

ภาคผนวกที่ 2.3

ผลการตรวจวิเคราะห์คุณภาพน้ำสระว่ายน้ำ (SWIMMING POOL)



Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 15/01/2025

Sampling Method : Grab

Report Date : 22/01/2025

Sampling Date : 14/01/2025

Report No. : WT3980168002

Received Date : 15/01/2025

Parameter	Unit	Method**	0245/01/25	Standard
			Laquita Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.78	0.5 – 1.0
Alkalinity	ppm	Titration Method	93	80 – 100
Calcium hardness	mg/L	Titration Method	390	250 – 600
Cyanuric acid	mg/L	Turbidimetric	41.20	30 – 60
Chloride	mg/L	Titration Method	260	<600
Ammonia	mg/L	Phenate Method	7.20	<20
Nitrate	mg/L	Nitrate Electrode	0.7500	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

(2)** Method Based on Standard Methods for The examination of Water & Wastewater 23rd Edition, 2017

(3)***Ministry of Public Health BE.2550, Thailand for swimming pool analysis



Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 15/01/2025

Sampling Method : Grab

Report Date : 22/01/2025

Sampling Date : 14/01/2025

Report No. : WT3980168003

Received Date : 15/01/2025

Parameter	Unit	Method**	0246/01/25	Standard ***
			Rim lay Pool	
pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.91	0.5 – 1.0
Alkalinity	ppm	Titration Method	96	80 – 100
Calcium hardness	mg/L	Titration Method	350	250 – 600
Cyanuric acid	mg/L	Turbidimetric	41.20	30 – 60
Chloride	mg/L	Titration Method	358	<600
Ammonia	mg/L	Phenate Method	11.30	<20
Nitrate	mg/L	Nitrate Electrode	0.7400	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๗-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 15/01/2025

Sampling Method : Grab

Report Date : 22/01/2025

Sampling Date : 14/01/2025

Report No. : WT3980168004

Received Date : 15/01/2025

Parameter	Unit	Method**	0247/01/25	Standard
			Club house Pool	

pH	-	Electrometric Method	7.6	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	1.5	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.88	0.5 – 1.0
Alkalinity	ppm	Titration Method	91	80 – 100
Calcium hardness	mg/L	Titration Method	180	250 – 600
Cyanuric acid	mg/L	Turbidimetric	41.20	30 – 60
Chloride	mg/L	Titration Method	180	<600
Ammonia	mg/L	Phenate Method	8.50	<20
Nitrate	mg/L	Nitrate Electrode	0.4500	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 21/02/2025

Sampling Method : Grab

Report Date : 28/02/2025

Sampling Date : 20/02/2025

Report No. : WT3980268002

Received Date : 21/02/2025

Parameter	Unit	Method**	0481/02/25	Standard
			Laquita Pool	
pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.60	0.5 – 1.0
Alkalinity	ppm	Titration Method	98	80 – 100
Calcium hardness	mg/L	Titration Method	300	250 – 600
Cyanuric acid	mg/L	Turbidimetric	39.60	30 – 60
Chloride	mg/L	Titration Method	280	<600
Ammonia	mg/L	Phenate Method	8.30	<20
Nitrate	mg/L	Nitrate Electrode	0.7400	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 21/02/2025

Sampling Method : Grab

Report Date : 28/02/2025

Sampling Date : 20/02/2025

Report No. : WT39801268003

Received Date : 21/02/2025

Parameter	Unit	Method**	0480/02/25	Standard
			Rim lay Pool	

pH	-	Electrometric Method	7.6	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.85	0.5 – 1.0
Alkalinity	ppm	Titration Method	94	80 – 100
Calcium hardness	mg/L	Titration Method	280	250 – 600
Cyanuric acid	mg/L	Turbidimetric	38.00	30 – 60
Chloride	mg/L	Titration Method	315	<600
Ammonia	mg/L	Phenate Method	7.20	<20
Nitrate	mg/L	Nitrate Electrode	0.7600	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

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Analysis/Test Report

Private Laboratory Registration ๗-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 21/02/2025

Sampling Method : Grab

Report Date : 28/02/2025

Sampling Date : 20/02/2025

Report No. : WT3980268004

Received Date : 21/02/2025

Parameter	Unit	Method**	0482/02/25	Standard ***
			Club house Pool	
pH	-	Electrometric Method	7.6	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.74	0.5 – 1.0
Alkalinity	ppm	Titration Method	95	80 – 100
Calcium hardness	mg/L	Titration Method	299	250 – 600
Cyanuric acid	mg/L	Turbidimetric	35.00	30 – 60
Chloride	mg/L	Titration Method	300	<600
Ammonia	mg/L	Phenate Method	11.00	<20
Nitrate	mg/L	Nitrate Electrode	0.6500	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 25/03/2025

Sampling Method : Grab

Report Date : 31/03/2025

Sampling Date : 24/03/2025

Report No. : WT3980368002

Received Date : 25/03/2025

Parameter	Unit	Method**	0778/03/25	Standard
			Rim lay Pool	

pH	-	Electrometric Method	7.2	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.71	0.5 – 1.0
Alkalinity	ppm	Titration Method	96	80 – 100
Calcium hardness	mg/L	Titration Method	196	250 – 600
Cyanuric acid	mg/L	Turbidimetric	38.00	30 – 60
Chloride	mg/L	Titration Method	196	<600
Ammonia	mg/L	Phenate Method	7.50	<20
Nitrate	mg/L	Nitrate Electrode	0.6800	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 25/03/2025

Sampling Method : Grab

Report Date : 31/03/2025

Sampling Date : 24/03/2025

Report No. : WT39800368003

Received Date : 25/03/2025

Parameter	Unit	Method**	0779/03/25	Standard
			Laguita Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.99	0.5 – 1.0
Alkalinity	ppm	Titration Method	98	80 – 100
Calcium hardness	mg/L	Titration Method	500	250 – 600
Cyanuric acid	mg/L	Turbidimetric	39.00	30 – 60
Chloride	mg/L	Titration Method	273	<600
Ammonia	mg/L	Phenate Method	8.30	<20
Nitrate	mg/L	Nitrate Electrode	0.8900	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๗-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 25/03/2025

Sampling Method : Grab

Report Date : 31/03/2025

Sampling Date : 24/03/2025

Report No. : WT3980368004

Received Date : 25/03/2025

Parameter	Unit	Method**	0780/03/25	Standard ***
			Club house Pool	
pH	-	Electrometric Method	7.6	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	1.50	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.65	0.5 – 1.0
Alkalinity	ppm	Titration Method	96	80 – 100
Calcium hardness	mg/L	Titration Method	360	250 – 600
Cyanuric acid	mg/L	Turbidimetric	40.00	30 – 60
Chloride	mg/L	Titration Method	301	<600
Ammonia	mg/L	Phenate Method	7.30	<20
Nitrate	mg/L	Nitrate Electrode	0.8000	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 23/04/2025

Sampling Method : Grab

Report Date : 30/04/2025

Sampling Date : 22/04/2025

Report No. : WT3980468002

Received Date : 23/04/2025

Parameter	Unit	Method**	1218/04/25	Standard
			Rim lay Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.69	0.5 – 1.0
Alkalinity	ppm	Titration Method	97	80 – 100
Calcium hardness	mg/L	Titration Method	199	250 – 600
Cyanuric acid	mg/L	Turbidimetric	37.20	30 – 60
Chloride	mg/L	Titration Method	300	<600
Ammonia	mg/L	Phenate Method	8.30	<20
Nitrate	mg/L	Nitrate Electrode	0.7400	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 23/04/2025

