

Report for Sample Analysis Of

นิติบุคคลอาคารชุด ไอดีโอ

โมบี พระราม 9 คอนโดมิเนียม

(January 2023, 12/12)

Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yaek 6, Ratphatthana, Saphansung, Bangkok 10240;

Tel: (66)2-108 6468-9; Fax: (66)2-061 2809

www.ecotechthailand.com / www.ecoilab.com

Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0045
 SAMPLING DATE : January 13, 2023 RECEIVED DATE : January 14, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : January 14 - 20, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/21/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (๖-295-๖-0001) WORK NO. : Ww-23-J0196

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Influent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	49.0	-
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ(5.0)	-
pH	-	Electrometric Method	6.9 (25°C)	-
Settleable Solids	mg/l	Imhoff cone	<0.1	-
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	-
TKN	mg/l	Semi-Micro Kjeldahl Method	15.7	-
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	368	-
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	19.9	-
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Slightly Cloudy	
			Sediment : Black	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: ***Bold-Italic*** number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ๖-295

Laboratory Manager:


 (Dr. Angsana Romsaiyud)
 ๖-295-๖-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
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 SAMPLING METHOD : Grab QUOTATION NO. : QL/21/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (๓-295-๓-0001) WORK NO. : Ww-23-J0197

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Effluent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	10.8	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ(5.0)	≤ 20.0
pH	-	Electrometric Method	7.0 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	5.0	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	383	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	12.6	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	4,900	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Clear	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

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Laboratory Manager: _____

(Dr. Angsana Romsaiyud)

๓-295-๓-0002

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 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0045
 SAMPLING DATE : January 13, 2023 RECEIVED DATE : January 14, 2023
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 SAMPLING METHOD : Grab QUOTATION NO. : QL/21/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (จ-295-จ-0001) WORK NO. : Ww-23-J0198

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			บ่อหนอง	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	4.8	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ(5.0)	≤ 20.0
pH	-	Electrometric Method	6.9 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	8.4	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	345	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	11.7	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	54,000	-
<u>SAMPLE CONDITION</u>			Sample Color / Turbid : Yellow / Clear	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

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ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ จ-295

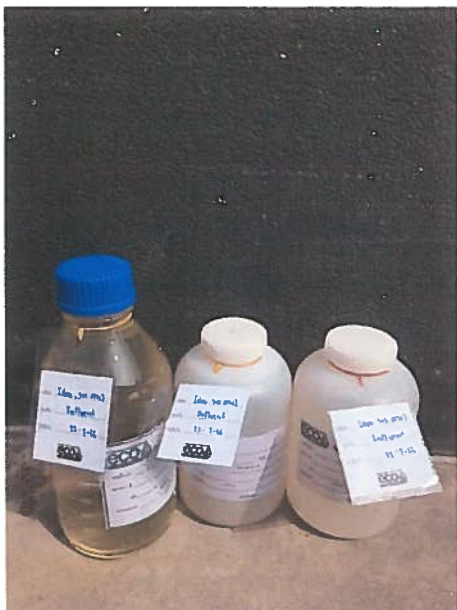
Laboratory Manager:


 (Dr. Angsana Romsaiyud)
 จ-295-ค-0002

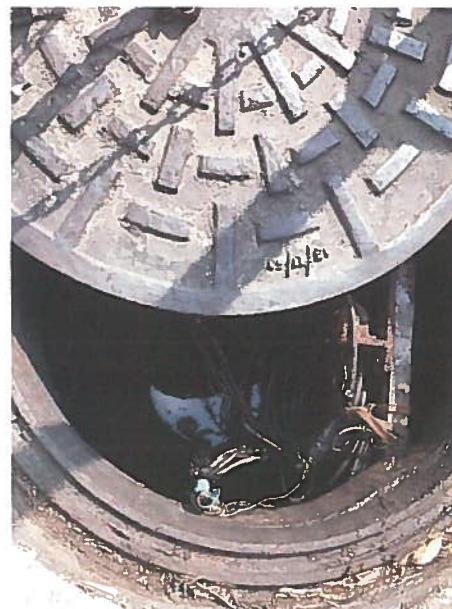
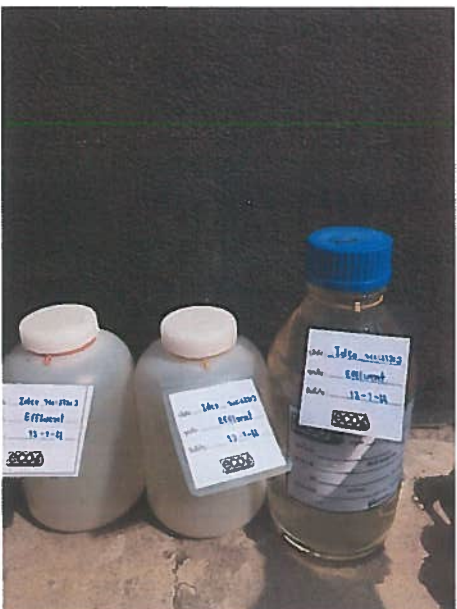
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Figure of sample

1. Influent



2. Effluent



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager: _____

Ang k

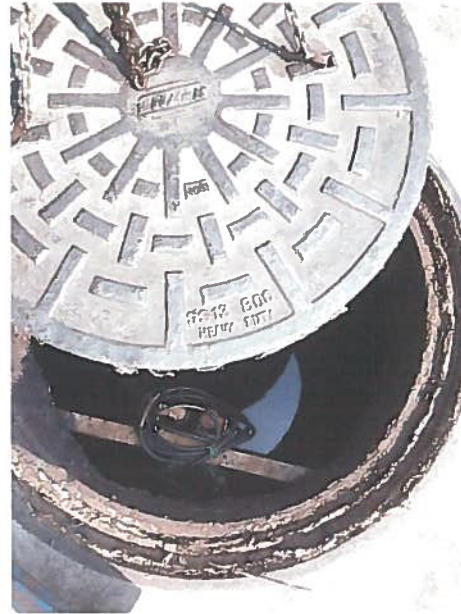
(Dr. Angsana Romsaiyud)

ว-295-ค-0002

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Figure of sample

3. ป้อนน้ำ



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:

Ang
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(February 2023, 1/12)

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 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0138
 SAMPLING DATE : February 1, 2023 RECEIVED DATE : February 2, 2023
 SAMPLING TIME : 14.30 Hour ANALYTICAL DATE : February 2 - 8, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (๖-295-๙-0001) WORK NO. : Ww-23-J0479

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Influent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	67.0	-
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ(5.0)	-
pH	-	Electrometric Method	7.1 (25°C)	-
Settleable Solids	mg/l	Imhoff cone	7.0	-
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	-
TKN	mg/l	Semi-Micro Kjeldahl Method	14.6	-
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	435	-
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	206.1	-
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Slightly Cloudy	
			Sediment : Black	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

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Ang R
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 ๖-295-๙-0002

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 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0138
 SAMPLING DATE : February 1, 2023 RECEIVED DATE : February 2, 2023
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 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (ว-295-ท-0001) WORK NO. : Ww-23-J0480

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Effluent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	9.0	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ(5.0)	≤ 20.0
pH	-	Electrometric Method	7.0 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	4.5	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	437	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	7.8	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	35,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Clear	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

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Laboratory Manager:


 (Dr. Angsana Romsaiyud)
 ว-295-ท-0002

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 SAMPLING BY : Anurak Tantrasai (ว-295-ท-0001) WORK NO. : Ww-23-J0481

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			ป้อนหน่วย	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	5.4	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ(5.0)	≤ 20.0
pH	-	Electrometric Method	7.1 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	4.5	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	303	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	NOT DETECTED	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	420	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Clear	
			Sediment : -	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

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 (Dr. Angsana Romsaiyud)
 ว-295-ท-0002

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Figure of sample

1. Influent



2. Effluent



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager: _____

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(Dr. Angsana Romsaiyud)

ว-295-ค-0002

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Figure of sample

3. ป่อน้ำ



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(March 2023, 2/12)

