ภาคผนวก

ภาคผนวก ก หนังสือขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน บริษัท วิศวกรรมเคมี จำกัด จากกรมโรงงานอุตสาหกรรม

ภาคผนวก ก

หนังสือขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท วิศวกรรมเคมี จำกัด จากกรมโรงงานอุตสาหกรรม

ที่ อก ๐๓๑๐(๑)/๕๑๑๒

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๑๖ พฤษภาคม ๒๕๖๘

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท วิศวกรรมเคมี จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๑๑ มีนาคม ๒๕๖๘

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน บริษัท วิศวกรรมเคมี จำกัดจำนวน ๑ แผ่น

ตามคำขอที่อ้างถึง บริษัท วิศวกรรมเคมี จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๐๐๑ สถานที่ตั้งเลขที่ ๑๐๔๘/๒ ซอยสุขุมวิท ๖๖/๑ ถนนสุขุมวิท แขวงพระโขนงใต้ เขตพระโขนง กรุงเทพมหานคร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท วิศวกรรมเคมี จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

ก. ผู้ควบคุมห้องปฏิบัติการวิเคราะห์เอกชน
๑) นางสาวธัญญารัตน์ พลอยกระจ่าง ทะเบียนเลขที่ ว-๐๐๑-ค-๐๐๐๑
๒) นางสาวกรานตณา สว่างรุ่งรัตนะ ทะเบียนเลขที่ ว-๐๐๑-ค-๐๐๐๒

ข. เจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน
๑) นางสาวรัชนินท์ วนิชกุลวิริยะ ทะเบียนเลขที่ ว-๐๐๑-จ-๐๐๐๑
๒) นางสาวจิราพร เบญจริยาภรณ์ ทะเบียนเลขที่ ว-๐๐๑-จ-๐๐๐๕
๓) นางสาวกาญจนา ลาขุมเหล็ก ทะเบียนเลขที่ ว-๐๐๑-จ-๐๐๐๗

ค. ขอบข่ายชนิดสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำ/น้ำเสีย ตามสิ่งที่ส่งมาด้วย

หนังสือฉบับนี้จะสิ้นอายุในวันที่ ๘ เมษายน ๒๕๗๒ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรม ภายใน ๖๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายประสม ดำรงพงษ์)
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕
โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙
ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th

เอกสารแนบท้ายหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท วิศวกรรมเคมี จำกัด เลขทะเบียน ว-๐๐๑
ที่ อก ๐๓๑๐(๑)/ ๕๑๑๒ ลงวันที่ ๑๖ พฤษภาคม ๒๕๖๘

ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๐ รายการ

น้ำ/น้ำเสีย จำนวน 20 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Arsenic	Digestion, Inductively Coupled Plasma Method[2]
2	Barium	Digestion, Inductively Coupled Plasma Method[2]
3	Biochemical Oxygen Demand	5-Day BOD Test, Azide Modification Method[2]
4	Cadmium	Digestion, Inductively Coupled Plasma Method[2]
5	Chemical Oxygen Demand	1) Closed Reflux, Colorimetric Method[2] 2) Closed Reflux, Titrimetric Method[2]
6	Chromium	Digestion, Inductively Coupled Plasma Method[2]
7	Color	ADMI Weighted-Ordinate Spectrophotometric Method[2]
8	Copper	Digestion, Inductively Coupled Plasma Method[2]
9	Formaldehyde	Distillation, Colorimetric Method[1]
10	Lead	Digestion, Inductively Coupled Plasma Method[2]
11	Manganese	Digestion, Inductively Coupled Plasma Method[2]
12	Nickel	Digestion, Inductively Coupled Plasma Method[2]
13	Oil & Grease	Soxhlet Extraction Method[2]
14	pH	Electrometric Method[2]
15	Selenium	Digestion, Inductively Coupled Plasma Method[2]
16	Sulfide	Iodometric Method[2]
17	Total Dissolved Solids	Dried at 180 °C[2]
18	Total Kjeldahl Nitrogen	Macro Kjeldahl Method[2]
19	Total Suspended Solids	Dried form 103 to 105 °C[2]
20	Zinc	Digestion, Inductively Coupled Plasma Method[2]

เอกสารอ้างอิง

1. สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย. **คู่มือวิเคราะห์น้ำเสีย.** พิมพ์ครั้งที่ 4. กรุงเทพฯ: เรือนแก้วการพิมพ์, 2547.

2. APHA, AWWA, WEF. **Standard Methods for the Examination of Water and Wastewater.** 24th ed. Washington, DC: APHA, 2023.

ภาคผนวก ข

เอกสารการสอบเทียบเครื่องมือวิเคราะห์

- pH Meter
- Incubator
- Hot Air Oven
- Balance
- Colorimeter
- TKN Analyzer
- Liquid Bath

Certificate of Calibration

Equipment:	pH METER	Certificate No.:	C07250468
Manufacturer:	TOA-DKK	Job No.:	WC-00088844
Model:	HM-41X	Issued Date:	16 October 2025
Serial No.:	824393	Page:	1 of 3
ID No.:	INS/LB 143		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition:

Temperature	23	°C	±	2	°C
Relative Humidity	50	%	±	15	%

Calibration Place: Environment Laboratory, DKSH Technology Limited.
2533 Sukhumvit Road, Bangchak,
Phrakhanong, Bangkok 10260 Thailand

Calibration By: Mr.Pongpisut Suebchantha

Calibration Date: 14 October 2025

The Method Used: In house method, CAL-WI-58, base on ASTM E 70-07

Traceability: This certificate is traceable to SI Units, Sample Test is assured through primary meaurement method Harned cell, through CPAchem Ltd. (ISO/IEC 17034) Certificate No. 1100242, 1100244, 1100243 And pH Scale traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through Industrial Foundation Electrical and Electronics Institute Certificate No. CA20250102EA

Person in charge

Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Calibration Results:

pH Scale

Input	pH Meter Reading			Uncertainty of Measurement (mV)	Coverage Factor (k)
(mV)	(mV)	Error (mV)	(pH)		
414.12	414	-0.12	-0.002	0.58	2.00
354.96	355	0.04	0.998	0.58	2.00
295.8	296	0.20	1.998	0.58	2.00
236.64	237	0.36	2.998	0.58	2.00
177.48	177	-0.48	4.000	0.58	2.00
118.32	118	-0.32	5.000	0.58	2.00
59.16	59	-0.16	6.000	0.58	2.00
0	0	0.00	7.000	0.58	2.00
-59.16	-59	0.16	8.000	0.58	2.00
-118.32	-119	-0.68	9.000	0.58	2.00
-177.48	-178	-0.52	10.000	0.58	2.00
-236.64	-237	-0.36	10.996	0.58	2.00
-295.8	-296	-0.20	11.996	0.58	2.00
-354.96	-355	-0.04	12.996	0.58	2.00
-414.12	-414	0.12	13.995	0.58	2.00

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth – in Asia and Beyond.

