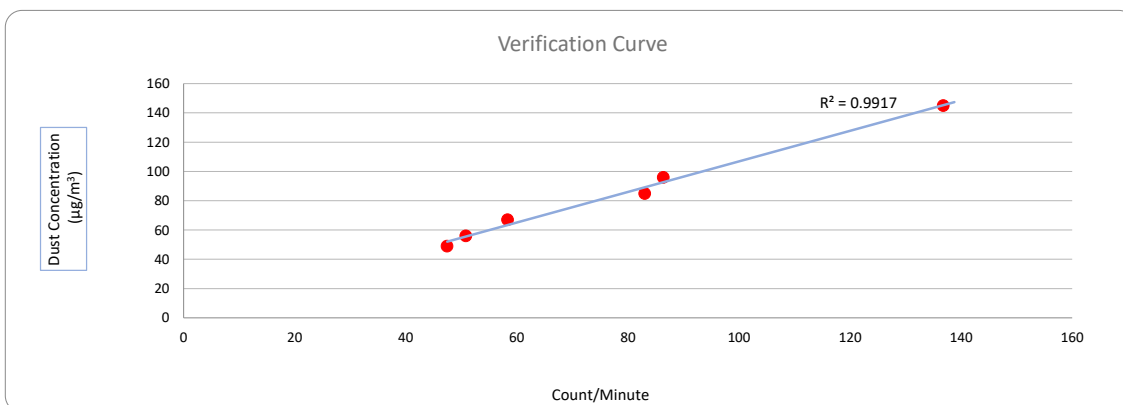
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	13-Sep-24	16-Jan-24
Next Calibration Date:	12-Sep-25	15-Jan-25

### 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 ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	28/11/23	8789.68	8792.68	180.00	15546	86	96
2	28/11/23	8792.68	8795.68	180.00	14944	83	85
3	28/11/23	8795.68	8798.68	180.00	8543	47	49
4	30/11/23	8798.68	8801.68	180.00	10499	58	67
5	30/11/23	8801.68	8804.68	180.00	24622	137	145
6	30/11/23	8804.68	8807.68	180.00	9145	51	56

### Linear Regression of y on x

Slope, K factor:	<b><u>1.0437</u></b>	Intercept:	<b><u>2.4993</u></b>	*Correlation Coefficient,R:	<b><u>0.9958</u></b>
Verification Test Result:	<b><u>Strong Correlation, Results were accepted.</u></b>				* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Operated By:

Andy Li

Project Technician, Environmental

Date: 14-09-2024

Checked By:

Tandy Tse

Senior Consultant, Environmental

Date: 14-09-2024

# Noise Quality Monitoring Equipment



# *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*



Page 1 of 4

**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



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	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



Page 4 of 4

# *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**



*Page 1 of 4*

**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



Page 2 of 4



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	$\pm 2.0$
				63	94.1	$\pm 1.5$
				125	94.1	$\pm 1.5$
				250	94.0	$\pm 1.4$
				500	94.0	$\pm 1.4$
				1000	94.0	Ref
				2000	93.6	$\pm 1.6$
				4000	92.5	$\pm 1.6$

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	$-39.4 \pm 2.0$
				63	67.9	$-26.2 \pm 1.5$
				125	78.0	$-16.1 \pm 1.5$
				250	85.4	$-8.6 \pm 1.4$
				500	90.8	$-3.2 \pm 1.4$
				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	$-3.0 \pm 2.0$
				63	93.3	$-0.8 \pm 1.5$
				125	93.9	$-0.2 \pm 1.5$
				250	94.1	$-0.0 \pm 1.4$
				500	94.0	$-0.0 \pm 1.4$
				1000	94.0	Ref
				2000	93.4	$-0.2 \pm 1.6$
				4000	91.7	$-0.8 \pm 1.6$



## 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



Page 4 of 4



# 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



Page 1 of 4

**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, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	94.0	±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	94.0	Ref
			104		104.0	±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	94.0	Ref
		Slow			94.0	±0.3

Certificate No.: APJ24-154-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	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



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	± 0.05
	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



Page 4 of 4

# *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*



Page 1 of 2

**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



Page 2 of 2



# *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

Page 1 of 2

**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

Page 2 of 2



# *Certificate of Calibration*

*for*

*Description:* *Sound Level Calibrator*

*Manufacturer:* *RION*

*Type No.:* *NC-75*

*Serial No.:* *35124529*

***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 October 2024

**Date of calibration:** 24 October 2024

**Date of NEXT calibration:** 23 October 2025

*Calibrated by:*   
*Calibration Technician*

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

**Date of issue:** 24 October 2024



*Certificate No.:* APJ23-154-CC005

Page 1 of 2

**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: 23.9 °C  
Air Pressure: 1008 hPa  
Relative Humidity: 59.6 %

**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:

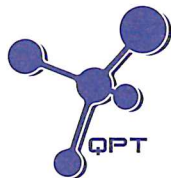
The values given in this certification only related to the values measured at the time of the calibration.



Certificate No.: APJ23-154-CC005

Page 2 of 2

# Water Quality Monitoring Equipment



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-BE060050

Date of Issue : 13 June 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 : 06 June 2025

Date of Calibration : 10 June 2025

Date of Next Calibration : 10 September 2025

Request No. : D-BE060050

### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

#### Test Parameter

pH value

Temperature

Salinity

Dissolved oxygen

Turbidity

Conductivity

#### Reference Method

APHA 21e 4500-H<sup>+</sup> B

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

APHA 21e 2520 B

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

APHA 21e 2130 B (Nephelometric Method)

APHA 21e 2510 B

### PART D - CALIBRATION RESULT

#### (1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance (pH unit)	Result
4.00	4.15	0.15	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	9.96	-0.05	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance (°C)	Result
35.5	35.4	-0.1	Satisfactory
25.8	25.6	-0.2	Satisfactory
14.2	14.4	0.2	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  (°C)

#### (3) Salinity

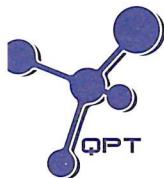
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.49	4.9	Satisfactory
20	20.93	4.65	Satisfactory
30	30.83	2.77	Satisfactory

Tolerance of Salinity should be less than  $\pm 10.0$  (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED  
SIGNATORY:

FUNG Yuen-ching  
Laboratory 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-BE060050

Date of Issue : 13 June 2025

Page No. : 2 of 2

### (4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance (mg/L)	Result
7.73	8.02	0.29	Satisfactory
5.24	5.51	0.27	Satisfactory
3.04	3.18	0.14	Satisfactory
0.08	0.20	0.12	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  (mg/L)

### (5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance <sup>(a)</sup> (%)	Result
0	0.04	-	Satisfactory
10	10.09	0.9	Satisfactory
20	18.81	-6.33	Satisfactory
100	94.55	-5.45	Satisfactory
800	811.97	1.50	Satisfactory

Tolerance of Turbidity should be less than  $\pm 10.0$  (%)

### (6) Conductivity

Expected Reading ( $\mu\text{S/cm}$ at 25°C)	Display Reading ( $\mu\text{S/cm}$ at 25°C)	Tolerance (%)	Result
146.9	139.5	-5.04	Satisfactory
1412	1495	5.88	Satisfactory
12890	12839	-0.40	Satisfactory
58670	58697	0.05	Satisfactory
111900	112304	0.36	Satisfactory

Tolerance of Conductivity should be less than  $\pm 10.0$  (%)

<sup>(a)</sup> 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 ---