

## **Appendix D:**

# **Calibration Certificates**

# Air Quality Monitoring



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### SUB-CONTRACTING REPORT

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|         |                                                              |                |                    |
|---------|--------------------------------------------------------------|----------------|--------------------|
| CONTACT | : MR MAGNUM FAN                                              | WORK ORDER     | : <b>HK2545415</b> |
| CLIENT  | : ENVIROTECH SERVICES CO.                                    |                |                    |
| ADDRESS | : RM 712, 7/F, MY LOFT 9 HOI WING ROAD,<br>TUEN MUN, N.T. HK | SUB-BATCH      | : 1                |
|         |                                                              | DATE RECEIVED  | : 18-OCT-2025      |
|         |                                                              | DATE OF ISSUE  | : 24-OCT-2025      |
| PROJECT | : Not Specified                                              | NO. OF SAMPLES | : 1                |
|         |                                                              | CLIENT ORDER   | : ---              |

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#### General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
  - Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
  - Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
  - Calibration was subcontracted to Envirotech Services Company.
- 

#### Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

*Signatories*

*Position*

Richard Fung

Managing Director

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This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

**ALS Technichem (HK) Pty Ltd**  
Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 [www.alsglobal.com](http://www.alsglobal.com)

WORK ORDER : HK2545415  
SUB-BATCH : 1  
CLIENT : ENVIROTECH SERVICES CO.  
PROJECT : Not Specified



| ALS Lab ID    | Client's Sample ID    | Sample Type | Sample Date | External Lab Report No. |
|---------------|-----------------------|-------------|-------------|-------------------------|
| HK2545415-001 | Sibata LD-3B (336338) | Equipments  | 11-Oct-2025 | S/N: 336338             |

----- END OF REPORT -----



Envirotech Services Co.

Rm. 712, 7/F  
My Loft,  
9 Hoi Wing Road,  
Tuen Mun, H.K.  
Tel : 2560 8450  
Fax : 2560 8553  
E-mail: envirotech@netvigator.com

## Equipment Verification Report (TSP)

### Equipment Calibrated:

Type: Laser Dust Monitor  
Manufacturer: Sibata LD-3B  
Serial No.: 336338  
Equipment Ref.: N/A  
ALS Job Order: HK2544216

### Standard Equipment

Standard Equipment: High Volume Sampler (TSP)  
Location: Envirotech Room (Calibration Room)  
Equipment Ref.: HVS 8162  
Last Calibration Date: 11-Oct-2025

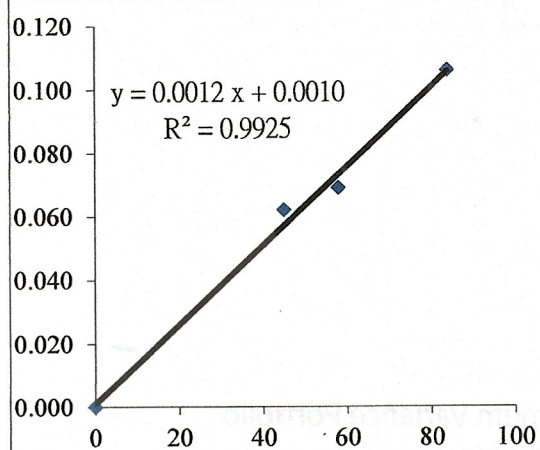
### Equipment Verification Results:

Verification Date: 11-Oct-2025

| Hour       | Time      | Mean<br>Temp °C | Mean<br>Pressure<br>(hpa) | TSP Level in mg<br>(Standard Equipment)<br>(Y-Axis) | Total Count<br>(Calibrated Equipment)<br>(X-Axis) |
|------------|-----------|-----------------|---------------------------|-----------------------------------------------------|---------------------------------------------------|
| 1hr 00mins | 0905-1005 | 28.2            | 1013.1                    | 0.062                                               | 45                                                |
| 2hr 00mins | 1015-1215 | 28.5            | 1013.0                    | 0.069                                               | 58                                                |
| 3hr 00mins | 1410-1710 | 31.1            | 1012.8                    | 0.106                                               | 84                                                |

### Linear Regression of Y or X

Slope (K-factor): 0.0012(mg)/Count  
Correlation Coefficient (R): 0.9962  
Date of Issue: 18-Oct-2025



### Remarks:

1. Strong Correlation ( $>0.8$ )
2. Factor 0.0012(mg)/Count should be applied for TSP monitoring

\*If  $R < 0.5$ , repair or verification is required for the equipment

Operator: P.F.Yeung Signature Tai Date: 18 Oct 2025

QC Reviewer: K.F.Ho Signature ad Date: 18 Oct 2025

## TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

|                                          |                                  |
|------------------------------------------|----------------------------------|
| Location : Rm. 712, My Loft, Tuen Mun    | Date of Calibration: 11-Oct-25   |
| HVS ID: 8162                             | Next Calibration Date: 11-Dec-25 |
| Name and Model : TISCH HVS Model TE-5170 | Operator: K.F.Ho                 |

### CONDITIONS

|                          |        |                            |       |
|--------------------------|--------|----------------------------|-------|
| Sea Level Pressure (hpa) | 1013.1 | Corrected Pressure (mm Hg) | 759.9 |
| Temperature (°C)         | 28.2   | Temperature (K)            | 301.2 |

### CALIBRATION ORIFICE

|          |          |                |          |
|----------|----------|----------------|----------|
| Make:    | TISCH    | Qstd Slope     | 2.08315  |
| Model:   | TE-5025A | Qstd Intercept | -0.04938 |
| Serial#: | 2454     |                |          |

### CALIBRATION

| Plate No. | H2O(L) (in) | H2O(R) (in) | H2O (in) | Qstd (m3/min) | I (chart) | IC (corrected) | LINEAR REGRESSION                                           |
|-----------|-------------|-------------|----------|---------------|-----------|----------------|-------------------------------------------------------------|
| 18        | 6.8         | 6.6         | 13.4     | 1.772         | 58        | 57.70          | Slope= 44.490<br>Intercept= -21.891<br>Corr. Coeff.= 0.9991 |
| 13        | 5.6         | 5.6         | 11.2     | 1.622         | 50        | 49.74          |                                                             |
| 10        | 4.2         | 4.0         | 8.2      | 1.391         | 40        | 39.79          |                                                             |
| 7         | 2.6         | 2.6         | 5.2      | 1.113         | 27        | 26.86          |                                                             |
| 5         | 1.6         | 1.6         | 3.2      | 0.878         | 18        | 17.91          |                                                             |

#### Calculations:

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

#### For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)] - b)$$

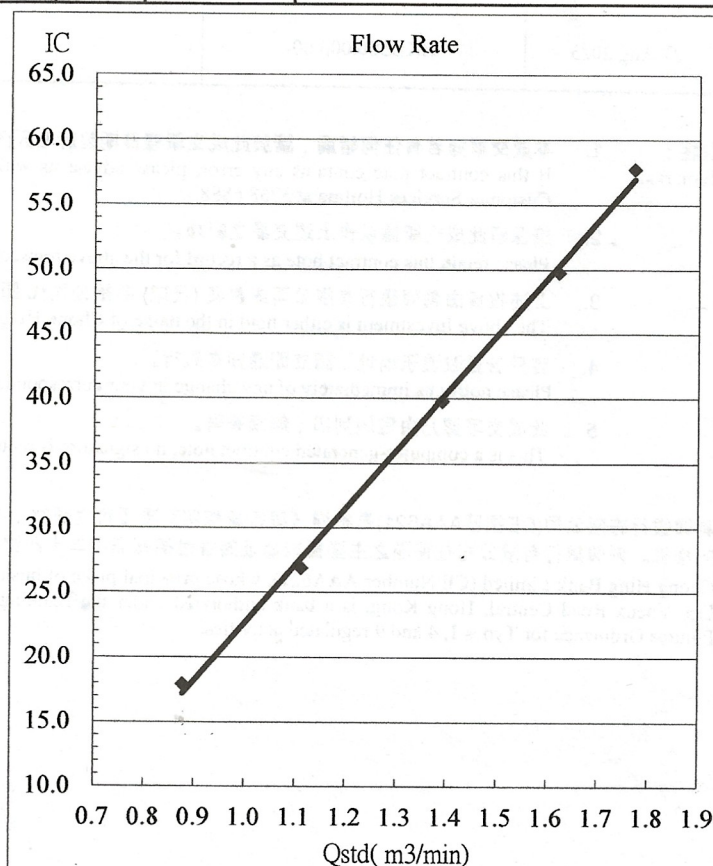
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



