

ANALYTICAL BALANCE (DU)

Model : XS205DU

Serial No. : B344940005

Certificate No. : 25-205716
Sample Code : 25-90375-006

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Analytical Balance Room)

Equipment : ELECTRONIC BALANCE

Manufacturer : METTLER TOLEDO

Model : XS205DU

Serial No. : B344940005

ID No. : LABE 05/3

Date of Receipt : 26 November 2025

Date of Calibration : 26 November 2025

Calibrated by Mr. Thanadol Pholthep
Scientist

Approved by (Mr. Somchai Neampunt)
Signed for Director

Issue date 28 November 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 25-205716
Sample Code : 25-90375-006

REPORT OF CALIBRATION

Equipment : ELECTRONIC BALANCE
Manufacturer : METTLER TOLEDO
Model : XS205DU
Capacity : Max 81 g / 200 g
Resolution : 0.00001 g / 0.0001 g
Serial No. : B344940005
ID No. : LABE 05/3

Result of Calibration

1. Test weight and repeatability of reading

Repeatability is a measure of the ability of a balance to supply the same result in repetitive weighings with one and the same load under the same measurement condition. The measurement of the repeatability must include both the balance specifications and the ambient (vibration, fluctuating air current/temperature/humidity, etc.) Operator handling of the balance is also included in the standard deviation.

Unit : g	Range : 81	☐ Before adjustment	☐ After adjustment
	Nominal value	40	80
☒ No adjustment	Standard weight	40.000087	80.000088
☐ Adjustment	Average reading of indicator	40.00004	80.00004
	Standard deviation	0.000007	0.000007

Unit : g	Range : 200	☐ Before adjustment	☐ After adjustment
	Nominal value	100	200
☒ No adjustment	Standard weight	99.999988	200.000015
☐ Adjustment	Average reading of indicator	99.9999	199.9997
	Standard deviation	0.000005	0.000005

Certificate No. : 25-205716
 Sample Code : 25-90375-006

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REPORT OF CALIBRATION

Result of Calibration

2. Sensitivity or value of a scale division

Change in the output variable of a measuring instrument divided by the associated change in the input variable.

Unit : g

Range : 81

Range : 200

Test Point	Sensitivity, S	Test Point	Sensitivity, S
0	1.00000	0	1.0000
40	1.00000	100	1.0000
80	1.00000	200	1.0000

3. Departure of indication from nominal value, Linearity

Unit : g

Nominal Value	Standard Value	Average Reading of Indicator	Correction Value	Expanded Uncertainty	Coverage Factor (k)
Unload	0.0000000	0.00000	0.00000	0.000011	2.04
0.01	0.0100016	0.01000	0.00000	0.000011	2.04
0.1	0.1000056	0.10000	0.00001	0.000012	2.02
1	1.0000110	1.00000	0.00001	0.000015	2.01
5	4.9999996	4.99998	0.00002	0.000020	2.00
10	9.9999994	9.99999	0.00000	0.000026	2.00
20	20.0000042	20.00000	0.00004	0.000037	2.00
50	50.0000052	50.00003	0.00002	0.000067	2.00
100	99.9999988	100.00000	0.00000	0.000016	2.00
150	150.0000040	150.00001	-0.00001	0.000022	2.00
200	200.0000015	200.00001	-0.00001	0.000027	2.00

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The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

Certificate No. : 25-205716
 Sample Code : 25-90375-006

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REPORT OF CALIBRATION

Result of Calibration :

4. Eccentric or off-centre loading

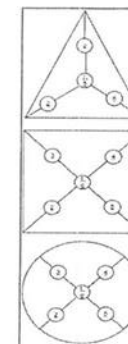
Deviation of the measurement value through off-center (eccentric) loading. The corner load increases with the weight of the load and its removal from the center of the pan support.

☐ Triangular☒ Rectangular☐ Circle

Test weight : 50 and 100

Unit : g

Range	81	200
Position	Reading of indicator	Reading of indicator
1	50.00000	100.0000
2	49.99997	100.0000
3	49.99993	99.9999
4	49.99999	100.0000
5	50.00003	99.9999
6	50.00000	100.0000
Maximum difference	0.00007	0.0001



Condition of Calibration

1. Calibration Method : WI-CL-004 base on UKAS LAB 14: 2019

2. This result of calibration was found accurate as shown on date and place of calibration only.

3. Condition of Calibration item: Normal

4. This certification is traceable to the International System of Unit maintained at : .

- Through the reference standard laboratory of Asia Medical and Agricultural Laboratory and Research Center Public

Company Limited (Instrument number 1).

5. Reference standard instrument :

Instrument	Class	ID No.	Certificate No.	Due Date
1) STANDARD WEIGHT 1 mg to 1 kg	E2	LB-WE-78	25-134074	18 July 2026

6. Ambient conditions	Min	Max
Temperature (°C)	22.9	24.3
Relative Humidity (%Rh)	45.4	47.7
Air pressure (hPa)	1007.2	1011.0

- End of Report -

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ANALYTICAL BALANCE

Model : SECURA224-1S

Serial No. : 0036707137



Certificate No. : 24-164695
Sample Code : 24-67405-005

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Analytical Balance Room)

Equipment : ELECTRONIC BALANCE

Manufacturer : SARTORIUS

Model : SECURA224-1S

Serial No. : 0036707137

ID No. : LABE 05/2

Date of Receipt : 19 December 2024

Date of Calibration : 19 December 2024

Calibrated by Mr. Thanadol Pholthep
Scientist

Approved by (Mr. Nuttaput Timula)
Signed for Director

Issue date 20 December 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).



