



Certificate of Calibration

校正證書

Certificate No. : C156299
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC15-2523) Date of Receipt / 收件日期 : 6 November 2015

Description / 儀器名稱 : Integrating Sound Level Meter
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2808432
Supplied By / 委託者 : Atkins China Limited
19/F., Tower 1, The Gateway Harbour City,
Tsim Sha Tsui, Kowloon

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check


DATE OF TEST / 測試日期 : 10 November 2015

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
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By : 
測試 : _____
H T Wong
Technical Officer

Certified By : 
核證 : _____
K C Lee
Project Engineer

Date of Issue : 11 November 2015
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室所書面批准。

Certificate of Calibration

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Certificate No. : C156299

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1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.3.2.
3. The results presented are the mean of 3 measurements at each calibration point.
4. Test equipment :

| Equipment ID | Description | Certificate No. |
|--------------|-------------------------------------|-----------------|
| CL280 | 40 MHz Arbitrary Waveform Generator | C150014 |
| CL281 | Multifunction Acoustic Calibrator | DC130171 |

5. Test procedure : MA101N.

6. Results :

- 6.1 Sound Pressure Level :

- 6.1.1 Reference Sound Pressure Level

- 6.1.1.1 Before Self-calibration

| UUT Setting | | | | Applied Value | | UUT Reading (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 1 | 95.2 |

- 6.1.1.2 After Self-calibration

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 1 | 94.1 | ± 1.1 |

- 6.1.2 Linearity

| UUT Setting | | | | Applied Value | | UUT Reading (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 1 | 94.1 (Ref.) |
| | | | | 104.00 | | 104.1 |
| | | | | 114.00 | | 114.1 |

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

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Certificate No. : C156299
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6.2 Time Weighting

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 1 | 94.1 | Ref. |
| | L _{ASP} | | S | | | 94.1 | ± 0.3 |

6.3 Frequency Weighting

6.3.1 A-Weighting

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|----------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. | | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 63 Hz | 68.0 | -26.2 ± 1.5 |
| | | | | | 125 Hz | 78.0 | -16.1 ± 1.5 |
| | | | | | 250 Hz | 85.4 | -8.6 ± 1.4 |
| | | | | | 500 Hz | 90.9 | -3.2 ± 1.4 |
| | | | | | 1 kHz | 94.1 | Ref. |
| | | | | | 2 kHz | 95.3 | +1.2 ± 1.6 |
| | | | | | 4 kHz | 95.1 | +1.0 ± 1.6 |
| | | | | | 8 kHz | 92.9 | -1.1 (+2.1 ; -3.1) |
| | | | | | 12.5 kHz | 89.8 | -4.3 (+3.0 ; -6.0) |

6.3.2 C-Weighting

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|----------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. | | |
| 50 - 130 | L _{CFP} | C | F | 94.00 | 63 Hz | 93.4 | -0.8 ± 1.5 |
| | | | | | 125 Hz | 94.0 | -0.2 ± 1.5 |
| | | | | | 250 Hz | 94.1 | 0.0 ± 1.4 |
| | | | | | 500 Hz | 94.1 | 0.0 ± 1.4 |
| | | | | | 1 kHz | 94.1 | Ref. |
| | | | | | 2 kHz | 94.0 | -0.2 ± 1.6 |
| | | | | | 4 kHz | 93.3 | -0.8 ± 1.6 |
| | | | | | 8 kHz | 91.1 | -3.0 (+2.1 ; -3.1) |
| | | | | | 12.5 kHz | 87.9 | -6.2 (+3.0 ; -6.0) |

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Certificate of Calibration

校正證書

Certificate No. : C156299

證書編號

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2929047

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : ± 0.35 dB
250 Hz - 500 Hz : ± 0.30 dB
1 kHz : ± 0.20 dB
2 kHz - 4 kHz : ± 0.35 dB
8 kHz : ± 0.45 dB
12.5 kHz : ± 0.70 dB
104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)

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

Note :

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.