CAL-FM-C07-15: 30 Jun 2025

Sample Test Results

Manufacturer: TOA-DKK **Model:** GST-5821C **Electrode Serial No.:** 311F0014ST

The three-point calibration using three standard buffer solutions; pH 4.007 , pH 6.988 and pH 10.010

-During calibration, display of pH meter reading; pH 4.010 , pH 7.000 and pH 10.020

Standard Buffer Solution (pH)	Unit Under Calibration (pH)	Difference (pH)	Uncertainty of Measurement (pH)	Coverage Factor (k)
4.007	4.011	0.004	0.0070	2.00
6.988	7.003	0.015	0.0075	2.00
10.010	10.020	0.010	0.0070	2.00

Practical slope and zero point*

The three-point calibration using three standard buffer solutions; pH 4.007 , pH 6.988 and pH 10.010

-During calibration, display of pH meter reading; pH 4.010 , pH 7.000 and pH 10.020

The practical slope of the pH electrode; 56.60 (mV/pH), 95.68%

The zero point of the pH electrode; 6.87 (pH)

* Calibration Marked " Not TISI Accredited " in this Certificate have been included for completeness.

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Certificate of Calibration

NSC-TISI-TIS 17025 Calibration 0087

Equipment :	Digital Thermometer with Probe	Certificate No. :	C15251132
Manufacturer:	TOA-DKK	Job No. :	WO-00088844
Model:	HM-41X	Issued Date :	14 October 2025
Serial No.:	824893	Page:	1 of 2
ID No.:	INS/LB 143		
Condition of the item:	Normal		

Customer : THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition :

Temperature:	22 °C	±	3 °C
Relative Humidity:	50 %	±	20 %
Voltage:	220 VAC	±	10 %

Calibration Place : Thermo-Hygro Laboratory, DKSH Technology Limited.
2533 Sukhumvit Road, Bangchak,
Phrakhanong, Bangkok 10260 Thailand

Calibration By : Mr. Tweewong Thaithiang

Calibration Date : 14 October 2025

The Method Used : In house method, CAL-WI-19, by comparison with standard thermometer

Traceability : This certificate is traceable to the International System of Unit maintained by: Quality Reborn Co. Ltd. (QR)

Person in charge

Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Reference standard equipment:

Equipment	Certificate no	Cal. date	Next Cal. date
Digital Thermometer with Probe	QR25-1422	13 May 2025	13 May 2026

Calibration Results:

Without Adjustment

Sensor Type: RTD Electrode s/n: 311F0014ST Channel: -

Diameter (mm): 12 Length (mm): 120 Immersion (mm): 120

Calibrate Point.(°C)	STD. Reading (°C)	UUC. Reading (°C)	Correction of UUC (°C)	Uncertainty (± °C)
20.0	20.005	20.0	0.005	0.076
25.0	25.007	24.9	0.107	0.076
30.0	30.009	29.8	0.209	0.076

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: infc.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Certificate of Calibration

Equipment:	Cooled Incubator	Certificate No.:	C31251920
Manufacturer:	Memmert	Issued Date:	10 September 2025
Model:	IPP 750	Job No.:	WO-00084486
Serial No.:	V818.0043	Ventilation Valve:	None
ID No.:	INS/LB133	Page:	1 of 3
Shelves(pc.):	3		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai, Prakanorg,
Bangkok 10260 Thailand

Environment Condition:

Temperature:	24 °C	±	0.8	°C
Relative Humidity:	50 %	±	5.1	%
Voltage:	228 VAC	±	1.5	VAC

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD.(Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai, Prakanong,
Bangkok 10260 Thailand

Calibration By: Mr. Sittiphong Lekfu

Calibration Date: 04 September 2025

The Method Used: In house method, CAL-WI-16, base on TLAS-G20

Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Limited.
Certificate No. C10250013

Person in charge

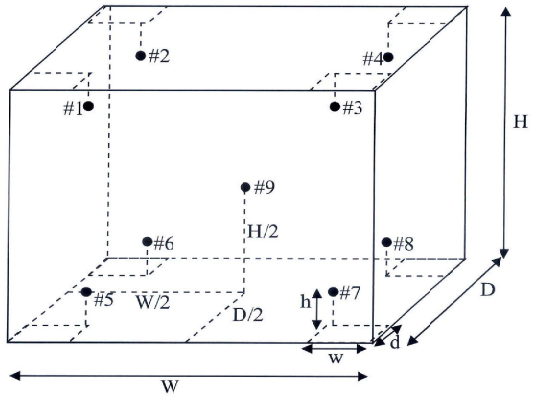
Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand



Standard Installation Locations

Volume (Calibration Zone)= 387 (Liters)

Inside chamber:	W = 104 (cm)	D = 60 (cm)	H = 120 (cm)
Standard Locations (#1, #2, #3, #4):	w = 10 (cm)	d = 6 (cm)	h = 12 (cm)
Standard Locations (#5, #6, #7, #8):	w = 10 (cm)	d = 6 (cm)	h = 12 (cm)

#9: Geometric center of the chamber

Position of Std	#1	#2	#3	#4	#5	#6	#7	#8	#9
Channel of Logger	301	302	303	304	305	306	307	308	309

Definitions

Indicating Temperature: The average reading of indicating device which forms the integral part of the enclosure.

Measured Temperature: The average reading of standards at any positions or location.

Measured Uniformity: The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time or at close observation time as possible to determine the temperature pattern or homogeneity with the chamber at steady-state. The reference probe is preferably located in the geometric center of the chamber.

Measured Stability: The one-half of greatest maximum difference of measured temperatures at any one probe.

Overall Variation: The difference of maximum and minimum measured temperatures throughout observation time.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technoogy Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth - in Asia and Beyond.

CAL-FM-C31-11: 30 Jun 2025

Calibration Results:

Without adjustment

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 20.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	20.21	0.21	0.26
#2	20.00	0.00	0.27
#3	20.48	0.48	0.26
#4	19.88	-0.12	0.25
#5	19.63	-0.37	0.26
#6	19.78	-0.22	0.26
#7	19.85	-0.15	0.26
#8	20.17	0.17	0.26
#9	20.18	0.18	0.27

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
20.0	20.0	20.0	20.21	20.00	20.48	19.88	19.63	19.78	19.85	20.17	20.18	0.27

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
20.0	0.69	0.08	0.96

Note: * Maximum uncertainty of the each position

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com\scientific-thailand

Delivering Growth – in Asia and Beyond.

Certificate of Calibration

Equipment:	Incubator	Certificate No.:	C31251919
Manufacturer:	Memmert	Issued Date:	08 September 2025
Model:	IN 55	Job No.:	WO-00084486
Serial No.:	D213.0681	Ventilation Valve:	Closed
ID No.:	INS/LB-121	Page:	1 of 3
Shelves(pc.):	1		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition:

Temperature:	23 °C	±	0.7	°C
Relative Humidity:	53 %	±	3.1	%
Voltage:	224 VAC	±	1.9	VAC

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD. (Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Calibration By: Mr. Chaiwat Srisanguan

Calibration Date: 04 September 2025

The Method Used: In house method, CAL-WI-16, base on TLAS-G20

Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Limited.
Certificate No. C10250017

Person in charge

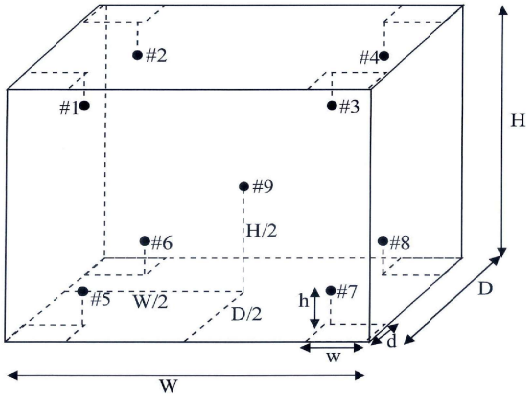
Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand



Standard Installation Locations

Volume (Calibration Zone)= 21 (Liters)

Inside chamber:	W = 40 (cm)	D = 33 (cm)	H = 40 (cm)
Standard Locations (#1, #2, #3, #4):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)
Standard Locations (#5, #6, #7, #8):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)

#9: Geometric center of the chamber

Position of Std	#1	#2	#3	#4	#5	#6	#7	#8	#9
Channel of Logger	301	302	303	304	305	306	307	308	309

Definitions

Indicating Temperature: The average reading of indicating device which forms the integral part of the enclosure.

Measured Temperature: The average reading of standards at any positions or location.

Measured Uniformity: The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time or at close observation time as possible to determine the temperature pattern or homogeneity with the chamber at steady-state. The reference probe is preferably located in the geometric center of the chamber.

Measured Stability: The one-half of greatest maximum difference of measured temperatures at any one probe.

Overall Variation: The difference of maximum and minimum measured temperatures throughout observation time.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth - in Asia and Beyond.

CAL-FM-C31-11: 30 Jun 2025

Calibration Results:

Before adjustment

Setting:	Indicating:	#1:	#2:	#3:	#4:	#5:	#6:	#7:	#8:	#9:
35.0	35.0	35.78	35.56	35.57	35.89	35.48	35.56	35.74	35.77	35.56

After adjustment

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 35.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	35.12	0.12	0.23
#2	34.94	-0.06	0.23
#3	34.91	-0.09	0.23
#4	35.24	0.24	0.24
#5	34.77	-0.23	0.27
#6	34.97	-0.03	0.23
#7	34.86	-0.14	0.23
#8	35.14	0.14	0.23
#9	34.89	-0.11	0.24

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
35.0	35.0	35.0	35.12	34.94	34.91	35.24	34.77	34.97	34.86	35.14	34.89	0.27

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
35.0	0.42	0.12	0.64

Note: * Maximum uncertainty of the each position

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

DKSH

Certificate of Calibration

Equipment:	Incubator	Certificate No.:	C31252359
Manufacturer:	Memmert	Issued Date:	04 November 2025
Model:	IN 55	Job No.:	WO-00092306
Serial No.:	D215.1344	Ventilation Valve:	Closed
ID No.:	INS/LB-022	Page:	1 of 3
Shelves(pc.):	1		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition:

Temperature:	23 °C	±	0.7	°C
Relative Humidity:	56 %	±	2.4	%
Voltage:	224 VAC	±	3.4	VAC

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD. (Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Calibration By: Mr. Santisuk Toskrai

Calibration Date: 03 November 2025

The Method Used: In house method, CAL-WI-16, base on TLAS-G20

Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Limited.
Certificate No. C10250011

Person in charge

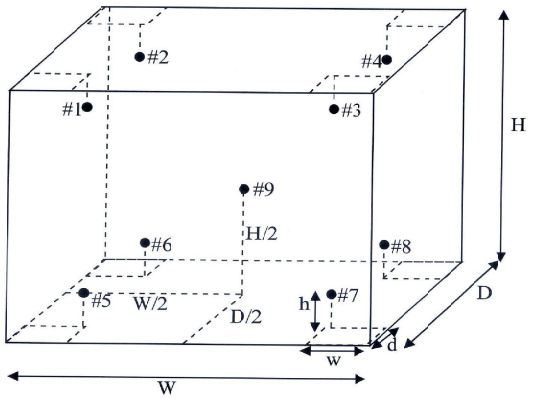
Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10250
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10250
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand



Standard Installation Locations

Volume (Calibration Zone)= 21 (Liters)

Inside chamber:	W = 40 (cm)	D = 33 (cm)	H = 40 (cm)
Standard Locations (#1, #2, #3, #4):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)
Standard Locations (#5, #6, #7, #8):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)

#9: Geometric center of the chamber

Position of Std	#1	#2	#3	#4	#5	#6	#7	#8	#9
Channel of Logger	201	202	203	204	205	206	207	208	209

Definitions

Indicating Temperature: The average reading of indicating device which forms the integral part of the enclosure.

Measured Temperature: The average reading of standards at any positions or location.

Measured Uniformity: The maximum difference of measured temperatures between of any probes and the measured temperature at the refererce location which are observed at same time or at close observation time as possible to determine the temperature pattern or homogeneity with the chamber at steady-state. The reference probe is preferably located in the geometric center of the chamber.

Measured Stability: The one-half of greatest maximum difference of measured temperatures at any one probe.

Overall Variation: The difference of maximum and minimum measured temperatures throughout observation time.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth – in Asia and Beyond.

CAL-FM-C31-11: 30 Jun 2025

Calibration Results:

Without adjustment

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 44.5 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	44.76	0.26	0.21
#2	44.66	0.16	0.23
#3	44.61	0.11	0.21
#4	44.65	0.15	0.21
#5	44.39	-0.11	0.23
#6	44.43	-0.07	0.21
#7	44.44	-0.06	0.21
#8	44.33	-0.17	0.21
#9	44.44	-0.06	0.21

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
44.5	44.5	44.5	44.76	44.66	44.61	44.65	44.39	44.43	44.44	44.33	44.44	0.23

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
44.5	0.33	0.09	0.54

Note: * Maximum uncertainty of the each position

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Certificate of Calibration

Equipment:	Hot Air Oven	Certificate No.:	C31251916
Manufacturer:	Memmert	Issued Date:	08 September 2025
Model:	UF55	Job No.:	WO-00084486
Serial No.:	B218.3817	Ventilation Valve:	Closed
ID No.:	INS/LB-134	Page:	1 of 4
Shelves(pc.):	2		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition:

Temperature:	22 °C	±	0.8	°C
Relative Humidity:	58 %	±	5.1	%
Voltage:	230 VAC	±	3.6	VAC

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD. (Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Calibration By: Mr. Nakarin Ruenros

Calibration Date: 04 September 2025

The Method Used: In house method, CAL-WI-16, base on TLAS-G20

Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Limited.
Certificate No. C10250016

Person in charge

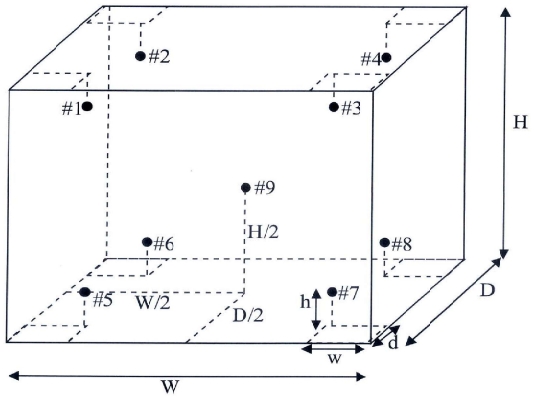
Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results reate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10250
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10250
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand



Standard Installation Locations

Volume (Calibration Zone)= 16 (Liters)

Inside chamber:	W = 40 (cm)	D = 33 (cm)	H = 40 (cm)
Standard Locations (#1, #2, #3, #4):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)
Standard Locations (#5, #6, #7, #8):	w = 5 (cm)	d = 5 (cm)	h = 12 (cm)

#9: Geometric center of the chamber

Position of Std	#1	#2	#3	#4	#5	#6	#7	#8	#9
Channel of Logger	301	302	303	304	305	306	307	308	309

Definitions

Indicating Temperature: The average reading of indicating device which forms the integral part of the enclosure.

Measured Temperature: The average reading of standards at any positions or location.

Measured Uniformity: The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time or at close observation time as possible to determine the temperature pattern or homogeneity with the chamber at steady-state. The reference probe is preferably located in the geometric center of the chamber.

Measured Stability: The one-half of greatest maximum difference of measured temperatures at any one probe.

Overall Variation: The difference of maximum and minimum measured temperatures throughout observation time.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth - in Asia and Beyond.

CAL-FM-C31-11: 30 Jun 2025

Calibration Results:

Without adjustment

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 104.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	103.78	-0.22	0.38
#2	103.52	-0.48	0.38
#3	103.80	-0.20	0.38
#4	103.88	-0.12	0.38
#5	103.93	-0.07	0.38
#6	103.65	-0.35	0.38
#7	104.18	0.18	0.38
#8	103.88	-0.12	0.38
#9	103.72	-0.28	0.38

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
104.0	104.0	104.0	103.78	103.52	103.80	103.88	103.93	103.65	104.18	103.88	103.72	0.38

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
104.0	0.53	0.09	0.83

Note: * Maximum uncertainty of the each position

Without adjustment (Cont.)

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 180.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	179.62	-0.38	0.42
#2	179.34	-0.66	0.42
#3	179.94	-0.06	0.42
#4	179.92	-0.08	0.42
#5	180.09	0.09	0.42
#6	179.75	-0.25	0.42
#7	180.57	0.57	0.42
#8	179.72	-0.28	0.42
#9	179.80	-0.20	0.42

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
180.0	180.0	180.0	179.62	179.34	179.94	179.92	180.09	179.75	180.57	179.72	179.80	0.42

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
180.0	0.83	0.09	1.37

Note: * Maximum uncertainty of the each position

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth – in Asia and Beyond.

CAL-FM-C31-11: 30 Jun 2025

Certificate of Calibration

Equipment:	Hot Air Oven	Certificate No.:	C31252357
Manufacturer:	Memmert	Issued Date:	03 November 2025
Model:	UF 55	Job No.:	WO-00092306
Serial No.:	B219.1995	Ventilation Valve:	Closed
ID No.:	INS/LB-149	Page:	1 of 4
Shelves(pc.):	2		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition:

Temperature:	23 °C	±	2.7	°C
Relative Humidity:	58 %	±	6.0	%
Voltage:	224 VAC	±	0.8	VAC

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD. (Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Calibration By: Mr. Piyapong Somkaew

Calibration Date: 03 November 2025

The Method Used: In house method, CAL-WI-16, base on TLAS-G20

Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Limited.
Certificate No. C10240023

Person in charge

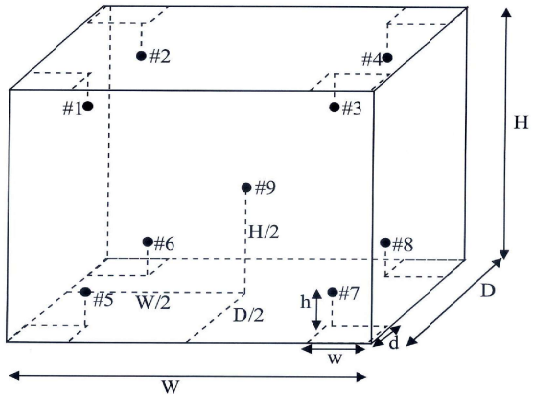
Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100)

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคอชเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand



Standard Installation Locations

Volume (Calibration Zone)= 21 (Liters)

Inside chamber:	W = 40 (cm)	D = 33 (cm)	H = 40 (cm)
Standard Locations (#1, #2, #3, #4):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)
Standard Locations (#5, #6, #7, #8):	w = 5 (cm)	d = 5 (cm)	h = 5 (cm)

#9: Geometric center of the chamber

Position of Std	#1	#2	#3	#4	#5	#6	#7	#8	#9
Channel of Logger	201	202	203	204	205	206	207	208	209

Definitions

Indicating Temperature: The average reading of indicating device which forms the integral part of the enclosure.

Measured Temperature: The average reading of standards at any positions or location.

Measured Uniformity: The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time or at close observation time as possible to determine the temperature pattern or homogeneity with the chamber at steady-state. The reference probe is preferably located in the geometric center of the chamber.

Measured Stability: The one-half of greatest maximum difference of measured temperatures at any one probe.

Overall Variation: The difference of maximum and minimum measured temperatures throughout observation time.

บริษัท ดีเคอชเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth - in Asia and Beyond.

CAL-FM-C31-11: 30 Jun 2025

Calibration Results:

Without adjustment

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 104.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	103.86	-0.14	0.38
#2	103.80	-0.20	0.38
#3	104.24	0.24	0.38
#4	104.21	0.21	0.38
#5	104.30	0.30	0.38
#6	104.03	0.03	0.38
#7	104.34	0.34	0.38
#8	104.22	0.22	0.38
#9	104.32	0.32	0.38

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
104.0	104.0	104.0	103.86	103.80	104.24	104.21	104.30	104.03	104.34	104.22	104.32	0.38

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
104.0	0.55	0.06	0.61

Note: * Maximum uncertainty of the each position

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Without adjustment (Cont.)

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 180.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	180.91	0.91	0.42
#2	179.35	-0.65	0.42
#3	180.71	0.71	0.42
#4	180.04	0.04	0.42
#5	179.71	-0.29	0.42
#6	179.85	-0.15	0.42
#7	179.25	-0.75	0.45
#8	180.27	0.27	0.42
#9	180.03	0.03	0.42

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)									Uncertainty (± °C)*
			#1	#2	#3	#4	#5	#6	#7	#8	#9	
180.0	180.0	180.0	180.91	179.35	180.71	180.04	179.71	179.85	179.25	180.27	180.03	0.45

Chamber Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
180.0	1.00	0.20	1.93

Note: * Maximum uncertainty of the each position

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand
Delivering Growth – in Asia and Beyond.
CAL-FM-C31-11: 30 Jun 2025

DKSH

Certificate of Calibration

NSC-TISI-TIS 17025
Calibration 0087

Represent to Certificate of Calibration No. C01252781

Equipment:	Electronic Balance	Certificate No.:	C01253394
Manufacturer:	Sartorius	Job No.:	WO-00084483
Model:	BSA224S-CW	Issued Date:	14 November 2025
Serial No.:	3137910053	Page:	1 of 3
ID No.:	INS/LB-144		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition: Temperature 25 °C ± 0.8 °C
Relative Humidity 55 % ± 1.5 %

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD. (Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Calibration By: Mr. Piyapong Sornkaew

Calibration Date: 04 September 2025

The Method Used: In-house method, CAL-WI-47, based on UKAS Lab 14

Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Co., Ltd. Certificate No. C02241786

TR

Person in charge

Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

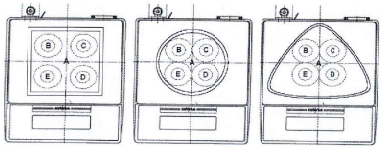
บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10250
2533 Sukhumvit Road, Bangchak Phrakhanong, Bangkok 10250
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

DKSH

Calibration Results:

Before Adjustment

Eccentric Error: Weight to be 1/3 or 1/2 of Maximum capacity, taken from the center of the pan as a zero reference.



Nominal Test Value 100 (g)

Reference Points (g)				
A	B	C	D	E
-	0.0000	0.0000	-0.0001	-0.0001

Repeatability: Determination of the standard deviation of weighing balance., Readability 0.0001 (g)

Nominal test value (g)	Standard Deviation
20	0.00004
200	0.00004

Error of indication from nominal or conventional mass value., Readability 0.0001 (g)

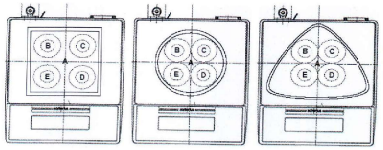
Nominal Value (g)	Conventional Mass (g)	Displayed Value (g)	Error of indication (g)	Uncertainty (± g)	k
0.05	0.05000	0.0500	0.0000	0.000096	2.02
0.5	0.50001	0.5000	0.0000	0.000097	2.02
1	1.00001	1.0000	0.0000	0.000097	2.02
2	2.00001	2.0000	0.0000	0.000098	2.02
5	5.00001	5.0000	0.0000	0.000099	2.02
10	10.00001	10.0000	0.0000	0.00010	2.02
20	20.00001	20.0000	0.0000	0.00011	2.01
50	50.00000	50.0001	0.0001	0.00012	2.01
100	99.99996	100.0003	0.0003	0.00017	2.00
120	119.99997	120.0003	0.0003	0.00020	2.00
150	149.99996	150.0003	0.0003	0.00023	2.00
200	200.00004	200.0004	0.0004	0.00029	2.00

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth - in Asia and Beyond.

After Adjustment

Eccentric Error: Weight to be1/3 or 1/2 of Maximum capacity, taken from the center of the pan as a zero reference.



Nominal Test Value 100 (g)

Reference Points (g)				
A	B	C	D	E
-	0.0000	0.0000	-0.0001	0.0001

Repeatability: Determination of the standard deviation of weighing balance., Readability 0.0001 (g)

Nominal test value (g)	Standard Deviation
20	0.00004
200	0.00005

Error of indication from nominal or conventional mass value., Readability 0.0001 (g)

Nominal Value (g)	Conventional Mass (g)	Displayed Value (g)	Error of indication (g)	Uncertainty (± g)	k
0.05	0.05000	0.0500	0.0000	0.00010	2.03
0.5	0.50001	0.5000	0.0000	0.00010	2.03
1	1.00001	1.0000	0.0000	0.00010	2.03
2	2.00001	2.0000	0.0000	0.00010	2.03
5	5.00001	5.0000	0.0000	0.00010	2.03
10	10.00001	10.0000	0.0000	0.00011	2.02
20	20.00001	20.0000	0.0000	0.00011	2.02
50	50.00000	50.0000	0.0000	0.00012	2.01
100	99.99996	100.0000	0.0000	0.00017	2.00
120	119.99997	120.0000	0.0000	0.00021	2.00
150	149.99996	150.0000	0.0000	0.00023	2.00
200	200.00004	200.0000	0.0000	0.00029	2.00

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

HACH
Be Right™

Test Report

Customers	:	Thai Chemical & Engineering Co., Ltd.			
Equipment	:	Colorimeter	Manufacturer	:	HACH
Controller Model	:	DR890	ID	:	INS/LB-096
Controller Serial No.	:	121190C92974	Sensor Serial No.	:	-
Date of test	:	21/08/2025	Period	:	1 Year
Environment temperature	:	25 °C	Humidity	:	60.0 %RH

Results

Instrument Checked

Item	Characteristic	Before	After	Remark
1	Visual Inspect	☑ Pass ☐ Fail	☑ Pass ☐ Fail	
2	Power Supply (4.5 – 6.5 VDC)	6.0 VDC	6.0 VDC	
3	Display Check	☑ Pass ☐ Fail	☑ Pass ☐ Fail	
4	Keyboard Check	☑ Pass ☐ Fail	☑ Pass ☐ Fail	
5	Function System Program	☑ Pass ☐ Fail	☑ Pass ☐ Fail	

Warning and Error Checked

Item	Event	Before	After
6	Error list	☑ None ☐ Appear_____	☑ None ☐ Appear_____

Check with Standard

Item	Characteristic	Before	After	Remark
7	Blank (0.000 ABS)	0.000 ABS	0.000 AES	
8	Wave Length 420 nm (0.652 ± 0.050 ABS) STD1	0.608 ABS	0.624 AES	
9	Wave Length 520 nm (0.649 ± 0.050 ABS) STD1	0.647 ABS	0.648 AES	
10	Wave Length 560 nm (0.651 ± 0.050 ABS) STD1	0.654 ABS	0.653 ABS	
11	Wave Length 610 nm (0.654 ± 0.050 ABS) STD1	0.657 ABS	0.655 ABS	
12	Wave Length 420 nm (1.225 ± 0.100 ABS) STD2	1.256 ABS	1.234 ABS	
13	Wave Length 520 nm (1.218 ± 0.100 ABS) STD2	1.215 ABS	1.215 ABS	
14	Wave Length 560 nm (1.230 ± 0.100 ABS) STD2	1.245 ABS	1.240 ABS	
15	Wave Length 610 nm (1.228 ± 0.100 ABS) STD2	1.240 ABS	1.231 ABS	
16	Wave Length 420 nm (1.843 ± 0.150 ABS) STD3	1.834 ABS	1.340 ABS	
17	Wave Length 520 nm (1.834 ± 0.150 ABS) STD3	1.824 ABS	1.330 ABS	
18	Wave Length 560 nm (1.850 ± 0.150 ABS) STD3	1.867 ABS	1.361 ABS	
19	Wave Length 610 nm (1.841 ± 0.150 ABS) STD3	1.866 ABS	1.354 ABS	

บริษัท ฮัค (ประเทศไทย) จำกัด: อาคารดี ห้องเลขที่ ดี 3 11 ชั้นที่3 เลขที่ 735/4 ถนนศรีนครินทร์ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพฯ 10250
Tel: +66 (02) 026-3529 | Fax: +66(02) 026-3572 | Tax ID : 0105552107330 | Email: thmarketing@hach.com | www.th.hach.com

HACH
Be Right™

Summary of checked

☑ The instrument can work normally and efficiently. (เครื่องมือวัดสามารถทำงานได้ปกติและมีประสิทธิภาพ)
☐ The instrument can work but it's requiring to maintenance. (เครื่องมือวัดสามารถทำงานได้แต่ต้องบำรุงรักษา)
☐ The instrument could not work it's requiring to repair. (เครื่องมือวัดไม่สามารถทำงานได้และต้องการซ่อมบำรุง)

Remark:

_____

_____

Standard Equipment Used

Equipment	Equipment I.D.			
Standard Absorbance	Lot No.	A4366	Exp date :	Jan-27
Digital multi meter	S/N :	92670084	Due date :	Sep-24
Thermo hygrometer	S/N :	41432443	Due date :	Oct-25

Test By :

Service Engineer

Approved by

Position Assistant Service Division Manager

Hach (Thailand) Limited

บริษัท ฮัค (ประเทศไทย) จำกัด: อาคารดี ห้องเลขที่ ดี 3 11 ชั้นที่3 เลขที่ 735/4 ถนนศรีนครินทร์ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพฯ 10250
Tel: +66 (02) 026-3529 | Fax: +66(02) 026-3572 | Tax ID : 0105552107330 | Email: thmarketing@hach.com | www.th.hach.com

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance IR Digestion

Service No. PM25-S08-215

1. Customer Information

Customer Name	Instrument	Serial Number	Service Date
บริษัท วิศวกรรมเคมี จำกัด 1048/2 ซอย สุขุมวิท 66/1 แขวงพระโขนงใต้ เขตพระโขนง กรุงเทพมหานคร 10260 คุณธัญญารัตน์ Tel: 084-463-8741 Fax:	K-424	0600004943	20 Aug 2025 PM 2/2

2. Instrument

2.1 Housing	OK	NOT OK	Remark
- Clean the housing	/		
- Visual check	/		
- Check for defects (e.g. cracks)	/		

2.2 Heating	OK	NOT OK	Remark
- Clean insulation plate	/		
- Visual check	/		
- Check heating element	/		

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance IR Digestion

2.3 Visual Check	OK	NOT OK	Remark
- Connection to suction	/		
- PTFE seal	/		
- O-ring	/		
- Glass holder set	/		
- Suction module	/		

2.4 System control (for K-439 only)	OK	NOT OK	Remark
- Keyboard	/		
- Display	/		
- Program	/		

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance IR Digestion

3. Summary

All specifications OK	Specification not OK
OK	

Comments
PM 2/2
เครื่องใช้งานได้ปกติ

Signature BUCHI

- Service by _____ Date 20 Aug 2025
- Approve by _____ Date 22 Aug 2025

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Scrubber

Service No. PM25-S08-215

1. Customer Information

Customer Name	Instrument	Serial Number	Service Date
บริษัท วิศวกรรมเคมี จำกัด 1048/2 ซอย สุขุมวิท 66/1 แขวงพระโขนงใต้ เขตพระโขนง กรุงเทพมหานคร 10260 คุณธัญญารัตน์ Tel: 084-463-8741 Fax:	B-414	0700002972	20 Aug 2025 PM 2/2

2. Instrument

2.1 Cooling water (If it connected)	OK	NOT OK	Remark
- Temperature 10 – 20 °C	/		
- Cooling water inlet	/		
- Cooling water outlet	/		

2.2 Cleaning	DONE	NOT DONE	Remark
- Housing	/		
- Condenser	/		
- Swirl disc	/		

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
23th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Scrubber

2.3 Visual Check	OK	NOT OK	Remark
- Hose connection to suction	/		
- Glassware	/		
- Lip gasket	/		
- GL-14 connector	/		
- Activated charcoal	/		

2.4 Flush Pump

Make sure, the bypass valve is closed completely (for maximum suction power).

- Disconnect the silencer, move it down (or take it away from the instrument), and flush out the pump with at least 500 mL of distilled water through the pump inlet, until the collected washing water is clean.
- Switch on the instrument and collect the waste water from the pump output in a suitable vessel.

Flush pump ☑ OK ☐ NOT OK

2.5 Washing Solution

- Sodium hydroxide 8-10 % max. 20 %
- Sodium carbonate
  - dissolve 600 g Na_2CO_3 in 3 L distilled warm water, or
  - dissolve 1.7 kg Na_2CO_3 in 10 H_2O in 3 L distilled warm water

Washing solution ☑ OK ☐ NOT OK

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Scrubber

3. Summary

All specifications OK	Specification not OK
OK	

Comments
PM 2/2
เครื่องใช้งานได้ปกติ

Signature BUCHI

- Service by _____ Date 20 Aug 2025
- Approve by _____ Date 22 Aug 2025

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Kjeldahl

Service No. PM25-S08-215

1. Customer Information

Customer Name	Instrument	Serial Number	Service Date
บริษัท วิศวกรรมเคมี จำกัด 1048/2 ซอย สุขุมวิท 66/1 แขวงพระโขนงใต้ เขตพระโขนง กรุงเทพมหานคร 10260 คุณธัญญารัตน์ Tel: 084-463-8741 Fax:	K-350	0700000545	20 Aug 2025 PM 2/2

2. Instrument

2.1 Cooling water (If it connected)	OK	NOT OK	Remark
- Temperature 15 – 20 °C	/		
- Cooling water inlet	/		
- Cooling water outlet	/		
- Control Temperature	/		

2.2 Cleaning	DONE	NOT DONE	Remark
- Outside Instrument	/		
- Insice Instrument	/		
- Splash protector	/		
- Condenser	/		

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Kjeldahl

2.3 Visual Test	OK	NOT OK	Remark
- Screw Coupling (between splash protector and condenser)	/		
- Condenser	/		
- Splash protector	/		
- Hypalon connection (connection tube)	/		
- Rubber bung	/		
- Ventilation valve	/		
- PTFE tube	/		
- Cooling water inlet	/		
- Cooling water cutlet	/		
- Magnetic valve	/		

2.4 System control	OK	NOT OK	Remark
- Key board	/		
- Display	/		
- Program	/		
- Adding H_2O	-		
- Adding NaOH	/		
- Adding H_3BO_3	-		
- Aspiration	-		

BUCHI (Thailand) Limited

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Kjeldahl

2.5 System Distillation	OK	NOT OK	Remark
- Boiler	/		
- Water level sensor	/		
- One way valve	/		
- Pressure switch	/		
- Thermostat	/		
- Steam valve1 (Y4)	/		
- Steam valve2 (Y5)	/		
- Drain valve (Y3)	-		
- Water 3/2 way valve (Y1)	-		

2.6 Hose	OK	NOT OK	Remark
- Unisil hose	/		
- Hypalon hose	/		
- Drain hose	-		
- Viton hose	/		
- Silicone hose	/		

2.7 Diaphragm pump	OK	NOT OK	Remark
- Diaphragm pump for H_2O	-		
- Diaphragm pump for NaOH	/		
- Diaphragm pump for H_3BO_3	-		

2.8 Program test	OK	NOT OK	Remark
- Distillation	/		
- Aspiration	-		
- Preheating	/		
- Cleaning	/		

BUCHI (Thailand) Ltd.
ASEAN Competence Center

77/121 Sin Sathorn Tower
28th FL, Krungthonburi Rd.
Klongtonsai, Klongsan
Bangkok 10600
P +662 862 0851
F +662 862 0854
bacc@buchi.com
www.buchi.com

Preventive Maintenance Kjeldahl

3. Function Test

Addition H_2O	0 ml	Reaction time	0 min
Addition NaOH	0 ml	Distillation time	5 min
Addition H_3BO_3	0 ml	Steam capacity	100%
		Aspiration	SAM

Result: Water in receiving vessel now approximately 180 ml, 183 ml

4. Summary

All specifications OK	Specification not OK
OK	

Comments
PM 2/2
เครื่องใช้งานได้ปกติ

Signature BUCHI

- Service by _____ Date 20 Aug 2025
- Approve by _____ Date 22 Aug 2025

DKSH

Certificate of Calibration

Equipment:	Liquid Bath	Certificate No.:	C13250414
Manufacturer:	Memmert	Issued Date:	03 November 2025
Model:	WNE14	Job No.:	WO-00092306
Serial No.:	L417.0480	Page:	1 of 4
ID No.:	INS/LB-130		
Forced Circulation:	None		
Condition of the item:	Normal		

Customer: THAI CHEMICAL & ENGINEERING CO., LTD.
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Environment Condition:

Temperature:	19 °C	±	1.1 °C
Relative Humidity:	60 %	±	5.7 %
Voltage:	224 VAC	±	0.9 VAC

Calibration Place: THAI CHEMICAL & ENGINEERING CO., LTD. (Laboratory)
1048/2 Sukhumvit 66/1 Rd., Prakanong Tai,
Prakanong, Bangkok 10260 Thailand

Calibration By: Mr. Piyapong Somkaew
Calibration Date: 03 November 2025
The Method Used: In house method CAL-WI-17, base on ASTM E715-80
Traceability: This certificate is traceable to the SI Units maintained by National Institute of Metrology (NIMT), Thailand through DKSH Technology Limited.
Certificate No. C10250009

Person in charge

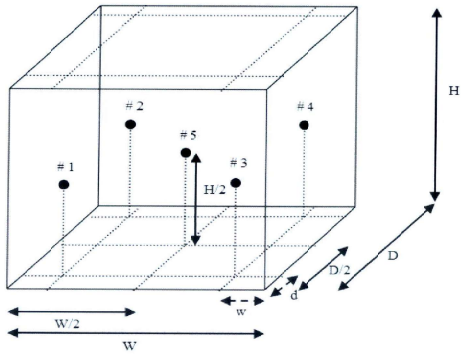
Authorized signatory

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with Evaluation of measurement data - Guide to the expression of uncertainty in measurement (JCGM 100).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand



Standard Installation Locations

Midway between the diffuser plate and the water surface

Inside bath:	W =	36	(cm)	D =	32	(cm)	H =	18	(cm) Volume = 21 (Liters)
Standard Locations #1:	w =	5	(cm)	d =	5	(cm)			
Standard Locations #2:	w =	5	(cm)	d =	5	(cm)			
Standard Locations #3:	w =	5	(cm)	d =	5	(cm)			
Standard Locations #4:	w =	5	(cm)	d =	5	(cm)			

Standard Locations #5: Center of any probes. (#1 - #4)

Position of Std	#1	#2	#3	#4	#5
Channel of Logger	201	202	203	204	205

Definitions

Indicating Temperature: The average reading of indicating device which forms the integral part of the bath.

Measured Temperature: The average reading of standards at any positions or location.

Measured Uniformity: The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location which are observed at same time or at close observation time as possible to determine the temperature pattern or homogeneity with the bath at steady-state. The reference probe is preferably located in the geometric center of the bath.

Measured Stability: The one-half of greatest maximum difference of measured temperatures at any one probe.

Overall Variation: The difference of maximum and minimum measured temperatures throughout observation time.

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Delivering Growth - in Asia and Beyond.

CAL-FM-C13-14: 30 Jun 2025

Calibration Results:

Without adjustment

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibraton: 60.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainly (± °C)
#1	60.00	0.00	0.19
#2	59.86	-0.14	0.21
#3	59.75	-0.25	0.20
#4	59.84	-0.16	0.22
#5	59.84	-0.16	0.22

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)					Uncertainty (± °C)*
			#1	#2	#3	#4	#5	
60.0	60.0	60.0	60.00	59.86	59.75	59.84	59.84	0.22

Bath Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
60.0	0.25	0.06	0.33

Note: * Maximum uncertainty of the each position

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand

Without adjustment (Cont.)

Measurement Temperature at Spread Locations, Indicating of Unit Under Calibration: 85.0 °C

Locations	Measured Temperature (°C)	Correction of UUC. (°C)	Uncertainty (± °C)
#1	84.91	-0.09	0.22
#2	84.70	-0.30	0.23
#3	84.67	-0.33	0.22
#4	84.72	-0.28	0.23
#5	84.71	-0.29	0.26

Temperature Distribution

Desired (°C)	Setting (°C)	Indicating (°C)	Measured Temperature at Spread Locations (°C)					Uncertainty (± °C)*
			#1	#2	#3	#4	#5	
85.0	85.0	85.0	84.91	84.70	84.67	84.72	84.71	0.26

Bath Characterization

Indicating (°C)	Measured Uniformity (°C)	Measured Stability (± °C)	Overall Variation (°C)
85.0	0.28	0.09	0.37

Note: * Maximum uncertainty of the each position

The End of Certificate

บริษัท ดีเคเอสเอช เทคโนโลยี จำกัด
DKSH Technology Limited
2533 ถนนสุขุมวิท แขวงบางจาก เขตพระโขนง กรุงเทพมหานคร 10260
2533 Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Phone: +66 2639 7000 Email: info.calibration@dksh.com Website: www.dksh.com/scientific-thailand
Delivering Growth – in Asia and Beyond.
CAL-FM-C13-14: 30 Jun 2025