Sampling Method : Grab

Report Date : 30/04/2025

Sampling Date : 22/04/2025

Report No. : WT39800468003

Received Date : 23/04/2025

Parameter	Unit	Method**	1219/04/25	Standard
			Laguita Pool	

pH	-	Electrometric Method	7.6	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.94	0.5 – 1.0
Alkalinity	ppm	Titration Method	95	80 – 100
Calcium hardness	mg/L	Titration Method	390	250 – 600
Cyanuric acid	mg/L	Turbidimetric	38.30	30 – 60
Chloride	mg/L	Titration Method	266	<600
Ammonia	mg/L	Phenate Method	11.20	<20
Nitrate	mg/L	Nitrate Electrode	0.7100	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๗-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 23/04/2025

Sampling Method : Grab

Report Date : 30/04/2025

Sampling Date : 22/04/2025

Report No. : WT3980468004

Received Date : 23/04/2025

Parameter	Unit	Method**	1220/04/25	Standard
			Club house Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.78	0.5 – 1.0
Alkalinity	ppm	Titration Method	95	80 – 100
Calcium hardness	mg/L	Titration Method	400	250 – 600
Cyanuric acid	mg/L	Turbidimetric	39.00	30 – 60
Chloride	mg/L	Titration Method	196	<600
Ammonia	mg/L	Phenate Method	9.30	<20
Nitrate	mg/L	Nitrate Electrode	0.7400	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 24/05/2025

Sampling Method : Grab

Report Date : 30/05/2025

Sampling Date : 23/05/2025

Report No. : WT3980568002

Received Date : 24/05/2025

Parameter	Unit	Method**	1491/05/25	Standard
			Rim lay Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.74	0.5 – 1.0
Alkalinity	ppm	Titration Method	97	80 – 100
Calcium hardness	mg/L	Titration Method	299	250 – 600
Cyanuric acid	mg/L	Turbidimetric	39.00	30 – 60
Chloride	mg/L	Titration Method	229	<600
Ammonia	mg/L	Phenate Method	7.30	<20
Nitrate	mg/L	Nitrate Electrode	0.9000	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

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Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 24/05/2025

Sampling Method : Grab

Report Date : 30/05/2025

Sampling Date : 23/05/2025

Report No. : WT39800568003

Received Date : 24/05/2025

Parameter	Unit	Method**	1492/05/25	Standard
			Laguitta Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.84	0.5 – 1.0
Alkalinity	ppm	Titration Method	96	80 – 100
Calcium hardness	mg/L	Titration Method	315	250 – 600
Cyanuric acid	mg/L	Turbidimetric	37.20	30 – 60
Chloride	mg/L	Titration Method	348	<600
Ammonia	mg/L	Phenate Method	11.00	<20
Nitrate	mg/L	Nitrate Electrode	0.6500	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

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Analysis/Test Report

Private Laboratory Registration ๗-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 24/05/2025

Sampling Method : Grab

Report Date : 30/05/2025

Sampling Date : 23/05/2025

Report No. : WT3980568004

Received Date : 24/05/2025

Parameter	Unit	Method**	1493/05/25	Standard ***
			Club house Pool	
pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	1.5	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.62	0.5 – 1.0
Alkalinity	ppm	Titration Method	99	80 – 100
Calcium hardness	mg/L	Titration Method	399	250 – 600
Cyanuric acid	mg/L	Turbidimetric	37.30	30 – 60
Chloride	mg/L	Titration Method	560	<600
Ammonia	mg/L	Phenate Method	9.00	<20
Nitrate	mg/L	Nitrate Electrode	0.8400	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

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(3)***Ministry of Public Health BE.2550, Thailand for swimming pool analysis



Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 24/06/2025

Sampling Method : Grab

Report Date : 30/06/2025

Sampling Date : 23/06/2025

Report No. : WT3980668002

Received Date : 24/06/2025

Parameter	Unit	Method**	1624/06/25	Standard
			Rim lay Pool	
pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.88	0.5 – 1.0
Alkalinity	ppm	Titration Method	96	80 – 100
Calcium hardness	mg/L	Titration Method	300	250 – 600
Cyanuric acid	mg/L	Turbidimetric	39.00	30 – 60
Chloride	mg/L	Titration Method	184	<600
Ammonia	mg/L	Phenate Method	12.00	<20
Nitrate	mg/L	Nitrate Electrode	0.8500	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

(2)** Method Based on Standard Methods for The examination of Water & Wastewater 23rd Edition, 2017

(3)***Ministry of Public Health BE.2550, Thailand for swimming pool analysis



Analysis/Test Report

Private Laboratory Registration ๖-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 24/06/2025

Sampling Method : Grab

Report Date : 30/06/2025

Sampling Date : 23/06/2025

Report No. : WT3980668003

Received Date : 24/06/2025

Parameter	Unit	Method**	1625/06/25	Standard
			Laguita Pool	

pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	3.0	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.95	0.5 – 1.0
Alkalinity	ppm	Titration Method	97	80 – 100
Calcium hardness	mg/L	Titration Method	366	250 – 600
Cyanuric acid	mg/L	Turbidimetric	38.20	30 – 60
Chloride	mg/L	Titration Method	332	<600
Ammonia	mg/L	Phenate Method	7.30	<20
Nitrate	mg/L	Nitrate Electrode	0.6900	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

(2)** Method Based on Standard Methods for The examination of Water & Wastewater 23rd Edition, 2017

(3)***Ministry of Public Health BE.2550, Thailand for swimming pool analysis



Analysis/Test Report

Private Laboratory Registration ๗-๒๓๘

Customer : Amari Phuket Resort & Spa

Address : Patong Beach, Phuket 83150 Thailand

Sample Type : Swimming water

Analytical Date : 24/06/2025

Sampling Method : Grab

Report Date : 30/06/2025

Sampling Date : 23/06/2025

Report No. : WT3980668004

Received Date : 24/06/2025

Parameter	Unit	Method**	1626/06/25	Standard ***
			Club house Pool	
pH	-	Electrometric Method	7.8	7.2 – 8.4
Free chlorine	ppm	Photometer (DPD)	1.5	0.6 – 1.0
Combined chlorine	ppm	Photometer (DPD)	0.71	0.5 – 1.0
Alkalinity	ppm	Titration Method	96	80 – 100
Calcium hardness	mg/L	Titration Method	280	250 – 600
Cyanuric acid	mg/L	Turbidimetric	39.60	30 – 60
Chloride	mg/L	Titration Method	190	<600
Ammonia	mg/L	Phenate Method	7.30	<20
Nitrate	mg/L	Nitrate Electrode	0.8900	<50
Coliform, Total	MPN/1000mL	APHA: 9221 B	ND	<10
Coliform, Fecal	MPN/1000mL	APHA: 9221 E	ND	Not detected
E.coli	MPN/1000mL	APHA: 9221 G	ND	Not detected
Staphylococcus aureus	MPN/1000mL	APHA: 9213 B	ND	Not detected
Pseudomonas aeruginosa	MPN/1000mL	ISO 1622	ND	Not detected
Appearance		Observation	Clear	

Remark :

(1)* Types of pollutants allowed to apply for the registration of private analytical laboratories. Department of Industrial Work

(2)** Method Based on Standard Methods for The examination of Water & Wastewater 23rd Edition, 2017

(3)***Ministry of Public Health BE.2550, Thailand for swimming pool analysis

ภาคผนวกที่ 3

เอกสารขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

ที่ อก ๐๓๒๒/ ๑๗๕๖๕



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๕๐๐

๒๘ ธ.ค. ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท เข้าเทิร์นไทยคอนซัลติ้ง จำกัด

อ้างถึง คำขอต่ออายุของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๑๐ พฤศจิกายน ๒๕๖๖

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เข้าเทิร์นไทยคอนซัลติ้ง จำกัด จำนวน ๑ แผ่น