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Sun Creation Engineering Limited – Calibration & Testing Laboratory

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

輝創工程有限公司 – 校正及檢測實驗室

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Certificate of Calibration

校正證書

Certificate No. : C165055
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1996) Date of Receipt / 收件日期 : 30 August 2016

Description / 儀器名稱 : Integrating Sound Level Meter
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2381580
Supplied By / 委託者 : Atkins China Limited
13/F., Wharf T&T Centre, Harbour City,
Tsim Sha Tsui, Kowloon, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 8 September 2016

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
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By : 
測試 : H T Wong
Technical Officer

Certified By : 
核證 : K C Lee
Project Engineer

Date of Issue : 9 September 2016
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.

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Certificate of Calibration

校正證書

Certificate No. : C165055
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.3.2.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

| Equipment ID | Description | Certificate No. |
|--------------|-------------------------------------|-----------------|
| CL280 | 40 MHz Arbitrary Waveform Generator | C160077 |
| CL281 | Multifunction Acoustic Calibrator | PA160023 |

- Test procedure : MA101N.

- Results :

- 6.1 Sound Pressure Level :

- 6.1.1 Reference Sound Pressure Level

- 6.1.1.1 Before Self-calibration

| UUT Setting | | | | Applied Value | | UUT Reading (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | |
| 50 - 130 | L _{AFF} | A | F | 94.00 | 1 | 94.1 |

- 6.1.1.2 After Self-calibration

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | | |
| 50 - 130 | L _{AFF} | A | F | 94.00 | 1 | 94.0 | ± 1.1 |

- 6.1.2 Linearity

| UUT Setting | | | | Applied Value | | UUT Reading (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | |
| 50 - 130 | L _{AFF} | A | F | 94.00 | 1 | 94.0 (Ref.) |
| | | | | 104.00 | | 104.0 |
| | | | | 114.00 | | 113.9 |

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

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Certificate of Calibration

校正證書

Certificate No. : C165055
證書編號

6.2 Time Weighting

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|-------------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. (kHz) | | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 1 | 94.0 | Ref. |
| | L _{ASP} | | S | | | 94.0 | ± 0.3 |

6.3 Frequency Weighting

6.3.1 A-Weighting

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|----------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. | | |
| 50 - 130 | L _{AFP} | A | F | 94.00 | 63 Hz | 67.9 | -26.2 ± 1.5 |
| | | | | | 125 Hz | 77.8 | -16.1 ± 1.5 |
| | | | | | 250 Hz | 85.3 | -8.6 ± 1.4 |
| | | | | | 500 Hz | 90.8 | -3.2 ± 1.4 |
| | | | | | 1 kHz | 94.0 | Ref. |
| | | | | | 2 kHz | 95.2 | +1.2 ± 1.6 |
| | | | | | 4 kHz | 95.0 | +1.0 ± 1.6 |
| | | | | | 8 kHz | 92.9 | -1.1 (+2.1 ; -3.1) |
| | | | | | 12.5 kHz | 89.8 | -4.3 (+3.0 ; -6.0) |

6.3.2 C-Weighting

| UUT Setting | | | | Applied Value | | UUT Reading (dB) | IEC 61672 Class 1 Spec. (dB) |
|-------------|------------------|---------------------|----------------|---------------|----------|------------------|------------------------------|
| Range (dB) | Parameter | Frequency Weighting | Time Weighting | Level (dB) | Freq. | | |
| 50 - 130 | L _{CFP} | C | F | 94.00 | 63 Hz | 93.3 | -0.8 ± 1.5 |
| | | | | | 125 Hz | 93.9 | -0.2 ± 1.5 |
| | | | | | 250 Hz | 94.0 | 0.0 ± 1.4 |
| | | | | | 500 Hz | 94.0 | 0.0 ± 1.4 |
| | | | | | 1 kHz | 94.0 | Ref. |
| | | | | | 2 kHz | 93.9 | -0.2 ± 1.6 |
| | | | | | 4 kHz | 93.2 | -0.8 ± 1.6 |
| | | | | | 8 kHz | 91.0 | -3.0 (+2.1 ; -3.1) |
| | | | | | 12.5 kHz | 87.9 | -6.2 (+3.0 ; -6.0) |

