



# Certificate of Calibration

## Calibration Certification Information

Cal. Date: October 17, 2018      Rootsmeter S/N: 438320      Ta: 294 °K  
Operator: Jim Tisch      Pa: 755.7 mm Hg  
Calibration Model #: TE-5025A      Calibrator S/N: 2154

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|-----|----------------|-----------------|------------|-------------|------------|-------------|
| 1   | 1              | 2               | 1          | 1.4590      | 3.2        | 2.00        |
| 2   | 3              | 4               | 1          | 1.0410      | 6.4        | 4.00        |
| 3   | 5              | 6               | 1          | 0.9310      | 7.9        | 5.00        |
| 4   | 7              | 8               | 1          | 0.8840      | 8.8        | 5.50        |
| 5   | 9              | 10              | 1          | 0.7320      | 12.7       | 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) |
|-----------|---------------|------------------------------------------------------------------------------------------|--------|-------------|---------------------------------------------------------|
| 1.0035    | 0.6878        | 1.4197                                                                                   | 0.9958 | 0.6825      | 0.8821                                                  |
| 0.9993    | 0.9599        | 2.0078                                                                                   | 0.9915 | 0.9525      | 1.2475                                                  |
| 0.9973    | 1.0712        | 2.2448                                                                                   | 0.9895 | 1.0629      | 1.3948                                                  |
| 0.9961    | 1.1268        | 2.3543                                                                                   | 0.9884 | 1.1180      | 1.4628                                                  |
| 0.9909    | 1.3536        | 2.8394                                                                                   | 0.9832 | 1.3432      | 1.7642                                                  |
| QSTD      | m=            | 2.13015                                                                                  | QA     | m=          | 1.33386                                                 |
|           | b=            | -0.04186                                                                                 |        | b=          | -0.02601                                                |
|           | r=            | 0.99996                                                                                  |        | r=          | 0.99996                                                 |

## Calculations

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

## Standard Conditions

Tstd: 298.15 °K

Pstd: 760 mm Hg

## Key

ΔH: calibrator manometer reading (in H2O)

ΔP: rootsmeter manometer reading (mm Hg)

Ta: actual absolute temperature (°K)

Pa: actual barometric pressure (mm Hg)

b: intercept

m: slope

## RECALIBRATION

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

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**MaterialLab****TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET**

|                                                                       |         |      |      |                                  |  |
|-----------------------------------------------------------------------|---------|------|------|----------------------------------|--|
| Project : Environmental Monitoring Works For Contract No. KLN/2015/07 |         |      |      | Date of Calibration: 29-Dec-18   |  |
| Location : KTD2b                                                      |         |      |      | Next Calibration Date: 28-Mar-19 |  |
| Brand:                                                                | Tisch   |      |      | Technician: Felix Fong           |  |
| Model:                                                                | TE-5170 | S/N: | 3838 |                                  |  |

**CONDITIONS**

|                           |        |                             |     |
|---------------------------|--------|-----------------------------|-----|
| Sea Level Pressure (hPa): | 1026.1 | Corrected Pressure (mm Hg): | 770 |
| Temperature (°C):         | 16     | Temperature (K):            | 289 |

**CALIBRATION ORIFICE**

|                   |           |                 |           |
|-------------------|-----------|-----------------|-----------|
| Make:             | Tisch     | Qstd Slope:     | 2.13015   |
| Model:            | TE-5025A  | Qstd Intercept: | -0.04186  |
| Calibration Date: | 17-Oct-18 | Expiry Date:    | 17-Oct-19 |
| S/N:              | 2154      |                 |           |

**CALIBRATIONS**

| Plate No. | H2O (L)<br>(in) | H2O (R)<br>(in) | H2O<br>(in) | Qstd<br>(m <sup>3</sup> /min) | I<br>(chart) | IC<br>(corrected) | LINEAR<br>REGRESSION                                          |
|-----------|-----------------|-----------------|-------------|-------------------------------|--------------|-------------------|---------------------------------------------------------------|
| 18        | 11.00           | -3.50           | 14.500      | 1.845                         | 54.00        | 55.15             | Slope = 25.5771<br>Intercept = 7.2498<br>Corr. coeff.: 0.9932 |
| 13        | 10.50           | -1.00           | 11.500      | 1.646                         | 48.00        | 49.02             |                                                               |
| 10        | 8.00            | 0.00            | 8.000       | 1.376                         | 40.00        | 40.85             |                                                               |
| 7         | 6.50            | 1.50            | 5.000       | 1.092                         | 36.00        | 36.77             |                                                               |
| 5         | 5.50            | 2.50            | 3.000       | 0.850                         | 28.00        | 28.60             |                                                               |