## Certificate of Calibration

**Calibration Certification Information**
**Cal. Date:** December 2, 2024

**Rootsmeter S/N:** 438320

**Ta:** 293

**°K**
**Operator:** Jim Tisch

**Pa:** 757.4

**mm Hg**
**Calibration Model #:** TE-5025A

**Calibrator S/N:** 2454

| Run | Vol. Init<br>(m3) | Vol. Final<br>(m3) | ΔVol.<br>(m3) | ΔTime<br>(min) | ΔP<br>(mm Hg) | ΔH<br>(in H2O) |
|-----|-------------------|--------------------|---------------|----------------|---------------|----------------|
| 1   | 1                 | 2                  | 1             | 1.4200         | 3.2           | 2.00           |
| 2   | 3                 | 4                  | 1             | 1.0170         | 6.4           | 4.00           |
| 3   | 5                 | 6                  | 1             | 0.9090         | 7.9           | 5.00           |
| 4   | 7                 | 8                  | 1             | 0.8700         | 8.8           | 5.50           |
| 5   | 9                 | 10                 | 1             | 0.7140         | 12.8          | 8.00           |

**Data Tabulation**

| Vstd<br>(m3) | Qstd<br>(x-axis) | $\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$<br>(y-axis) | Va        | Qa<br>(x-axis) | $\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$<br>(y-axis) |
|--------------|------------------|---------------------------------------------------------------------------------------------|-----------|----------------|------------------------------------------------------------|
| 1.0093       | 0.7108           | 1.4238                                                                                      | 0.9958    | 0.7013         | 0.8796                                                     |
| 1.0051       | 0.9883           | 2.0136                                                                                      | 0.9916    | 0.9750         | 1.2439                                                     |
| 1.0031       | 1.1035           | 2.2512                                                                                      | 0.9896    | 1.0886         | 1.3907                                                     |
| 1.0018       | 1.1515           | 2.3611                                                                                      | 0.9884    | 1.1361         | 1.4586                                                     |
| 0.9965       | 1.3956           | 2.8476                                                                                      | 0.9831    | 1.3769         | 1.7592                                                     |
| <b>QSTD</b>  | m=               | <b>2.08315</b>                                                                              | <b>QA</b> | m=             | <b>1.30443</b>                                             |
|              | b=               | <b>-0.04938</b>                                                                             |           | b=             | <b>-0.03050</b>                                            |
|              | r=               | <b>0.99985</b>                                                                              |           | r=             | <b>0.99985</b>                                             |

**Calculations**

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

**Standard Conditions**

|                                           |           |
|-------------------------------------------|-----------|
| <b>Tstd:</b>                              | 298.15 °K |
| <b>Pstd:</b>                              | 760 mm Hg |
| <b>Key</b>                                |           |
| 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



### SUB-CONTRACTING REPORT

|         |                                                              |                |                    |
|---------|--------------------------------------------------------------|----------------|--------------------|
| CONTACT | : MR MAGNUM FAN                                              | WORK ORDER     | : <b>HK2602811</b> |
| CLIENT  | : ENVIROTECH SERVICES CO.                                    |                |                    |
| ADDRESS | : RM 712, 7/F, MY LOFT 9 HOI WING ROAD,<br>TUEN MUN, N.T. HK | SUB-BATCH      | : 1                |
|         |                                                              | DATE RECEIVED  | : 24-DEC-2025      |
|         |                                                              | DATE OF ISSUE  | : 17-JAN-2026      |
| PROJECT | : Not Specified                                              | NO. OF SAMPLES | : 1                |
|         |                                                              | CLIENT ORDER   | : ---              |

#### General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Calibration was subcontracted to Envirotech Services Company.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.

#### Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

*Signatories*

*Position*

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

**ALS Technichem (HK) Pty Ltd**  
Part of the **ALS Laboratory Group**

WORK ORDER : HK2602811  
SUB-BATCH : 1  
CLIENT : ENVIROTECH SERVICES CO.  
PROJECT : Not Specified



| ALS Lab ID    | Client's Sample ID    | Sample Type | Sample Date | External Lab Report No. |
|---------------|-----------------------|-------------|-------------|-------------------------|
| HK2602811-001 | Sibata LD-3B (456666) | Equipments  | 24-Dec-2025 | S/N: 456666             |

----- END OF REPORT -----



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## Equipment Verification Report (TSP)

### Equipment Calibrated:

Type: Laser Dust Monitor  
Manufacturer: Sibata LD-3B  
Serial No.: 456666  
Equipment Ref.: N/A  
ALS Job Order: HK2555544

### Standard Equipment

Standard Equipment: High Volume Sampler (TSP)  
Location: Envirotech Room (Calibration Room)  
Equipment Ref.: HVS 8162  
Last Calibration Date: 13-Dec-2025

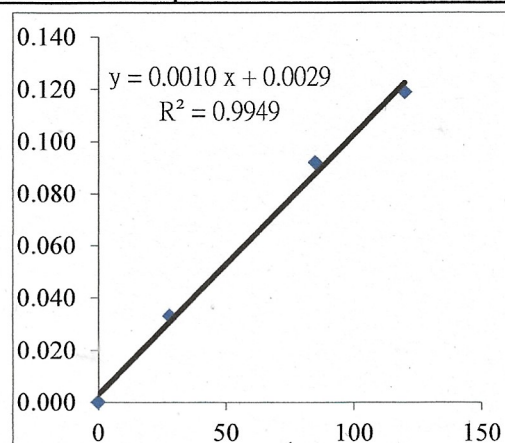
### Equipment Verification Results:

Verification Date: 20-Dec-2025

| Hour       | Time      | Mean<br>Temp °C | Mean<br>Pressure<br>(hpa) | TSP Level in mg<br>(Standard Equipment)<br>(Y-Axis) | Total Count<br>(Calibrated Equipment)<br>(X-Axis) |
|------------|-----------|-----------------|---------------------------|-----------------------------------------------------|---------------------------------------------------|
| 1hr 00mins | 0900-1000 | 23.8            | 1019.0                    | 0.033                                               | 28                                                |
| 2hr 00mins | 1005-1205 | 24.5            | 1020.0                    | 0.092                                               | 85                                                |
| 3hr 00mins | 1330-1630 | 25.1            | 1020.5                    | 0.119                                               | 120                                               |

### Linear Regression of Y or X

Slope (K-factor):  $0.0010(\text{mg})/\text{Count}$   
Correlation Coefficient (R): 0.9974  
Date of Issue: 24-Dec-2025



### Remarks:

1. Strong Correlation ( $>0.8$ )
2. Factor  $0.0010(\text{mg})/\text{Count}$  should be applied for TSP monitoring

\*If  $R < 0.5$ , repair or verification is required for the equipment

Operator: P.F.Yeung Signature: Date: 24 Dec 2025

QC Reviewer: K.F.Ho Signature: Date: 24 Dec 2025

## TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

|                                          |  |  |  |                        |  |           |  |
|------------------------------------------|--|--|--|------------------------|--|-----------|--|
| Location : Rm. 712, My Loft, Tuen Mun    |  |  |  | Date of Calibration:   |  | 13-Dec-25 |  |
| HVS ID: 8162                             |  |  |  | Next Calibration Date: |  | 13-Feb-26 |  |
| Name and Model : TISCH HVS Model TE-5170 |  |  |  | Operator:              |  | K.F.Ho    |  |

| CONDITIONS               |  |        |  |                            |  |       |  |
|--------------------------|--|--------|--|----------------------------|--|-------|--|
| Sea Level Pressure (hpa) |  | 1018.2 |  | Corrected Pressure (mm Hg) |  | 763.7 |  |
| Temperature (°C)         |  | 23.5   |  | Temperature (K)            |  | 296.5 |  |

| CALIBRATION ORIFICE |  |          |  |                |  |          |  |
|---------------------|--|----------|--|----------------|--|----------|--|
| Make:               |  | TISCH    |  | Qstd Slope     |  | 2.07213  |  |
| Model:              |  | TE-5025A |  | Qstd Intercept |  | -0.03199 |  |
| Serial#:            |  | 2454     |  |                |  |          |  |

| CALIBRATION |             |             |          |               |           |                |                                                             |
|-------------|-------------|-------------|----------|---------------|-----------|----------------|-------------------------------------------------------------|
| Plate No.   | H2O(L) (in) | H2O(R) (in) | H2O (in) | Qstd (m3/min) | I (chart) | IC (corrected) | LINEAR REGRESSION                                           |
| 18          | 6.4         | 6.3         | 12.7     | 1.748         | 60        | 60.31          | Slope= 34.754<br>Intercept= -0.3807<br>Corr. Coeff.= 0.9997 |
| 13          | 5.1         | 5.0         | 10.1     | 1.561         | 54        | 54.28          |                                                             |
| 10          | 4.0         | 3.9         | 7.9      | 1.382         | 47        | 47.25          |                                                             |
| 7           | 2.6         | 2.5         | 5.1      | 1.114         | 38        | 38.20          |                                                             |
| 5           | 1.6         | 1.5         | 3.1      | 0.873         | 30        | 30.16          |                                                             |