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Certificate of Calibration

校正證書

Certificate No. : C165055
證書編號

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2379759

- Mfr's Spec. : IEC 61672 Class 1

| | | |
|--|------------------|--------------------------|
| - Uncertainties of Applied Value : 94 dB | : 63 Hz - 125 Hz | : ± 0.35 dB |
| | 250 Hz - 500 Hz | : ± 0.30 dB |
| | 1 kHz | : ± 0.20 dB |
| | 2 kHz - 4 kHz | : ± 0.35 dB |
| | 8 kHz | : ± 0.45 dB |
| | 12.5 kHz | : ± 0.70 dB |
| 104 dB | : 1 kHz | : ± 0.10 dB (Ref. 94 dB) |
| 114 dB | : 1 kHz | : ± 0.10 dB (Ref. 94 dB) |

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

Note :

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輝創工程有限公司 – 校正及檢測實驗室

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Website/網址: www.suncreation.com



Certificate of Calibration 校正證書

Certificate No. : C163909
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1579)

Date of Receipt / 收件日期 : 13 July 2016

Description / 儀器名稱 : Acoustical Calibrator
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 4231
Serial No. / 編號 : 3004068
Supplied By / 委託者 : Atkins China Limited
13/F., Wharf T&T Centre, Harbour City,
Tsim Sha Tsui, Kowloon, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$

Relative Humidity / 相對濕度 : $(55 \pm 20)\%$

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 19 July 2016

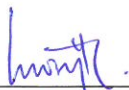
TEST RESULTS / 測試結果

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).

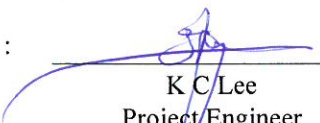
The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By
測試


H T Wong
Technical Officer

Certified By
核證


K C Lee
Project Engineer

Date of Issue
簽發日期

19 July 2016

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.

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Certificate of Calibration

校正證書

Certificate No. : C163909

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 | C163709 |
| CL281 | Multifunction Acoustic Calibrator | PA160023 |
| TST150A | Measuring Amplifier | C161175 |

- 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 | 94.0 | ± 0.2 | ± 0.2 |
| 114 dB, 1 kHz | 114.0 | | |

5.2 Frequency Accuracy

| UUT Nominal Value (kHz) | Measured Value (kHz) | Mfr's Spec. | Uncertainty of Measured Value (Hz) |
|----------------------------|-------------------------|----------------|---------------------------------------|
| 1 | 1.000 0 | 1 kHz ± 0.1 % | ± 0.1 |

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

Note :

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ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : AMS5 (Ma Wan Chung Village)
Calibrated by : K.F.Ho
Date : 05/08/2016

Sampler

Model : TE-5170
Serial Number : S/N3640

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
Service Date : 14 Mar 2016
Slope (m) : 2.10326
Intercept (b) : -0.06696
Correlation Coefficient(r) : 0.99989

Standard Condition

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

Calibration Condition

Pa (hpa) : 1008
Ta(K) : 301

| Resistance Plate | dH [green liquid] (inch water) | Z | X=Qstd (cubic meter/min) | IC | Y |
|------------------|--------------------------------|-------|--------------------------|----|-------|
| 1 18 holes | 11.0 | 3.292 | 1.597 | 56 | 55.58 |
| 2 13 holes | 8.4 | 2.877 | 1.400 | 50 | 49.63 |
| 3 10 holes | 6.6 | 2.550 | 1.244 | 45 | 44.66 |
| 4 7 holes | 4.0 | 1.985 | 0.976 | 37 | 36.72 |
| 5 5 holes | 2.7 | 1.631 | 0.807 | 31 | 30.77 |

Sampler Calibration Relationship

Slope(m):31.180 Intercept(b):5.910 Correlation Coefficient(r):0.9996

Checked by: Magnum Fan

Date: 05/08/2016

ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : AMS5(Ma Wan Chung Village)
Calibrated by : K.F.Ho
Date : 29/09/2016

Sampler

Model : TE-5170
Serial Number : S/N3640

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
Service Date : 14 Mar 2016
Slope (m) : 2.10326
Intercept (b) : -0.06696
Correlation Coefficient(r) : 0.99989

Standard Condition

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

Calibration Condition

Pa (hpa) : 1004
Ta(K) : 300

| Resistance Plate | dH [green liquid] (inch water) | Z | X=Qstd (cubic meter/min) | IC | Y |
|------------------|--------------------------------|-------|--------------------------|----|-------|
| 1 18 holes | 10.2 | 3.169 | 1.539 | 62 | 61.52 |
| 2 13 holes | 8.0 | 2.806 | 1.366 | 54 | 53.58 |
| 3 10 holes | 5.8 | 2.390 | 1.168 | 44 | 43.66 |
| 4 7 holes | 4.0 | 1.984 | 0.975 | 34 | 33.74 |
| 5 5 holes | 2.5 | 1.569 | 0.778 | 26 | 25.80 |