**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)

Tstd = 298 deg K

Pstd = 760 mm Hg

**For subsequent calculation of sampler flow:**

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

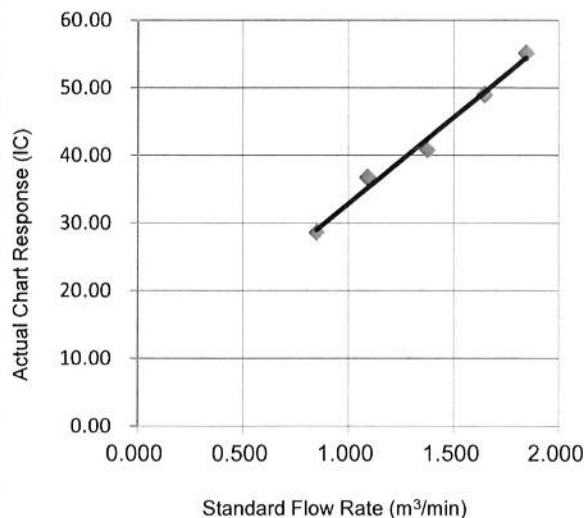
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

**FLOW RATE CHART**

**CHOI KAM HO**  
Project Consultant

**Report Date:** 1<sup>st</sup> January, 2019

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**MaterialLab****TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET**

Project : Environmental Monitoring Works For Contract No. KLN/2015/07 Date of Calibration: 29-Dec-18  
Location : KTD1a Next Calibration Date: 28-Mar-19  
Brand: Tisch Technician: Felix Fong  
Model: TE-5170 S/N: 4037

**CONDITIONS**

Sea Level Pressure (hPa): 1026.1 Corrected Pressure (mm Hg): 770  
Temperature (°C): 16 Temperature (K): 289

**CALIBRATION ORIFICE**

Make: Tisch Qstd Slope: 2.13015  
Model: TE-5025A Qstd Intercept: -0.04186  
Calibration Date: 17-Oct-18 Expiry Date: 17-Oct-19  
S/N: 2154

**CALIBRATIONS**

| Plate No. | H2O (L)<br>(in) | H2O (R)<br>(in) | H2O<br>(in) | Qstd<br>(m <sup>3</sup> /min) | I<br>(chart) | IC<br>(corrected) | LINEAR<br>REGRESSION                                           |
|-----------|-----------------|-----------------|-------------|-------------------------------|--------------|-------------------|----------------------------------------------------------------|
| 18        | 10.00           | -3.00           | 13.000      | 1.749                         | 58.00        | 59.27             | Slope = 27.2293<br>Intercept = 10.3971<br>Corr. coeff.: 0.9942 |
| 13        | 9.50            | -1.50           | 11.000      | 1.611                         | 52.00        | 53.14             |                                                                |
| 10        | 8.50            | 0.00            | 8.500       | 1.418                         | 48.00        | 49.05             |                                                                |
| 7         | 6.80            | 1.20            | 5.600       | 1.155                         | 40.00        | 40.87             |                                                                |
| 5         | 5.20            | 2.10            | 3.100       | 0.864                         | 34.00        | 34.74             |                                                                |