**Calculations:**

Qstd =  $1/m[\text{Sqrt}(\text{H2O}(\text{Pa}/\text{Pstd})(\text{Tstd}/\text{Ta}))-b]$

IC =  $I[\text{Sqrt}(\text{Pa}/\text{Pstd})(\text{Tstd}/\text{Ta})]$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

**For subsequent calculation of sampler flow:**

$1/m(I[\text{Sqrt}(298/\text{Tav})(\text{Pav}/760)]-b)$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Flow Rate

Qstd( m3/min)

## Certificate of Calibration

### Calibration Certification Information

Cal. Date: December 1, 2025      Rootmeter S/N: 438320      Ta: 294      °K  
 Operator: Jim Tisch      Pa: 755.4      mm Hg  
 Calibration Model #: TE-5025A      Calibrator S/N: **2454**

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|-----|----------------|-----------------|------------|-------------|------------|-------------|
| 1   | 1              | 2               | 1          | 1.4240      | 3.2        | 2.00        |
| 2   | 3              | 4               | 1          | 1.0130      | 6.4        | 4.00        |
| 3   | 5              | 6               | 1          | 0.9040      | 7.9        | 5.00        |
| 4   | 7              | 8               | 1          | 0.8620      | 8.8        | 5.50        |
| 5   | 9              | 10              | 1          | 0.7130      | 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) |
|-------------|---------------|------------------------------------------------------------------------------------------|-----------|-------------|---------------------------------------------------------|
| 1.0032      | 0.7045        | 1.4195                                                                                   | 0.9958    | 0.6993      | 0.8823                                                  |
| 0.9989      | 0.9861        | 2.0075                                                                                   | 0.9915    | 0.9788      | 1.2477                                                  |
| 0.9969      | 1.1028        | 2.2444                                                                                   | 0.9895    | 1.0946      | 1.3950                                                  |
| 0.9957      | 1.1551        | 2.3539                                                                                   | 0.9884    | 1.1466      | 1.4631                                                  |
| 0.9904      | 1.3891        | 2.8390                                                                                   | 0.9831    | 1.3788      | 1.7645                                                  |
| <b>QSTD</b> | m=            | <b>2.07213</b>                                                                           | <b>QA</b> | m=          | <b>1.29754</b>                                          |
|             | b=            | <b>-0.03919</b>                                                                          |           | b=          | <b>-0.02436</b>                                         |
|             | r=            | <b>0.99999</b>                                                                           |           | r=          | <b>0.99999</b>                                          |

### Calculations

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

### Standard Conditions

Tstd: 298.15 °K

Pstd: 760 mm Hg

### Key

ΔH: calibrator manometer reading (in H2O)  
 ΔP: rootmeter 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



### SUB-CONTRACTING REPORT

|         |                                                              |                |                    |
|---------|--------------------------------------------------------------|----------------|--------------------|
| CONTACT | : MR MAGNUM FAN                                              | WORK ORDER     | : <b>HK2553846</b> |
| CLIENT  | : ENVIROTECH SERVICES CO.                                    |                |                    |
| ADDRESS | : RM 712, 7/F, MY LOFT 9 HOI WING ROAD,<br>TUEN MUN, N.T. HK | SUB-BATCH      | : 1                |
|         |                                                              | DATE RECEIVED  | : 10-DEC-2025      |
|         |                                                              | DATE OF ISSUE  | : 17-DEC-2025      |
| PROJECT | : Not Specified                                              | NO. OF SAMPLES | : 1                |
|         |                                                              | CLIENT ORDER   | : ---              |

#### General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Calibration was subcontracted to Envirotech Services Company.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.

#### Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

**ALS Technichem (HK) Pty Ltd**  
Part of the **ALS Laboratory Group**

WORK ORDER : HK2553846  
SUB-BATCH : 1  
CLIENT : ENVIROTECH SERVICES CO.  
PROJECT : Not Specified



| ALS Lab ID    | Client's Sample ID    | Sample Type | Sample Date | External Lab Report No. |
|---------------|-----------------------|-------------|-------------|-------------------------|
| HK2553846-001 | Sibata LD-3B (6Z7780) | Equipments  | 29-Nov-2025 | S/N: 6Z7780             |

----- END OF REPORT -----



Envirotech Services Co.

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Tuen Mun, H.K.  
Tel : 2560 8450  
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E-mail: [envirotech@netvigator.com](mailto:envirotech@netvigator.com)

### Equipment Verification Report (TSP)

#### Equipment Calibrated:

Type: Laser Dust Monitor  
Manufacturer: Sibata LD-3B  
Serial No.: 6Z7780  
Equipment Ref.: N/A  
ALS Job Order: HK2551886

#### Standard Equipment

Standard Equipment: High Volume Sampler (TSP)  
Location : Envirotech Room (Calibration Room)  
Equipment Ref.: HVS 8162  
Last Calibration Date: 11-Oct-2025

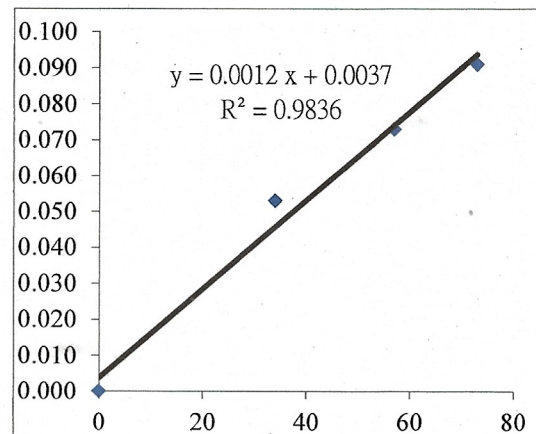
#### Equipment Verification Results:

Verification Date: 29-Nov-2025

| Hour       | Time      | Mean<br>Temp °C | Mean<br>Pressure<br>(hpa) | TSP Level in mg<br>(Standard Equipment)<br>(Y-Axis) | Total Count<br>(Calibrated Equipment)<br>(X-Axis) |
|------------|-----------|-----------------|---------------------------|-----------------------------------------------------|---------------------------------------------------|
| 1hr 00mins | 0910-1010 | 21.8            | 1016.2                    | 0.053                                               | 34                                                |
| 2hr 00mins | 1020-1120 | 22.1            | 1016.3                    | 0.073                                               | 57                                                |
| 3hr 00mins | 1405-1505 | 24.1            | 1016.6                    | 0.091                                               | 73                                                |

#### Linear Regression of Y or X

Slope (K-factor): 0.0012(mg)/Count  
Correlation Coefficient (R): 0.9918  
Date of Issue: 10-Dec-2025



#### Remarks:

1. Strong Correlation ( $>0.8$ )
2. Factor 0.0012(mg)/Count should be applied for TSP monitoring

\*If  $R < 0.5$ , repair or verification is required for the equipment

Operator: P.F.Yeung Signature: Tai Date: 10 Dec 2025

QC Reviewer: K.F.Ho Signature: ak Date: 10 Dec 2025

## TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

|                                          |                                  |
|------------------------------------------|----------------------------------|
| Location : Rm. 712, My Loft, Tuen Mun    | Date of Calibration: 11-Oct-25   |
| HVS ID: 8162                             | Next Calibration Date: 11-Dec-25 |
| Name and Model : TISCH HVS Model TE-5170 | Operator: K.F.Ho                 |

### CONDITIONS

|                          |        |                            |       |
|--------------------------|--------|----------------------------|-------|
| Sea Level Pressure (hpa) | 1013.1 | Corrected Pressure (mm Hg) | 759.9 |
| Temperature (°C)         | 28.2   | Temperature (K)            | 301.2 |