ตามหนังสือที่อ้างถึง บริษัท เข้าเทิร์นไทยคอนซัลติ้ง จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียน
ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๑๗๖ สถานที่ตั้ง เลขที่ ๕๙/๔๕ หมู่ที่ ๕ ตำบลศรีสุนทร อำเภอถลาง
จังหวัดภูเก็ต ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท เข้าเทิร์นไทยคอนซัลติ้ง จำกัด ต่ออายุหนังสือ
รับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์

๑) นายพิมุข สอนมี

ทะเบียนเลขที่ ว-๑๗๖-ค-๐๐๐๑

๒) นายศิริพงศ์ พะสริ

ทะเบียนเลขที่ ว-๑๗๖-ค-๐๐๐๒

๓) นางเพ็ญภา จันทรเพ็ญ

ทะเบียนเลขที่ ว-๑๗๖-ค-๐๐๐๓

๔) นางสาวพรวิษา จินรัตน์

ทะเบียนเลขที่ ว-๑๗๖-ค-๐๐๐๔

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์

๑) นางสาวกรรณิกา แก้วสามเขียว

ทะเบียนเลขที่ ว-๑๗๖-จ-๐๐๐๑

๒) นางสาวศิริรัตน์ นิเทศนพกุล

ทะเบียนเลขที่ ว-๑๗๖-จ-๐๐๐๒

๓) นางสาวจุฑาทิพย์ ชูถึง

ทะเบียนเลขที่ ว-๑๗๖-จ-๐๐๐๓

๔) นางสาวปรีชญา หมุกแก้ว

ทะเบียนเลขที่ ว-๑๗๖-จ-๐๐๐๔

๕) นางสาวบุษยา ประกอบแสง

ทะเบียนเลขที่ ว-๑๗๖-จ-๐๐๐๕

๖) นางสาวจุฑาภรณ์ จุฑามาศย์

๗) นางสาวกรรณนิการ์ ประทุมเพชร

๘) นางสาวสุธาสินี ละเมาะ

ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้



หนังสือฉบับนี้จะหมดอายุในวันที่ ๑ ธันวาคม ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกซน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรม ภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกซน ทั้งนี้สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

h.

(นายณรงค์ ตรีชัย)

ผู้อำนวยการศูนย์วิจัยและเตือนภัย
ปฏิบัติราชการแทนอธิบดีกรมโร

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคใต้

โทร. ๐ ๗๔๓๒ ๕๐๒๙, ๐ ๗๔๘๙ ๐๖๓๔ ต่อ ๕๒๐๑

ไปรษณีย์อิเล็กทรอนิกส์ sirw@diw.mail.go.th

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เช่าเทิร์นไทยคอนสตรัคติ้ง จำกัด เลขทะเบียน ว-๑๗๖
ที่ อก ๐๓๒๒/ ลงวันที่

ขอข่ายสารมลพิษที่ได้รับการขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๙ รายการ
น้ำเสีย จำนวน 9 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Biochemical Oxygen Demand	5-Day BOD Test, Azide Modification Method
2	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method
3	Oil & Grease	Liquid-Liquid, Partition-Gravimetric Method
4	pH	Electrometric Method
5	Sulfide	Iodometric Method
6	Temperature	Laboratory and Field Method
7	Total Dissolved Solids	Dried at 180 °C
8	Total Kjeldahl Nitrogen	Macro-Kjeldahl, Titrimetric Method
9	Total Suspended Solids	Dried at 103-105 °C

เอกสารอ้างอิง

APHA, AWWA, WEF. Standard Methods for the Examination of Water and Wastewater. American Public Health Association, Washington, DC: APHA, 2023.

(นาง
นักวิ

ภาคผนวกที่ 4

เอกสารสอบเทียบอุปกรณ์เครื่องมือห้องปฏิบัติการ



PREMIER SYSTEM ENGINEERING CO., LTD.

123 Moo 8 Kanjanavanit Rd., Banpru, Hatyai, Songkhla 90250

E-mail : pse-cal@sriranggroup.com ,Fax. : (074)222912 Tel. : 084-2148162, 084-2148165, 074-222900-9



NSC-TISI-TIS 17025
CALIBRATION 0024

CALIBRATION CERTIFICATE

CERTIFICATE No. : V25-0477

CSR No. : 250252

Page : 1 of 3

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : pH Meter

Manufacturer : SI Analytics

Model : lab 845

Serial No. : 21021943

ID. No. : -

Resolution : 0.01 pH

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : $(25 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(55 \pm 15) \%$

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVED BY

Calibrated By : Mr. Alongkorn Chewaisarakul

(Calibration Technician)

(/) M
() M

This certificate may not be reproduced other than in full except with the prior written approval of PREMIER SYSTEM ENGINEERING CO., LTD.
The uncertainties are for a confidence probability of approximately 95 % .





CERTIFICATE NO. : V25-0477

CSR No. : 250252

Page : 2 of 3

Equipment : pH Meter
Manufacturer : SI Analytics
Model : lab 845
Serial No. : 21021943
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Nominal Value/Model	Serial No.	Cert. No.		Traceability
pH Calibration Standard	4.00	1027602	1027602	15-09-2025	CPA Chem
pH Calibration Standard	6.98	1027603	1027603	15-09-2025	CPA Chem
pH Calibration Standard	10.01	1027604	1027604	15-09-2025	CPA Chem
Temperature/Electrical Calibrator	MC2-TE	10548	CAL0252-25P0013	26-01-2026	RKT

CALIBRATION METHOD :

In-house method : CA.WI.11.117 based on direct measurement by using standard voltage calibrator

In-house method : CA.WI.11.117 based on direct measurement by using certified reference material (CRM)

TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

CPA Chem : CPA chem Ltd. (ANAB Cert No. AR-1835)

RKT : Rockertek (Thailand) Co.,Ltd. , (NSC-TISI-TIS 17025 CALIBRATION 0069)

CALIBRATION RESULTS :

Function : Electrical Measurement

Applied Voltage (mV)	pH meter Reading (mV)	Correction (mV)	Uncertainty (± mV)	Coverage Factor (k)
177.48	178	-0.52	0.60	
0.00	1	-1.00	0.59	
-177.48	-177	-0.48	0.60	

Function : Chemical Measurement

Standard Buffer Solutions (pH)	pH meter Reading (pH)	Correction (pH)	
4.007	4.01	-0.003	
6.976	6.98	-0.004	
10.010	9.96	0.050	

Calibration curve - % off set - mV

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

The above results are valid exclusively for calibration sample as mentioned in the report

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



CERTIFICATE No. : V25-0477

CSR No. : 250252

Page : 2 of 2

Equipment : pH Meter
Manufacturer : SI Analytics
Model : lab 845
Serial No. : 21021943
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Model	Serial No.	Cert. No.	Due Date	Traceability
Digital Thermometer with Sensor	376	220608721	SDTH-002/1124	14-11-2025	PSE

CALIBRATION METHOD :

In-house method : CA.WI.11.180 comparison with standard thermometer

TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

PSE : Premier System Engineering Co., Ltd. ,(NSC-TISI-TIS 17025 CALIBRATION 0024)

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

Cal Point	Standard Temperature	UUC Reading	Correction	Uncertainty
(°C)	(°C)	(°C)	(°C)	(±°C)
25	25.00	25.0	0.00	0.25

UUC : Unit Under Calibration

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

The above results are valid exclusively for calibration sample as mentioned in the r

This result of calibration was found accurate as shown on date and place of calibra

--End--

PSE.CA.AP.11.017-161124 R.04



PREMIER SYSTEM ENGINEERING CO., LTD.