**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)

Tstd = 298 deg K

Pstd = 760 mm Hg

**For subsequent calculation of sampler flow:**

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

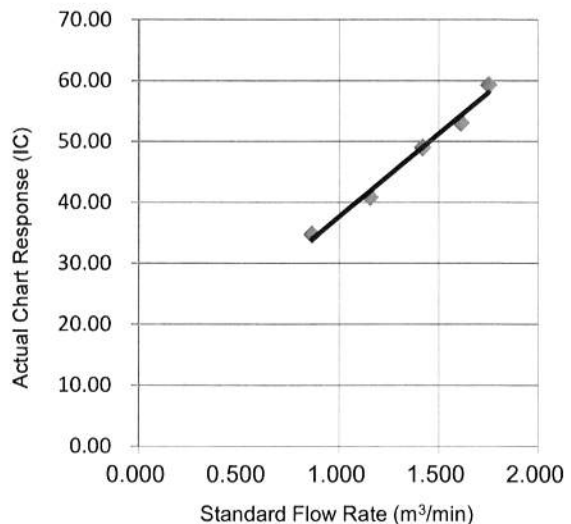
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

**FLOW RATE CHART**

**CHOI KAM HO**  
Project Consultant

**Report Date:** 1<sup>st</sup> January, 2019

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**MaterialLab****TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET**

Project : Environmental Monitoring Works For Contract No. KLN/2015/07 Date of Calibration: 29-Dec-18  
Location : KER1b Next Calibration Date: 28-Mar-19  
Brand: Tisch Technician: Felix Fong  
Model: TE-5170 S/N: 3482

**CONDITIONS**

Sea Level Pressure (hPa): 1026.1 Corrected Pressure (mm Hg): 770  
Temperature (°C): 16 Temperature (K): 289

**CALIBRATION ORIFICE**

Make: Tisch Qstd Slope: 2.13015  
Model: TE-5025A Qstd Intercept: -0.04186  
Calibration Date: 17-Oct-18 Expiry Date: 17-Oct-19  
S/N: 2154

**43755**

| Plate No. | H2O (L)<br>(in) | H2O (R)<br>(in) | H2O<br>(in) | Qstd<br>(m <sup>3</sup> /min) | I<br>(chart) | IC<br>(corrected) | LINEAR<br>REGRESSION                                           |
|-----------|-----------------|-----------------|-------------|-------------------------------|--------------|-------------------|----------------------------------------------------------------|
| 18        | 10.50           | -3.20           | 13.700      | 1.795                         | 56.00        | 57.22             | Slope = 21.6783<br>Intercept = 17.4679<br>Corr. coeff.: 0.9967 |
| 13        | 9.00            | -1.60           | 10.600      | 1.581                         | 50.00        | 51.09             |                                                                |
| 10        | 8.40            | 0.20            | 8.200       | 1.393                         | 46.00        | 47.01             |                                                                |
| 7         | 6.60            | 1.80            | 4.800       | 1.071                         | 40.00        | 40.87             |                                                                |
| 5         | 5.40            | 2.20            | 3.200       | 0.878                         | 36.00        | 36.79             |                                                                |

**Calculations:**

$$Q_{std} = 1/m[\sqrt{(H_2O(Pa/P_{std})(T_{std}/T_a))}] - b]$$

$$IC = I[\sqrt{(Pa/P_{std})(T_{std}/T_a)}]$$

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)

Tstd = 298 deg K

Pstd = 760 mm Hg

**For subsequent calculation of sampler flow:**

$$1/m((I)[\sqrt{(298/T_{av})(P_{av}/760)}] - b)$$

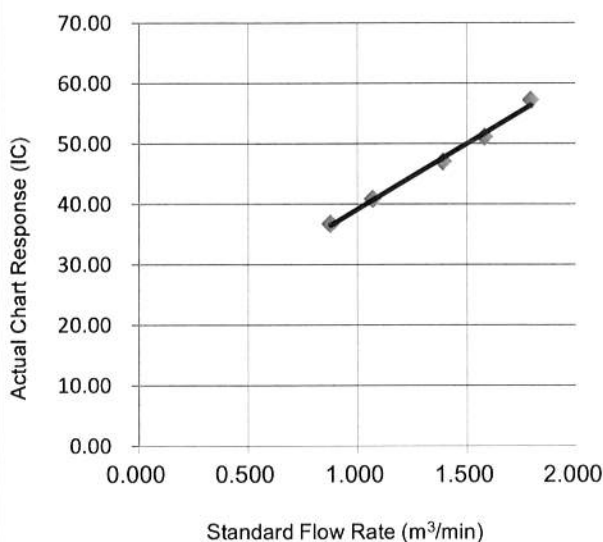
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