### CALIBRATION ORIFICE

|          |          |                |          |
|----------|----------|----------------|----------|
| Make:    | TISCH    | Qstd Slope     | 2.08315  |
| Model:   | TE-5025A | Qstd Intercept | -0.04938 |
| Serial#: | 2454     |                |          |

### CALIBRATION

| Plate No. | H2O(L) (in) | H2O(R) (in) | H2O (in) | Qstd (m3/min) | I (chart) | IC (corrected) | LINEAR REGRESSION                                           |
|-----------|-------------|-------------|----------|---------------|-----------|----------------|-------------------------------------------------------------|
| 18        | 6.8         | 6.6         | 13.4     | 1.772         | 58        | 57.70          | Slope= 44.490<br>Intercept= -21.891<br>Corr. Coeff.= 0.9991 |
| 13        | 5.6         | 5.6         | 11.2     | 1.622         | 50        | 49.74          |                                                             |
| 10        | 4.2         | 4.0         | 8.2      | 1.391         | 40        | 39.79          |                                                             |
| 7         | 2.6         | 2.6         | 5.2      | 1.113         | 27        | 26.86          |                                                             |
| 5         | 1.6         | 1.6         | 3.2      | 0.878         | 18        | 17.91          |                                                             |

#### Calculations:

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

#### For subsequent calculation of sampler flow:

$$1/m((I[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

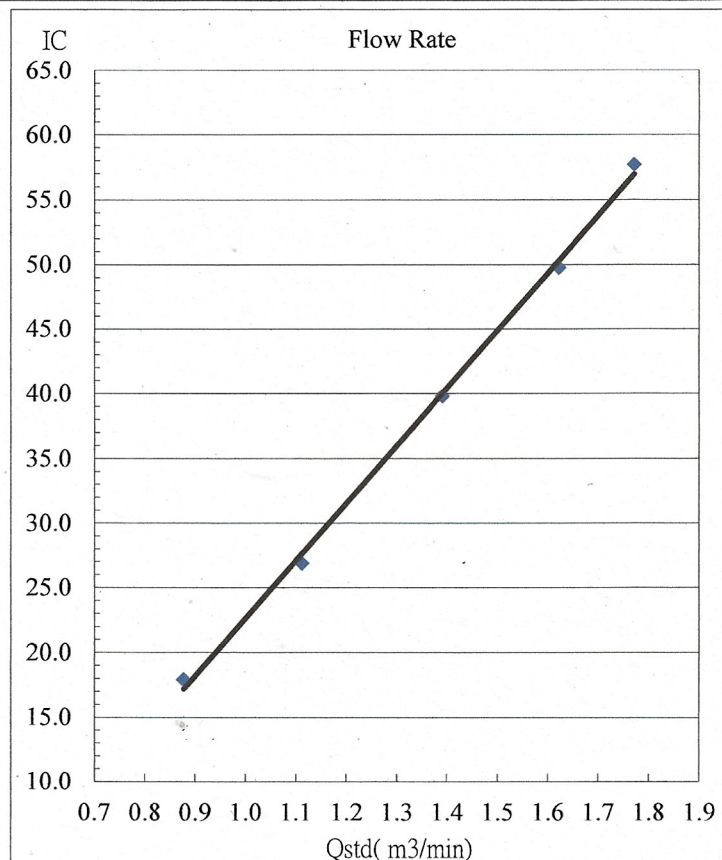
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



## Certificate of Calibration

### Calibration Certification Information

**Cal. Date:** December 2, 2024

**Rootsmeter S/N:** 438320

**Ta:** 293

**°K**
**Operator:** Jim Tisch

**Pa:** 757.4

**mm Hg**
**Calibration Model #:** TE-5025A

**Calibrator S/N:** 2454

| Run | Vol. Init<br>(m3) | Vol. Final<br>(m3) | ΔVol.<br>(m3) | ΔTime<br>(min) | ΔP<br>(mm Hg) | ΔH<br>(in H2O) |
|-----|-------------------|--------------------|---------------|----------------|---------------|----------------|
| 1   | 1                 | 2                  | 1             | 1.4200         | 3.2           | 2.00           |
| 2   | 3                 | 4                  | 1             | 1.0170         | 6.4           | 4.00           |
| 3   | 5                 | 6                  | 1             | 0.9090         | 7.9           | 5.00           |
| 4   | 7                 | 8                  | 1             | 0.8700         | 8.8           | 5.50           |
| 5   | 9                 | 10                 | 1             | 0.7140         | 12.8          | 8.00           |

### Data Tabulation

| Vstd<br>(m3) | Qstd<br>(x-axis) | $\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$<br>(y-axis) | Va        | Qa<br>(x-axis) | $\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$<br>(y-axis) |
|--------------|------------------|---------------------------------------------------------------------------------------------|-----------|----------------|------------------------------------------------------------|
| 1.0093       | 0.7108           | 1.4238                                                                                      | 0.9958    | 0.7013         | 0.8796                                                     |
| 1.0051       | 0.9883           | 2.0136                                                                                      | 0.9916    | 0.9750         | 1.2439                                                     |
| 1.0031       | 1.1035           | 2.2512                                                                                      | 0.9896    | 1.0886         | 1.3907                                                     |
| 1.0018       | 1.1515           | 2.3611                                                                                      | 0.9884    | 1.1361         | 1.4586                                                     |
| 0.9965       | 1.3956           | 2.8476                                                                                      | 0.9831    | 1.3769         | 1.7592                                                     |
| <b>QSTD</b>  | m=               | 2.08315                                                                                     | <b>QA</b> | m=             | 1.30443                                                    |
|              | b=               | -0.04938                                                                                    |           | b=             | -0.03050                                                   |
|              | r=               | 0.99985                                                                                     |           | r=             | 0.99985                                                    |

### Calculations

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

### Standard Conditions

|                                           |           |
|-------------------------------------------|-----------|
| <b>Tstd:</b>                              | 298.15 °K |
| <b>Pstd:</b>                              | 760 mm Hg |
| <b>Key</b>                                |           |
| 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 Monitoring

## Certificate of Calibration

Certificate No.: A250074

|                     |                          |                   |                     |
|---------------------|--------------------------|-------------------|---------------------|
| <b>Description:</b> | <b>Sound level meter</b> | <b>Microphone</b> | <b>Preamplifier</b> |
| <b>Make:</b>        | Rion                     | Rion              | Rion                |
| <b>Model:</b>       | NL-53                    | UC-59             | NH-25               |
| <b>Serial No.:</b>  | 01141565                 | 26697             | 44507               |
| <b>Type:</b>        | 1                        | -                 | -                   |

**Customer:** Envirotech Services Co.  
**Department:** -  
**Address:** RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T.

**Date of receipt the calibration item:** 2025-11-25

**Environmental conditions:**

**Pressure:** (100.42  $\pm$  0.50) kPa  
**Temperature:** (24.2  $\pm$  1.0) °C  
**Humidity:** (35.7  $\pm$  2.0)%RH

**Date of calibration:** 2025-11-26  
**Date of issue:** 2025-11-26

**Prepared by:**



Wong Hau Chun

**Checked by:**



Choi Pui Sum

**Approved Signatory:**



Choi Pui Sum

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. HOKLAS 302) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Unit (SI) or recognised measurement standards. This certificate shall not be reproduced except in full.

*Certificate No.: A250074*

**Preconditioning:**

The equipment was preconditioned for more than 12 hours at the measurement conditions of pressure, temperature and humidity.

**Measurement method:**

A description of the in-house test procedure (ESG-NOISE-001) is available separately from the calibration laboratory.

**Test Specification:**

The Sound Level Meter has been calibrated in accordance with the requirements as specified the electrical tests in IEC 61672-3:2013 (Clause 11.2, 13, 14, 15, 16, 17(If necessary) \*, 18, 19, 20 and 21).

\*The application of Clause 17 is based on the more than one level range of Sound Level Meter.

**Reference equipment used in the calibration:**

| Description:       | Model: | Serial No. | Calibration Date: | Traceable to:                                        |
|--------------------|--------|------------|-------------------|------------------------------------------------------|
| Signal generator   | DS 360 | 123901     | 2025-08-25        | Metcal Technologies (M) Sdn Bhd                      |
| Meteo Station HM30 | HM30   | J120806    | 2025-09-02        | China Ceprei Laboratory Calibration & Testing Centre |

**Uncertainty:**

The measurement uncertainty evaluation has been carried out in accordance with principles in the Evaluation of Measurement Data – Guide to the Expression of Uncertainty in Measurement, JCGM 100:2008. The expanded measurement uncertainty  $U$ , with its coverage factor  $k$ , corresponds to an approximate 95% probability that the value of measurand  $Y$  lies within the interval  $y-U$  to  $y+U$ . The combined standard measurement uncertainty  $u_c$  can be calculated as  $u_c = U/k$  and its degree of freedom  $V_{eff}$  is given by the t-distribution with the respective  $k$  value.