123 Moo 8 Kanjanavanit Rd., Banpru, Hatyai, Songkhla 90250

E-mail : pse-cal@sriranggroup.com ,Fax. : (074)222912 Tel. : 084-2148162, 084-2148165, 074-222900-9



CALIBRATION CERTIFICATE

CERTIFICATE No. : T25-0653

CSR No. : 250252

Page : 1 of 4

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : Hot Air Oven

Manufacturer : Binder

Model : FD56

Serial No. : 20210000003365

ID. No. : -

Resolution : 1 °C

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : (30 ± 15) °C

Relative Humidity : (60 ± 20) %

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVED BY :

APPROVED SIGNATORY

(/) MR. PIYAPONG RATTANAKAN / Calibration Manager
() MR. BUNPOT SUWANNARAT / Technical Manager

Calibrated By : Mr. Attapol Juntasurat
(Calibration Engineer)

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





CERTIFICATE No. : T25-0653

CSR No. : 250252

Page : 2 of 4

Equipment : Hot Air Oven
Manufacturer : Binder
Model : FD56
Serial No. : 20210000003365
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Model	Serial No.	Cert. No.	Due Date	Traceability
Digital Thermometer with Sensor	34970 A	MY 44042662	DAT003/0824	01-08-2025	PSE

CALIBRATION METHOD :

In-house method : CA.WI.11.160 based on ASTM E145 : 94 (re-approved 2021)

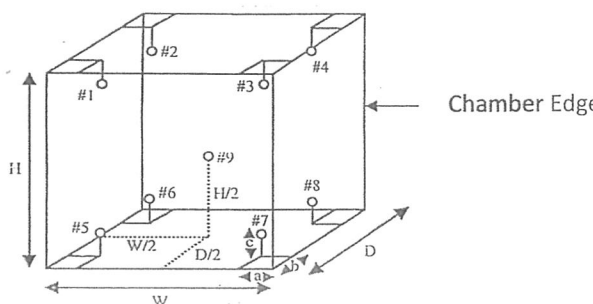
TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

PSE : Premier System Engineering Co., Ltd. ,(NSC-TISI-TIS 17025 CALIBRATION 0024)

CALIBRATION RESULTS :

Sensor Installation Diagram



Dimension of the chamber : $W \times H \times D = 40 \times 40 \times 33$ cm
Sensor Installation : $a \times b \times c = 5 \times 5 \times 5$ cm

The uncertainties are for a confidence probability of approximately 95 % .
The above results are valid exclusively for calibration sample as mentioned in the report.
This result of calibration was found accurate as shown on date and place of calibration only.



CERTIFICATE NO. : T25-0653

CSR No. : 250252

Page : 3 of 4

Equipment : Hot Air Oven
Manufacture : Binder
Model : FD56
Serial No. : 20210000003365
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

Temperature Measurement Accuracy Test

The measurement results of the hot air oven and associates are reported in the manner as shown below

Cal Point (°C)	Measured Standard Temperature (°C) at Spread Locations									Uncertainty (± °C)
	#1	#2	#3	#4	#5	#6	#7	#8	Ref. 9	
104	103.823	104.225	103.823	104.015	103.778	104.033	104.085	103.758	103.776	0.67

Hot Air Oven Performance Result

The performance of the hot air oven are reported as shown below

Cal Point	UUC Setting	UUC Reading	Chamber Stability	Chamber Uniformity	Overall Variation
(°C)	(°C)	(°C)	(± °C)		
104	104	104	0.11		

UUC : Unit Under Calibration

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

The above results are valid exclusively for calibration sample as mentioned in the

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

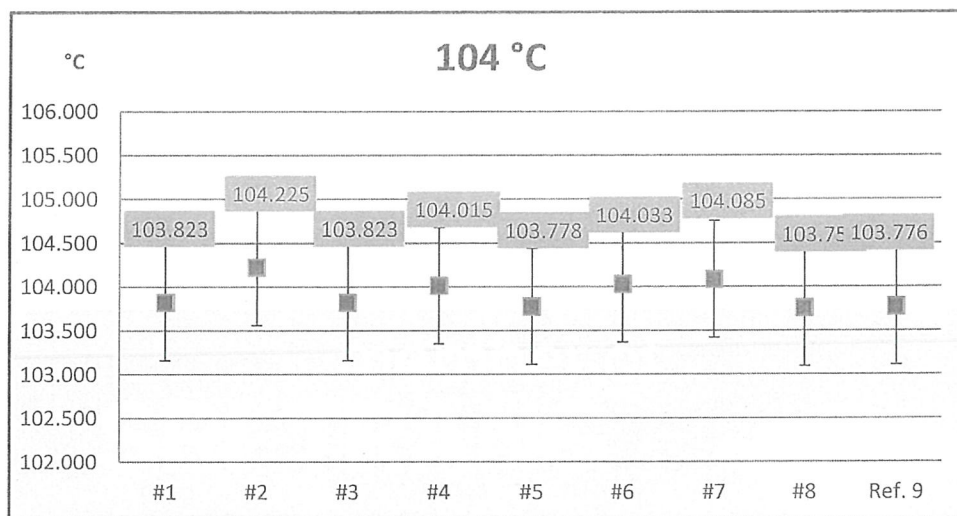


CERTIFICATE NO. : T25-0653

CSR No. : 250252

Page : 4 of 4

Report Graph



The above results are valid exclusively for calibration sample as mentioned in the

This result of calibration was found accurate as shown on date and place of calib

-- End --



PREMIER SYSTEM ENGINEERING CO., LTD.

123 Moo 8 Kanjanavanit Rd., Banpru, Hatyai, Songkhla 90250

E-mail : pse-cal@sriranggroup.com ,Fax. : (074)222912 Tel. : 084-2148162, 084-2148165, 074-222900-9

CALIBRATION CERTIFICATE

CERTIFICATE No. : T25-0654

CSR No. : 250252

Page : 1 of 3

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : COD Reactor

Manufacturer : Lovibond

Model : RD125

Serial No. : 0423/00542

ID. No. : -

Resolution : -

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : $(30 \pm 15) ^\circ\text{C}$

Relative Humidity : $(60 \pm 20) \%$

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 3-Mar-2025

APPROVE

Calibrated By : Mr. Attapol Juntasurat
(Calibration Engineer)

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



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CERTIFICATE No. : T25-0654

CSR No. : 250252

Page : 2 of 3

Equipment : COD Reactor
Manufacturer : Lovibond
Model : RD125
Serial No. : 0423/00542
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Model	Serial No.	Cert. No.	Due Date	Traceability
Digital Thermometer with Sensor	34970 A	MY 44042662	DAT003/0824	02-08-2025	PSE

CALIBRATION METHOD :

In-house method : CA.WI.11.160 based on ASTM E145 : 1994 (re-approved 2011)

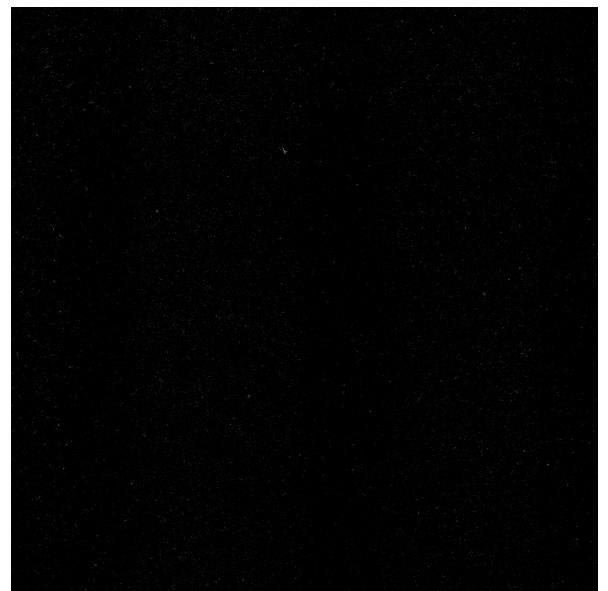
TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

PSE : Premier System Engineering Co., Ltd. ,(NSC-TISI-TIS 17025 CALIBRATION 0024)

CALIBRATION RESULTS :

Sensor Installation Diagram



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

The above results are valid exclusively for calibration sample as mentioned in the report.