**FLOW RATE CHART**

**CHOI KAM HO**  
Project Consultant

**Report Date:** 1<sup>st</sup> January, 2019



# Certificate of Conformity and Calibration

**Instrument Model:-** CEL-633A

Serial Number 1488291  
Firmware revision V006-03

**Microphone Type:-** CEL-251

Serial Number 2789

**Preamplifier Type:-** CEL-495

Serial Number 003921

**Instrument Class/Type:-** 1

**Applicable standards:-**

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)  
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

**Note:-** The test sequences performed in this report are in accordance with the current Sound level meter Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superseded Sound Level Meter Standards - IEC60651 and IEC60804.

**Test Conditions:-**

31 °C  
51 %RH  
1000 mBar

**Test Engineer:-**
**Date of Issue:-**

Chris Taylor  
September 10, 2018


**Declaration of conformity:-**

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

**Test Summary:-**

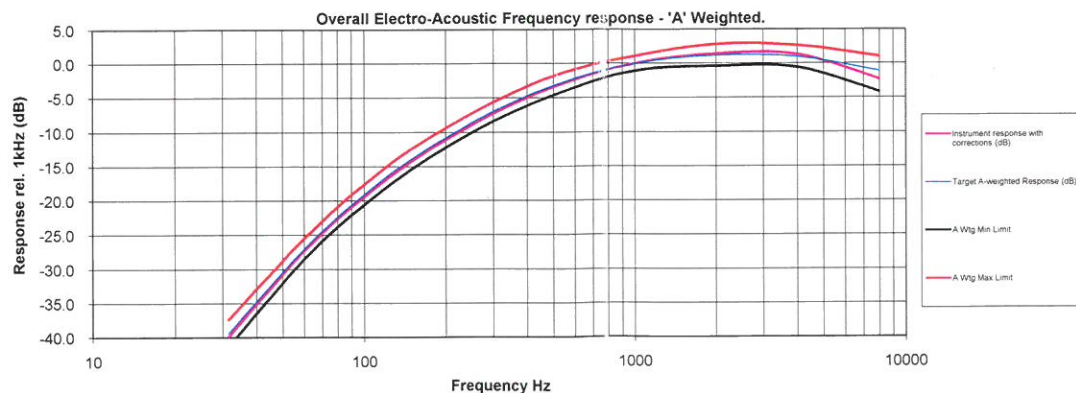
Self Generated Noise Test  
Electrical Signal Test Of Frequency Weightings  
Frequency & Time Weightings At 1 kHz  
Level Linearity On The Reference Level Range  
Toneburst Response Test  
C-peak Sound Levels  
Overload Indication  
Acoustic Tests

All Tests Pass  
All Tests Pass  
All Tests Pass  
All Tests Pass  
All Tests Pass  
All Tests Pass  
All Tests Pass  
All Tests Pass

**Combined Electro-Acoustic Frequency Response - A Weighted**

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instrument's overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1 kHz.


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# MaterialLab

Report no.: 172379CA185194

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND LEVEL METER

### Client Supplied Information

Client : MaterialLab Consultants Ltd.

Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.

Project : Calibration Services

### Details of Unit Under Test, UUT

Description : Sound Level Meter  
Manufacturer : Casella

|            | Meter   | Microphone | Preamplifier |
|------------|---------|------------|--------------|
| Model No.  | CL63X   | CE-251     | CEL-495      |
| Serial No. | 3756072 | 2403       | 002109       |

Equipment ID : N/A

Next Calibration Date : 11-Jun-2019

Specification Limit : EN 61672: 2003 Type 1

### Laboratory Information

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date of Calibration : 12-Jun-2018 Ambient Temperature : 22 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : By direct comparison