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): 47.730 Intercept(b): -11.954

Correlation Coefficient(r): 0.9992

Checked by: Magnum Fan

Date: 04/10/2016

ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : AMS6(Dragonair Building)
Calibrated by : P.F.Yeung
Date : 08/09/2016

Sampler

Model : TE-5170
Serial Number : S/N3639

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
Service Date : 14 Mar 2016
Slope (m) : 2.10326
Intercept (b) : -0.06696
Correlation Coefficient(r) : 0.99989

Standard Condition

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

Calibration Condition

Pa (hpa) : 1003
Ta(K) : 304

| Resistance Plate | dH [green liquid] (inch water) | Z | X=Qstd (cubic meter/min) | IC | Y |
|------------------|--------------------------------|-------|--------------------------|----|-------|
| 1 18 holes | 11.3 | 3.312 | 1.606 | 52 | 51.23 |
| 2 13 holes | 9.0 | 2.956 | 1.437 | 47 | 46.30 |
| 3 10 holes | 6.5 | 2.512 | 1.226 | 41 | 40.39 |
| 4 7 holes | 4.2 | 2.019 | 0.992 | 35 | 34.48 |
| 5 5 holes | 2.7 | 1.619 | 0.802 | 29 | 28.57 |

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): 27.774 Intercept(b): 6.517

Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan

Date: 15/09/2016



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 513.467.9000
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 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 14, 2016 Rootsmeter S/N 0438320 Ta (K) - 295
 Operator Tisch Orifice I.D. - 2454 Pa (mm) - 745.49

| PLATE OR Run # | VOLUME START (m3) | VOLUME STOP (m3) | DIFF VOLUME (m3) | DIFF TIME (min) | METER DIFF Hg (mm) | ORFICE DIFF H2O (in.) |
|----------------|-------------------|------------------|------------------|-----------------|--------------------|-----------------------|
| 1 | NA | NA | 1.00 | 1.4020 | 3.2 | 2.00 |
| 2 | NA | NA | 1.00 | 1.0060 | 6.4 | 4.00 |
| 3 | NA | NA | 1.00 | 0.9010 | 7.9 | 5.00 |
| 4 | NA | NA | 1.00 | 0.8590 | 8.8 | 5.50 |
| 5 | NA | NA | 1.00 | 0.7090 | 12.8 | 8.00 |

DATA TABULATION

| Vstd | (x axis) Qstd | (y axis) | Va | (x axis) Qa | (y axis) |
|-------------------------------------|---------------|----------|---------------------------|-------------|----------|
| 0.9866 | 0.7037 | 1.4078 | 0.9957 | 0.7102 | 0.8896 |
| 0.9824 | 0.9765 | 1.9909 | 0.9914 | 0.9855 | 1.2581 |
| 0.9803 | 1.0880 | 2.2259 | 0.9893 | 1.0980 | 1.4066 |
| 0.9792 | 1.1399 | 2.3345 | 0.9882 | 1.1504 | 1.4753 |
| 0.9738 | 1.3735 | 2.8155 | 0.9828 | 1.3862 | 1.7792 |
| Qstd slope (m) = 2.10326 | | | Qa slope (m) = 1.31703 | | |
| intercept (b) = -0.06696 | | | intercept (b) = -0.04232 | | |
| coefficient (r) = 0.99989 | | | coefficient (r) = 0.99989 | | |
| y axis = SQRT[H2O(Pa/760) (298/Ta)] | | | y axis = SQRT[H2O(Ta/Pa)] | | |

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
 Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{ [SQRT(H2O(Pa/760) (298/Ta))] - b}
 Qa = 1/m{ [SQRT H2O(Ta/Pa)] - b}

EQUIPMENT CALIBRATION RECORD

Type : Laser Dust Monitor
 Manufacturer / Brand : SIBATA
 Model No.: LD-3B
 Equipment No.: LD-3B-003
 Serial No.: 276018
 Sensitivity Adjustment Scale Setting : 799 CPM