Certificate No. : 24-164695
Sample Code : 24-67405-005

REPORT OF CALIBRATION

Equipment : ELECTRONIC BALANCE
Manufacturer : SARTORIUS
Model : SECURA224-1S
Capacity : Max 220 g
Resolution : 0.0001 g
Serial No. : 0036707137
ID No. : LABE 05/2

Result of Calibration

1. Test weight and repeatability of reading

Repeatability is a measure of the ability of a balance to supply the same result in repetitive weighings with one and the same load under the same measurement condition. The measurement of the repeatability must include both the balance specifications and the ambient (vibration, fluctuating air current/temperature/humidity, etc.) Operator handling of the balance is also included in the standard deviation.

Unit : g	Range : 220	☐ Before adjustment	☐ After adjustment
☒ No adjustment	Nominal value	100	200
☐ Adjustment	Standard weight	100.000016	200.000028
	Average reading of indicator	100.0000	200.0000
	Standard deviation	0.00005	0.00005

Unit : -	Range : -	☐ Before adjustment	☐ After adjustment
☐ No adjustment	Nominal value	-	-
☐ Adjustment	Standard weight	-	-
	Average reading of indicator	-	-
	Standard deviation	-	-

Certificate No. : 24-164695
Sample Code : 24-67405-005

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REPORT OF CALIBRATION

Result of Calibration

2. Sensitivity or value of a scale division

Change in the output variable of a measuring instrument divided by the associated change in the input variable.

Unit : g

Range : 220

Range :

Test Point	Sensitivity, S	Test Point	Sensitivity, S
0	0.9998		
100	0.9998		
200	0.8998		

3. Departure of indication from nominal value, Linearity

Unit : g

Nominal Value	Standard Value	Average Reading of Indicator	Correction Value	Expanded Uncertainty	Coverage Factor (k)
Unload	0.0000000	0.0000	0.0000	0.000094	2.01
0.01	0.0100015	0.0100	0.0000	0.000094	2.01
0.1	0.1000064	0.1000	0.0000	0.000094	2.01
1	1.0000017	1.0000	0.0000	0.000095	2.01
2	2.0000049	2.0000	0.0000	0.000095	2.01
5	5.0000012	5.0000	0.0000	0.000096	2.01
10	9.999992	10.0000	0.0000	0.000097	2.01
20	20.000042	20.0000	0.0000	0.00010	2.01
50	50.000046	50.0000	0.0000	0.00012	2.01
100	100.000016	100.0000	0.0000	0.00016	2.00
200	200.000028	200.0000	0.0000	0.00028	2.00

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003.

Certificate No. : 24-164695
Sample Code : 24-67405-005

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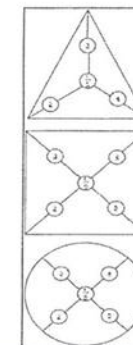
REPORT OF CALIBRATION

Result of Calibration :

4. Eccentric or off-centre loading

Deviation of the measurement value through off-center (eccentric) loading. The corner load increases with the weight of the load and its removal from the center of the pan support.

Weighing pan	☒ Circle ☐ Triangular ☐ Rectangular	Test weight : 100 Unit : g
Range	220	
Position	Reading of indicator	Reading of indicator
1	99.9999	-
2	100.0001	-
3	99.9999	-
4	99.9998	-
5	99.9999	-
6	99.9999	-
Maximum difference	0.0002	-



Condition of Calibration

1. Calibration Method : WI-CL-004 base on UKAS LAB 14: 2019
2. This result of calibration was found accurate as shown on date and place of calibration only.
3. Condition of Calibration item: Normal

4. This certification is traceable to the International System of Unit maintained at :

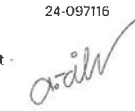
- Through the reference standard laboratory of Asia Medical and Agricultural Laboratory and Research Center Public

Company Limited (Instrument number 1).

5. Reference standard instrument :

Instrument	Class	ID No.	Certificate No.	Due Date
1) STANDARD WEIGHT 1 mg to 1 kg	E2	LB-WF-78	24-097116	02 August 2025

- End of Report -



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AUTOCLAVE

Model : FLS-1000

Serial No. : 55169083

NSC-TISI-TIS17025
CALIBRATION 0152

Page 1 of 2

CERTIFICATE OF CALIBRATION

Certificate No. : 25-118068

Sample Code : 25-51697-004

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.