### Calibration Results :

| Parameters                           |             | Mean Value (dB) | Specification Limit(dB) |
|--------------------------------------|-------------|-----------------|-------------------------|
| A-weighting<br>frequency<br>response | 4000Hz      | 0.4             | 2.6 to -0.6             |
|                                      | 2000Hz      | 1.0             | 2.8 to -0.4             |
|                                      | 1000Hz      | -0.1            | 1.1 to -1.1             |
|                                      | 500Hz       | -3.4            | -1.8 to -4.6            |
|                                      | 250Hz       | -9.6            | -7.2 to -10.0           |
|                                      | 125Hz       | -16.2           | -14.6 to -17.6          |
|                                      | 63Hz        | -26.3           | -24.7 to -27.7          |
|                                      | 31.5Hz      | -39.2           | -37.4 to -41.4          |
| Differential level<br>linearity      | 94dB-104dB  | 0.0             | ± 0.6                   |
|                                      | 104dB-114dB | 0.0             | ± 0.6                   |

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference range is 30-130dB, reference SPL is 94, 104 & 114dB, frequency weighing is A,
4. The equipment does comply with EN 61672: 2003 Type 1 sound level meter for the above measurement.

Checked by : William Date : 22-6-2018 Certified by : K. Th. Leung Date : 23-6-2018  
CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

**\*\* End of Report \*\***



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# MaterialLab

Report no.: 172379CA180517A

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND LEVEL METER

### Client Supplied Information

Client : MaterialLab Consultants Ltd.

Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter

Manufacturer : Casella

|            | Meter   | Microphone | Preamplifier |
|------------|---------|------------|--------------|
| Model No.  | CEL-63X | CE-251     | CEL-495      |
| Serial No. | 3756127 | 00995      | 003350       |

Next Calibration Date : 11-Mar-2019

Specification Limit : EN 61672: 2003 Type 1

### Laboratory Information

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date of Calibration : 12-Mar-2018 Ambient Temperature : 22 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : By direct comparison

### Calibration Results :

| Parameters                     |             | Mean Value (dB) | Specification Limit(dB) |
|--------------------------------|-------------|-----------------|-------------------------|
| A-weighting frequency response | 4000Hz      | -0.3            | 2.6 to -0.6             |
|                                | 2000Hz      | 0.9             | 2.8 to -0.4             |
|                                | 1000Hz      | 0.3             | 1.1 to -1.1             |
|                                | 500Hz       | -2.9            | -1.8 to -4.6            |
|                                | 250Hz       | -8.2            | -7.2 to -10.0           |
|                                | 125Hz       | -15.6           | -14.6 to -17.6          |
|                                | 63Hz        | -25.6           | -24.7 to -27.7          |
|                                | 31.5Hz      | -38.6           | -37.4 to -41.4          |
| Differential level linearity   | 94dB-104dB  | 0.0             | ± 0.6                   |
|                                | 104dB-114dB | 0.0             | ± 0.6                   |

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighing is fast
4. The equipment does comply with EN 61672: 2003 Type 1 sound level meter for the above measurement.
5. This is to supersede the previous report no. 172379CA180517.

Checked by : any Date : 5-7-2018 Certified by : K.T. Young Date : 7-7-2018

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

**\*\* End of Report \*\***

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# MaterialLab

Report no.: 183057CA185248

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

### Client Supplied Information

Client : MaterialLab Consultants Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Calibrator  
Manufacturer : Casella (Model CEL-120/1)  
Serial No. : 4358250  
Equipment ID : N/A  
Next Calibration Date : 02-Jul-2019  
Specification Limit : EN 60942: 2003 Type 1

### Laboratory Information

Description : Reference Sound level meter  
Equipment ID. : R-119-1  
Date of Calibration : 03-Jul-2018 Ambient Temperature : 22 °C  
Calibration Location : Calibration Laboratory of FTS  
Method Used : By direct comparison

### Calibration Results :

| Parameters (Setting of UUT) | Mean Value (error of measurement) | Specification Limit(dB) |
|-----------------------------|-----------------------------------|-------------------------|
| 94dB                        | 0.0 dB                            | ±0.4dB                  |
| 114dB                       | 0.1 dB                            |                         |

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The equipment does comply with the specification limit.

