

High-Volume TSP Sampler
5-Point Calibration Record

Location : AM1 (ICC)
 Calibrated by : K.T.Ho
 Date : 20/03/2020

Sampler

Model : TE-5170
 Serial Number : S/N 0767

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 18 February 2020
 Slope (m) : 2.07134
 Intercept (b) : -0.040910
 Correlation Coefficient(r) : 0.99999

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

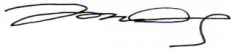
Pa (hpa) : 1015
 Ta(K) : 297

| Resistance Plate | | dH [green liquid] (inch water) | Z | X=Qstd (cubic meter/min) | IC (chart) | Y (corrected) |
|------------------|----------|-----------------------------------|-------|-----------------------------|---------------|------------------|
| 1 | 18 holes | 11.2 | 3.361 | 1.642 | 58 | 58.25 |
| 2 | 13 holes | 8.2 | 2.876 | 1.408 | 50 | 50.22 |
| 3 | 10 holes | 6.2 | 2.501 | 1.227 | 42 | 42.18 |
| 4 | 7 holes | 4.4 | 2.107 | 1.037 | 32 | 32.14 |
| 5 | 5 holes | 2.6 | 1.619 | 0.802 | 20 | 20.09 |

Notes: $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$, $X = Z/m - b$, $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

Sampler Calibration Relationship

Slope(m): 45.943 Intercept(b): -15.624 Correlation Coefficient(r): 0.9960

Checked by: 

 Magnum Fan

Date: 23/03/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location : AM2B (Gammon Office)
 Calibrated by : K.T.Ho
 Date : 20/03/2020

Sampler

Model : TE-5170
 Serial Number : S/N 8919

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 18 February 2020
 Slope (m) : 2.07134
 Intercept (b) : -0.040910
 Correlation Coefficient(r) : 0.99999

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

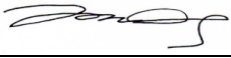
Pa (hpa) : 1015
 Ta(K) : 297

| Resistance Plate | dH [green liquid] (inch water) | Z | X=Qstd (cubic meter/min) | IC (chart) | Y (corrected) |
|------------------|-----------------------------------|-------|-----------------------------|---------------|------------------|
| 1 18 holes | 12.0 | 3.479 | 1.699 | 60 | 60.26 |
| 2 13 holes | 9.0 | 3.013 | 1.474 | 56 | 56.24 |
| 3 10 holes | 6.6 | 2.580 | 1.265 | 48 | 48.21 |
| 4 7 holes | 4.0 | 2.009 | 0.990 | 34 | 34.15 |
| 5 5 holes | 2.0 | 1.420 | 0.705 | 24 | 24.10 |

Notes: $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$, $X = Z/m - b$, $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

Sampler Calibration Relationship

Slope(m): 38.403 Intercept(b): -2.521 Correlation Coefficient(r): 0.9906

Checked by: 

 Magnum Fan

Date: 23/03/2020



| |
|---|
| RECALIBRATION DUE DATE: February 18, 2021 |
|---|

Certificate of Calibration

| Calibration Certification Information | | | |
|---------------------------------------|-----------------------|-----------------|--|
| Cal. Date: February 18, 2020 | Rootmeter S/N: 438320 | Ta: 29.4 °K | |
| Operator: Jim Tisch | | Pa: 753.1 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 | 1.4190 | 3.2 | 2.00 |
| 2 | 3 | 4 | 1 | 1.0100 | 6.4 | 4.00 |
| 3 | 5 | 6 | 1 | 0.9020 | 7.9 | 5.00 |
| 4 | 7 | 8 | 1 | 0.8600 | 8.8 | 5.50 |
| 5 | 9 | 10 | 1 | 0.7110 | 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) | $\sqrt{\Delta H (Ta/Pa)}$ (y-axis) |
| 1.0001 | 0.7048 | 1.4173 | 0.9958 | 0.7017 | 0.8836 |
| 0.9959 | 0.9860 | 2.0044 | 0.9915 | 0.9817 | 1.2496 |
| 0.9939 | 1.1019 | 2.2410 | 0.9895 | 1.0970 | 1.3971 |
| 0.9927 | 1.1543 | 2.3504 | 0.9883 | 1.1492 | 1.4653 |
| 0.9875 | 1.3889 | 2.8347 | 0.9831 | 1.3828 | 1.7672 |
| QSTD | m= | 2.07134 | QA | m= | 1.29704 |
| | b= | -0.04091 | | b= | -0.02551 |
| | r= | 0.99999 | | r= | 0.99999 |

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

| 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 K.W. FAN
CLIENT : ENVIROTECH SERVICES CO.
ADDRESS : RM113, 1/F, MY LOFT, 9 HOI WING ROAD,
TUEN MUN, N.T. HONG KONG
PROJECT : ----

WORK ORDER : **HK1950885**
SUB-BATCH : 1
DATE RECEIVED : 3-DEC-2019
DATE OF ISSUE : 13-DEC-2019
NO. OF SAMPLES : 1
CLIENT ORDER : ----

General Comments

- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.
- Sample information (Project name, Sample ID, Sampling date/time, etc., if any) is provided by client.
- Calibration was subcontracted to and analysed by Action United Enviro Services.