683 Moo 11, Sukhapiarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Autoclave Room)

Equipment : Autoclave

Manufacturer : TOMY

Model : FLS-1000

Serial No. : 55169083

ID No. : LABE 43/2

Date of Receipt : 25 June 2025

Date of Calibration : 25 June 2025

Condition of Calibration

1. Environment
- 1.1 Ambient temperature : Maximum 32.0 °C ; Minimum 29.7 °C
- 1.2 Relative humidity : Maximum 68.1 % ; Minimum 65.2 %
- 1.3 Line voltage supplied : Maximum 222.3 VAC ; Minimum 219.3 VAC

2. Calibration method

The calibration use in-house method; WI-CL-025 based on BS 2646-1: 2021

3. Reference standard instrument

Instrument	Model	ID No.	Certificate No.	Due Date
3.1 Temperature Data Logger	HiTemp 140	LB-TEM-25	25-034993	12 March 2026
3.2 Temperature Data Logger	HiTemp 140	LB-TEM-26	25-034994	12 March 2026
3.3 Temperature Data Logger	HiTemp 140	LB-TEM-27	25-034995	12 March 2026

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by : Mr. Pattanapong Pulngern
Scientist

Approved by

(Mr. Somchai Neampunt)

Signed for Director

Issue date : 26 June 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC)

361 Soi Ladprao 122, Ladprao Road,
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Rev 01CONTACT@AMARC.CO.TH
WWW.AMARC.CO.TH
Effective Date: 15/10/21

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CALIBRATION 0152

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REPORT OF CALIBRATION

Certificate No. : 25-118068

Sample Code : 25-51697-004

Results of Calibration

Resolution : 1 °C

1. Reporting of Temperature

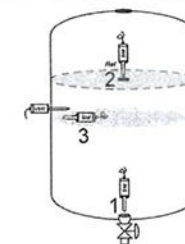
Calibration point (°C)	UUC* setting (°C)	UUC* reading		Measured Temperature at each positions (°C)			Uncertainty ± (°C)	Coverage factor k
		Temperature (°C)	Pressure (MPa)	# 1	# 2 ^{Ref}	# 3		
121	121	122	0.11	121.75	121.76	121.77	0.63	2.00

2. Characterization results

Calibration Point (°C)	Stability ± (°C)	Uniformity (°C)	Overall Variation (°C)
121	0.03	0.03	0.06

Notes

1. UUC* = Unit Under Calibration
2. The quoted uncertainty includes "Stability of chamber and loading effect in chamber at 20% of uniformity".
3. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
4. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.
5. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.
6. UUC* reading - the average reading of indicating device that forms the integral part of the autoclave.
7. Calibration results without adjustment.

Figure: Example of sensor
installation Positions

- Standard 1 - In the chamber drain, within 100 mm.
- Standard 2 - In the upper half of the chamber.
- Standard 3 - Attached to the load temperature probe, within 15 mm.

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

- End of Report -

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Rev 09CONTACT@AMARC.CO.TH
WWW.AMARC.CO.TH
Effective Date: 15/10/21

BOD INCUBATOR

Model : LABE 19/3

CERTIFICATE OF CALIBRATION

Page 1 of 3

Certificate No. : 25-118065

Sample Code : 25-51697-001

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Laboratory)

Equipment : Temperature controlled enclosures (Incubator)

Manufacturer : พิกัด เครื่องเย็น Model : N/A

Serial No. : S43020027 ID No. : LABE 19/3

Date of Receipt : 25 June 2025 Date of Calibration : 25 June 2025

Condition of Calibration

1. Environment
- | | |
|---------------------------|---|
| 1.1 Ambient temperature | : Maximum 34.6 °C ; Minimum 32.2 °C |
| 1.2 Relative humidity | : Maximum 64.0 % ; Minimum 58.7 % |
| 1.3 Line voltage supplied | : Maximum 224.5 VAC ; Minimum 223.8 VAC |

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-P1100)	LB-DA-08 (RTD-411 to RTD-419)	25-082913	18 May 2026

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by

Mr. Pattanapong Pulngern
Scientist

Approved by

(Mr. Somchai Neampunt)
Signed for Director

Issue date

26 June 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

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REPORT OF CALIBRATION

Page 2 of 3

Certificate No. : 25-118065

Sample Code : 25-51697-001

Results of Calibration

Resolution : 0.1 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)									Uncertainty ± (°C)	Coverage factor k
			# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9 ^{ref}		
20	20.0	20.0	20.61	20.42	19.97	19.90	20.29	20.47	20.25	19.96	20.18	0.24	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
20	0.09	0.46	0.89

Notes

- UUC* = Unit Under Calibration



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CALIBRATION 0152

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REPORT OF CALIBRATION

Certificate No. : 25-118065

Sample Code : 25-51697-001

Results of Calibration

Notes

1. Sensor installation locations

1.1 All sensors at any corners or walls should be positioned
5 cm (a x b x c) from the wall.

1.2 The reference sensor is preferably located of the geometric center
of the chamber.

2. Interior dimensions approx of chamber :

W = 70 cm ; D = 55 cm ; H = 140 cm

3. Air valve or fresh air level : Off

4. Fan level : Open

5. The quoted uncertainty includes "Stability of chamber and loading effect
in chamber at 20% of uniformity".6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference
location which are observed at the same time.

7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.

8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.

9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.

10. Calibration results without adjustment.

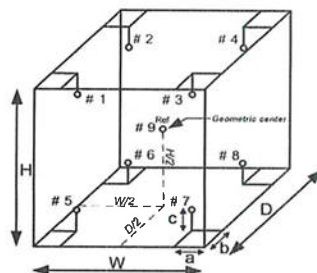


Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003.