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

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CERTIFICATE NO. : T25-0654

CSR No. : 250252

Page : 3 of 3

Equipment : COD Reactor
Manufacture : Lovibond
Model : RD125
Serial No. : 0423/00542
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

Temperature Measurement Accuracy Test

The measurement results of the COD Reactor and associates are reported in the manner as shown below

Cal Point	Measured Standard Temperature (°C) at Spread Locations									Uncertainty
(°C)	#1	#2	#3	#4	#5	#6	#7	#8	#9	(± °C)
150	151.299	147.200	147.791	148.604	150.268	149.030	149.150	148.082	151.746	0.18

Cal Point	Measured Standard Temperature (°C) at Spread Locations									Uncertainty
(°C)	#10	#11	#12	#13	#14	#15	#16	#17	#18	(± °C)
150	151.831	148.283	146.341	150.289	150.245	150.111	150.150	149.029	151.111	0.18

Cal Point	Measured Standard Temperature (°C) at Spread Locations						Uncertainty
(°C)	#19	#20	#21	#22	#23	#24	(± °C)
150	149.287	150.834	148.796	149.018	151.437	151.266	0.18

UUC : Unit Under Calibration

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

The above results are valid exclusively for calibration sample as mentioned in t

This result of calibration was found accurate as shown on date and place of cali

-- End --



PREMIER SYSTEM ENGINEERING CO., LTD.

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CALIBRATION CERTIFICATE

CERTIFICATE No. : M25-0359

CSR No. : 250252

Page : 1 of 3

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : Electronic Balance

Manufacturer : Sartorius

Model : PRACTUM224-1S

Serial No. : 0035106544

ID. No. : -

Capacity : 220 g

Resolution : 0.0001 g

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : (30 ± 10) °C

Relative Humidity : (50 ± 20) %

Barometric Pressure : (1010 ± 10) hPa

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVED BY

Calibrated By : Mr. Bowornnan Langlea
(Mechanical Supervisor)

(/) MR. BUNPOT SUWANNARAT / Technical Manager

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





CERTIFICATE No. : M25-0359

CSR No. : 250252

Page : 2 of 3

Equipment : Electronic Balance
Manufacturer : Sartorius
Model : PRACTUM224-1S
Serial No. : 0035106544
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Norminal Value	Serial No.	Cert. No.	Due Date	Traceability
Standard Weight Set	1 mg ~ 500 g	-	M2412021S	02-12-2025	TCS

CALIBRATION METHOD :

In-house method : CA.WI.11.015 based on UKAS LAB 14 : 2022

TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurment

according to the International System of Unit (SI) through :

TCS : Thai Calibration Services Co.,Ltd. , (NSC-TISI-TIS 17025 CALIBRATION 0189)

CALIBRATION RESULTS :

(/) Without Adjustment () After Adjustment

DETERMINATION OF THE STANDARD DEVIATION OF WEIGHT MACHIN

Nominal Value (g)	Standard Deviation (g)
200	0.00013

EFFECT OF OFF CENTER LOADING AT 100 g

Position					Maximum Difference
1	2	3	4	5	
99.9999	99.9997	100.0001	100.0002	100.0001	0.0003

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



CERTIFICATE NO. : M25-0359

CSR No. : 250252

Page : 3 of 3

Equipment : Electronic Balance
Manufacturer : Sartorius
Model : PRACTUM224-1S
Serial No. : 0035106544
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

EFFECT OF TARE AT 100 g

Nominal Value (g)	UUC* Reading (g)	Correction (g)
20	20.0002	-0.00020
40	40.0001	-0.00012
60	60.0001	-0.00007
80	80.0001	-0.00007
100	100.0001	-0.00001

ERROR OF INDICATION FROM NOMINAL VALUE

Nominal Value (g)	UUC* Reading (g)	Correction (g)	Uncertainty (\pm g)	Coverage Factor (k)
* Unload	0.0000	0.00000	0.00031	2.28
0.01	0.0100	0.00000	0.00031	2.28
0.05	0.0500	0.00000	0.00031	2.28
0.1	0.1001	-0.00009	0.00031	2.28
0.5	0.5001	-0.00010	0.00032	2.28
1	1.0001	-0.00011	0.00032	2.28
2	1.9997	0.00030	0.00032	2.28
5	4.9998	0.00021	0.00032	2.28
10	10.0000	0.00001	0.00032	2.28
20	20.0001	-0.00010	0.00031	
40	40.0000	-0.00002	0.00032	
60	60.0001	-0.00007	0.00032	
80	80.0000	0.00003	0.00033	
100	99.9999	0.00019	0.00033	
120	120.0000	0.00008	0.00034	
140	139.9999	0.00017	0.00036	
160	159.9999	0.00022	0.00037	
180	180.0000	0.00011	0.00039	
200	200.0001	0.00001	0.00039	

UUC : Unit Under Calibration

The table as per (*) marked are not NSC-ONSC accreditation scope.

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

The above results are valid exclusively for calibration sample as mentioned in the

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

-- End --



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CALIBRATION CERTIFICATE

CERTIFICATE No. : M25-0360

CSR No. : 250252

Page : 1 of 3

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : Electronic Balance

Manufacturer : Sartorius

Model : PRACTUM2101-1S

Serial No. : 0033508410

ID. No. : -

Capacity : 2100 g

Resolution : 0.1 g

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : $(30 \pm 10) ^\circ\text{C}$

Relative Humidity : $(50 \pm 20) \%$

Barometric Pressure : (1010 ± 10) hPa

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVED BY

Calibrated By : Mr. Bowornnan Langlea
(Mechanical Supervisor)

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





CERTIFICATE No. : M25-0360

CSR No. : 250252

Page : 2 of 3

Equipment : Electronic Balance
Manufacturer : Sartorius
Model : PRACTUM2101-1S
Serial No. : 0033508410
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Norminal Value	Serial No.	Cert. No.	Due Date	Traceability
Standard Weight Set	1 mg ~ 500 g	-	M2412021S	02-12-2025	TCS

CALIBRATION METHOD :

In-house method : CA.WI.11.015 based on UKAS LAB 14 : 2022

TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurment

according to the International System of Unit (SI) through :

TCS : Thai Calibration Services Co.,Ltd. , (NSC-TISI-TIS 17025 CALIBRATION 0189)

CALIBRATION RESULTS :

(/) Without Adjustment () After Adjustment

DETERMINATION OF THE STANDARD DEVIATION OF WEIGHT MACHIN

Nominal Value (g)	Standard Deviation (g)
500	0.12

EFFECT OF OFF CENTER LOADING AT 200 g

Position					Maximum Difference (g)
1	2	3	4	5	
199.6	200.4	197.4	195.9	202.0	3.7

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



CERTIFICATE NO. : M25-0360

CSR No. : 250252

Page : 3 of 3

Equipment : Electronic Balance
Manufacturer : Sartorius
Model : PRACTUM2101-1S
Serial No. : 0033508410
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment () After Adjustment

EFFECT OF TARE AT 200 g

Nominal Value (g)	UUC* Reading (g)	Correction (g)
40	40.3	-0.30
80	81.1	-1.10
120	120.9	-0.90
160	159.9	0.10
200	200.1	-0.10

ERROR OF INDICATION FROM NOMINAL VALUE

Nominal Value (g)	UUC* Reading (g)	Correction (g)	Uncertainty (\pm g)	Coverage Factor (k)
* Unload	0.0	0.00	0.28	2.25
1	1.0	0.00	0.28	2.25
2	2.0	0.00	0.28	2.25
5	5.0	0.00	0.28	2.25
10	10.0	0.00	0.28	2.25
50	49.8	0.20	0.28	2.25
100	99.8	0.20	0.28	2.25
150	149.8	0.20	0.28	2.25
200	199.6	0.40	0.28	2.25
250	249.5	0.50	0.28	2.25
300	299.5	0.50	0.28	2.25
350	349.4	0.60	0.28	2.25
400	398.7	1.30	0.28	2.25
450	448.5	1.50	0.28	2.25
500	499.0	1.00	0.28	2.25

UUC : Unit Under Calibration

The table as per (*) marked are not NSC-ONSC accreditation scope.