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 is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

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

11/F, Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK1950885
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----



| ALS Lab ID | Client's Sample ID | Sample Type | Sample Date | External Lab Report No. |
|---------------|--------------------|-------------|-------------|-------------------------|
| HK1950885-001 | S/N: 235780 | Equipments | 03-Dec-2019 | 235780 |

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-3B
Serial No. 235780
Equipment Ref: Nil
Job Order HK1950885

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 3 December 2019

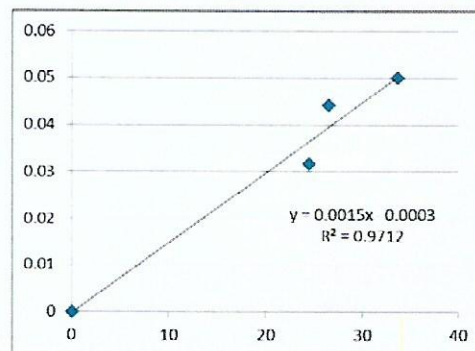
Equipment Verification Results:

Verification Date: 10 December 2019

| Hour | Time | Mean Temp °C | Mean Pressure (hPa) | Concentration in mg/m ³ (Standard Equipment) | Total Count (Calibrated Equipment) | Count/Minute (Total Count/min) |
|----------|---------------|--------------|---------------------|---|------------------------------------|--------------------------------|
| 2hr02min | 09:08 ~ 11:10 | 18.4 | 1018.6 | 0.032 | 2989 | 24.5 |
| 2hr01min | 11:15 ~ 13:16 | 18.4 | 1018.6 | 0.044 | 3203 | 26.6 |
| 2hr01min | 13:22 ~ 15:23 | 18.4 | 1018.6 | 0.050 | 4060 | 33.7 |

Linear Regression of Y or X

Slope (K-factor): 0.0015
Correlation Coefficient 0.9855
Date of Issue 13 December 2019



Remarks:

1. Strong Correlation ($R > 0.8$)
2. Factor 0.0015 should be applied for TSP monitoring

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

Operator : Fai So Signature : [Signature] Date : 13 December 2019

QC Reviewer : Ben Tam Signature : [Signature] Date : 13 December 2019



SUB-CONTRACTING REPORT

| | | | |
|---------|---|----------------|--------------------|
| CONTACT | : MR K.W. FAN | WORK ORDER | : HK1950891 |
| CLIENT | : ENVIROTECH SERVICES CO. | | |
| ADDRESS | : RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T. HONG KONG | SUB-BATCH | : 1 |
| | | DATE RECEIVED | : 3-DEC-2019 |
| | | DATE OF ISSUE | : 13-DEC-2019 |
| PROJECT | : ---- | NO. OF SAMPLES | : 1 |
| | | CLIENT ORDER | : ---- |

General Comments

- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.
- Sample information (Project name, Sample ID, Sampling date/time, etc., if any) is provided by client.
- Calibration was subcontracted to and analysed by Action United Enviro Services.

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 is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

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

11/F, Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK1950891
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ---



| ALS Lab ID | Client's Sample ID | Sample Type | Sample Date | External Lab Report No. |
|---------------|--------------------|-------------|-------------|-------------------------|
| HK1950891-001 | S/N: 627784 | Equipments | 03-Dec-2019 | 627784 |

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-3B
Serial No. 6Z7784
Equipment Ref: Nil
Job Order HK1950891

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 3 December 2019

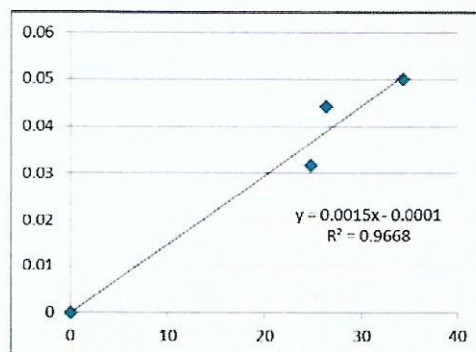
Equipment Verification Results:

Verification Date: 10 December 2019

| Hour | Time | Mean Temp °C | Mean Pressure (hPa) | Concentration in mg/m ³ (Standard Equipment) | Total Count (Calibrated Equipment) | Count/Minute (Total Count/min) |
|----------|---------------|--------------|---------------------|---|------------------------------------|--------------------------------|
| 2hr02min | 09:08 ~ 11:10 | 18.4 | 1018.6 | 0.032 | 3020 | 24.8 |
| 2hr01min | 11:15 ~ 13:16 | 18.4 | 1018.6 | 0.044 | 3185 | 26.4 |
| 2hr01min | 13:22 ~ 15:23 | 18.4 | 1018.6 | 0.050 | 4141 | 34.3 |

Linear Regression of Y or X

Slope (K-factor): 0.0015
Correlation Coefficient 0.9833
Date of Issue 13 December 2019



Remarks:

1. **Strong** Correlation ($R > 0.8$)
2. Factor 0.0015 should be applied for TSP monitoring

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

Operator : Fai So Signature :  Date : 13 December 2019

QC Reviewer : Ben Tam Signature :  Date : 13 December 2019

Certificate of Calibration

for

Description: Sound Level Meter
Manufacturer: RION
Type No.: NL-52 (Serial No.: 00175561)
Microphone: UC-53A (Serial No.: 99995)
Preamplifier: NH-25 (Serial No.:65663)

Submitted by:

Customer: Envirotech Services Co.
Address: Rm.113, 1/F., My Loft, 9 Hoi Wing Road,
Tuen Mun, N.T., Hong Kong.

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

- Within
 Outside

the allowable tolerance.

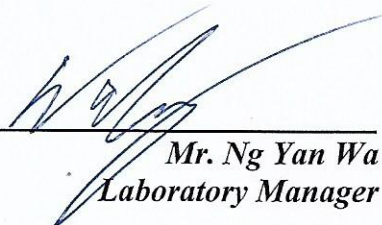
The test equipment used for calibration are traceable to National Standards via:

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

Date of receipt: 24 September 2019

Date of calibration: 26 September 2019

Calibrated by: 
Calibration Technician

Certified by: 
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 26 September 2019

Certificate No.: APJ19-095-CC001



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1. Calibration Precaution:

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

2. Calibration Conditions:

Air Temperature: 24.1 °C
 Air Pressure: 1006 hPa
 Relative Humidity: 54.2 %

3. Calibration Equipment:

| | Type | Serial No. | Calibration Report Number | Traceable to |
|--------------------------|----------|------------|---------------------------|--------------|
| Multifunction Calibrator | B&K 4226 | 2288467 | AV180064 | HOKLAS |

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

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

Linearity

| Setting of Unit-under-test (UUT) | | | Applied value | | UUT Reading, dB | IEC 61672 Class 1 Specification, dB |
|----------------------------------|-----------------|----------------|---------------|---------------|-----------------|-------------------------------------|
| Range, dB | Freq. Weighting | Time Weighting | Level, dB | Frequency, Hz | | |
| 30-130 | dBA SPL | Fast | 94 | 1000 | 94.0 | Ref |
| | | | 104 | | 104.0 | ±0.3 |
| | | | 114 | | 114.1 | ±0.3 |

Time Weighting

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



Frequency Response

Linear Response

| Setting of Unit-under-test (UUT) | | | Applied value | | UUT Reading, dB | IEC 61672 Class 1 Specification, dB | |
|----------------------------------|-----------------|----------------|---------------|---------------|--------------------|--|------------|
| Range, dB | Freq. Weighting | Time Weighting | Level, dB | Frequency, Hz | | | |
| 30-130 | dB | SPL | Fast | 94 | 31.5 | 94.3 | ±2.0 |
| | | | | | 63 | 94.2 | ±1.5 |
| | | | | | 125 | 94.1 | ±1.5 |
| | | | | | 250 | 94.0 | ±1.4 |
| | | | | | 500 | 94.0 | ±1.4 |
| | | | | | 1000 | 94.0 | Ref |
| | | | | | 2000 | 93.9 | ±1.6 |
| | | | | | 4000 | 93.7 | ±1.6 |
| | | | | | 8000 | 91.9 | +2.1; -3.1 |