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 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0289
 SAMPLING DATE : March 3, 2023 RECEIVED DATE : March 4, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : March 4 - 13, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (ว-295-จ-0001) WORK NO. : Ww-23-J0891

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Influent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	36.5	-
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	-
pH	-	Electrometric Method	7.0 (25°C)	-
Settleable Solids	mg/l	Imhoff cone	<0.1	-
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	-
TKN	mg/l	Semi-Micro Kjeldahl Method	11.2	-
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	400	-
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	14.8	-
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Slightly Cloudy Sediment : Black	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: *: The test was subcontracted to the another laboratory

Remark: **Bold-Italic** number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:


 (Dr. Angsana Romsaiyud)
 ว-295-ค-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
 2) Do not copy partial of this analysis report without official approval.

Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0289
 SAMPLING DATE : March 3, 2023 RECEIVED DATE : March 4, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : March 4 - 13, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (๖-295-๖-0001) WORK NO. : Ww-23-J0892

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Effluent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	5.1	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	7.2 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	4.5	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	308	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	<LOQ (1.0)	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	1,200	-
<u>SAMPLE CONDITION</u>			Sample Color / Turbid : Yellow / Clear	
			Sediment : -	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ๖-295

Laboratory Manager: _____

(Dr. Angsana Romsaiyud)

๖-295-๖-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.

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Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0289
 SAMPLING DATE : March 3, 2023 RECEIVED DATE : March 4, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : March 4 - 13, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (ว-295-จ-0001) WORK NO. : Ww-23-J0893

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY
			บ่อหนอง	STANDARD
BOD	mg/l	5-Day BOD Test, Azide Modification Method	5.0	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	7.2 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	3.9	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	358	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	5.8	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	7,900	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Clear	
			Sediment : Black	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: **Bold-Italic** number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:


 (Dr. Angsana Romsaiyud)
 ว-295-ค-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
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Figure of sample

1. Influent



2. Effluent



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:

Ang k

(Dr. Angsana Romsaiyud)

ว-295-ค-0002

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Figure of sample

3. ป่อน้ำ



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager: _____

Ang h
(Dr. Angsana Romsaiyud)
ว-295-ค-0002

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Report for Sample Analysis Of

นิติบุคคลอาคารชุด ไอดีโอ

โมบี พระราม 9 คอนโดมิเนียม

(April 2023, 3/12)

Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yaek 6, Ratphatthana, Saphansung, Bangkok 10240;

Tel: (66)2-108 6468-9; Fax: (66)2-061 2809

www.ecotechthailand.com / www.ecoilab.com

Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอดีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอดีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0464
 SAMPLING DATE : April 7, 2023 RECEIVED DATE : April 8, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : April 8 - 19, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (ว-295-จ-0001) WORK NO. : Ww-23-J1476

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Influent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	57.6	-
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	-
pH	-	Electrometric Method	7.1 (25°C)	-
Settleable Solids	mg/l	Imhoff cone	0.1	-
Sulfide	mg/l	Iodometric Method	2.20	-
TKN	mg/l	Semi-Micro Kjeldahl Method	66.6	-
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	340	-
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	45.8	-
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Slightly Cloudy	
			Sediment : Yellow	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: *: The test was subcontracted to the another laboratory

Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager: _____

(Dr. Angsana Romsaiyud)

ว-295-ค-0002

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Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
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 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0464
 SAMPLING DATE : April 7, 2023 RECEIVED DATE : April 8, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : April 8 - 19, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (ว-295-ท-0001) WORK NO. : Ww-23-J1477

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Effluent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	17.9	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	6.7 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	12.9	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	458	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	7.1	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	92,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Cloudy	
			Sediment : Yellow	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager: _____

(Dr. Angsana Romsaiyud)

ว-295-ท-0002

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Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
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 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0464
 SAMPLING DATE : April 7, 2023 RECEIVED DATE : April 8, 2023
 SAMPLING TIME : 14.00 Hour ANALYTICAL DATE : April 8 - 19, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Anurak Tantrasai (๖-295-๖-0001) WORK NO. : Ww-23-J1478