- End of Report -

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BOD INCUBATOR

Model : LABE 19/5



Page 1 of 3

CERTIFICATE OF CALIBRATION

Certificate No. : 25-042561

Sample Code : 25-18090-002

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Laboratory)

Equipment : Temperature controlled enclosures (Incubator)

Manufacturer : Lovibond Model : TC 445 S

Serial No. : 0520/005227 ID No. : LABE 19/5

Date of Receipt : 20 March 2025 Date of Calibration : 20 March 2025

Condition of Calibration

1. Environment
- 1.1 Ambient temperature : Maximum 29.9 °C ; Minimum 27.5 °C
- 1.2 Relative humidity : Maximum 51.9 % ; Minimum 43.4 %
- 1.3 Line voltage supplied : Maximum 239.4 VAC ; Minimum 232.8 VAC

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-P1100)	LB-DA-11 (RTD-148 to RTD-155, RTD-227)	24-040190	03 April 2025

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by Mr. Pattanapong Pulngern
Scientist

Approved by

(Mr. Somchai Neampunt)

Signed for Director

Issue date 24 March 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).



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REPORT OF CALIBRATION

Certificate No. : 25-042561

Sample Code : 25-18090-002

Results of Calibration

Resolution : 0.1 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)										Uncertainty ± (°C)	Coverage factor k
			#1	#2	#3	#4	#5	#6	#7	#8	#9 ^{ref}			
20	20.5	20.5	19.91	19.78	19.82	19.86	19.78	19.85	19.93	19.63	19.79		0.38	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
20	0.28	0.25	0.83

Notes

- UUC* = Unit Under Calibration



NSC-TISI-TISI17025
CALIBRATION 0152

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REPORT OF CALIBRATION

Certificate No. : 25-042561

Sample Code : 25-18090-002

Results of Calibration

Notes

1. Sensor installation locations
 - 1.1 All sensors at any corners or walls should be positioned 5 cm (a x b x c) from the wall.
 - 1.2 The reference sensor is preferably located of the geometric center of the chamber.
2. Interior dimensions approx of chamber :
W = 60 cm ; D = 56 cm ; H = 146 cm
3. Air valve or fresh air level : Off
4. Fan level : Open
5. The quoted uncertainty includes* Stability of chamber and loading effect in chamber at 20% of uniformity*.
6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.
8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.
9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.
10. Calibration results without adjustment.

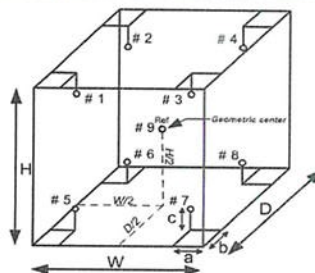


Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

- End of Report -

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DO

Model : YSI 5000

Serial No. : 18E101961



CERT.No., HS-W041G

Harikul Science Co.,Ltd.
694 Soi Ratchadaniwet 24, Pracharatbamphen,
Samsaennok, Huaikhwang, Bangkok 10310
Tel: 0-2274-2456 Fax: 0-2274-2443
Email: info@harikul.com www.harikul.com
Certificate of Calibration

Calibration Date : 3 Jul 25

Submitted by : Eastern Thai Consulting 1992 Company Limited
683 Moo.11 Sukaphibal8 Rd., Nongkharn, Sriracha,
Chonburi 20230

Model : YSI 5000

S/N : 18E101961

Probe : YSI 5010

S/N : 18D100709

ID NO. : -

Air Temp ref : S/N. F8065C26

Barometric ref : S/N. F8065C26

Water Temp ref : -

ID NO. HS001

Technician : Kittipong M.

Avg Room Temp : 20 °C

Avg Water Temp : 20 °C

Air Pressure : 760.00 mmHg

Salinity : 0 ppt

Calibration Details

Calibration Point	100% air sat. (@20 °C, DO = 9.09 mg/l)	(status)	(status)
Measurement 1 (mg/l)	9.08	(PASS)	-
Measurement 2 (mg/l)	9.08	(PASS)	-
Measurement 3 (mg/l)	9.08	(PASS)	-
Measurement 4 (mg/l)	9.08	(PASS)	-
Measurement 5 (mg/l)	9.08	(PASS)	-
Measurement 6 (mg/l)	9.08	(PASS)	-
Measurement 7 (mg/l)	9.08	(PASS)	-
Measurement 8 (mg/l)	9.08	(PASS)	-
Measurement 9 (mg/l)	9.08	(PASS)	-
Measurement 10 (mg/l)	9.08	(PASS)	-

Mean Measurement	9.08	mg/l	-	-
Inaccuracy	0.01	mg/l	-	-

Overall Status (PASS)

Manufacturer Specification

Accuracy = +/- 0.02 mg/l

- 1) This certificate is issued based on the result that are found as shown on date and place of test only.
- 2) The calibration procedure followed in accordance with Harikul Science Co., Ltd.
- 3) This result shall not be used for advertising purpose.