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

The above results are valid exclusively for calibration sample as mentioned in the report

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

-- End --



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NSC-TISI-TIS 17025
CALIBRATION 0024

CALIBRATION CERTIFICATE

CERTIFICATE No. : T25-0655

CSR No. : 250252

Page : 1 of 4

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : Refrigerator

Manufacturer : SANDEN INTERCOOL

Model : SEA-0405

Serial No. : SEA0405-191200194

ID. No. : -

Resolution : 1 °C

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : $(30 \pm 15) ^\circ\text{C}$

Relative Humidity : $(60 \pm 20) \%$

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVE

Calibrated By : Mr. Attapol Juntasurat
(Calibration Engineer)

APPROVED SIGNATORY

(/) MR. PIYAPONG RATTANAKAN / Calibration Manager
() MR. BUNPOT SUWANNARAT / Technical Manager

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CERTIFICATE No. : T25-0655

CSR No. : 250252

Page : 2 of 4

Equipment : Refrigerator
Manufacturer : SANDEN INTERCOOL
Model : SEA-0405
Serial No. : SEA0405-191200194
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Model	Serial No.	Cert. No.	Due Date	Traceability
Digital Thermometer with Sensor	34970 A	MY 44042662	DAT003/0824	01-08-2025	PSE

CALIBRATION METHOD :

In-house method : CA.WI.11.160 based on ASTM E145 : 94 (re-approved 2021)

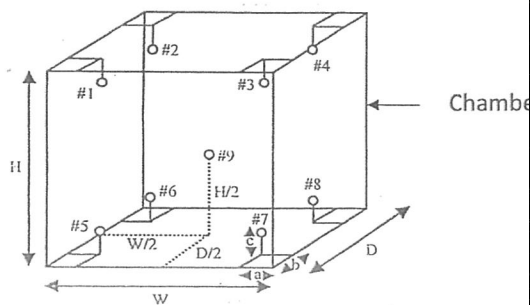
TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

PSE : Premier System Engineering Co., Ltd. (NSC-TISI-TIS 17025 CALIBRATION 0024)

CALIBRATION RESULTS :

Sensor Installation Diagram



Dimension of the chamber : $W \times H \times D = 53 \times 130 \times 43$
Sensor Installation : $a \times b \times c = 5 \times 5 \times 5$ cm

The uncertainties are for a confidence probability of approximately 95 % .
The above results are valid exclusively for calibration sample as mentioned in the report.
This result of calibration was found accurate as shown on date and place of calibration only.



CERTIFICATE NO. : T25-0655

CSR No. : 250252

Page : 3 of 4

Equipment : Refrigerator
Manufacture : SANDEN INTERCOOL
Model : SEA-0405
Serial No. : SEA0405-191200194
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

Temperature Measurement Accuracy Test

The measurement results of the refrigerator and associates are reported in the manner as shown below

Cal Point (°C)	Measured Standard Temperature (°C) at Spread Locations									Uncertainty (± °C)
	#1	#2	#3	#4	#5	#6	#7	#8	Ref. 9	
4	4.970	4.632	4.119	3.822	4.508	4.076	4.555	4.308	4.126	1.4

Refrigerator Performance Result

The performance of the refrigerator are reported as shown below

Cal Point (°C)	UUC Setting (°C)	UUC Reading (°C)	Chamber Stability (± °C)
4	4	4	0.98

UUC : Unit Under Calibration

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

The above results are valid exclusively for calibration sample as mentioned in the

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

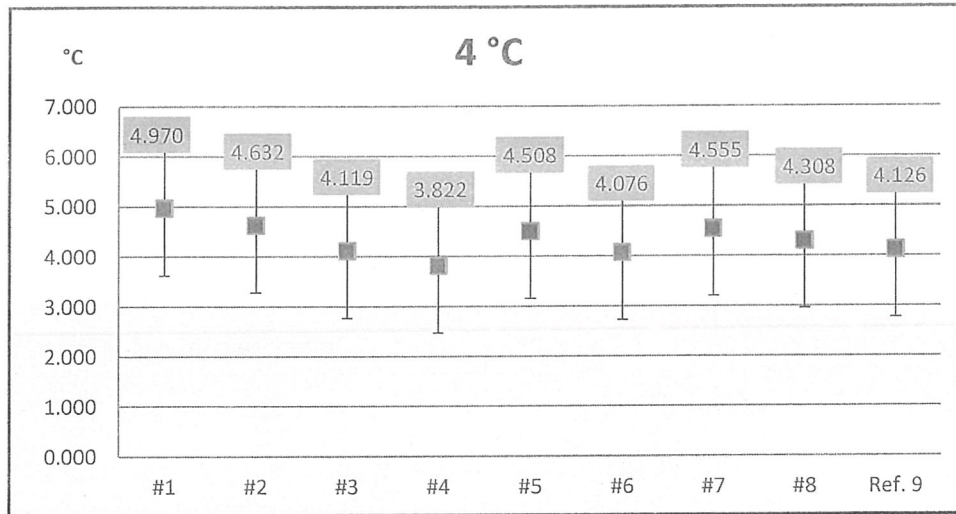


CERTIFICATE NO. : T25-0655

CSR No. : 250252

Page : 4 of 4

Report Graph



The above results are valid exclusively for calibration sample as mentioned in the report.

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

-- End --



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NSC-TISI-TIS 17025
CALIBRATION 0024

CALIBRATION CERTIFICATE

CERTIFICATE No. : T25-0656

CSR No. : 250252

Page : 1 of 4

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : Incubator

Manufacturer : ACCUPLUS

Model : I250

Serial No. : 0408-0415-0034

ID. No. : -

Resolution : 0.1 °C

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : (30 ± 15) °C

Relative Humidity : (60 ± 20) %

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVED

Calibrated By : Mr. Attapol Juntasurat
(Calibration Engineer)

() MR. BUNPOT SUWANNARAT / Technical Manager

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





CERTIFICATE No. : T25-0656

CSR No. : 250252

Page : 2 of 4

Equipment : Incubator
Manufacturer : ACCUPLUS
Model : I250
Serial No. : 0408-0415-0034
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Model	Serial No.	Cert. No.	Due Date	Traceability
Digital Thermometer with Sensor	34970 A	MY 44042662	DAT003/0824	01-08-2025	PSE

CALIBRATION METHOD :

In-house method : CA.WI.11.160 based on ASTM E145 : 94 (re-approved 2021)

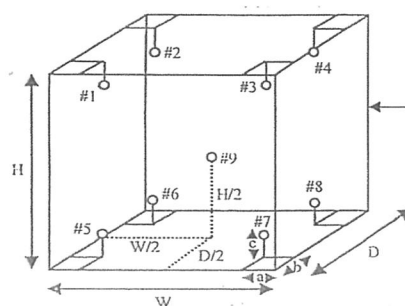
TRACEABILITY :

This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

PSE : Premier System Engineering Co., Ltd. (NSC-TISI-TIS 17025 CALIBRATION 0024)

CALIBRATION RESULTS :

Sensor Installation Diagram



Chamber B

Dimension of the chamber : $W \times H \times D = 78 \times 100 \times 45$ cm
Sensor Installation : $a \times b \times c = 5 \times 5 \times 5$ cm

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

The above results are valid exclusively for calibration sample as mentioned in the report.