Standard Equipment

Equipment : MFC High Volume Air Sampler
 Venue : Tung Chung Pier
 Model No.: TE-5170 Total Suspended Particulate
 Serial No.: S/N3641

Calibration Result

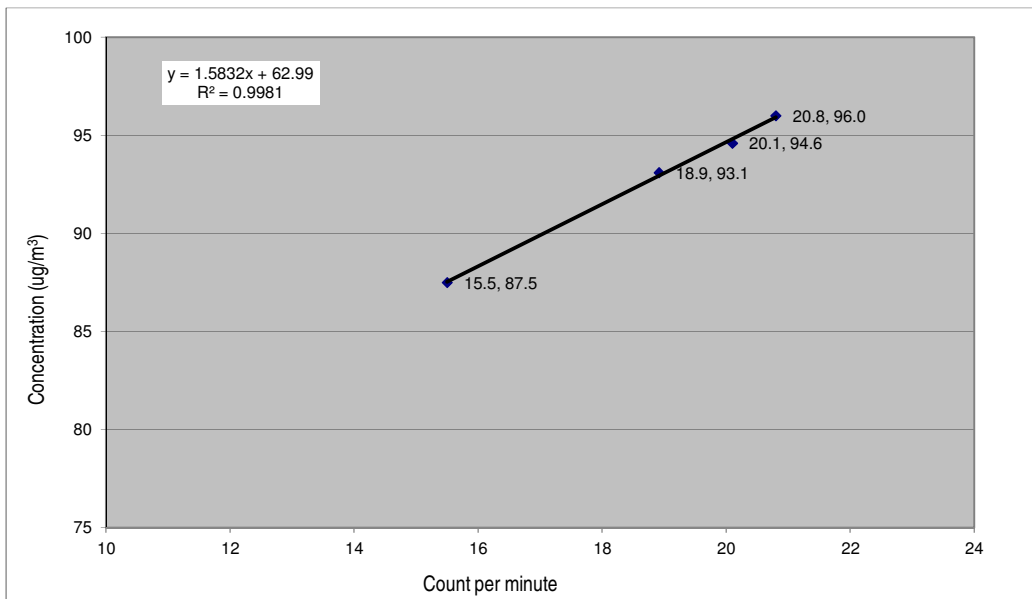
Sensitivity Adjustment Scale Setting (Before Calibration) : 799 CPM
 Sensitivity Adjustment Scale Setting (After Calibration) : 799 CPM

| Hour | Date (dd-mmm-yy) | Time | | Ambient Condition | | Concentration (ug/m ³) Y-axis | Total Count | Count/Minute X-axis |
|------|---------------------|-------|-------|-------------------|----------|---|-------------|------------------------|
| | | | | Temp (°C) | R.H. (%) | | | |
| 1 | 25-Nov-15 | 14:20 | 15:20 | 23.6 | 68% | 87.5 | 930 | 15.5 |
| 2 | 25-Nov-15 | 15:34 | 16:34 | 24.8 | 60% | 93.1 | 1135 | 18.9 |
| 3 | 25-Nov-15 | 16:50 | 17:50 | 23.8 | 60% | 96.0 | 1248 | 20.8 |
| 4 | 25-Nov-15 | 18:00 | 19:00 | 23.5 | 50% | 94.6 | 1206 | 20.1 |

Be Linear Regression of Y or X

Slope (K-factor): 1.5832
 Correlation coefficient : 0.9981

Remark: _____



Recorded by: Ray Cheng

Signature: 

Date: 30/11/2015

Checked by: Keith Chau

Signature: 

Date: 30/11/2015



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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: MR MIKE SHEK
CLIENT: AECOM ASIA COMPANY LIMITED
ADDRESS: 1501-10, 15/F, TOWER 1,
GRAND CENTRAL PLAZA,
138 SHATIN RURAL COMMITTEE ROAD,
SHATIN, NEW TERRITORIES, HONG KONG

WORK ORDER: HK1630169
SUB-BATCH: 0
LABORATORY: HONG KONG
DATE RECEIVED: 26/07/2016
DATE OF ISSUE: 27/07/2016

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

Scope of Test: Conductivity, Dissolved Oxygen, Salinity, pH, Turbidity and Temperature
Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 26 July, 2016

NOTES

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.


Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Work Order: HK1630169
Sub-batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 27/07/2016



Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 26 July, 2016

Date of next Calibration: 26 October, 2016

Parameters:

Conductivity

Method Ref: APHA (21th edition), 2510B

| Expected Reading (uS/cm) | Displayed Reading (uS/cm) | Tolerance (%) |
|--------------------------|---------------------------|---------------|
| 146.9 | 144.7 | -1.5 |
| 6667 | 6630 | -0.6 |
| 12890 | 12820 | -0.5 |
| 58670 | 58660 | -0.0 |
| Tolerance Limit (%) | | ±10.0 |

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
|-------------------------|--------------------------|------------------|
| 3.41 | 3.40 | -0.01 |
| 5.52 | 5.56 | +0.04 |
| 7.78 | 7.81 | +0.03 |
| Tolerance Limit (mg/L) | | ±0.20 |

Temperature

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

| Reading of Ref. thermometer (°C) | Displayed Reading (°C) | Tolerance (°C) |
|----------------------------------|------------------------|----------------|
| 11.0 | 10.96 | -0.0 |
| 22.0 | 22.04 | +0.0 |
| 37.5 | 37.42 | -0.1 |
| Tolerance Limit (°C) | | ±2.0 |

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



 Mr Fung Lim Chee, Richard
 General Manager -
 Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Work Order: HK1630169
Sub-Batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 27/07/2016



Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 26 July, 2016

Date of next Calibration: 26 October, 2016

Parameters:

Salinity

Method Ref: APHA (21st edition), 2520B

| Expected Reading (g/L) | Displayed Reading (g/L) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.00 | -- |
| 10 | 10.3 | +3.0 |
| 20 | 19.97 | -0.2 |
| 30 | 29.87 | -0.4 |
| Tolerance Limit (%) | | ±10.0 |

Turbidity

Method Ref: APHA (21st edition), 2130B

| Expected Reading (NTU) | Displayed Reading (NTU) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.0 | -- |
| 4 | 4.1 | +2.5 |
| 10 | 10.3 | +3.0 |
| 20 | 19.7 | -1.5 |
| 50 | 49.6 | -0.8 |
| 100 | 100.5 | +0.5 |
| Tolerance Limit (%) | | ±10.0 |

pH Value

Method Ref: APHA (21st edition), 4500H:B

| Expected Reading (pH Unit) | Displayed Reading (pH Unit) | Tolerance (pH unit) |
|----------------------------|-----------------------------|---------------------|
| 4.0 | 3.99 | -0.01 |
| 7.0 | 7.03 | +0.03 |
| 10.0 | 10.04 | +0.04 |
| Tolerance Limit (pH Unit) | | ±0.20 |

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


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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

CONTACT: MR MIKE SHEK
CLIENT: AECOM ASIA COMPANY LIMITED
ADDRESS: 1501-10, 15/F, TOWER 1,
GRAND CENTRAL PLAZA,
138 SHATIN RURAL COMMITTEE ROAD,
SHATIN, NEW TERRITORIES, HONG KONG

WORK ORDER: HK1642743
SUB-BATCH: 0
LABORATORY: HONG KONG
DATE RECEIVED: 25/10/2016
DATE OF ISSUE: 02/11/2016

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 ALS Hong Kong laboratory or quoted from relevant international standards.

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

Scope of Test: Conductivity, Dissolved Oxygen, Salinity, pH, Turbidity and Temperature
Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 25 October, 2016

NOTES

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.

Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Work Order: HK1642743
Sub-batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 02/11/2016



Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 25 October, 2016

Date of next Calibration: 25 January, 2017

Parameters:

Conductivity

Method Ref: APHA (21th edition), 2510B

| Expected Reading (uS/cm) | Displayed Reading (uS/cm) | Tolerance (%) |
|--------------------------|----------------------------|---------------|
| 146.9 | 144.5 | -1.6 |
| 6667 | 6680 | +0.2 |
| 12890 | 12840 | -0.4 |
| 58670 | 58450 | -0.4 |
| Tolerance Limit (%) | | ±10.0 |

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
|-------------------------|--------------------------|------------------|
| 3.45 | 3.43 | -0.02 |
| 5.50 | 5.52 | +0.02 |
| 7.80 | 7.77 | -0.03 |
| Tolerance Limit (mg/L) | | ±0.20 |