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**Summary of Measurement Results**

Self-generated noise - IEC 61672-3 Ed.2.0 Clause 11  
Frequency weightings: A Network - IEC 61672-3 Ed.2.0 Clause 13.3  
Frequency weightings: C Network - IEC 61672-3 Ed.2.0 Clause 13.3  
Frequency weightings: Z Network - IEC 61672-3 Ed.2.0 Clause 13.3  
Frequency and time weightings at 1 kHz IEC 61672-3 Ed.2.0 Clause 14  
Long term stability test - IEC 61672-3 Ed.2.0 Clause 15  
Level linearity on the reference level range - IEC 61672-3 Ed.2.0 Clause 16  
Toneburst response - IEC 61672-3 Ed.2.0 Clause 18  
Peak C sound level - IEC 61672-3 Ed.2.0 Clause 19  
Overload indication - IEC 61672-3 Ed.2.0 Clause 20  
High level stability test - IEC 61672-3 Ed.2.0 Clause 21

**Verification:**

The verification measurements have been performed using the calibration system Nor1504A with software SImCal62Y8.exe.

Detailed measurement results are printed on the following pages.

**Comment:**

The values given in this Certificate of Calibration only relate to values measured at the time of the test and any measurement uncertainties quoted will not include allowances for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, or the capability of any other laboratory to repeat the measurement. The results apply to the item as received.

The results in this Certificate of Calibration only apply to the sample / calibration item as received.

Certificate No.: A250074

## Measurement results

| Self-generated noise test - IEC 61672-3:2013 Clause 11                                                                                                                                                                             |      |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|
| Description:<br>Relevant tests were carried out in accordance with Section 11 of IEC 61672-3:2013. The noise test is performed in the most sensitive condition of the SLM with the microphone replaced by an equivalent impedance. |      |    |
| Noise level in A weighting network                                                                                                                                                                                                 | 12.3 | dB |
| Noise level in C weighting network                                                                                                                                                                                                 | 15.5 | dB |
| Noise level in Z (Lin) weighting network                                                                                                                                                                                           | 21.4 | dB |

| Frequency weighting test - IEC 61672-3:2013 Clause 13.3                                                                                                                                                                                                                                                  |                 |                |                                    |                   |           |                       |      |                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|------------------------------------|-------------------|-----------|-----------------------|------|--------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                             |                 |                |                                    |                   |           |                       |      |                                            |
| Relevant tests were carried out in accordance with Section 13.3 of IEC 61672-3:2013. The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 63.1Hz to 15848.9 Hz.                                                                                     |                 |                |                                    |                   |           |                       |      |                                            |
| On the reference level range and for each frequency weighting to be tested, the level of a 1 kHz input signal shall be adjusted to yield an indication that is 45 dB less than the upper boundary stated in the Instruction Manual for the linear operating range at 1 kHz on the reference level range. |                 |                |                                    |                   |           |                       |      |                                            |
| Frequency weighting A:                                                                                                                                                                                                                                                                                   |                 |                |                                    |                   |           |                       |      |                                            |
| Frequency                                                                                                                                                                                                                                                                                                | Reference Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limit (dB) |      | Maximum permitted Uncertainty <sup>#</sup> |
| Hz                                                                                                                                                                                                                                                                                                       | dB              | dB             | dB                                 |                   | dB        | +                     | -    | dB                                         |
| 63.1                                                                                                                                                                                                                                                                                                     | 93.0            | 93.0           | 0.2                                | 1.96              | 0.0       | 1.0                   | 1.0  | 0.6                                        |
| 125.9                                                                                                                                                                                                                                                                                                    | 93.0            | 92.9           | 0.2                                |                   | -0.1      | 1.0                   | 1.0  |                                            |
| 251.2                                                                                                                                                                                                                                                                                                    | 93.0            | 92.9           | 0.2                                |                   | -0.1      | 1.0                   | 1.0  |                                            |
| 501.2                                                                                                                                                                                                                                                                                                    | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 1000.0                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 0.7                   | 0.7  |                                            |
| 1995.3                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 3981.1                                                                                                                                                                                                                                                                                                   | 93.0            | 92.9           | 0.2                                |                   | -0.1      | 1.0                   | 1.0  |                                            |
| 7943.3                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.5                   | 2.5  | 0.7                                        |
| 15848.9                                                                                                                                                                                                                                                                                                  | 93.0            | 92.3           | 0.2                                |                   | -0.7      | 2.5                   | 16.0 | 1.0                                        |
| Frequency weighting C:                                                                                                                                                                                                                                                                                   |                 |                |                                    |                   |           |                       |      |                                            |
| Frequency                                                                                                                                                                                                                                                                                                | Reference Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limit (dB) |      | Maximum permitted Uncertainty <sup>#</sup> |
| Hz                                                                                                                                                                                                                                                                                                       | dB              | dB             | dB                                 |                   | dB        | +                     | -    | dB                                         |
| 63.1                                                                                                                                                                                                                                                                                                     | 93.0            | 93.0           | 0.2                                | 1.96              | 0.0       | 1.0                   | 1.0  | 0.6                                        |
| 125.9                                                                                                                                                                                                                                                                                                    | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 251.2                                                                                                                                                                                                                                                                                                    | 93.0            | 92.9           | 0.2                                |                   | -0.1      | 1.0                   | 1.0  |                                            |
| 501.2                                                                                                                                                                                                                                                                                                    | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 1000.0                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 0.7                   | 0.7  |                                            |
| 1995.3                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 3981.1                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 7943.3                                                                                                                                                                                                                                                                                                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.5                   | 2.5  | 0.7                                        |
| 15848.9                                                                                                                                                                                                                                                                                                  | 93.0            | 92.2           | 0.2                                |                   | -0.8      | 2.5                   | 16.0 | 1.0                                        |

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| Frequency weighting Z: |                 |                |                                    |                   |           |                       |      |                                            |
|------------------------|-----------------|----------------|------------------------------------|-------------------|-----------|-----------------------|------|--------------------------------------------|
| Frequency              | Reference Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limit (dB) |      | Maximum permitted Uncertainty <sup>#</sup> |
| Hz                     | dB              | dB             | dB                                 | 1.96              | dB        | +                     | -    | dB                                         |
| 63.1                   | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  | 0.6                                        |
| 125.9                  | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 251.2                  | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 501.2                  | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 1000.0                 | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 0.7                   | 0.7  |                                            |
| 1995.3                 | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 1.0                   | 1.0  |                                            |
| 3981.1                 | 93.0            | 92.9           | 0.2                                |                   | -0.1      | 1.0                   | 1.0  | 0.7                                        |
| 7943.3                 | 93.0            | 92.9           | 0.2                                |                   | -0.1      | 1.5                   | 2.5  |                                            |
| 15848.9                | 93.0            | 93.0           | 0.2                                |                   | 0.0       | 2.5                   | 16.0 | 1.0                                        |

#### Frequency and time weighting test at 1kHz- IEC 61672-3:2013 Clause 14

##### Description:

Relevant tests were carried out in accordance with Section 14 of IEC 61672-3:2013. For a steady sinusoidal electrical input signal at 1 kHz on the reference level range and with an input signal that yields an indication of the reference sound pressure level with frequency weighting A, C and Z, with the sound level meter set to display F-time-weighted sound level, or time averaged sound level, as available. In addition, the indications with frequency weighting A shall be recorded with the sound level meter set to display F-time-weighted sound level, S-time-weighted sound level, and time-averaged sound level.

| Parameter Setting   | Reference Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limits (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|---------------------|-----------------|----------------|------------------------------------|-------------------|-----------|------------------------|-----|--------------------------------------------|
|                     | dB              | dB             | dB                                 |                   | dB        | +                      | -   |                                            |
| L <sub>AF</sub> SPL | 94.0            | 94.0           | 0.2                                | 1.96              | 0.0       | 0.2                    | 0.2 | 0.2                                        |
| L <sub>CF</sub> SPL | 94.0            | 94.0           | 0.2                                |                   | 0.0       |                        |     |                                            |
| L <sub>ZF</sub> SPL | 94.0            | 94.0           | 0.2                                |                   | 0.0       |                        |     |                                            |
| L <sub>AS</sub> SPL | 94.0            | 94.0           | 0.2                                |                   | 0.0       | 0.1                    | 0.1 |                                            |
| L <sub>Aeq</sub>    | 94.0            | 94.0           | 0.2                                |                   | 0.0       |                        |     |                                            |
| L <sub>AE</sub>     | 114.0           | 114.0          | 0.2                                |                   | 0.0       |                        |     |                                            |

#### Long term stability test - IEC 61672-3:2013 Clause 15

##### Description:

Relevant tests were carried out in accordance with Section 15 of IEC 61672-3:2013. The long-term stability of a sound level meter is evaluated from the difference between the A-weighted sound levels indicated in response to steady 1 kHz signals applied at the beginning and end of a period of operation. The period of continuous operation shall be between 25 min and 35 min.