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			บ่อหนอง	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	10.2	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	6.8 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	<LOQ(1.0)	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	<LOQ(4.0)	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	390	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	2.8	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	33	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Clear	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ๖-295

Laboratory Manager: _____

(Dr. Angsana Romsaiyud)

๖-295-๖-0002

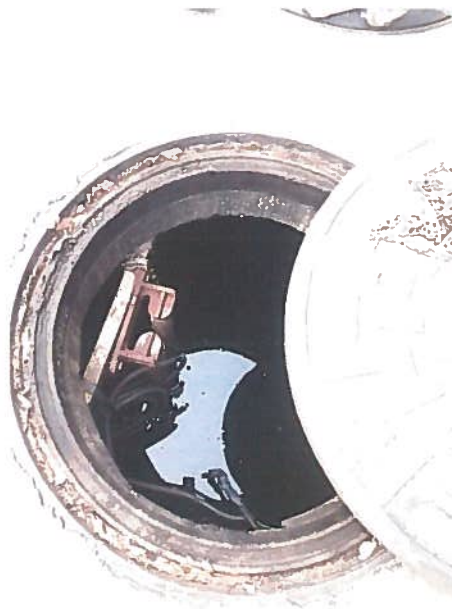
Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
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Figure of sample

1. Influent



2. Effluent



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager: _____

Ang
(Dr. Angsana Romsaiyud)
ว-295-ค-0002

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Figure of sample

3. ป่อน้ำ



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:


(Dr. Angana Romsaiyud)
ว-295-ค-0002

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Ecotech Water Systems Co., Ltd.

Report for Sample Analysis

Of

นิติบุคคลอาคารชุด ไอดีโอ

โมบี พระราม 9 คอนโดมิเนียม

(May 2023, 4/12)

Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yaek 6, Ratphatthana, Saphansung, Bangkok 10240;

Tel: (66)2-108 6468-9; Fax: (66)2-061 2809

www.ecotechthailand.com / www.ecoilab.com



Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
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SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0620
SAMPLING DATE : May 12, 2023 RECEIVED DATE : May 13, 2023
SAMPLING TIME : 11.40 Hour ANALYTICAL DATE : May 13 - 19, 2023
SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
SAMPLING BY : Praphan Wongjaesem (๖-295-๖-0004) WORK NO. : Ww-23-J1882

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Influent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	20.0	-
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	-
pH	-	Electrometric Method	7.3 (25°C)	-
Settleable Solids	mg/l	Imhoff cone	2.0	-
Sulfide	mg/l	Iodometric Method	<LOQ (1.0)	-
TKN	mg/l	Semi-Micro Kjeldahl Method	48.7	-
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	324	-
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	45.2	-
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,000	-
SAMPLE CONDITION				
			Sample Color / Turbid : Yellow / Turbid	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

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Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ๖-295

Laboratory Manager: _____

(Dr. Angsana Romsaiyud)

๖-295-๖-0002

- Remark:**
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Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
SAMPLE TYPE/NAME : Waste Water **REPORT NO.** : JEX-Ww-23-J0620
SAMPLING DATE : May 12, 2023 **RECEIVED DATE** : May 13, 2023
SAMPLING TIME : 11.40 Hour **ANALYTICAL DATE** : May 13 - 19, 2023
SAMPLING METHOD : Grab **QUOTATION NO.** : QL/22/0567/NF/Pw
SAMPLING BY : Praphan Wongjaesem (1-295-1-0004) **WORK NO.** : Ww-23-J1883

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Effluent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	4.9	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	7.0 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	<LOQ (2.8)	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	366	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	3.0	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	700	-
SAMPLE CONDITION <div> Sample Color / Turbid : Yellow / Clear Sediment : A Bit </div>				

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

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ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ 1-295

Laboratory Manager:

(Dr. Angsana Romsaiyud)

1-295-1-0002

- Remark:**
- 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
 - 2) Do not copy partial of this analysis report without official approval.

Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0620
 SAMPLING DATE : May 12, 2023 RECEIVED DATE : May 13, 2023
 SAMPLING TIME : 11.40 Hour ANALYTICAL DATE : May 13 - 19, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Praphan Wongjaesem (1-295-1-0004) WORK NO. : Ww-23-J1884

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			บ่อหนอง	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	5.0	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	7.6 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	<LOQ(4.0)	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	204	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	28.6	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	17,000	-
SAMPLE CONDITION Sample Color / Turbid : Colorless / Clear Sediment : A Bit				

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: *: The test was subcontracted to the another laboratory

Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ 1-295

Laboratory Manager:

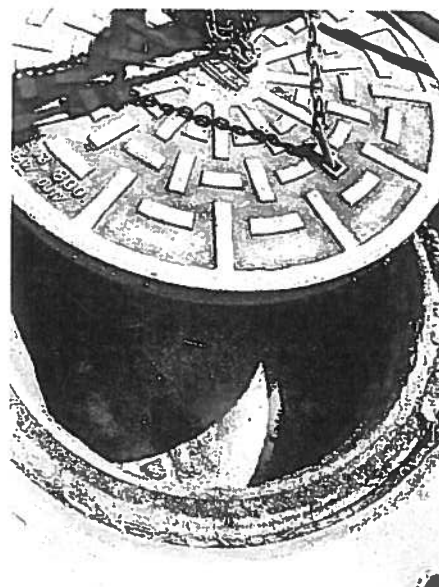
(Dr. Angsana Romsaiyud)

1-295-1-0002

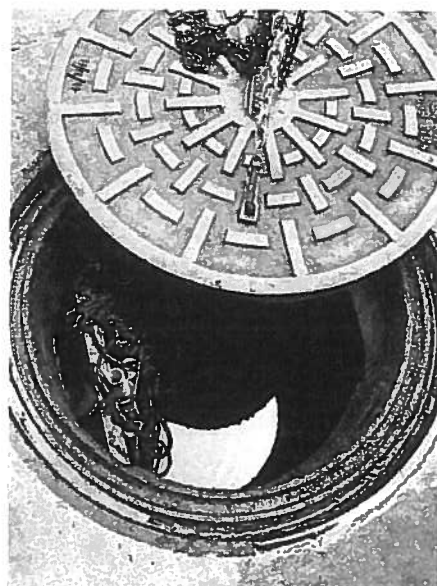
Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
 2) Do not copy partial of this analysis report without official approval.

Figure of sample

1. Influent




2. Effluent



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:


(Dr. Angsana Romsaiyud)
ว-295-ค-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
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Figure of sample

3. ป้อนผง



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:

(Dr. Angsana Romsaiyud)
ว-295-ค-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
2) Do not copy partial of this analysis report without official approval.



Ecotech Water Systems Co., Ltd.

Report for Sample Analysis Of

นิติบุคคลอาคารชุด ไอดีโอ

โมบี พระราม 9 คอนโดมิเนียม

(June 2023, 5/12)

Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yaek 6, Ratphatthana, Saphansung, Bangkok 10240;

Tel: (66)2-108 6468-9; Fax: (66)2-061 2809

www.ecotechthailand.com / www.ecoilab.com

Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0736
 SAMPLING DATE : June 9, 2023 RECEIVED DATE : June 10, 2023
 SAMPLING TIME : 11.50 Hour ANALYTICAL DATE : June 10 - 21, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Praphan Wongjaesem (ว-295-จ-0004) WORK NO. : Ww-23-J2159

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Influent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	45.0	-
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	-
pH	-	Electrometric Method	7.1 (25°C)	-
Settleable Solids	mg/l	Imhoff cone	<0.1	-
Sulfide	mg/l	Iodometric Method	NOT DETECTED	-
TKN	mg/l	Semi-Micro Kjeldahl Method	53.2	-
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	304	-
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	47.3	-
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,000	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Turbid	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: *: The test was subcontracted to the another laboratory

Remark: ***Bold-Italic*** number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:

(Dr. Angsana Romsaiyud)

ว-295-ค-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.