Temperature

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

| Reading of Ref. thermometer (°C) | Displayed Reading (°C) | Tolerance (°C) |
|----------------------------------|------------------------|----------------|
| 10.5 | 10.46 | 0.0 |
| 21.0 | 21.03 | 0.0 |
| 38.0 | 37.92 | -0.1 |
| Tolerance Limit (°C) | | ±2.0 |

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



 Mr Fung Lim Chee, Richard
 General Manager -
 Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Work Order: HK1642743
Sub-Batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 02/11/2016



Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 25 October, 2016

Date of next Calibration: 25 January, 2017

Parameters:

Salinity

Method Ref: APHA (21st edition), 2520B

| Expected Reading (g/L) | Displayed Reading (g/L) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.00 | -- |
| 10 | 10.06 | +0.6 |
| 20 | 20.04 | +0.2 |
| 30 | 29.95 | -0.2 |
| | Tolerance Limit (%) | ±10.0 |

Turbidity

Method Ref: APHA (21st edition), 2130B

| Expected Reading (NTU) | Displayed Reading (NTU) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.0 | -- |
| 4 | 3.9 | -2.5 |
| 10 | 10.2 | +2.0 |
| 20 | 20.2 | +1.0 |
| 50 | 50.4 | +0.8 |
| 100 | 100.4 | +0.4 |
| | Tolerance Limit (%) | ±10.0 |

pH Value

Method Ref: APHA (21st edition), 4500H:B

| Expected Reading (pH Unit) | Displayed Reading (pH Unit) | Tolerance (pH unit) |
|----------------------------|-----------------------------|---------------------|
| 4.0 | 3.99 | -0.01 |
| 7.0 | 7.01 | +0.01 |
| 10.0 | 9.98 | -0.02 |
| | Tolerance Limit (pH Unit) | ±0.20 |

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


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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: MR MIKE SHEK
CLIENT: AECOM ASIA COMPANY LIMITED
ADDRESS: 1501-10, 15/F, TOWER 1,
GRAND CENTRAL PLAZA,
138 SHATIN RURAL COMMITTEE ROAD,
SHATIN, NEW TERRITORIES, HONG KONG

WORK ORDER: HK1630168
SUB-BATCH: 0
LABORATORY: HONG KONG
DATE RECEIVED: 26/07/2016
DATE OF ISSUE: 28/07/2016

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

Scope of Test: pH, Turbidity, Dissolved Oxygen, Conductivity, Salinity, and Temperature
Description: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 26 July, 2016

NOTES

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.


Mr Fung Lim Chee, Richard
General Manager
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1630168
Sub-batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 28/07/216



Description: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 26 July, 2016

Date of next Calibration: 26 October, 2016

Parameters:

Conductivity

Method Ref: APHA (21th edition), 2510B

| Expected Reading (uS/cm) | Displayed Reading (uS/cm) | Tolerance (%) |
|--------------------------|----------------------------|---------------|
| 146.9 | 147.0 | +0.1 |
| 6667 | 6680 | +0.2 |
| 12890 | 12830 | -0.5 |
| 58670 | 58700 | +0.1 |
| | Tolerance Limit (%) | ±10.0 |

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
|-------------------------|--------------------------|------------------|
| 3.41 | 3.42 | +0.01 |
| 5.52 | 5.55 | +0.03 |
| 7.78 | 7.76 | -0.02 |
| | Tolerance Limit (mg/L) | ±0.20 |

Temperature

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

| Reading of Ref. thermometer (°C) | Displayed Reading (°C) | Tolerance (°C) |
|----------------------------------|------------------------|----------------|
| 11.0 | 11.01 | +0.0 |
| 22.0 | 22.09 | +0.1 |
| 37.5 | 37.44 | -0.1 |
| | Tolerance Limit (°C) | ±2.0 |

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



 Mr Fung Lim Chee, Richard
 General Manager -
 Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1630168
Sub-Batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 28/07/216



Description: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 26 July, 2016

Date of next Calibration: 26 October, 2016

Parameters:

Salinity

Method Ref: APHA (21st edition), 2520B

| Expected Reading (g/L) | Displayed Reading (g/L) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.00 | -- |
| 10 | 10.02 | +0.2 |
| 20 | 19.98 | -0.1 |
| 30 | 29.94 | -0.2 |
| Tolerance Limit (%) | | ±10.0 |