Test signal: Sine wave at 1 kHz

| Time Interval | Reading at Beginning | Reading at Ending | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limits (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|---------------|----------------------|-------------------|------------------------------------|-------------------|-----------|------------------------|-----|--------------------------------------------|
| mm:ss         | dB                   | dB                | dB                                 |                   | dB        | +                      | -   | dB                                         |
| 27:08         | 94.0                 | 94.0              | 0.2                                | 1.96              | 0.0       | 0.1                    | 0.1 | 0.1                                        |

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ESG Matters Limited – Acoustic Calibration Centre

Unit 1813, 1815-16, 18/F, Tower A, Regent Centre, 63 Wo Yi Hop Road, Kwai Chung, Hong Kong

Tel : 2525 8033 Website : [www.esgmatters.asia](http://www.esgmatters.asia) Email : [email@esgmatters.asia](mailto:email@esgmatters.asia)

Certificate No.: A250074

## Level linearity on the reference level range test - IEC 61672-3:2013 Clause 16

### Description:

Relevant tests were carried out in accordance with Section 16 of IEC 61672-3:2013. Level linearity shall be tested with steady sinusoidal electrical signals at a frequency of 8 kHz with the sound level meter set for frequency-weighting A. Level linearity shall be measured in 5 dB steps of increasing input signal level from the starting point up to within 5 dB of the upper boundary stated in the Instruction Manual for the linear operating range at 8 kHz, then at 1 dB steps of increasing input signal level up to, but not including, the first indication of overload.\* The test of level linearity shall then be continued at 5 dB steps of decreasing input signal level from the starting point down to within 5 dB of the specified lower boundary, then at 1 dB steps of decreasing input signal level down to, but not including, the first indication of an under-range condition.

| Reference Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limit (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|-----------------|----------------|------------------------------------|-------------------|-----------|-----------------------|-----|--------------------------------------------|
|                 |                |                                    |                   | dB        | +                     | -   |                                            |
| dB              | dB             | dB                                 |                   | dB        |                       |     | dB                                         |
| 94.0            | 93.9           | 0.2                                | 1.96              | -0.1      | 0.8                   | 0.8 | 0.3                                        |
| 99.0            | 98.9           | 0.2                                |                   | -0.1      |                       |     |                                            |
| 104.0           | 103.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 109.0           | 108.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 114.0           | 113.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 119.0           | 118.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 124.0           | 123.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 129.0           | 128.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 134.0           | 133.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 135.0           | 134.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 136.0           | 135.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 137.0           | 136.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 138.0           | 137.9          | 0.2                                |                   | -0.1      |                       |     |                                            |
| 94.0            | 93.9           | 0.2                                |                   | -0.1      |                       |     |                                            |
| 89.0            | 88.9           | 0.2                                |                   | -0.1      |                       |     |                                            |
| 84.0            | 83.9           | 0.2                                |                   | -0.1      |                       |     |                                            |
| 79.0            | 78.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 74.0            | 73.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 69.0            | 68.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 64.0            | 63.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 59.0            | 58.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 54.0            | 53.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 49.0            | 48.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 44.0            | 43.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 39.0            | 38.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 34.0            | 33.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 30.0            | 29.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 29.0            | 28.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 28.0            | 27.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 27.0            | 26.8           | 0.2                                |                   | -0.2      |                       |     |                                            |
| 26.0            | 25.7           | 0.2                                |                   | -0.3      |                       |     |                                            |
| 25.0            | 24.7           | 0.2                                |                   | -0.3      |                       |     |                                            |

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ESG Matters Limited – Acoustic Calibration Centre

Unit 1813, 1815-16, 18/F, Tower A, Regent Centre, 63 Wo Yi Hop Road, Kwai Chung, Hong Kong

Tel : 2525 8033 Website : [www.esgmatters.asia](http://www.esgmatters.asia) Email : [email@esgmatters.asia](mailto:email@esgmatters.asia)

Certificate No.: A250074

## Toneburst response test - IEC 61672-3:2013 Clause 18

### Description:

Relevant tests were carried out in accordance with Section 18 of IEC 61672-3:2013. For the toneburst signals, indications of the sound level meter to be recorded are maximum F-time-weighted sound level, maximum S-time-weighted sound level, and sound exposure level. The level of the steady input signal shall be adjusted to display an F-time-weighted, S-time-weighted, or time-averaged sound level, as appropriate, that is 3 dB less than the upper boundary stated in the Instruction Manual for the linear operating range at 4 kHz on the reference level range.

For tests with the F time weighting, the indication shall be recorded of the maximum F-time-weighted sound level in response to tonebursts having durations of 200 ms, 2 ms, and 0.25 ms.

For tests with the S time weighting, the indication shall be recorded of the maximum S-time-weighted sound level in response to tonebursts having durations of 200 ms and 2 ms.

For measurements of sound exposure level (or time-averaged sound level for an averaging time that includes the toneburst), the indications in response to tonebursts having durations of 200 ms, 2 ms, and 0.25 ms.

| Parameter Setting   | Burst Duration | Reference Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance limit (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|---------------------|----------------|-----------------|----------------|------------------------------------|-------------------|-----------|-----------------------|-----|--------------------------------------------|
|                     |                |                 |                |                                    |                   | dB        | +                     | -   |                                            |
| L <sub>AF</sub> MAX | 200            | 134.0           | 134.0          | 0.2                                | 1.96              | 0.0       | 0.5                   | 0.5 | 0.3                                        |
|                     | 2              | 117.0           | 117.0          | 0.2                                |                   | 0.0       | 1.0                   | 1.5 |                                            |
|                     | 0.25           | 108.0           | 107.9          | 0.2                                |                   | -0.1      | 1.0                   | 3.0 |                                            |
| L <sub>AS</sub> MAX | 200            | 127.6           | 127.6          | 0.2                                |                   | 0.0       | 0.5                   | 0.5 |                                            |
|                     | 2              | 108.0           | 108.0          | 0.2                                |                   | 0.0       | 1.0                   | 3.0 |                                            |
|                     |                |                 |                |                                    |                   | 0.0       | 0.5                   | 0.5 |                                            |
| LAE                 | 200            | 128.0           | 128.0          | 0.2                                |                   | 0.0       | 1.0                   | 1.5 |                                            |
|                     | 2              | 108.0           | 108.0          | 0.2                                |                   | 0.0       | 1.0                   | 3.0 |                                            |
|                     | 0.25           | 99.0            | 98.9           | 0.2                                |                   | -0.1      | 1.0                   | 3.0 |                                            |

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Certificate No.: A250074

#### Peak C sound level test - IEC 61672-3:2013 Clause 19

##### Description:

Relevant tests were carried out in accordance with Section 19 of IEC 61672-3:2013. Indications of C-weighted peak sound level shall be tested on the least-sensitive level range. The test signals consist of (a) a single complete cycle of an 8 kHz sinusoid starting and stopping at zero crossings and (b) positive and negative half cycles of a 500 Hz sinusoid that also start and stop at zero crossings.

The level of the steady sinusoidal 8 kHz electrical input signal, from which a single complete cycle is extracted, shall be adjusted to yield an indication of C-weighted, F-time-weighted sound level, or C-weighted, time-averaged sound level, that is 8 dB less than the upper boundary stated in the Instruction Manual for the peak level range at 8 kHz on the least sensitive level range.