Checked by : William Date : 10-7-2018 Certified by : Chan Chun Wai Date : 14.7.2018

CA-R-297 (22/07/2009)

Chan Chun Wai (Manager)

**\*\* End of Report \*\***



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# MaterialLab

Report no.: 183057CA185294

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

### Client Supplied Information

Client : MaterialLab Consultants Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Calibrator  
Manufacturer : Casella (Model no. CEL-120/1)  
Serial No. : 5230736  
Equipment ID : FY-SLC-01  
Next Calibration Date : 18-Jul-2019  
Specification Limit : EN 60942: 2003 Type 1

### Laboratory Information

Description : Reference Sound level meter  
Equipment ID. : R-119-1  
Date of Calibration : 19-Jul-2018 Ambient Temperature : 22 °C  
Calibration Location : Calibration Laboratory of FTS  
Method Used : By direct comparison

### Calibration Results :

| Parameters (Setting of UUT) | Mean Value (error of measurement) | Specification Limit(dB) |
|-----------------------------|-----------------------------------|-------------------------|
| 94dB                        | 0.0 dB                            | ±0.4dB                  |
| 114dB                       | -0.2 dB                           |                         |

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The equipment does comply with the specification limit.

Checked by : William Date : 20-7-2018 Certified by : Chan Chun Wai Date : 23.7.2018

CA-R-297 (22/07/2009)

Chan Chun Wai (Manager)

**\*\* End of Report \*\***

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# MaterialLab

Report No. : 183057CA185180(1)

Page 1 of 1

### CALIBRATION CERTIFICATE OF ANEMOMETER

#### Client Supplied Information

Client : MaterialLab Consultants Ltd.

Project : Calibration Services

#### Details of Unit Under Test, UUT

Description : Anemometer

Manufacturer : Benetech

Model No. : GM816

Serial No. : 13372555

Equipment ID. : N/A

Next Calibration Date : 08-Jun-2019

#### Laboratory Information

##### Details of Reference Equipment –

Description : Reference Anemometer

Equipment ID. : R-101-4

Date of Calibration : 09-Jun-2018 Ambient Temperature : 22 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : By direct Comparison

#### Calibration Results :

| Reference Reading<br>(m/s) | UUT Reading<br>(m/s) | Error<br>(m/s) |
|----------------------------|----------------------|----------------|
| 1.96                       | 2.2                  | 0.2            |
| 4.04                       | 4.1                  | 0.1            |
| 6.05                       | 6.2                  | 0.2            |
| 8.02                       | 7.9                  | -0.1           |
| 10.06                      | 9.7                  | -0.4           |

#### Remark :

1. The equipment being used in this calibration is traceable to recognized National Standards.

Checked by : William Date : 12-6-2018 Certified by : Chan Chun Wai Date : 13-6-2018  
CA-R-297 (22/07/2009) Chan Chun Wai (Manager)

**\*\* End of Report \*\***

# FUGRO TECHNICAL SERVICES LIMITED

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# Materialab

Report No. : 182933CA185214(2)

Page 1 of 1

## CALIBRATION CERTIFICATE OF ANEMOMETER

### Client Supplied Information

Client : Materialab Consultants Ltd.

Address: Room 723 & 725, 7F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.

Project : Calibration Services

### Details of Unit Under Test, UUT

Description : Comfort Level Probe

Manufacturer : Testo

Model No. :

Serial No. :

Equipment ID :

| Meter    | Probe    |
|----------|----------|
| 480      | 409      |
| 61003846 | 03216409 |

N/A

Next Calibration Due Date : 22-Aug-2019

### Laboratory Information

Details of Reference Equipment –

Description : Reference Anemometer

Equipment ID. : R-101-4

Date of Calibration : 23-Aug-2018

Ambient Temperature : 20± 2 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : By direct Comparison

### Calibration Results :

| Reference Reading<br>(m/s) | UUT Reading<br>(m/s) | Error<br>(m/s) |
|----------------------------|----------------------|----------------|
| 1.05                       | 1.06                 | 0.01           |
| 3.02                       | 3.06                 | 0.04           |
| 5.04                       | 5.07                 | 0.03           |

### Remarks :

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The reported readings in this calibration are an average from 10 trials.

Checked by : William Date : 31-8-2018 Certified by : K. T. Leung Date : 31-8-2018  
CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

**\*\* End of Report \*\***