Technician Signature
(Kittipong Maekwong)

COPY

Laboratory Manager
(Natenapha Pisatkunchon)

Hot Air Oven

Model : UM 400

Serial No. : 900982

CERTIFICATE OF CALIBRATION

Certificate No. : 24-164692

Sample Code : 24-67405-002

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarni 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Hot Lab)

Equipment : Temperature controlled enclosures (Hot air oven)

Manufacturer : Memmert Model : UM 400

Serial No. : 900982 ID No. : LABE 17/1

Date of Receipt : 19 December 2024 Date of Calibration : 19 December 2024

Condition of Calibration

1. Environment
- | | | | | |
|---------------------------|-----------|-----------|-----------|-----------|
| 1.1 Ambient temperature | : Maximum | 32.1 °C | : Minimum | 30.4 °C |
| 1.2 Relative humidity | : Maximum | 48.9 % | : Minimum | 42.4 % |
| 1.3 Line voltage supplied | : Maximum | 226.3 VAC | : Minimum | 221.0 VAC |

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-Pt100)	LB-DA-11 (RTD-148 to RTD-155, RTD-227)	24-040190	03 April 2025

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by Mr. Nophanon Anusak
Scientist

Approved by

(Mr. Somchai Neampunt)
Signed for Director

Issue date 20 December 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

REPORT OF CALIBRATION

Certificate No. : 24-164692

Sample Code : 24-67405-002

Results of Calibration

Resolution : 0.1 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)									Uncertainty ± (°C)	Coverage factor <i>k</i>
			# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9 ^{ref}		
85	85.0	85.0	85.33	85.28	84.83	85.01	85.15	85.18	85.32	85.12	85.23	0.25	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
85	0.10	0.43	0.69

Notes

- UUC* = Unit Under Calibration

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REPORT OF CALIBRATION

Page 3 of 3

Certificate No. : 24-164692

Sample Code : 24-67405-002

Results of Calibration

Notes

1. Sensor installation locations
 - 1.1 All sensors at any corners or walls should be positioned 5 cm (a x b x c) from the wall.
 - 1.2 The reference sensor is preferably located of the geometric center of the chamber.
2. Interior dimensions approx of chamber :
W = 40 cm ; D = 28 cm ; H = 39 cm
3. Air valve or fresh air level : Off
4. Fan level : Open
5. The quoted uncertainty includes "Stability of chamber and loading effect in chamber at 20% of uniformity".
6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.
8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.
9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.
10. Calibration results without adjustment.

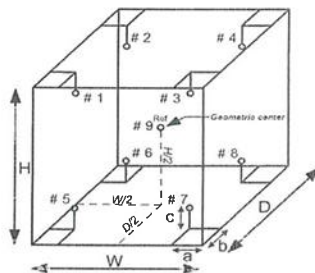


Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

- End of Report -

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LIQUID IN GLASS THERMOMETER

Model / Type : 0-100 °C

Serial No. : 43560



CALIBRATION LABORATORY CO., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



CERTIFICATE OF CALIBRATION

FOR

NOMENCLATURE : LIQUID IN GLASS THERMOMETER
MANUFACTURER : AA PRECISION
MODEL / TYPE : 0-100 °C
SERIAL NO. : 43560[LABE 16/1]
CLID. NO. : 232403905
JOB CONTROL NO. : 251115135334
CALIBRATION SERVICE : ☒ IN-LABORATORY ☐ ON-SITE

CUSTOMER : EASTERN THAI CONSULTING 1992 CO., LTD.
683 MOO 11, SUKHAPIBARN 8 RD,
NONGKHAM, SRIRACHA, CHONBURI 20230

DATE OF RECEIVED : 15 November 2025 DATE OF ISSUED : 18 November 2025

The report of calibration shall not be reproduced except in full without approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Pimsiri Hemtanon
Calibration Engineer

Approved By : Mongkol Yotsoontorn
Authorized Signatory
18 November 2025



This Calibration Certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI)

Certificate No. Q25135334

F3-011-05/12-23

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@clccalibration



CALIBRATION LABORATORY CO., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



REPORT OF CALIBRATION

FOR

NOMENCLATURE : LIQUID IN GLASS THERMOMETER
MANUFACTURER : AA PRECISION
MODEL / TYPE : 0-100 °C
SERIAL NO. : 43560[LABE 16/1]
DATE OF CALIBRATION : 17 November 2025

ENVIRONMENT CONDITIONS :

Temperature : $(23 \pm 2) ^\circ\text{C}$ Relative Humidity : $(55 \pm 10) \%$

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPTH-02 based on ASTM E 77-07 as calibration guidelines. The calibration was performed by comparison with Calibration Bath, Precision Thermometer and IPRT which maintained by the Calibration Laboratory Co., Ltd.

REFERENCE STANDARD USED :

1. Calibration Bath, Kambic Model OB-22/2 ULT,OB-22/2 S/N. 17115653,17115654.
2. Precision Thermometer, ASL Model F200-A-8 S/N. 014433/03 with IPRT S/N. L0193A-1-1,PO106346-1-13.

TRACEABILITY :

1. The measurements are traceable to International System of Units (SI), through Calibration Laboratory Co., Ltd. Certificate No. Q24120999,Q25124610. Due Date 26 November 2025,07 November 2026.
2. The measurements are traceable to International System of Units (SI), through Thailand Institute of Scientific and Technological Research (TISTR) and National Institute of Metrology (Thailand). Certificate No. PSL-T 0177/68,TT-0169-24,TT-1008-25. Due Date 10 February 2026,11 December 2025,04 March 2026.

UNCERTAINTY :

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$ which for a normal distribution corresponds to a coverage probability of approximately 95 %. It has been evaluated according to the "Evaluation of the Uncertainty of Measurement in Calibration (EA-4/02 M:2022)"

Certificate No. Q25135334

F3-011-05/12-23

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CALIBRATION LABORATORY CO., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : RECEIVED IN GOOD OPERATIONAL CONDITION

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The DUC Reading were recorded and the means value were reported of four times measurement in the table below.

