

ภาคผนวกที่ 4

ใบรายงานผลการตรวจคุณภาพน้ำ

สรุปตารางรายการเอกสารสอบเทียบความถูกต้องของเครื่องมือตรวจวิเคราะห์คุณภาพน้ำ

รายการตรวจวิเคราะห์	เครื่องมือตรวจวิเคราะห์
	ชื่อเครื่องมือ
- pH	- pH Meter
- Total Suspended Solids	- Electronic Balance
- Total Dissolved Solids	- Electronic Balance
- BOD ₅	- BOD Analyzer
- COD	- COD Reactor
- TKN	- Kjeldahl Block Digestion
- Sulfide	- Electronic Balance
- Grease & Oil	- Electronic Balance



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 : pH METER
MANUFACTURER : WTW
MODEL / TYPE : INOLAB pH LEVEL1
SERIAL NO. : 01510033/B211901089[PH 03/45]
CLID. NO. : 272201870
JOB CONTROL NO. : 230614064515

CUSTOMER : S.P.S. CONSULTING SERVICE CO., LTD.
7 SOI PHAHOLYOTHIN 24 ROAD, JOMPOL,
CHATUCHAK, BANGKOK 10900

DATE OF RECEIVED : 14 June 2023

DATE OF ISSUED : 20 June 2023

Report of calibration screening must not be taken in part. Except complete. Without the approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Sukgasem Seehanart
Calibration Engineer



Approved By :
Authorized Signatory
20 June 2023

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. Q23064515
F3-011-04/01-12

page 1 of 4



@clccalibration



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REPORT OF CALIBRATION

FOR

NOMENCLATURE : pH METER
MANUFACTURER : WTW
MODEL / TYPE : INOLAB pH LEVEL1
SERIAL NO. : 01510033/B211901089[PH 03/45]
DATE OF CALIBRATION : 15 June 2023

ENVIRONMENT CONDITIONS :

Temperature : $(25 \pm 2.5) ^\circ\text{C}$ Relative Humidity : $(50 \pm 15) \% \text{ RH}$

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPCH-01. The calibration was performed by direct measurement with Certified Reference Material (CRM) and comparison with Calibration Bath, Precision Thermometer and IPRT which maintained by the Calibration Laboratory Co., Ltd.

REFERENCE STANDARD USED :

1. pH Standard Solution, NIMT TRM CODE TRM-S-2003, TRM CODE TRM-S-2007.
2. pH Standard Solution, Control Company Catalog Number 06664263,11784256, Lot Number CC752722.
3. Calibration Bath, Kambic Model OB-22/2 ULT S/N. 17115653.
4. Precision Thermometer, ASL Model F200-A-8 S/N. 014433/03.
5. IPRT, ASL Model T100-250-1D S/N. L0193A-1-1.

Certificate No. Q23064515

F3-011-04/01-12

page 2 of 4



@clccalibration



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TRACEABILITY :

1. The measurements are traceable to International System of Units (SI) , through National Institute of Metrology (Thailand).
Lot Number. 040822 , 230822. Due Date 26 April 2024.
2. The measurements are traceable to International System of Units (SI) , through Control Company.
Certificate No. 4288-13355261 , Due Date 06 May 2024.
3. The measurements are traceable to International System of Units (SI) , through Calibration Laboratory Co., Ltd.
Certificate No. Q22130792, Due Date 05 January 2024.
4. The measurements are traceable to International System of Units (SI) , through Thailand Institute of Scientific and Technological Research (TISTR). Certificate No. PSL-T 0010/66, Due Date 06 November 2023.
5. The measurements are traceable to International System of Units (SI) , through National Institute of Metrology (Thailand).
Certificate No. TT-0166-22, Due Date 01 December 2023.

UNCERTAINTY :

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor complies with the table 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. Q23064515

F3-011-04/01-12

page 3 of 4



@clccalibration



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Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : GOOD

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The table in the following gives the calibration results and associated measurement uncertainties of pH meter.

CALIBRATION DATA

1. pH METER RESULT @ 25 °C

Standard pH Buffer Solution (pH)	pH Meter Reading (pH)	pH Meter Reading (mV)	Correction (pH)	Uncertainty of pH Measurement ($\pm$ pH)	k Factor
4.003	4.018	162.4	-0.015	0.010	2,00
7.000	7.020	-8.2	-0.020	0.012	2,00
10.003	9.990	-173.1	+0.013	0.012	2,00

Technical Note. Setting function CAL 3 point (4,7,10).

The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 008 Page 2,3 of 54

*2. TEMPERATURE RESULT [pH PROBE]

Immersion depth (mm)	Actual Temperature (°C)	DUC Reading (°C)	Correction (°C)	Uncertainty $\pm$ (°C)
100	25.00	24.9	+0.10	0.07

Note. * means Calibrations marked " Not ANAB Accredited " in this Certificate have been included for completeness.

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor of $k = 2,00$.

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

End of Certificate

Certificate No. Q23064515

F3-011-04/01-12

page 4 of 4



@clccalibration



CERTIFICATE No : 23M2444
REFERENCE No : 68471-4

PAGE : 1 OF 2

Certificate of Calibration

EQUIPMENT : DIGITAL BALANCE
MANUFACTURER : SARTORIUS
MODEL : BCA2241-IS
SERIAL No : 0042506394
ID No : BA 11/65
CONDITION AS RECEIVED : USED ITEM
SUBMITTED BY : S.P.S. CONSULTING SERVICE CO., LTD.
7 SOI PHAHOLYOTHIN 24, PHAHOLYOTHIN RD.,
JOMPOL, CHATUCHAK, BANGKOK 10900

CALIBRATED BY : ATSAWIN Y.
CALIBRATION DATE : 10-Mar-23
APPROVED BY : 
ISSUED DATE : 16-Mar-23
RECEIVED DATE : 10-Mar-23

THIS CERTIFICATE MAY NOT BE REPRODUCED OTHER THAN IN FULL EXCEPT WITH THE PRIOR WRITTEN APPROVAL OF
QUALITY CALIBRATION CO., LTD.



CERTIFICATE No : 23M2444

PAGE : 2 OF 2

Calibration Report

EQUIPMENT : DIGITAL BALANCE
MANUFACTURER : SARTORIUS
MODEL : BCA2241-IS
ID No : BA 11/65
RECEIVED DATE : 10-Mar-23
AIR PRESSURE : 1010mbar $\pm$ 1mbar
CALIBRATION DATE : 10-Mar-23
RELATIVE HUMIDITY : 49% RH $\pm$ 10% RH
AMBIENT TEMPERATURE : 23°C $\pm$ 1°C

CONDITION OF THIS RESULTS OF CALIBRATION

1. THIS INSTRUMENT WAS CALIBRATED BY ACCORDING TO UKAS LAB 14 EDITION 6/2019 BY USING KNOWN WEIGHT STANDARD WEIGHT. THE BALANCE WAS NOT ADJUSTED BEFORE CALIBRATION. THE BALANCE HAS NO ZERO TRACKING FUNCTION. REPEATABILITY WAS MEASURED BY USING 10 REPEATED MEASUREMENTS. LINEARITY WAS MEASURED COVERING 10 POINTS, EVENLY SPREAD OVER THE RANGE. THE INSTRUMENT WAS SET ZERO BEFORE PERFORMING THE LINEARITY TEST. OFF-CENTER LOADING WAS MEASURED BY USING STANDARD WEIGHTS PLACED ON THE PAN AND MOVED TO VARIOUS POSITIONS ON THE PAN.

2. REFERENCE STANDARD INSTRUMENTS :-

- 1) STANDARD WEIGHT SET E2
- 2) STANDARD WEIGHT E2
- 3) THIS RESULT WAS FOUND ACCURATE AS SHOWN ON DATE AND PLACE OF CALIBRATION ONLY.
- 4) THIS RESULT EXCLUDE LONG TERM STABILITY OF THE UNIT UNDER CALIBRATION.
- 5) THIS CERTIFICATE IS TRACEABLE TO THE INTERNATIONAL SYSTEM OF UNIT MAINTAINED AT:-

- NATIONAL INSTITUTE OF METROLOGY (THAILAND) THROUGH CENTRAL BUREAU OF WEIGHTS&MEASURES

RESULT OF CALIBRATION :- WITHOUT ADJUSTMENT

1. ZERO SETTING FUNCTION : NORMAL
2. TARE FUNCTION : NORMAL
3. REPEATABILITY OF READING AT 200 g WAS 0 g
4. DEPARTURE FROM NOMINAL VALUE/ LINEARITY

NOMINAL VALUE (g)	BALANCE READING (g)	CORRECTION (g)	UNCERTAINTY ($\pm$ g)
0.0	0.0000	0.0000	0.000058
0.1	0.1000	0.0000	0.000059
0.2	0.2000	0.0000	0.000059
0.5	0.5000	0.0000	0.000060
1.0	1.0000	0.0000	0.000060
2.0	2.0000	0.0000	0.000061
5.0	5.0000	0.0000	0.000063
10.0	10.0000	0.0000	0.000067
20.0	20.0001	-0.0001	0.000073
50.0	50.0000	0.0000	0.00011
100.0	100.0001	-0.0001	0.00019
200.0	200.0000	0.0000	0.00032

5. OFF CENTER LOADING ERROR



POINT	READING (g)
-------	-------------

1	100.0000
2	100.0000
3	100.0000
4	100.0000
5	100.0000

OFF-CENTER LOADING

0.0000

NOTE: THIS CALIBRATION WAS CARRIED OUT AT THE CUSTOMER'S PLACE AT LABORATORY AREA
THE REPORTED UNCERTAINTY OF MEASUREMENT WAS BASED ON A STANDARD UNCERTAINTY MULTIPLIED BY A
COVERAGE FACTOR $k=2$, PROVIDING A LEVEL OF CONFIDENCE APPROXIMATELY 95%.
END OF CALIBRATION REPORT

CERT.No.: HS-U017D

Calibration Date : 3 Apr 23
 Submitted by : S.P.S CONSULTING SERVICE CO.,LTD
 7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol,
 Chatuchak, Bangkok, Thailand 10900

Avg Room Temp : 20 °C
 Avg Water Temp : 20 °C
 Air Pressure : 760.00 mmHg
 Salinity : 0 ppt

Model : YSI 5000
 S/N : 15B100751
 Probe : YSI 5010
 S/N : 22D100097
 ID NO. : -
 Air Temp ref : S/N. E00522
 Barometric ref : S/N. E00522
 Water Temp ref : S/N. 11431
 Technician : Kittipong M.

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

Laboratory Manager



QUALITY CALIBRATION CO.,LTD.

235 Petchkasem 63/2 Road, Laksong, Bangkok, Bangkok 10160
Tel (662) 421-5402, (662) 444-0152-3, Fax (662) 809-4584
www.qcalibration.com

CERTIFICATE No : 22T10972
REFERENCE No : 66837-1

PAGE : 1 OF 3

Certificate of Calibration

EQUIPMENT : COD REACTOR

MANUFACTURER : HACH

MODEL : DRB 200

SERIAL No : 15110C0497

ID No : DRB 04/59

SUBMITTED BY : S.P.S. CONSULTING SERVICE CO., LTD.
7 SOI PHAHOLYOTHIN 24, PHAHOLYOTHIN RD.,
JOMPOL, CHATUCHAK, BANGKOK 10900

CALIBRATED BY : CHAICHARN CH.

CALIBRATION DATE : 20-Dec-22

APPROVED BY : 
PONGSAK J.

ISSUED DATE : 20-Dec-22

RECEIVED DATE : 20-Dec-22

THIS CERTIFICATE MAY NOT BE REPRODUCED OTHER THAN IN FULL EXCEPT WITH THE PRIOR WRITTEN APPROVAL OF
QUALITY CALIBRATION CO., LTD.

F-G010 REV : 02



QUALITY CALIBRATION CO.,LTD.

235 Petchkasem 63/2 Road, Laksong, Bangkok, Bangkok 10160
Tel (662) 421-5402, (662) 444-0152-3, Fax (662) 809-4584

CERTIFICATE No : 22T10972

PAGE : 2 OF 2

Calibration Report

EQUIPMENT : COD REACTOR
MANUFACTURER : HACH
ID NUMBER : DRB 04/59
RECEIVED DATE : 20-Dec-22
AMBIENT TEMPERATURE : 23°C ± 1°C
MODEL : DRB 200
SERIAL NUMBER : 15110C0497
CALIBRATION DATE : 20-Dec-22
RELATIVE HUMIDITY : 52 %RH ± 10 % RH

CONDITION OF THIS RESULTS OF CALIBRATION

1. THIS INSTRUMENT WAS CALIBRATED BY DIRECT MEASUREMENT TEMPERATURE RECORDER WITH THERMOCOUPLE TYPE K UNDER NO LOAD CONDITION. THE THERMOCOUPLES WERE PLACED ON 15 POINTS AND LOCATED ONE THERMOCOUPLE IN EACH OF THE FOUR CORNERS OF THE REACTOR AND PLACED THE EIGHTH THERMOCOUPLE AT THE CENTER OF THE REACTOR.

2. REFERENCE STANDARD INSTRUMENTS :-

INSTRUMENT : MODEL : SERIAL No : CERTIFICATE No : DUE DATE :
1) DATA LOGGER WITH TC TYPE K HYDRA 2635A 8009008 22T7511 10-Jul-23

3. THIS RESULT WAS FOUND ACCURATE AS SHOWN ON DATE AND PLACE OF CALIBRATION ONLY.

4. THIS RESULT EXCLUDE LONG TERM STABILITY OF THE UNIT UNDER CALIBRATION.

5. THIS CERTIFICATE IS TRACEABLE TO THE INTERNATIONAL SYSTEM OF UNIT MAINTAINED AT:-

- NATIONAL INSTITUTE OF METROLOGY (THAILAND) THROUGH QUALITY CALIBRATION CO.,LTD.

RESULT OF CALIBRATION :- WITHOUT ADJUSTMENT

BLOCK No.1 FRONT					BLOCK No.2 FRONT				
13	14	15	13	14	15	13	14	15	13
10	11	12	10	11	12	10	11	12	10
7	8	9	7	8	9	7	8	9	7
4	5	6	4	5	6	4	5	6	4
1	2	3	1	2	3	1	2	3	1

TEMPERATURE MEASUREMENT ACCURACY TEST

Block No.	1	2
Controller Temperature (°C)	145	145
Indicating Temperature	145	145
Locations Measured Temperature (°C) at Spread	1	149.6
	2	149.6
	3	149.7
	4	149.8
	5	149.8
	6	149.8
	7	149.8
	8	149.8
	9	149.9
	10	149.8
	11	149.9
	12	149.7
	13	149.9
	14	149.8
	15	149.7
Uncertainty of Measurement(± °C)		0.86

NOTE 1 : THE UNCERTAINTY OF MEASUREMENT EXCLUDED TEMPERATURE UNIFORMITY OF THE CHAMBER.

NOTE 2 : THIS CALIBRATION WAS CARRIED OUT AT THE CUSTOMER'S PLACE AT LABORATORY AREA.

THE REPORTED UNCERTAINTY OF MEASUREMENT WAS BASED ON A STANDARD UNCERTAINTY M

COVERAGE FACTOR k =2, PROVIDING A LEVEL OF CONFIDENCE APPROXIMATELY 95%.

END OF CALIBRATION REPORT

F-



CERTIFICATE No : 23T0959
REFERENCE No : 68047-2

PAGE : 1 OF 3

Certificate of Calibration

EQUIPMENT : COD REACTOR
MANUFACTURER : HACH
MODEL : DRB200
SERIAL No : 15110C0235
ID No : CRB 05/59
SUBMITTED BY : S.P.S. CONSULTING SERVICE CO.,LTD.
7 SOI PHAHOLYOTHIN 24, PHAHOLYOTHIN RD.,
JOMPOL, CHATUCHAK, BANGKOK 10900

CALIBRATED BY : CHAICHARN CH.
CALIBRATION DATE : 07-Feb-23

APPROVED BY :
ISSUED DATE : 07-Feb-23
RECEIVED DATE : 31-Jan-23

THIS CERTIFICATE MAY NOT BE REPRODUCED OTHER THAN IN FULL EXCEPT WITH THE PRIOR WRITTEN APPROVAL OF
QUALITY CALIBRATION CO., LTD.

F-G010 REV : 02



CERTIFICATE No : 23T0959

PAGE : 2 OF 2

Calibration Report

EQUIPMENT : COD REACTOR
MANUFACTURER : HACH
ID NUMBER : CRB 05/59
RECEIVED DATE : 31-Jan-23
AMBIENT TEMPERATURE : 23°C ± 1°C
MODEL : DRB200
SERIAL NUMBER : 15110C0235
CALIBRATION DATE : 07-Feb-23
RELATIVE HUMIDITY : 52%RH ± 10% RH

CONDITION OF THIS RESULTS OF CALIBRATION

1. THIS INSTRUMENT WAS CALIBRATED BY DIRECT MEASUREMENT TEMPERATURE RECORDER WITH THERMOCOUPLE TYPE K UNDER NO LOAD CONDITION. THE THERMOCOUPLES WERE PLACED ON 15 POINTS AND LOCATED ONE THERMOCOUPLE IN EACH OF THE FOUR CORNERS OF THE REACTOR AND PLACED THE EIGHTH THERMOCOUPLE AT THE CENTER OF THE REACTOR.

2. REFERENCE STANDARD INSTRUMENTS :-

- 1) DATA LOGGER WITH TC TYPE K HYDRA 2635A
2) THERMOCOUPLE TYPE K
3. THIS RESULT WAS FOUND ACCURATE AS SHOWN ON DATE AND PLACE OF CALIBRATION ONLY.
4. THIS RESULT EXCLUDE LONG TERM STABILITY OF THE UNIT UNDER CALIBRATION.
5. THIS CERTIFICATE IS TRACEABLE TO THE INTERNATIONAL SYSTEM OF UNIT MAINTAINED AT:-
- NATIONAL INSTITUTE OF METROLOGY (THAILAND) THROUGH QUALITY CALIBRATION CO.,LTD.

RESULT OF CALIBRATION :- WITHOUT ADJUSTMENT

BLOCK No.1 FRONT					BLOCK No.2 FRONT				
13	14	15	13	14	15	13	14	15	13
10	11	12	10	11	12	10	11	12	10
7	8	9	7	8	9	7	8	9	7
4	5	6	4	5	6	4	5	6	4
1	2	3	1	2	3	1	2	3	1

TEMPERATURE MEASUREMENT ACCURACY TEST

Block No.	1	2
Controller temperature (°C)	145	145
Indicating Temperature	149.4	149.5
Locations Measured Temperature (°C) at Spread	149.5	149.4
	149.4	149.4
	149.7	149.6
	149.4	149.3
	149.6	149.3
	149.6	149.6
	149.7	149.4
	149.7	149.3
	149.5	149.5
	149.7	149.5
	149.3	149.4
	149.5	149.5
	149.8	149.4
	149.6	149.3
Uncertainty of Measurement(± °C)	0.86	0.86

NOTE 1 : THE UNCERTAINTY OF MEASUREMENT EXCLUDED TEMPERATURE UNIFORMITY OF THE CHAMBER.

NOTE 2 : THIS CALIBRATION WAS CARRIED OUT AT THE CUSTOMER'S PLACE AT LABORATORY AREA.

THE REPORTED UNCERTAINTY OF MEASUREMENT WAS BASED ON A STANDARD UNCERTAINTY M

COVERAGE FACTOR k=2, PROVIDING A LEVEL OF CONFIDENCE APPROXIMATELY 95%.

END OF CALIBRATION REPORT

F-



CALIBRATION CERTIFICATE

Certificate No. : L202207235-001
 Date Issued : 03-Aug-22

Customer : S.P.S. CONSULTING SERVICE CO., LTD.
 7 Soi Phaholyothin 24 Phaholyothin Road., Jompol, Chatuchak,
 Bangkok 10900

Equipment : Block Digestion (Gerhardt, TR)

Manufacturer : Gerhardt

Model : -

Serial No. : 4061832

ID No./Tag No. : KJ 01/43

Date Received : 02-Aug-22

Date Calibrated : 03-Aug-22

Calibrated by : Mr. Nirot Pamkamnoed

Calibration Method or Calibration Procedure Used

In-house method : CP-49 base on TLAS G-20 by comparing against Standard Thermometer.

This certificate is traceable to national standards, which realize the units of measurement according to the International System of Units (SI).

Result of Calibration

The reported uncertainty of measurement was based on standard uncertainty multiplied by a coverage factor $k = 2$, providing a level confidence approximately 95 percent.

This certificate may not be reproduced other than in full except with the prior written approval of the Miracle International Technology Company Limited.

Approved by

(N)



ข้อมูล

Calibration Temperature (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Stability ¹ (°C)	Measured Uniformity ² (°C)	Overall Variation ³ (°C)
380	380	380	1.45	0.57	4.01

Calibration Temperature (°C)	Standard Reading (°C), Probe No. 9 is Reference Probe					Uncertainty ^a (±°C)
380	No. 1	No. 2	No. 3	No. 4	No. 5	2.2
	377.86	378.11	378.69	378.54	378.72	
	No. 6	No. 7	No. 8	No. 9	No. 10	
	378.09	378.07	377.93	378.17	377.61	

Without adjustment

No. 1	No. 2	No. 3	No. 4	No. 5
No. 3	No. 4	No. 5	No. 6	No. 7
No. 5	No. 6	No. 7	No. 8	No. 9
No. 7	No. 8	No. 9	No. 10	

Top view position

Condition As-Received : Used Item

The measurement results and statements of conformity with specification only relate to the item calibrated.

Measurement Standards Used & Traceability :

The International System of Units (SI) through

MIT Certificate No. AD2202-055-0002 for Digital Thermometer with Probe (Agilent) Module 2 (172) Type K Serial No. US37011204, Due 11-Aug-22

- Notes :
1. The temperature stability is the one-half of greatest maximum difference of measured temperatures at any one probe.
 2. The temperature uniformity is the maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time.
 3. Overall variation is the difference of maximum and minimum measured temperatures throughout observation time.
 4. The uncertainty of measurement is included temperature stability.

Certificate No. : L202207235-001

Environment : Ambient Temperature : (25 ± 2)°C
Relative Humidity : (50 ± 15)%RH

ข้อมูล

Calibration Temperature (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Stability (°C)	Measured Uniformity ² (°C)	Overall Variation ³ (°C)
380	380	380	1.45	0.94	4.40

Calibration Temperature (°C)	Standard Reading (°C), Probe No. 9 is Reference Probe										Uncertainty ^a (±°C)
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	
380	378.91	379.16	378.76	378.60	378.78						2.2
	378.15	378.13	378.00	378.23	377.67						

	No. 1	No. 2
	No. 3	No. 4
	No. 5	No. 6
	No. 7	No. 8
	No. 9	No. 10

Top view position

Condition As-Received : Used Item

The measurement results and statements of conformity with specification only relate to the item calibrated.

Measurement Standards Used & Traceability :

The International System of Units (SI) through

MIT Certificate No. AD2202-055-0002 for Digital Thermometer with Probe (Agilent) Module 2 (172) Type K Serial No. US37011204, Due 11-Aug-22

- Notes :
- 1. The temperature stability is the one-half of greatest maximum difference of measured temperatures at any one probe.
 - 2. The temperature uniformity is the maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time.
 - 3. Overall variation is the difference of maximum and minimum measured temperatures throughout observation time.
 - 4. The uncertainty of measurement is included temperature stability.

End of Certificate