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Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtom.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0736
 SAMPLING DATE : June 9, 2023 RECEIVED DATE : June 10, 2023
 SAMPLING TIME : 11.50 Hour ANALYTICAL DATE : June 10 - 21, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Praphan Wongjaesem (ว-295-จ-0004) WORK NO. : Ww-23-J2160

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD
			Effluent	
BOD	mg/l	5-Day BOD Test, Azide Modification Method	3.2	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	7.1 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	NOT DETECTED	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	<LOQ (4.0)	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	362	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	3.4	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	7,900	-
SAMPLE CONDITION			Sample Color / Turbid : Yellow / Clear Sediment : -	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: *Bold-Italic* number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager :


 (Dr. Angsana Romsaiyud)
 ว-295-ค-0002

Remark: 1) The above results are valid only for the analyzed / tested sample (s) as indicated in this report only.
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Report for Sample Analysis

CUSTOMER NAME : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 ADDRESS : 90 ถนน พระราม 9 แขวง ห้วยขวาง เขต ห้วยขวาง กรุงเทพมหานคร 10310
 CONTACT DETAILS : คุณดาว และคุณพงษ์ธร วงษ์เพ็ญ TEL: 082 540 7167 e-mail: pongtorn.theworks@ananda.co.th
 SAMPLING SOURCE : นิติบุคคลอาคารชุด ไอทีโอ โมบี พระราม 9 คอนโดมิเนียม
 SAMPLE TYPE/NAME : Waste Water REPORT NO. : JEX-Ww-23-J0736
 SAMPLING DATE : June 9, 2023 RECEIVED DATE : June 10, 2023
 SAMPLING TIME : 11.50 Hour ANALYTICAL DATE : June 10 - 21, 2023
 SAMPLING METHOD : Grab QUOTATION NO. : QL/22/0567/NF/Pw
 SAMPLING BY : Praphan Wongjaesem (ว-295-จ-0004) WORK NO. : Ww-23-J2161

PARAMETERS	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY
			ข้อหนึ่ง	STANDARD
BOD	mg/l	5-Day BOD Test, Azide Modification Method	45.0	≤ 20
Grease and Oil	mg/l	Liquid-Liquid, Partition-Gravimetric Method	<LOQ (5.0)	≤ 20.0
pH	-	Electrometric Method	7.6 (25°C)	5.0-9.0
Settleable Solids	mg/l	Imhoff cone	<0.1	≤ 0.5
Sulfide	mg/l	Iodometric Method	NOT DETECTED	≤ 1.0
TKN	mg/l	Semi-Micro Kjeldahl Method	45.4	≤ 35
Total Dissolved Solids	mg/l	Total Dissolved Solids Dried at 180°C	354	≤ 500
Total Suspended Solids	mg/l	Total Suspended Solids Dried at 103-105°C	31.0	≤ 30
Total Coliform Bacteria*	mg/l	Multiple Tube Fermentation Technique	>160,00	-
<u>SAMPLE CONDITION</u>			Sample Color / Turbid : Yellow / Turbid	
			Sediment : A Bit	

Reference: Base on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd ed. Washington, 2017

Standard: Notification of the Ministry of Natural Resources and Environment, Subject: Establish control standards Drainage of wastewater from certain types and buildings of certain sizes, dated November 7, 2005, announced in the Government Gazette, Volume 122, Chapter 125 D, dated 29 December 2005.

Definition: * : The test was subcontracted to the another laboratory

Remark: **Bold-Italic** number meaning the value out of range of regulatory standard



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:


 (Dr. Angsana Romsaiyud)
 ว-295-ค-0002

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Figure of sample

1. Influent



2. Effluent



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:

(Dr. Angsana Romsaiyud)

ว-295-ค-0002

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Figure of sample

3. บ่อน้ำ



ห้องปฏิบัติการวิเคราะห์เอกชน : ทะเบียนเลขที่ ว-295

Laboratory Manager:

(Dr. Angsana Romsaiyud)

ว-295-ค-0002

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2) Do not copy partial of this analysis report without official approval.

CAL

Calibratech Co.,Ltd.