CALIBRATION DATA

CORRECTION OF TEMPERATURE

STD Reading (°C)	DUC Reading (°C)	Correction (°C)	Uncertainty $\pm$ (°C)
0.01	0.00	+0.01	0.06
25.02	25.00	+0.02	
50.03	50.00	+0.03	
100.01	100.00	+0.01	

Range : 0 °C to 100 °C

Graduation : 0.1 °C

Immersion Type : Total Immersion.

Correction of Reference Temperature (0 °C) = 0.00 °C

Note. The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 016 Page 60 of 73

This report is valid for the above stated instrument/s only.

End of Certificate

Certificate No. Q25135334

F3-011-05/12-23

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@clccalibration

pH Meter

Model : SevenCompact S220

Serial No. : B835349235

Certificate Number CCP-0403-25**Calibration Certificate**
SevenCompact™ pH/Ion Meter S220**Customer**Company EASTERN THAI CONSULTING 1992 CO., LTD.Address 683 Moo 11, Sukhaphiban 8 Rd., Nong KhamSrirachaCHONBURI 20230Customer ID number 301608441Customer representative คุณ ศิริกรณ นาคฉัตรกุล**Instrument**

Type	<u>SevenCompact™ S220</u>	Instrument Serial Number	<u>B835349235</u>
Internal Identification	<u>LASE 11/6</u>	Firmware version	<u>1.20.06</u>

Technical specifications

Measuring Range	<u>-1999.9 ... 1999.9 mV</u>	<u>-2.000 ... 20.000 pH</u>
Resolution	<u>0.1 mV</u>	<u>0.001 pH</u>
Limit of Error	<u>± 0.2 mV</u>	<u>± 0.002 pH</u>

Temperature range MTC -30.0 ... 130.0 °CTemperature range ATC -5.0 ... 130.0 °CResolution 0.1 °CLimit of Error ± 0.1 °C**Procedure Statement**

METTLER TOLEDO Certification SOP (Doc. No. ME-30027577B) will be used as referring documentation to adjust and certify the instrument indicated in the "Type" and "Serial number" section. The measurement results of this certification were obtained at ambient conditions.

COPYCertificate Number CCP-0403-25**Certification Tools**

Certified digital voltmeter	Manufacturer	<u>KEYSIGHT TECHNOLOGIES</u>
	Type	<u>34461A</u>
	Control No.	<u>ANA143</u>

Serial number	<u>MY60036967</u>
Certificate number	<u>E1U2401054</u>
Due date	<u>March 10, 2025</u>

Certified Temperature Resistors	Manufacturer	<u>METTLER-TOLEDO</u>
	Type	<u>51302410</u>
	Control No.	<u>ANA114</u>

Serial number	<u>A275</u>
Certificate number	<u>73757</u>
Due date	<u>February 12, 2026</u>

Designation	Nominal value	Certified value
NTC 30 kΩ, 0 °C	94.980 kΩ	94.9730 kΩ
NTC 30 kΩ, 25 °C	30.000 kΩ	29.9950 kΩ
NTC 30 kΩ, 50 °C	10.969 kΩ	10.9704 kΩ
NTC 30 kΩ, 75 °C	4.528 kΩ	4.5275 kΩ
NTC 30 kΩ, 100 °C	2.070 kΩ	2.0714 kΩ
PT1000, 0 °C	1.000 kΩ	1.0001 kΩ
PT1000, 25 °C	1.0974 kΩ	1.0975 kΩ
PT1000, 50 °C	1.1940 kΩ	1.1942 kΩ
PT1000, 75 °C	1.2899 kΩ	1.2900 kΩ
PT1000, 100 °C	1.3851 kΩ	1.3851 kΩ

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METTLER TOLEDO

Certificate Number **CCP-0403-25**

Certification Measurements

pH/mV Sensor Input	Designation	Certified value	Measured value	Max. Tolerance	Passed / Failed
	-1900 mV	-1900.0 mV	-1899.98 mV	0.2 mV	Passed
	-1000 mV	-1000.0 mV	-1000.00 mV	0.2 mV	Passed
	-500 mV	-500.0 mV	-499.98 mV	0.2 mV	Passed
	-180 mV	-180.0 mV	-180.00 mV	0.2 mV	Passed
	0 mV	0.0 mV	0.01 mV	0.2 mV	Passed
	180 mV	180.0 mV	179.98 mV	0.2 mV	Passed
	500 mV	500.0 mV	499.90 mV	0.2 mV	Passed
	1000 mV	1000.0 mV	1000.00 mV	0.2 mV	Passed
	1900 mV	1900.0 mV	1899.99 mV	0.2 mV	Passed

pH/mV Sensor Input at high Impedance	Designation	Measured low imp.	Measured high imp.	Max. Tolerance	Passed / Failed
	1900 mV	1900.0 mV	1899.8 mV	0.6 mV	Passed

Temperature Sensor Input	Designation	Nominal value	Measured value	Max. Tolerance	Passed / Failed
	NTC 30 kΩ, 0 °C	0.0 °C	0.0 °C	0.1 °C	Passed
	NTC 30 kΩ, 25 °C	25.0 °C	25.0 °C	0.1 °C	Passed
	NTC 30 kΩ, 50 °C	50.0 °C	50.0 °C	0.1 °C	Passed
	NTC 30 kΩ, 75 °C	75.0 °C	74.9 °C	0.1 °C	Passed
	NTC 30 kΩ, 100 °C	100.0 °C	100.0 °C	0.1 °C	Passed
	Pt1000, 0 °C	0.0 °C	0.1 °C	0.1 °C	Passed
	Pt1000, 25 °C	25.0 °C	25.0 °C	0.1 °C	Passed
	Pt1000, 50 °C	50.0 °C	50.0 °C	0.1 °C	Passed
	Pt1000, 75 °C	75.0 °C	74.9 °C	0.1 °C	Passed
	Pt1000, 100 °C	100.0 °C	99.9 °C	0.1 °C	Passed

Summary of Certification

Certification of instrument

Passed

The instrument referred to in this certificate has fulfilled the criteria of the certification. This is indicated by the notation Passed in the column above.

Remarks - Test high Impedance at 1900.0 mV, Results : 1899.8 mV

Difference = 0.005% Within MPE (0.033%)

Certification of the Instrument was performed by

Name Khomsan Pralaung Function Service

Place Mettler-Toledo (Thailand) Ltd.

Calibration Date: 29-Jan-2025

Signature

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Mettler-Toledo (Thailand) Limited

METTLER TOLEDO

Performance Test

Attachment to Certificate No. CCP-0403-25

pH Electrode

Type: InLab Expert Pro-ISM S/N: 2463982

Certified standards used

Standard 1:	Type: pH Buffer	Manufacturer: METTLER TOLEDO	Exp. date: 3-Dec-2026
	Nominal value: pH (25.00 °C):	4.01	Lot No.: 1J338E
Standard 2:	Type: pH Buffer	Manufacturer: METTLER TOLEDO	Exp. date: 27-Nov-2026
	Nominal value: pH (25.00 °C):	7.00	Lot No.: 1J331B
Standard 3:	Type: pH Buffer	Manufacturer: METTLER TOLEDO	Exp. date: 11-Jan-2026
	Nominal value: pH (25.00 °C):	10.00	Lot No.: 1K011B
Standard 4:	Type: Redox Solution	Manufacturer: METTLER TOLEDO	Exp. date: -
	Nominal value: pH (25.00 °C):	-	Lot No.: -

Adjustment

Set Calibration Buffer	B1 (25 °C) 1.68, 4.01, 7.00, 10.01									
Select Calibration Mode Segment	3-Point calibration				2-Point calibration		2-Point calibration			
3-Point Calibration	°C		pH	°C		pH	°C		pH	
Cal 1	ATC	25.5	7.00	ATC			ATC			
Cal 2	ATC	25.5	4.00	ATC			ATC			
Offset (mV)	-27.2									
Slope % (or mV/pH)	95.9									
Cal 3	ATC	25.5	10.01							
Offset (mV)	-27.2									
Slope % (or mV/pH)	97.4									

Measurements

Resolution: 2 Decimal places

As Found				As Left			
Buffer Values	Measured	Difference	Buffer Values	Measured	Difference		
pH	°C	pH	pH	°C	pH	pH	
4.01	25.3	ATC	4.02	0.01	4.01	25.3	ATC
7.00	25.2	ATC	6.98	-0.02	7.00	25.2	ATC
9.99	25.3	ATC	10.11	0.12	9.99	25.2	ATC

Redox Measurement Result = - mV

Note: The difference result of calibrated electrode should be within +/- 0.05 pH

Remarks: N/A

Place: Laboratory Calibration Date: 29-Jan-2025

Service Specialist: Khomsan Pralaung

Signature: Khomsan

STANDARD WEIGHT 50 g

Certificate No. : 24-062445
Sample Code : 24-25551-001

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited
(Calibration Laboratory)

Equipment : Standard Weight 50 g

Manufacturer : METTLER TOLEDO

Class : F1

Serial No. : N/A

ID No. : LABE 10/1

Date of Receipt : 23 May 2024

Date of Calibration : 03 June 2024

Calibrated by Mr. Somwang Sangdee

Scientist

Issue date 04 June 2024

Approved by

(Mr. Somchai Neampunt)

Signed for Director

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 24-062445
Sample Code : 24-25551-001

REPORT OF CALIBRATION

Equipment : Standard Weight 50 g

Manufacturer : METTLER TOLEDO

Class : F1

Serial No. : N/A

ID No. : LABE 10/1

Result of Calibration :

☒ Without adjustment☐ Adjustment

Conventional value of the result of weighing in air. For a weight taken at a reference temperature (t_{ref}) of 20°C, the conventional mass is the mass of a reference weight of a density (ρ_{ref}) of 8000 kg.m⁻³ which it balances in air of a reference density (ρ_0) of 1.2 kg.m⁻³

Description	Deviation	Conventional	Expanded	Maximum	ID No.
	(mg)	Mass	Uncertainty	Permissible Error	
			(mg)	± (mg)	
50 g	-0.343	49.999657 g	0.10	0.30	LABE 10/1

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.0$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

Certificate No. : 24-062445
Sample Code : 24-25551-001

Page 3 of 3

REPORT OF CALIBRATION

Condition of Calibration

1. Ambient Conditions : Temperature 20 °C ± 1.5°C, Relative humidity 50% ± 10% and air density 1.19 kg/m³
2. Calibration Method : Direct comparison weighing according to OIML R111-1 : 2004(E)
3. Reference standard instrument

Instrument	Class	ID No.	Certificate No.	Due Date
1) Standard Weight 1 mg to 1 kg	E2	LB-WE-83	24-001894	11 January 2025

4. This certification is traceable to the International System of Unit maintained at : -

Asia Medical and Agricultural Laboratory and Research Center Public Company Limited

(Instrument number 1).

5. Condition of Calibration item: Normal

6. Description of Calibrated Item :

Type and Nominal Value :	Standard Weight 50 g
Shape :	Cylindrical weight with knob
Material :	Stainless steel
Case :	Wooden Box
Comments :	Recalibration

- End of Report -



STANDARD WEIGHT 100 g

Certificate No. : 24-079772
Sample Code : 24-31841-002

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., NongKham,
Sriracha, Chonburi 20230

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited
(Calibration Laboratory)

Equipment : Standard Weight 100 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/2

Date of Receipt : 25 June 2024

Date of Calibration : 30 June 2024

Calibrated by Mr. Nawa Sisuwan Approved by (Mr. Somchai Neampunt)
Scientist Signed for Director

Issue date 03 July 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 24-079772
Sample Code : 24-31841-002

REPORT OF CALIBRATION

Equipment : Standard Weight 100 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/2

Result of Calibration : ☒ Without adjustment ☐ Adjustment

Conventional value of the result of weighing in air. For a weight taken at a reference temperature (t_{ref}) of 20°C, the conventional mass is the mass of a reference weight of a density (ρ_{ref}) of 8000 kg.m⁻³ which it balances in air of a reference density (ρ_0) of 1.2 kg.m⁻³

Description	Deviation	Conventional Mass	Expanded Uncertainty	Maximum Permissible Error	ID No.
	(mg)		(mg)	± (mg)	
100 g	-0.173	99.999827 g	0.16	0.50	LABE 10/2

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.0$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

Certificate No. : 24-079772

Sample Code : 24-31841-002

REPORT OF CALIBRATION

Condition of Calibration

1. Ambient Conditions : Temperature 20 °C ± 1.5°C, Relative humidity 50% ± 10% and air density 1.19 kg/m³

2. Calibration Method : WI-CL-007 base on OIML R 111-1 : 2004(E)

3. Reference standard instrument

Instrument	Class	ID No.	Certificate No.	Due Date
1) Standard Weight 1 mg to 1 kg	E2	LB-WE-83	24-001894	11 January 2025

4. This certification is traceable to the International System of Unit maintained at : -

Asia Medical and Agricultural Laboratory and Research Center Public Company Limited

(Instrument number 1).

5. Condition of Calibration item: Normal

6. Description of Calibrated Item :

Type and Nominal Value :	Standard Weight 100 g
Shape :	Cylindrical weight with knob
Material :	Stainless steel
Case :	Wooden Box
Comments :	Recalibration

- End of Report -



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STANDARD WEIGHT 50 g

Certificate No. : 24-079773
Sample Code : 24-31841-003

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapiarn 8 Rd., NongKham,
Sriracha, Chonburi 20230

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited
(Calibration Laboratory)

Equipment : Standard Weight 50 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/4

Date of Receipt : 25 June 2024

Date of Calibration : 30 June 2024

Calibrated by Mr. Nawa Sisuwan Approved by (Mr. Somchai Neampunt)
Scientist Signed for Director

Issue date 03 July 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 24-079773
Sample Code : 24-31841-003

REPORT OF CALIBRATION

Equipment : Standard Weight 50 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/4

Result of Calibration : ☒ Without adjustment ☐ Adjustment

Conventional value of the result of weighing in air. For a weight taken at a reference temperature (t_{ref}) of 20°C, the conventional mass is the mass of a reference weight of a density (ρ_{ref}) of 8000 kg.m⁻³ which it balances in air of a reference density (ρ_0) of 1.2 kg.m⁻³

Description	Deviation	Conventional	Expanded	Maximum	ID No.
	(mg)	Mass	Uncertainty	Permissible Error	
			(mg)	± (mg)	
50 g	-0.176	49.999824 g	0.10	0.30	LABE 10/4

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.0$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003



Certificate No. : 24-079773

Sample Code : 24-31841-003

REPORT OF CALIBRATION

Condition of Calibration

1. Ambient Conditions : Temperature $20^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$, Relative humidity $50\% \pm 10\%$ and air density 1.19 kg/m^3
2. Calibration Method : WI-CL-007 base on OIML R 111-1 : 2004(E)
3. Reference standard instrument

Instrument	Class	ID No.	Certificate No.	Due Date
1) Standard Weight 1 mg to 1 kg	E2	LB-WE-83	24-001894	11 January 2025

4. This certification is traceable to the International System of Unit maintained at : -

Asia Medical and Agricultural Laboratory and Research Center Public Company Limited

(Instrument number 1).

5. Condition of Calibration item: Normal

6. Description of Calibrated Item :

Type and Nominal Value :	Standard Weight 50 g
Shape :	Cylindrical weight with knob
Material :	Stainless steel
Case :	Wooden Box
Comments :	Recalibration

- End of Report -

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