Turbidity

Method Ref: APHA (21st edition), 2130B

| Expected Reading (NTU) | Displayed Reading (NTU) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.0 | -- |
| 4 | 4.2 | +5.0 |
| 10 | 10.2 | +2.0 |
| 20 | 20.3 | +1.5 |
| 50 | 49.5 | -1.0 |
| 100 | 100.4 | +0.4 |
| Tolerance Limit (%) | | ±10.0 |

pH Value

Method Ref: APHA (21st edition), 4500H:B

| Expected Reading (pH Unit) | Displayed Reading (pH Unit) | Tolerance (pH unit) |
|----------------------------|-----------------------------|---------------------|
| 4.0 | 4.01 | +0.01 |
| 7.0 | 7.02 | +0.02 |
| 10.0 | 10.02 | +0.02 |
| Tolerance Limit (pH Unit) | | ±0.20 |

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


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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: MR MIKE SHEK
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GRAND CENTRAL PLAZA,
138 SHATIN RURAL COMMITTEE ROAD,
SHATIN, NEW TERRITORIES, HONG KONG

WORK ORDER: HK1642745
SUB-BATCH: 0
LABORATORY: HONG KONG
DATE RECEIVED: 25/10/2016
DATE OF ISSUE: 02/11/2016

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 ALS Hong Kong laboratory or quoted from relevant international standards.

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

Scope of Test: Conductivity, Dissolved Oxygen, Salinity, pH, Turbidity and Temperature
Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 25 October, 2016

NOTES

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.


Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

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Page 1 of 3

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Work Order: HK1642745
Sub-batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 02/11/2016



Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 25 October, 2016

Date of next Calibration: 25 January, 2017

Parameters:

Conductivity

Method Ref: APHA (21th edition), 2510B

| Expected Reading (uS/cm) | Displayed Reading (uS/cm) | Tolerance (%) |
|--------------------------|----------------------------|---------------|
| 146.9 | 146.0 | -0.6 |
| 6667 | 6670 | +0.0 |
| 12890 | 12740 | -1.2 |
| 58670 | 58710 | +0.1 |
| | Tolerance Limit (%) | ±10.0 |

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
|-------------------------|--------------------------|------------------|
| 3.45 | 3.46 | +0.01 |
| 5.50 | 5.47 | -0.03 |
| 7.80 | 7.76 | -0.04 |
| | Tolerance Limit (mg/L) | ±0.20 |

Temperature

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

| Reading of Ref. thermometer (°C) | Displayed Reading (°C) | Tolerance (°C) |
|----------------------------------|------------------------|----------------|
| 10.5 | 10.44 | -0.1 |
| 21.0 | 21.01 | +0.0 |
| 38.0 | 37.94 | -0.1 |
| | Tolerance Limit (°C) | ±2.0 |

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

Mr Fung Lim Chee, Richard
 General Manager -
 Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Work Order: HK1642745
Sub-Batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 02/11/2016



Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 25 October, 2016

Date of next Calibration: 25 January, 2017

Parameters:

Salinity

Method Ref: APHA (21st edition), 2520B

| Expected Reading (g/L) | Displayed Reading (g/L) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.00 | -- |
| 10 | 10.04 | +0.4 |
| 20 | 20.06 | +0.3 |
| 30 | 30.05 | +0.2 |
| | Tolerance Limit (%) | ±10.0 |

Turbidity

Method Ref: APHA (21st edition), 2130B

| Expected Reading (NTU) | Displayed Reading (NTU) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 0 | 0.0 | -- |
| 4 | 4.0 | 0.0 |
| 10 | 10.1 | +1.0 |
| 20 | 20.2 | +1.0 |
| 50 | 49.7 | -0.6 |
| 100 | 99.7 | -0.3 |
| | Tolerance Limit (%) | ±10.0 |

pH Value

Method Ref: APHA (21st edition), 4500H:B

| Expected Reading (pH Unit) | Displayed Reading (pH Unit) | Tolerance (pH unit) |
|----------------------------|-----------------------------|---------------------|
| 4.0 | 4.02 | +0.02 |
| 7.0 | 7.03 | +0.03 |
| 10.0 | 10.03 | +0.03 |
| | Tolerance Limit (pH Unit) | ±0.20 |

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


Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong