

ภาคผนวก จ

เอกสารสอบเทียบเครื่องมือที่ใช้ในการตรวจวิเคราะห์



Thai Environmental Technic Limited
บริษัท เทคโนโลยีสิ่งแวดล้อมไทย จำกัด

ตารางการสอบเทียบเครื่องมือที่ใช้ในการตรวจวัดและวิเคราะห์

| Item | Description | Parameter | List of Equipment | Equipment No. | Calibration | Next Calibration |
|------|-------------|-----------|--|----------------|-------------|------------------|
| 1. | Ambient Air | TSP | ORIFICE TRANSFER STANDARD/Tisch | S/N 0068 | 21/09/2022 | September 2023 |
| | | | High Volume Air Sampler/TET | S/N TSP-38 | 11/07/2023 | July 2024 |
| | | | High Volume Air Sampler/TET | S/N TSP-41 | 13/07/2023 | July 2024 |
| | | | High Volume Air Sampler/TET | S/N TSP-23 | 13/07/2023 | July 2024 |
| | | | High Volume Air Sampler/TET | S/N TSP-19 | 11/07/2023 | July 2024 |
| | | | Electronic Balance/METTLER TOLEDO | S/N 1116392227 | 10/04/2024 | April 2025 |
| | | WS & WD | Wind speed and wind direction/Weather Wizard III | S/N WC41020A38 | 13/09/2023 | September 2024 |
| | | | Wind speed and wind direction/Vantage VUE | S/N Display | 20/11/2023 | November 2024 |
| | | | | MT220822047 | | |
| | | | | | | |

Certificate of Calibration

| Calibration Certification Information | | | |
|---------------------------------------|------------------------|-----------------|--|
| Cal. Date: September 21, 2022 | Rootsmeter S/N: 438320 | Ta: 296 °K | |
| Operator: Jim Tisch | | Pa: 748.3 mm Hg | |
| Calibration Model #: TE-5025A | Calibrator S/N: 0068 | | |

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|-----|----------------|-----------------|------------|-------------|------------|-------------|
| 1 | 1 | 2 | 1 | 1.3760 | 3.2 | 2.00 |
| 2 | 3 | 4 | 1 | 0.9710 | 6.4 | 4.00 |
| 3 | 5 | 6 | 1 | 0.8730 | 8.0 | 5.00 |
| 4 | 7 | 8 | 1 | 0.8300 | 8.8 | 5.50 |
| 5 | 9 | 10 | 1 | 0.6870 | 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) |
| 0.9870 | 0.7173 | 1.4080 | 0.9957 | 0.7236 | 0.8895 |
| 0.9828 | 1.0121 | 1.9912 | 0.9914 | 1.0211 | 1.2579 |
| 0.9806 | 1.1233 | 2.2262 | 0.9893 | 1.1332 | 1.4064 |
| 0.9796 | 1.1802 | 2.3349 | 0.9882 | 1.1907 | 1.4750 |
| 0.9744 | 1.4184 | 2.8160 | 0.9830 | 1.4309 | 1.7789 |
| QSTD | m= | 2.01042 | QA | m= | 1.25889 |
| | b= | -0.03659 | | b= | -0.02312 |
| | r= | 0.99996 | | r= | 0.99996 |

| Calculations | |
|---|--|
| Vstd= $\Delta Vol \left(\frac{Pa - \Delta P}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)$ | Va= $\Delta Vol \left(\frac{Pa - \Delta P}{Pa} \right)$ |
| 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 |



Thai Environmental Technic Limited
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High Volume TSP&PM-10 Calibration Report

Location : Thai Environmental Tech

Site ID : Bangkok

Date : 11-Jul-23

ITEM : TSP

Serial No : (No.38)

Calibrate By : Pipat

Site Conditions

Barometric Pressure (mm Hg) : 760.00

Temperature (°C) : 25.0

Average Press. (mm Hg) : 750.8

Average Temp (°C) : 29.2

Corrected Pressure (mm Hg) : 760.0

Temperature (deg K) : 298.0

Corrected Average (mm Hg) : -

Average Temp: (Deg K) : -

Calibration Orifice

Make : Tisch

Model : TE-5025A

Serial# : 0068

Qstd Slope : 2.01042

Qstd Intercept : -0.36590

Calibration Due Date : 21-Sep-23

Calibration Information

| Plate or Test # | ORIFICE (in H ₂ O) | Qstd (m3/min) | Indicate (CFM) | IC (corrected) | Linear Regression Slope : 30.2297 Intercept : 0.1413 Corr. Coeff : 0.9875 # of Observations: 5 |
|-----------------|-------------------------------|---------------|----------------|----------------|--|
| 1 | 12.50 | 1.941 | 60.0 | 57.00 | |
| 2 | 9.20 | 1.691 | 54.0 | 52.00 | |
| 3 | 7.20 | 1.517 | 50.0 | 48.00 | |
| 4 | 5.00 | 1.294 | 40.0 | 40.00 | |
| 5 | 3.00 | 1.044 | 30.0 | 30.00 | |

Calculations

$$Qstd = 1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$$

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

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

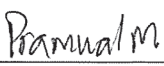
b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Calibrate By : 

Approve By : 

NOTE: Ensure calibration orifice has been certified within 12 months of use



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High Volume TSP&PM-10 Calibration Report

Location : Thai Environmental Tech

Site ID : Bangkok

Date : 13-Jul-23

ITEM : TSP

Serial No : (No.41)

Calibrate By : Pipat

Site Conditions

Barometric Pressure (mm Hg) : 760.00

Temperature (°C) : 25.0

Average Press. (mm Hg) : 750.8

Average Temp (°C) : 29.2

Corrected Pressure (mm Hg) : 760.0

Temperature (deg K) : 298.0

Corrected Average (mm Hg) : -

Average Temp: (Deg K) : -

Calibration Orifice

Make : Tisch

Model : TE-5025A

Serial# : 0068

Qstd Slope : 2.01042

Qstd Intercept : -0.36590

Calibration Due Date : 21-Sep-23

Calibration Information

| Plate or Test # | ORIFICE (in H ₂ O) | Qstd (m3/min) | Indicate (CFM) | IC (corrected) | Linear Regression Slope : 30.9129 Intercept : -0.8070 Corr. Coeff : 0.9909 # of Observations: 5 |
|-----------------|-------------------------------|---------------|----------------|----------------|---|
| 1 | 12.10 | 1.912 | 60.0 | 57.00 | |
| 2 | 9.40 | 1.707 | 54.0 | 52.00 | |
| 3 | 7.20 | 1.517 | 50.0 | 48.00 | |
| 4 | 5.00 | 1.294 | 40.0 | 40.00 | |
| 5 | 3.00 | 1.044 | 30.0 | 30.00 | |

Calculations

$$Qstd = 1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$$

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

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

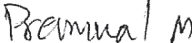
b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Calibrate By : 

Approve By : 

NOTE: Ensure calibration orifice has been certified within 12 months of use



Thai Environmental Technic Limited
บริษัท เทคนิคสิ่งแวดล้อมไทย จำกัด

High Volume TSP&PM-10 Calibration Report

Location : Thai Environmental Tech

Site ID : Bangkok

Date : 13-Jul-23

ITEM : TSP

Serial No : (No. 23)

Calibrate By : Pipat

Site Conditions

Barometric Pressure (mm Hg) : 760.00

Temperature (°C) : 25.0

Average Press. (mm Hg) : 750.6

Average Temp (°C) : 29.2

Corrected Pressure (mm Hg) : 760.0

Temperature (deg K) : 298.0

Corrected Average (mm Hg) : -

Average Temp (Deg K) : -

Calibration Orifice

Make : Tisch

Model : TE-5025A

Serial# : 0068

Qstd Slope : 2.01042

Qstd Intercept : -0.36590

Calibration Due Date : 21-Sep-23

Calibration Information

| Plate or Test # | ORIFICE (in H ₂ O) | Qstd (m3/min) | Indicate (CFM) | IC (corrected) | Linear Regression Slope : 30.2297 Intercept : 0.1413 Corr. Coeff : 0.9875 # of Observations: 5 |
|-----------------|-------------------------------|---------------|----------------|----------------|--|
| 1 | 12.50 | 1.941 | 60.0 | 57.00 | |
| 2 | 9.20 | 1.691 | 54.0 | 52.00 | |
| 3 | 7.20 | 1.517 | 50.0 | 48.00 | |
| 4 | 5.00 | 1.294 | 40.0 | 40.00 | |
| 5 | 3.00 | 1.044 | 30.0 | 30.00 | |

Calculations

$$Qstd = 1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$$

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

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

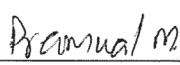
b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Calibrate By : 

Approve By : 

NOTE: Ensure calibration orifice has been certified within 12 months of use



Thai Environmental Technic Limited
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High Volume TSP&PM-10 Calibration Report

Location : Thai Environmental Tech

Site ID : Bangkok

Date : 11-Jul-23

ITEM : TSP

Serial No : (No.19)

Calibrate By : Pipat

Site Conditions

Barometric Pressure (mm Hg) : 760.00

Temperature (°C) : 25.0

Average Press. (mm Hg) : 750.6

Average Temp (°C) : 28.7

Corrected Pressure (mm Hg) : 760.0

Temperature (deg K) : 298.0

Corrected Average (mm Hg) : -

Average Temp: (Deg K) : -

Calibration Orifice

Make : Tisch

Model : TE-5025A

Serial# : 0068

Qstd Slope : 2.01042

Qstd Intercept : -0.36590

Calibration Due Date : 21-Sep-23

Calibration Information

| Plate or Test # | ORIFICE (in H ₂ O) | Qstd (m ³ /min) | Indicate (CFM) | IC (corrected) | Linear Regression Slope : 30.1571 Intercept : 0.3626 Corr. Coeff : 0.9846 # of Observations: 5 |
|-----------------|-------------------------------|----------------------------|----------------|----------------|--|
| 1 | 12.50 | 1.941 | 60.0 | 57.00 | |
| 2 | 9.20 | 1.691 | 54.0 | 52.00 | |
| 3 | 7.00 | 1.498 | 50.0 | 48.00 | |
| 4 | 5.00 | 1.294 | 40.0 | 40.00 | |
| 5 | 3.00 | 1.044 | 30.0 | 30.00 | |

Calculations

$$Qstd = 1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$$

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

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

Calibrate By : 

Approve By : 

NOTE: Ensure calibration orifice has been certified within 12 months of use

THAI METEOROLOGICAL DEPARTMENT



4353 Sukhumvit, Bangna, Bangkok 10260 Tel. 081-454-2804, 0-2399-0469

Calibration Certificate

Issued by : Calibration & Test Section : Meteorological Instruments Bureau

Date of Issue 13 September, 2023

Certification No. 314/23

Page : 1 of 2

Object : Wind speed and wind direction

Manufacturer : Davis Instruments Inc.

Type : Weather Wizard III

Serial No. : WC41020A38 ID No. : No.20

Customer : Thai Environmental Technic Limited.
1/6 Soi Ramkhamhaeng 145,
Khwaeng/Khet Saphan Sung, Bangkok 10240.

Calibration Condition : Temperature 25.1 °C Barometric Pressure 1008.4 hPa

NATIONAL STANDARD WIND TUNNEL :

: Thermal Anemometer 642 S/N 91563

: HOOK GAGE NO 1425 Pitot Tube Theodor Friedrichs Type 0800.0000 serial 9023

N.I.S.T. Test Reference Number 731/241460 : Standard Velocity at 20 - 30 m/sec

: Ultrasonic Anemometer Model DA-650-3TV (sensor TR-90AH)

Serial Number 110730029 (sensor 120629586)

JAPAN QUALITY ASSURANCE ORGANIZATION : Standard Velocity at 0 - 20 m/sec

Calibrated by :

Mr. Watcharapol Subwat

Mechanical Engineer

Signed :

Mr. Pisood Promsut





THAI METEOROLOGICAL DEPARTMENT

4353 Sukhumvit, Bangna, Bangkok 10260 Tel. 081-454-2804,0-2399-0469

The Result of Calibration

Certification No. 314/23

13 September, 2023

Page : 2 of 2

| Standard Ultrasonic Anemometer | HOOK GAGE NO. 1425 | | | TESTED ANEMOMETER | |
|-----------------------------------|--------------------|------------|----------|-------------------|------------|
| | Pressure | Vacumm | Velocity | Velocity | Correction |
| m/sec | inches H2O | inches H2O | m/sec | m/sec | m/sec |
| 1.00 | - | - | - | 0.4 | 0.60 |
| 3.02 | - | - | - | 2.7 | 0.32 |
| 5.00 | - | - | - | 4.5 | 0.50 |
| 7.00 | - | - | - | 6.8 | 0.20 |
| 9.02 | - | - | - | 8.5 | 0.52 |
| 11.01 | - | - | - | 10.8 | 0.21 |
| 13.01 | - | - | - | 12.5 | 0.51 |
| 15.01 | - | - | - | 14.8 | 0.21 |
| 17.02 | - | - | - | 16.5 | 0.52 |
| 20.02 | - | - | - | 19.8 | 0.22 |

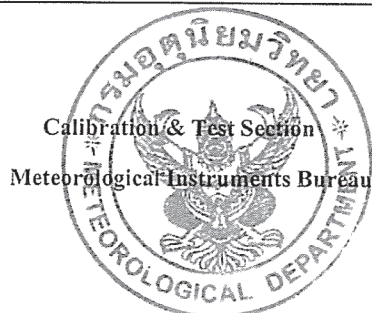
| Wind Aloft Plotting Board. | |
|--|-----------------------|
| US.DEPARTMENT OF COMMERCE WEATHER BUREAU | |
| WIND DIRETION | TESTED WIND DIRECTION |
| 0 | 0 |
| 90 | 90 |
| 180 | 180 |
| 270 | 270 |

Calibrated by :

Watchapol

Mr. Watchapol Subwat

Mechanical Engineer





THAI METEOROLOGICAL DEPARTMENT

4353 Sukhumvit, Bangna, Bangkok 10260 Tel. 081-454-2804, 0-2399-0469

Calibration Certificate

Issued by : Calibration & Test Section : Meteorological Instruments Bureau

Date of Issue 20 November, 2023

Certification No. 411/23

Page : 1 of 2

Object : Wind speed and wind direction

Manufacturer : Davis Instruments Inc.

Type : Vantage VUE Model No. : #6251EU

ID No. : No.35

Serial No. : Display MT220822047 Transmitter MT231004046

Customer : Thai Environmental Technic Limited.
1/6 Soi Ramkhamhaeng 145,
Khwaeng/Khet Saphan Sung, Bangkok 10240.

Calibration Condition : Temperature 25.1 °C Barometric Pressure 1016.0 hPa

NATIONAL STANDARD WIND TUNNEL :

: Thermal Anemometer 642 S/N 91563


: HOOK GAGE NO 1425 Pitot Tube Theodor Friedrichs Type 0800.0000 serial 9023

N.I.S.T. Test Reference Number 731/241460 : Standard Velocity at 20 - 30 m/sec

: Ultrasonic Anemometer Model DA-650-3TV (sensor TR-90AH)

Serial Number 110730029 (sensor 120629586)

JAPAN QUALITY ASSURANCE ORGANIZATION : Standard Velocity at 0 - 20 m/sec

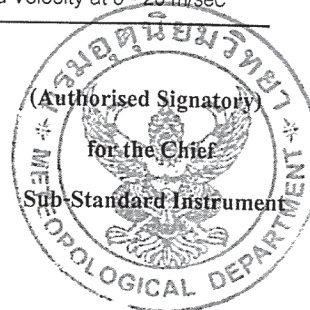
Calibrated by : 

Mr. Watcharapol Subwat

Mechanical Engineer

Signed :


Mr. Pisod Promsut





THAI METEOROLOGICAL DEPARTMENT

4353 Sukhumvit, Bangna, Bangkok 10260 Tel. 081-454-2804,0-2399-0469

The Result of Calibration

Certification No. 411/23

20 November, 2023

Page : 2 of 2

| Standard Ultrasonic Anemometer m/sec | HOOK GAGE NO. 1425 | | | TESTED ANEMOMETER | |
|--|--------------------|------------|----------|-------------------|------------|
| | Pressure | Vacumm | Velocity | Velocity | Correction |
| | inches H2O | inches H2O | m/sec | m/sec | m/sec |
| 1.00 | - | - | - | 0.9 | 0.10 |
| 3.02 | - | - | - | 2.7 | 0.32 |
| 5.00 | - | - | - | 4.9 | 0.10 |
| 7.00 | - | - | - | 6.8 | 0.20 |
| 9.02 | - | - | - | 9.0 | 0.02 |
| 11.01 | - | - | - | 10.8 | 0.21 |
| 13.01 | - | - | - | 13.0 | 0.01 |
| 15.01 | - | - | - | 15.0 | 0.01 |
| 17.02 | - | - | - | 17.0 | 0.02 |
| 20.02 | - | - | - | 20.0 | 0.02 |

| Wind Aloft Plotting Board. | |
|--|-----------------------|
| US.DEPARTMENT OF COMMERCE WEATHER BUREAU | |
| WIND DIRETION | TESTED WIND DIRECTION |
| 0 | 0 |
| 90 | 90 |
| 180 | 180 |
| 270 | 270 |

Calibrated by :

Mr. Watcharapol Subwat

Mechanical Engineer





TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484



Certificate of Calibration

Cert.No.: 24MM272

Page.: 1 of 3

Equipment : Electronic Balance

Manufacturer : Mettler Toledo

Model : AB204

Serial No. : 1116392227

ID No. : Ins-LAB-033

Submitted by : Thai Environmental Technic Limited
1/6 Soi Ramkhamhaeng 145,
Khwaeng/Khet Saphan Sung,
Bangkok 10240

Location : Balance Room

Received order : 09 April 2024

Calibration Date : 10 April 2024

Ambient Temperature : 15 °C to 40 °C

Relative Humidity : 30 % to 90 %

Calibrated by : Khit Ruttanaprapachai

Approved by :

Kunchit

Approved Signatory

- () Ponpan Paipim
() Suwit Imjai
(✓) Kunchit Promprat

Issue Date :

12 April 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.



Equipment : Electronic Balance
Condition As-Received : Used Item
Reference : 2404-0113OC-14
Procedure used :-

Cert.No.: 24MM272
Page: 2 of 3

Calibration were conducted using in-house calibration procedure CP-OB01 based on UKAS LAB 14 according to direct measurement method against standard weight.

Condition of this result of calibration

1. Reference standard instruments:-

| <u>Instruments</u> | <u>Model</u> | <u>Serial No.</u> | <u>ID No.</u> | <u>Test report No.</u> | <u>Due date</u> |
|-----------------------------|--------------|-------------------|---------------|------------------------|-----------------|
| 1) Standard Weight Set (E2) | 15884 | - | 70RC138 | MM-0020-23 | 30 Jan 2025 |

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This result of calibration was made on requested at the point specified by customer.
4. This certificate is not certified for any commercial transaction.
5. This certification is traceable to the International System of Unit.

Result of calibration () Without Adjustment (*) After Adjustment by External Calibration

Range capacity : 0 g to 210 g **Resolution** 0.0001 g

Before Adjustment :

| <u>Applied Weight</u> | <u>Balance Reading</u> | <u>Correction</u> | <u>Measurement Uncertainty</u> | <u>Coverage Factor</u> |
|-----------------------|------------------------|-------------------|--------------------------------|------------------------|
| (g) | (g) | (g) | (\pm mg) | (k) |
| 100 | 100.0000 | 0.0000 | 0.19 | 2 |
| 200 | 200.0001 | -0.0001 | 0.30 | 2 |

After Adjustment :

1. **Determination of the standard deviation of weighing machine** (n = 10)

| <u>Applied Weight</u> | <u>Standard Deviation of Reading (g)</u> |
|-----------------------|--|
| (g) | |
| 100 | 0.00007 |
| 200 | 0.00008 |



Equipment : Electronic Balance
 Condition As-Received : Used Item
 Reference : 2404-0113OC-14

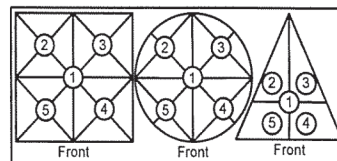
Cert.No.: 24MM272

Page: 3 of 3

Result of calibration

2. Effect of off center loading

A mass of 100 g was placed to various position on the pan.
 The weighing machine reading error obtained is given in the table



Maximum difference between
 off-center and central loading
 (g)
 0.0003

| Position 1 | Position 2 | Position 3 | Position 4 | Position 5 |
|------------|------------|------------|------------|------------|
| (g) | (g) | (g) | (g) | (g) |
| 0.0000 | +0.0001 | 0.0000 | +0.0001 | +0.0003 |

3. Departure from nominal value

| Applied Weight | Balance Reading | Correction | Measurement Uncertainty | Coverage Factor |
|----------------|-----------------|------------|-------------------------|-----------------|
| (g) | (g) | (g) | (\pm mg) | (k) |
| Unload | 0.0000 | 0.0000 | 0.14 | 2.11 |
| 0.01 | 0.0101 | -0.0001 | 0.14 | 2.11 |
| 0.1 | 0.1001 | -0.0001 | 0.14 | 2.11 |
| 0.5 | 0.5002 | -0.0002 | 0.14 | 2.11 |
| 1 | 1.0002 | -0.0002 | 0.14 | 2.11 |
| 5 | 5.0000 | 0.0000 | 0.14 | 2.11 |
| 10 | 10.0001 | -0.0001 | 0.14 | 2.11 |
| 25 | 25.0000 | 0.0000 | 0.15 | 2.07 |
| 50 | 49.9999 | +0.0001 | 0.15 | 2.06 |
| 100 | 100.0002 | -0.0002 | 0.19 | 2 |
| 200 | 200.0002 | -0.0002 | 0.30 | 2 |

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k , providing a level of confidence of approximately 95 %.

-o0o-