A-weighting

| Setting of Unit-under-test (UUT) | | | Applied value | | UUT Reading, dB | IEC 61672 Class 1 Specification, dB | |
|----------------------------------|-----------------|----------------|---------------|---------------|--------------------|--|----------------|
| Range, dB | Freq. Weighting | Time Weighting | Level, dB | Frequency, Hz | | | |
| 30-130 | dBA | SPL | Fast | 94 | 31.5 | 55.2 | -39.4±2.0 |
| | | | | | 63 | 68.0 | -26.2±1.5 |
| | | | | | 125 | 78.0 | -16.1±1.5 |
| | | | | | 250 | 85.4 | -8.6±1.4 |
| | | | | | 500 | 90.8 | -3.2±1.4 |
| | | | | | 1000 | 94.0 | Ref |
| | | | | | 2000 | 95.1 | +1.2±1.6 |
| | | | | | 4000 | 94.7 | +1.0±1.6 |
| | | | | | 8000 | 90.9 | -1.1±2.1; -3.1 |

C-weighting

| Setting of Unit-under-test (UUT) | | | Applied value | | UUT Reading, dB | IEC 61672 Class 1 Specification, dB | |
|----------------------------------|-----------------|----------------|---------------|---------------|--------------------|--|-----------------|
| Range, dB | Freq. Weighting | Time Weighting | Level, dB | Frequency, Hz | | | |
| 30-130 | dBC | SPL | Fast | 94 | 31.5 | 91.3 | -3.0±2.0 |
| | | | | | 63 | 93.4 | -0.8±1.5 |
| | | | | | 125 | 93.9 | -0.2±1.5 |
| | | | | | 250 | 94.0 | -0.0±1.4 |
| | | | | | 500 | 94.0 | -0.0±1.4 |
| | | | | | 1000 | 94.0 | Ref |
| | | | | | 2000 | 93.8 | -0.2±1.6 |
| | | | | | 4000 | 92.9 | -0.8±1.6 |
| | | | | | 8000 | 89.0 | -3.0 +2.1: -3.1 |

Certificate No.: APJ19-095-CC001



Page 3 of 4

5. Calibration Results Applied

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

Uncertainties of Applied Value:

| | | |
|--------|---------|--------|
| 94 dB | 31.5 Hz | ± 0.15 |
| | 63 Hz | ± 0.10 |
| | 125 Hz | ± 0.10 |
| | 250 Hz | ± 0.05 |
| | 500 Hz | ± 0.10 |
| | 1000 Hz | ± 0.05 |
| | 2000 Hz | ± 0.05 |
| | 4000 Hz | ± 0.10 |
| | 8000 Hz | ± 0.10 |
| 104 dB | 1000 Hz | ± 0.05 |
| 114 dB | 1000 Hz | ± 0.05 |

The uncertainties are evaluated for a 95% confidence level.

Note:

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



Certificate of Calibration 校正證書

Certificate No. : C192695
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC19-0995) Date of Receipt / 收件日期 : 17 May 2019
Description / 儀器名稱 : Precision Acoustic Calibrator
Manufacturer / 製造商 : LARSON DAVIS
Model No. / 型號 : CAL200
Serial No. / 編號 : 11333
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(50 \pm 25)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

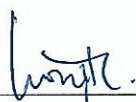
DATE OF TEST / 測試日期 : 26 May 2019

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

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

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By : 
測試 : _____
H T Wong
Technical Officer

Certified By : 
核證 : _____
K O Lee
Engineer

Date of Issue : 29 May 2019
簽發日期

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Certificate of Calibration

校正證書

Certificate No. : C192695
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

| <u>Equipment ID</u> | <u>Description</u> | <u>Certificate No.</u> |
|---------------------|-----------------------------------|------------------------|
| CL130 | Universal Counter | C183775 |
| CL281 | Multifunction Acoustic Calibrator | CDK1806821 |
| TST150A | Measuring Amplifier | C181288 |

- Test procedure : MA100N.

- Results :

5.1 Sound Level Accuracy

| UUT Nominal Value | Measured Value (dB) | Mfr's Spec. (dB) | Uncertainty of Measured Value (dB) |
|----------------------|------------------------|---------------------|---------------------------------------|
| 94 dB, 1 kHz | 93.8 | ± 0.2 | ± 0.2 |
| 114 dB, 1 kHz | 113.8 | | |

5.2 Frequency Accuracy

| UUT Nominal Value (kHz) | Measured Value (kHz) | Mfr's Spec. | Uncertainty of Measured Value (Hz) |
|----------------------------|-------------------------|----------------|---------------------------------------|
| 1 | 1.000 | 1 kHz ± 1 % | ± 1 |

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :

Only the original copy or the laboratory's certified true copy is valid.

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

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory

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輝創工程有限公司 – 校正及檢測實驗室

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