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



CERTIFICATE NO. : T25-0656

CSR No. : 250252

Page : 3 of 4

Equipment : Incubator
Manufacture : ACCUPLUS
Model : I250
Serial No. : 0408-0415-0034
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

Temperature Measurement Accuracy Test

The measurement results of the incubator and associates are reported in the manner as shown below

Cal Point (°C)	Measured Standard Temperature (°C) at Spread Locations									Uncertainty (± °C)
	#1	#2	#3	#4	#5	#6	#7	#8	Ref. 9	
20	20.204	20.344	20.218	20.310	19.964	20.077	20.086	19.786	20.102	0.36

Incubator Performance Result

The performance of the incubator are reported as shown below

Cal Point (°C)	UUC Setting (°C)	UUC Reading (°C)	Char Stab (±
20	20	20	0.

UUC : Unit Under Calibration

The uncertainties are for a confidence probability of approximately 95 %
The above results are valid exclusively for calibration sample as mentioned
This result of calibration was found accurate as shown on date and place

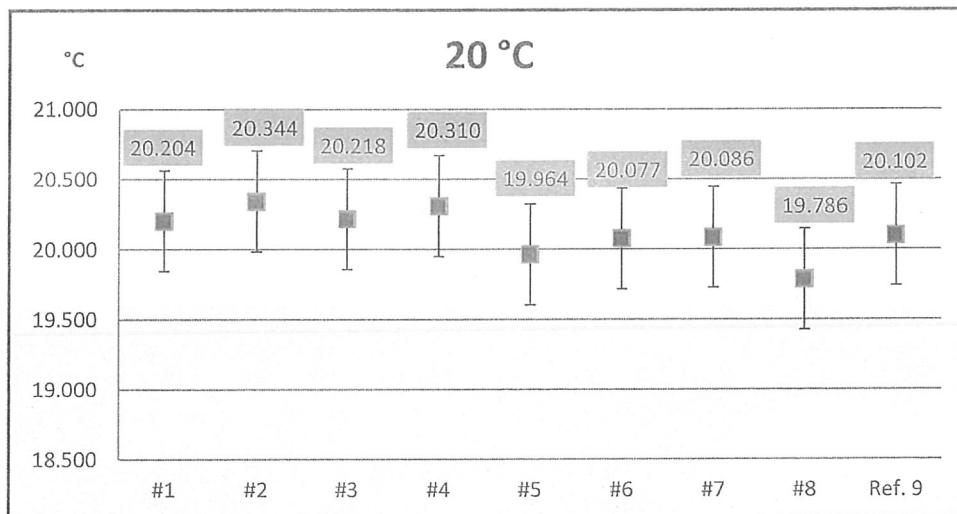


CERTIFICATE NO. : T25-0656

CSR No. : 250252

Page : 4 of 4

Report Graph



The above results are valid exclusively for calibration sample as mentioned in the report.

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

-- End --



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NSC-TISI-TIS 17025
CALIBRATION 0024

CALIBRATION CERTIFICATE

CERTIFICATE No. : T25-0657

CSR No. : 250252

Page : 1 of 4

Customer : Southern Thai Consulting Co., Ltd.
59/45 Moo5 Srisoontorn, Talang, Phuket
83110

Equipment : Water Bath

Manufacturer : Memmert

Model : WNB 22

Serial No. : L522.1030

ID. No. : -

Resolution : 0.1 °C

Instrument Condition : Good Condition

Location of Calibration : Customer Laboratory

Ambient Temperature : (30 ± 10) °C

Relative Humidity : (50 ± 20) %

Date of Received : 1-Mar-2025

Date of Calibration : 1-Mar-2025

Date of Issued : 4-Mar-2025

APPROVED BY :

Calibrated By : Mr. Attapol Juntasurat
(Calibration Engineer)

APPROVED SIGNATORY

(/) MR. PIYAPONG RATTANAKAN / Calibration Manager
() MR. BUNPOT SUWANNARAT / Technical Manager

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





CERTIFICATE No. : T25-0657

CSR No. : 250252

Page : 2 of 4

Equipment : Water Bath
Manufacturer : Memmert
Model : WNB 22
Serial No. : L522.1030
ID. No. : -
Date of Received : 1-Mar-2025
Date of Calibration : 1-Mar-2025

REFERENCE STANDARD INSTRUMENT :

Instrument Type	Model	Serial No.	Cert. No.	Due Date	Traceability
Digital Thermometer with Sensor	34970 A	MY 44042662	DAT003W/0824	02-08-2025	PSE

CALIBRATION METHOD :

In-house method : CA.WI.11.161 based on ASTM E715 : 80 (re-approved 2022)

TRACEABILITY :

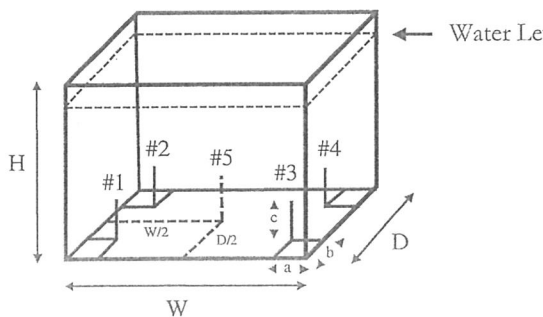
This Calibration Certificate is traceable to national standards which realize the unit of measurement according to the International System of Unit (SI) through :

PSE : Premier System Engineering Co., Ltd. ,(NSC-TISI-TIS 17025 CALIBRATION 0024)

CALIBRATION RESULTS :

(/) Without Adjustment () After Adjustment

Sensor Installation Diagram



Dimension of the chamber : $W \times H \times D = 35 \times 29 \times 22$ cm
Sensor Installation : $a \times b \times c = 5 \times 5 \times 5$ cm

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

The above results are valid exclusively for calibration sample as mentioned in the report.

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



CERTIFICATE NO. : T25-0657

CSR No. : 250252

Page : 3 of 4

Equipment : Water Bath
Manufacture : Memmert
Model : WNB 22
Serial No. : L522.1030
ID. No. : -
Date of Received : 1-Mar-2025
Date of Received : 1-Mar-2025

CALIBRATION RESULTS : (Cont.)

(/) Without Adjustment

() After Adjustment

Temperature Measurement Accuracy Test

The measurement results of the water bath and associates are reported in the manner as shown below

Cal Point (°C)	Measured Standard Temperature (°C) at Spread Locations					Uncertainty (± °C)
	#1	#2	#3	#4	#5	
85	84.58	84.80	84.57	84.60	84.77	0.35
95	94.85	95.05	94.85	95.08	95.15	0.44

Water Bath Performance Result

The performance of the water bath are reported as shown below

Cal Point (°C)	UUC Setting (°C)	UUC Reading (°C)	Water Bath Stability (± °C)	Water Bath Uniformity (± °C)
85	85.0	85.0	0.11	0.26
95	95.0	95.0	0.25	0.37

UUC : Unit Under Calibration

The uncertainty is not combine uniformity of the water bath

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

The above results are valid exclusively for calibration sample as mentioned in the report.