The level of the steady sinusoidal 500 Hz electrical input signal, from which positive and negative half cycles are extracted, shall be adjusted to yield an indication of C-weighted, F-time-weighted sound level, or C-weighted, time-averaged sound level, that is 8 dB less than the upper boundary stated in the Instruction Manual for the peak level range on the least-sensitive level range.

| Pulse Type     | Pulse Frequency | Reference Peak Level | Measured Level | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limit (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|----------------|-----------------|----------------------|----------------|------------------------------------|-------------------|-----------|-----------------------|-----|--------------------------------------------|
|                | Hz              | dB                   | dB             | dB                                 |                   | dB        | +                     | -   | dB                                         |
| 1 cycle        | 8000            | 136.4                | 135.5          | 0.2                                | 1.96 <sup>*</sup> | -0.9      | 2.0                   | 2.0 | 0.35                                       |
| Positive cycle | 500             | 138.4                | 138.1          | 0.2                                |                   | -0.3      | 1.0                   | 1.0 |                                            |
| Negative cycle | 500             | 138.4                | 138.2          | 0.2                                |                   | -0.2      |                       |     |                                            |

#### Overload indication test - IEC 61672-3:2013 Clause 20

##### Description:

Relevant tests were carried out in accordance with Section 20 of IEC 61672-3:2013. The sound level meter set to display A-weighted, time-averaged sound level. Positive and negative one-half cycle sinusoidal electrical signals at a frequency of 4 kHz.

The test shall begin at an indicated time-averaged level for the steady input signal that corresponds to 1 dB less than the upper boundary specified for the linear operating range at 4 kHz. The level of the single positive one-half-cycle input signal shall be increased to the first indication of overload, to a resolution of 0.1 dB. The process shall be repeated for the single negative one-half-cycle signal.

| Overload Indication at 4 kHz |                         | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limit (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|------------------------------|-------------------------|------------------------------------|-------------------|-----------|-----------------------|-----|--------------------------------------------|
| Positive One-Half-Cycle      | Negative One-Half-Cycle |                                    |                   |           | +                     | -   |                                            |
| dB                           | dB                      | dB                                 |                   | dB        |                       |     | dB                                         |
| 139.5                        | 139.5                   | 0.2                                | 1.96              | 0.0       | 1.5                   | 1.5 | 0.25                                       |

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Certificate No.: A250074

High level stability test - IEC 61672-3:2013 Clause 21

Description:

Relevant tests were carried out in accordance with Section 21 of IEC 61672-3:2013. The ability of a sound level meter to operate continuously in response to high signal levels without significant change in sensitivity is evaluated from the difference between the A-weighted sound levels indicated in response to a steady 1 kHz electrical signal at the beginning and end of a 5 min period of continuous exposure to the signal.

The level of the steady electrical input signal shall be that which is required to display the sound level that is 1 dB less than the upper boundary of the 1 kHz linear operating range on the least-sensitive level range.

| Reading at Beginning | Reading at Ending | Expanded Measurement Uncertainty U | Coverage Factor k | Deviation | Acceptance Limits (dB) |     | Maximum permitted Uncertainty <sup>#</sup> |
|----------------------|-------------------|------------------------------------|-------------------|-----------|------------------------|-----|--------------------------------------------|
|                      |                   |                                    |                   | dB        | +                      | -   | dB                                         |
| 137.0                | 137.0             | 0.2                                | 1.96              | 0.0       | 0.1                    | 0.1 | 0.1                                        |

**Remark:**

- 1) Acoustical levels are stated relative to 20 $\mu$ Pa. Other dB levels are relative values.
- 2) “\*” refer to the test point beyond upper boundary stated in the instruction manual for the linear operating range at 8 kHz are not necessary to test.
- 3) “#” refer to table B.1 of Annex B in IEC61672-1:2013, the maximum-permitted uncertainties of measurement are not equivalent to the uncertainties associated with the measurement of a sound level.

- END -

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## Certificate of Calibration

Certificate No.: B250042

**Description:** Sound calibrator  
**Make:** Larson and Davis  
**Model:** CAL200  
**Serial No.:** 10227  
**Class:** 1

**Customer:** Envirotech Services Co.  
**Department:** -  
**Address:** RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T.

**Date of receipt the calibration item:** 2025-11-25

**Environmental conditions:**

**Pressure:** (100.6  $\pm$  0.50) kPa  
**Temperature:** (23.4  $\pm$  1.0) °C  
**Humidity:** (31.5  $\pm$  2.0)%RH

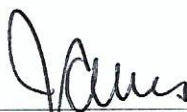
**Date of calibration:** 2025-11-27  
**Date of issue:** 2025-11-27

**Prepared by:**



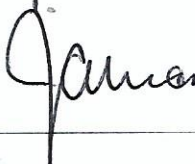
Wong Hau Chun

**Checked by:**



Choi Pui Sum

**Approved Signatory:**



Choi Pui Sum

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. HOKLAS 302) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Unit (SI) or recognised measurement standards. This certificate shall not be reproduced except in full.

*Certificate No.: B250042*

**Preconditioning:**

The equipment was preconditioned for more than 12 hours at the measurement conditions of pressure, temperature and humidity.

**Measurement method:**

A description of the in-house test procedure (ESG-NOISE-003) is available separately from the calibration laboratory.

**Test Specification:**

The Sound Calibrator has been calibrated in accordance with the requirements as specified the in-house test procedure ESG-NOISE-003.

**Reference equipment used in the calibration:**

| Description:         | Model:         | Serial No. | Calibration Date: | Traceable to:                                                |
|----------------------|----------------|------------|-------------------|--------------------------------------------------------------|
| Multimeter           | Agilent 34401A | MY41030277 | 2025-08-22        | Metcal Technologies (M) Sdn Bhd                              |
| Meteo Station HM30   | HM30           | J120806    | 2025-09-02        | China Ceprei Laboratory Calibration & Testing Centre         |
| Reference microphone | Nor 1225       | 505480     | 2025-10-09        | The Government of HKSAR Standards and Calibration Laboratory |
| Reference Calibrator | B&K 4231       | 3014997    | 2025-08-26        | Soils & Materials Engineering Co., LTD.                      |
| Audio Analyzer       | 8903B          | 3011A11797 | 2025-09-04        | China Ceprei Laboratory Calibration & Testing Centre         |

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*Certificate No.: B250042*

**Uncertainty:**

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k$ , which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA publication EA-4/02.

The measurement uncertainty evaluation has been carried out in accordance with principles in the Evaluation of Measurement Data – Guide to the Expression of Uncertainty in Measurement, JCGM 100:2008. The expanded measurement uncertainty  $U$ , with its coverage factor  $k$ , corresponds to an approximate 95% probability that the value of measurand  $Y$  lies within the interval  $y-U$  to  $y+U$ . The combined standard measurement uncertainty  $u_c$  can be calculated as  $u_c = U/k$  and its degree of freedom  $V_{\text{eff}}$  is given by the t-distribution with the respective  $k$  value.

**Comment:**

The values given in this Certificate of Calibration only relate to values measured at the time of the test and any measurement uncertainties quoted will not include allowances for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, or the capability of any other laboratory to repeat the measurement. The results apply to the item as received.

All tests are performed according to in-house test procedure ESG-Noise-003.

The results in this Certificate of Calibration only apply to the sample / calibration item as received.

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. HOKLAS 302) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Unit (SI) or recognised measurement standards. This certificate shall not be reproduced except in full.

Certificate No.: B250042

**Table 1**

**Sound Pressure Level Test Results**

Description:

Performance tests were carried out in accordance with Annex B.3.4.3.2 of IEC 60942:2003. The sound pressure level generated by the equipment was compared to the reference sound pressure level by the reference equipment B&K 4231 (Equipment No.:3014997).

| Larson and Davis CAL200 |                            |                            | Measured Deviation<br>(b) – (a) |                                             |                         | Acceptance<br>Limits | Maximum<br>Permitted<br>Uncertainty |
|-------------------------|----------------------------|----------------------------|---------------------------------|---------------------------------------------|-------------------------|----------------------|-------------------------------------|
| Frequency<br>Setting    | Sound Pressure Level       |                            | Value<br>y                      | Measurement Uncertainty                     |                         |                      |                                     |
|                         | Expected<br>Reading<br>(a) | Measured<br>Reading<br>(b) |                                 | Expanded<br>Measurement<br>Uncertainty<br>U | Coverage<br>Factor<br>k |                      |                                     |
| (Hz)                    | (dB)                       | (dB)                       | (dB)                            | (dB)                                        |                         | (dB)                 | (dB)                                |
| 1000.00                 | 94.00                      | 94.08                      | 0.08                            | 0.13                                        | 1.96                    | ±0.40                | 0.15                                |
|                         | 114.00                     | 114.06                     | 0.06                            | 0.13                                        | 1.96                    | ±0.40                | 0.15                                |

The calibrator was placed on top of the reference microphone, only held in place by gravity. At least three repetitions have been performed. No adapter ring was needed to obtain half inch configuration.

The calibrator level was not adjusted.

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Certificate No.: B250042

**Table 2**

**Frequency Test Results**

Description:

Relevant tests were carried out in accordance with Annex B.3.5 of IEC 60942:2003. The frequency of sound pressure level generated by the equipment was measured by the multimeter (Equipment No.: MY41030277).

| Larson and Davis CAL200               |                            |                            | Measured Deviation<br>[ =([b] – [a])/[a] x 100%] |                                             |                         | Acceptance<br>Limits | Maximum<br>Permitted<br>Uncertainty |
|---------------------------------------|----------------------------|----------------------------|--------------------------------------------------|---------------------------------------------|-------------------------|----------------------|-------------------------------------|
| Sound<br>Pressure<br>Level<br>Setting | Frequency                  |                            | Value<br><br>y                                   | Measurement Uncertainty                     |                         |                      |                                     |
|                                       | Expected<br>Reading<br>(a) | Measured<br>Reading<br>(b) |                                                  | Expanded<br>Measurement<br>Uncertainty<br>U | Coverage<br>Factor<br>k |                      |                                     |
|                                       | (dB)                       | (Hz)                       |                                                  | (Hz)                                        | (%)                     |                      |                                     |
| 94.00                                 | 1000.00                    | 1008.16                    | 0.82                                             | 0.20                                        | 1.96                    | ±1.00                | 0.30                                |
| 114.00                                | 1000.00                    | 1008.17                    | 0.82                                             | 0.20                                        | 1.96                    | ±1.00                | 0.30                                |

The calibrator was placed on top of the reference microphone, only held in place by gravity. At least three repetitions have been performed. No adapter ring was needed to obtain half inch configuration.

The calibrator level was not adjusted.

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Certificate No.: B250042

**Table 3**

**Total Distortion Test Results**

Description:

Relevant tests were carried out in accordance with Annex B.3.6 of IEC 60942:2003. The total distortion of the acoustic signal generated by the equipment was measured by the Laboratory’s audio analyzer (Equipment No.: 3011A11797).

| Larson and Davis<br>CAL200 |                                       | Measured Total Distortion |                                             |                         | Acceptance<br>Limits | Maximum<br>Permitted<br>Uncertainty |
|----------------------------|---------------------------------------|---------------------------|---------------------------------------------|-------------------------|----------------------|-------------------------------------|
| Frequency<br>Setting       | Sound<br>Pressure<br>Level<br>Setting | Value<br>y                | Measurement Uncertainty                     |                         |                      |                                     |
|                            |                                       |                           | Expanded<br>Measurement<br>Uncertainty<br>U | Coverage<br>Factor<br>k |                      |                                     |
| (Hz)                       | (dB)                                  | (%)                       | (%)                                         |                         | (%)                  | (%)                                 |
| 1000.00                    | 94.00                                 | 2.25                      | 0.40                                        | 1.96                    | ±3.00                | 0.50                                |
|                            | 114.00                                | 0.81                      | 0.30                                        | 1.96                    | ±3.00                | 0.50                                |

The calibrator was placed on top of the reference microphone, only held in place by gravity. At least three repetitions have been performed. No adapter ring was needed to obtain half inch configuration.

The calibrator level was not adjusted.

The stated levels are relative to 20μPa. The distortion value (in %) is the signal to total noise ratio.

- END -

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. HOKLAS 302) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Unit (SI) or recognised measurement standards. This certificate shall not be reproduced except in full.

# Water Quality Monitoring



ALS Technichem (HK) Pty Ltd

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www.alsglobal.com

## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** THOMAS WONG  
**CLIENT:** ENOVATIVE ENVIRONMENTAL SERVICE LTD  
**ADDRESS:** RM623, 6/F, GOLDFIELD INDUSTRIAL CENTRE  
NO. 1 SUI WO ROAD, FO TAN, N.T. HONG KONG

**WORK ORDER:** HK2629880  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 14-Jul-2026  
**DATE OF ISSUE:** 22-Jul-2026

### GENERAL COMMENTS

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

This report superseded any previous report(s) with same work order number.

### EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

Equipment Type: Multifunctional Meter

Service Nature: Performance Check

Scope: Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature

Brand Name/ Model No.: [YSI]/ [ProDSS]

Serial No./ Equipment No.: [24A102447]/ [N/A]

Date of Calibration: 14-July-2026

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

*This report shall not be reproduced except in full without the written approval of the laboratory.*

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2629880  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 22-Jul-2026  
**CLIENT:** ENOVATIVE ENVIRONMENTAL SERVICE LTD

Equipment Type: Multifunctional Meter  
Brand Name/Model No.: [YSI]/ [ProDSS]  
Serial No.: [24A102447]/ [N/A]  
Equipment No.:  
Date of Calibration: 14-July-2026

Date of Next Calibration: 14-October-2026

## PARAMETERS:

### Conductivity

Method Ref: APHA (23rd edition), 2510B

| Expected Reading ( $\mu\text{S}/\text{cm}$ ) | Displayed Reading ( $\mu\text{S}/\text{cm}$ ) | Tolerance (%) |
|----------------------------------------------|-----------------------------------------------|---------------|
| 146.9                                        | 151.8                                         | +3.3          |
| 6667                                         | 6894                                          | +3.4          |
| 12890                                        | 13329                                         | +3.4          |
| 58670                                        | 60749                                         | +3.5          |
|                                              | Tolerance Limit (%)                           | $\pm 10.0$    |

### Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
|-------------------------|--------------------------|------------------|
| 2.24                    | 2.33                     | +0.09            |
| 5.01                    | 5.02                     | +0.01            |
| 6.35                    | 6.35                     | +0.00            |
|                         | Tolerance Limit (mg/L)   | $\pm 0.20$       |

### pH Value

Method Ref: APHA (23rd edition), 4500H: B

| Expected Reading (pH unit) | Displayed Reading (pH unit) | Tolerance (pH unit) |
|----------------------------|-----------------------------|---------------------|
| 4.0                        | 4.05                        | +0.05               |
| 7.0                        | 7.03                        | +0.03               |
| 10.0                       | 9.98                        | -0.02               |
|                            | Tolerance Limit (pH unit)   | $\pm 0.20$          |

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2629880  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 22-Jul-2026  
**CLIENT:** ENOVATIVE ENVIRONMENTAL SERVICE LTD

Equipment Type: Multifunctional Meter  
Brand Name/Model No.: [YSI]/ [ProDSS]  
Serial No./Equipment No.: [24A102447]/ [N/A]  
Date of Calibration: 14-July-2026

Date of Next Calibration: 14-October-2026

## PARAMETERS:

### Turbidity

Method Ref: APHA (23rd edition), 2130B

| Expected Reading (NTU) | Displayed Reading (NTU) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0                      | 0.08                    | --            |
| 4                      | 3.94                    | -1.5          |
| 40                     | 38.88                   | -2.8          |
| 80                     | 78.80                   | -1.5          |
| 400                    | 373.67                  | -6.6          |
| 800                    | 742.93                  | -7.1          |
| Tolerance Limit (%)    |                         | ±10.0         |

### Salinity

Method Ref: APHA (23rd edition), 2520B

| Expected Reading (ppt) | Displayed Reading (ppt) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0                      | 0.01                    | --            |
| 10                     | 10.21                   | +2.1          |
| 20                     | 20.66                   | +3.3          |
| 30                     | 31.17                   | +3.9          |
| Tolerance Limit (%)    |                         | ±10.0         |

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2629880  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 22-Jul-2026  
**CLIENT:** ENOVATIVE ENVIRONMENTAL SERVICE LTD

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [ProDSS]  
Serial No./ Equipment No.: [24A102447]/ [N/A]  
Date of Calibration: 14-July-2026

Date of Next Calibration: 14-October-2026

## PARAMETERS:

### Temperature

**Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

| Expected Reading (°C) | Displayed Reading (°C) | Tolerance (°C) |
|-----------------------|------------------------|----------------|
| 11.0                  | 11.9                   | +0.9           |
| 20.0                  | 19.2                   | -0.8           |
| 38.5                  | 39.0                   | +0.5           |
|                       | Tolerance Limit (°C)   | ±2.0           |

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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