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

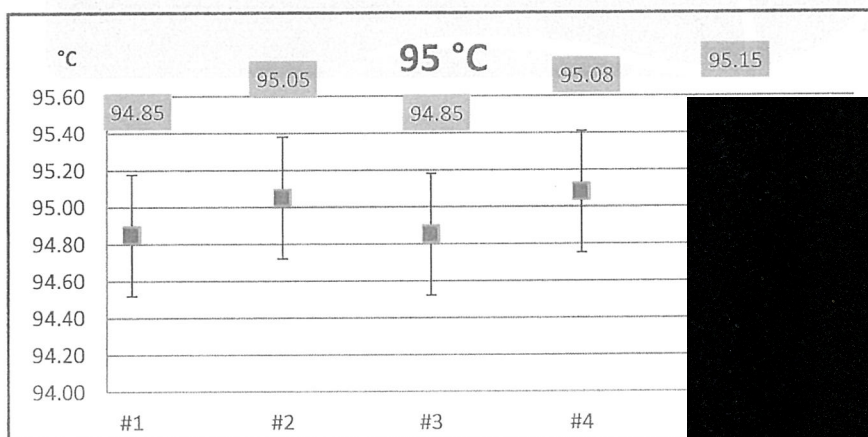
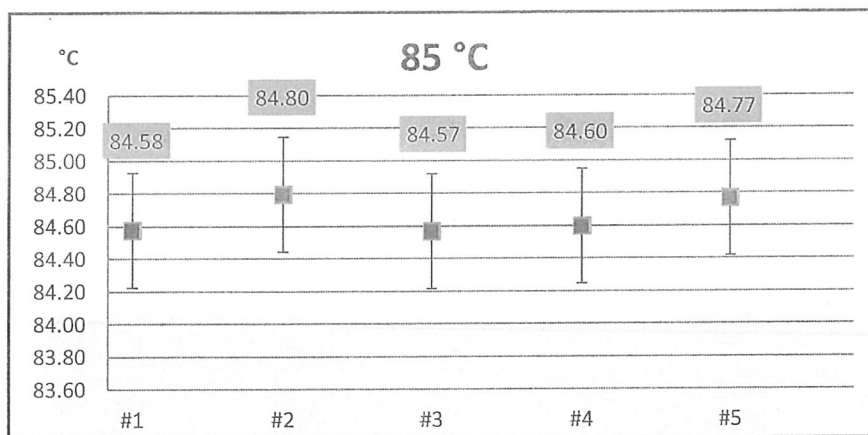


CERTIFICATE NO. : T25-0657

CSR No. : 250252

Page : 4 of 4

Report Graph



The above results are valid exclusively for calibration sample as mentioned in the

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

-- End --

Certificate of Calibration

Number of Page(s)

1 of 3

Certificate No. BSCC-UV-081/25
Equipment UV/Vis Spectrophotometer
Model UV-1800
Manufacturer SHIMADZU
Serial No. A11635305233 CD
ID No. UV-03
Date of receipt 5 March 2025
Date of calibration 5 March 2025
Date of issue 7 March 2025

Customer name Southern Thai Consulting Co.,Ltd.

Address 59/45 Moo 5, Srisoontorn, Talang, Phuket 83110

Temperature (24.2-26.8) °C (On site)
Humidity (54.6-64.0) %RH (On site)

Equipment condition Good Operation

Calibration Location Laboratory

Calibration Procedure In-house method WI-UV-702-01 based on ASTM E275-01

Traceability Wavelength Accuracy is traceable to certificate No. 118114 and 118119
Photometric Accuracy is traceable to certificate No. 118970 and 119006
Stray Light is traceable to certificate No. 118111

it through Starna Scientific Ltd.
O. 0659)

Calibrated by

Approved by



Mr. Pannaphong Phanmekakul
Technical Manager

As mentioned in this report / certificate.
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except in full, without written approval of the Bara Scientific Co., Ltd.

Certificate of Calibration

Certificate No. **BSCC-UV-081/25**

Number of Page(s) 2 of 3

Calibration Results:

1.Wavelength Accuracy

Certified Wavelength (nm)	UUC (nm)	Error (nm)	Uncertainty (\pm nm)
360.89	360.81	-0.08	0.18
418.53	418.50	-0.03	0.18
513.39	513.39	0.00	0.18
572.99	573.12	0.13	0.18
879.41	879.40	-0.01	0.18

2.Photometric Accuracy (UV)

Wavelength (nm)	Certified Absorbance (A)	UUC (A)	Error (A)	Uncertainty (\pm A)
235	CNR	CNR	CNR	CNR
	CNR			CNR
257	0.0000	[REDACTED]	[REDACTED]	0.0075
	0.8616			0.0075
313	CNR	[REDACTED]	[REDACTED]	CNR
	CNR			CNR
350	0.0000	[REDACTED]	[REDACTED]	0.0075
	0.6393			0.0075

*CNR = Customer not request

The above results are valid exclusively for the calibrated item(s) as mention in this report / certificate.
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Certificate of Calibration

Certificate No.

BSCC-UV-081/25

Number of Page(s)

3 of 3

Calibration Results:

3. Photometric Accuracy (Visible)

Wavelength (nm)	Certified Absorbance (A)	UUC (A)	Error (A)	Uncertainty ($\pm A$)
420.0	CNR	CNR	CNR	CNR
	CNR	CNR	CNR	CNR
	CNR	CNR	CNR	CNR
	CNR	CNR	CNR	CNR
440.0	CNR	CNR	CNR	CNR
	CNR	CNR	CNR	CNR
	CNR	CNR	CNR	CNR
	CNR	CNR	CNR	CNR
465.0	0.0000	0.0000	0.0000	0.0042
	0.5188	0.5186	-0.0002	0.0042
	0.6627	0.6627	0.0000	0.0042
	0.9424	0.9425	0.0001	0.0042
546.1	0.0000	0.0000	0.0000	0.0042
	0.5199	0.5199	0.0000	0.0042
	0.6989	0.6988	-0.0001	0.0042
	0.9972	0.9974		
590.0	CNR	CNR		
	CNR	CNR		
	CNR	CNR		
	CNR	CNR		
635.0	0.0000	0.0000		
	0.5611	0.5614		
	0.7637	0.7636		
	1.0942	1.0944		

*CNR = Customer not request

4. Stray Light*

Standard cut-off wavelength (nm)	Unit Under Ca	
	Wavelength (nm)	Transmis
201.15 \pm 0.11nm	200.90	0.9

The Stray light transmission reference is less than 1.0%T and Stray

*Stray Light not NSC-ONSC Accredited.

The measurement uncertainty is base on a standard uncertainty multiplied by a coverage factor $k=2$ providing a level of confidence of approximately 95%.

End of Certificate

The above results are valid exclusively for the calibrated item(s) as mention in this report / certificate.
Advertising the report / Certificate and publicity of the results are prohibited and also shall not be reproduced
except in full, without written approval of the Bara Scientific Co., Ltd.

CERT.No.: HS-W037F

Certificate of Calibration

Calibration Date : 18 Jun 25

Model : YSI Pro20i

Submitted by : SOUTHERN THAI CONSULTING CO.,LTD.

S/N : 23D101243

59/45 Moo 5 T.Srisoontorn, A.Talang Phuket 83110

Probe : -

S/N : -

ID NO. : -

Avg Room Temp 25 °C

Air Temp ref : S/N. F8065C26

Avg Water Temp 25 °C

Barometric ref : S/N. F8065C26

Air Pressure : 760.00 mmHg

Water Temp ref : -

Salinity : 0 ppt

ID NO. HS001

Technician : Kittipong M.

Calibration Details

Calibration Point	100% air sat. (@25 °C, DO = 8.26 mg/l)	(status)	(status)
Measurement 1 (mg/l)	8.26	(PASS)	-
Measurement 2 (mg/l)	8.26	(PASS)	-
Measurement 3 (mg/l)	8.25	(PASS)	-
Measurement 4 (mg/l)	8.25	(PASS)	-
Measurement 5 (mg/l)	8.24	(PASS)	-
Measurement 6 (mg/l)	8.24	(PASS)	-
Measurement 7 (mg/l)	8.24	(PASS)	-
Measurement 8 (mg/l)	8.25	(PASS)	-
Measurement 9 (mg/l)	8.27	(PASS)	-
Measurement 10 (mg/l)	8.29	(PASS)	-

Mean Measurement	8.25	mg/l	-
Inaccuracy	0.01	mg/l	-

Overall Status (PASS)

Manufacturer Specification

- 1) This certificate is issued based on the date and place of test only.
- 2) The calibration procedure followed
- 3) This result shall not be used for adv



Technician Signature

(Kittipong Maekwong)



Laboratory Manager

(Supreecha Sumaritam)