7/106-7 Moo 2, Sukhaphrachasan 3 Rd., Bangpood, Pakkred, Nonthaburi 11120

Tel.(02) 964-6211 Fax.(02) 964-5155, e-mail : calibratech.cal@yahoo.com, cnlibratech.cal@hotmail.com



Certificate of Calibration

Certificate No. : 65-400508-3

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Autoclave

Manufacturer : LABTECH

Model : LAC-5060S

Range : N/A °C

Resolution 0.1 °C

Serial No. : 090414007

ID No. : INS008

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (26.0 to 27.0) °C

Relative Humidity : (48 to 52) %

Line Voltage : (225.0 to 226.4) V

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : This instrument was calibrated by In-house method CAL-M4007 based on BS 2646 Part5 : 1993

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units

Standard Temperature Data Logger with RTD pt 100

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400039	65-400420-1	15 Feb 2023	National Institute of Metrology Thailand (NIMT)
400040	65-400420-2	15 Feb 2023	National Institute of Metrology Thailand (NIMT)
400041	65-400420-3	15 Feb 2023	National Institute of Metrology Thailand (NIMT)

Approved by :

(Bunjerd Marsi)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

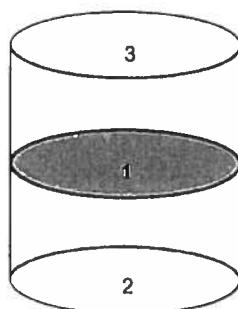
Certificate No. 65-400508-3

Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement



Front

Test Point (° C)	Setting Temperature (° C)	Indicating Temperature (° C)	Measured Temperature (° C) @ Sensor No.			Uncertainty (± ° C)	Measured Uniformity (° C)	Measured Stability (° C)	Sterilizing Time (minute)	Pressure Gauge Reading (kgf/cm²)
			1	2	3					
121.0	121.0	121.0	121.5	121.0	121.1	0.71	0.6	0.1	15	1.2

Remark

1. UUC : Unit Under Calibration
2. Pressure Gauge reading are out of accreditation's scope.

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

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

- o0o -

B



Certificate of Calibration

Certificate No. : 65-200308-1

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.
20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Electronic Balance
Manufacturer : OHAUS **Model :** PA214
Serial No. : 8328380168 **ID No. :** INS013
Capacity : 210 g **Resolution :** 0.0001 g

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.
Ambient Temperature : (24.6 to 24.7) °C
Relative Humidity : (59.9 to 61.3) %
Air Pressure : 1005.0 mbar

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Satja Sangkhum

Calibration Method : In-house method CAL-M2001 based on UKAS Publication ref : LAB 14
Edition 5, July 2015

Reference Standard Instruments : This certification is traceable to the International System of Units

Standard Weights

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
E261-E2624	C02213103	18 Nov 2022	National Institute of Metrology (Thailand), (NIMT)

Approved by :



(Surachai Promthong)

Laboratory Manager

The Uncertainties are for a confidence probability of approximately 95%

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CAL

Calibratech Co.,Ltd.

7/106-7 Moo 2, Sukhaprachasan 3 Rd., Bangpood, Pakkred, Nonthaburi 11120

Tel.(02) 964-6211 Fax.(02) 964-5155, e-mail : calibratech.cal@yahoo.com, calibratech.cal@hotmail.com

Certificate of Calibration

Certificate No. : 65-200308-1

Page : 2 of 2

Result of Calibration : After Adjustment

UUC Condition As-Received : Good

Departure of indication from nominal value

Nominal Value (g)	Correction (g)	Uncertainty \pm (g)	Error before Adjustment (g)
0.01	0.0000	0.00011	0.0000
0.1	0.0000	0.00011	0.0000
1	0.0000	0.00011	-0.0001
5	0.0000	0.00011	0.0000
10	0.0000	0.00011	-0.0003
20	-0.0001	0.00011	-0.0004
50	0.0001	0.00012	-0.0014
100	0.0000	0.00020	-0.0027
150	0.0000	0.00038	-0.0042
200	0.0000	0.00038	-0.0055

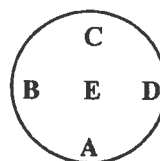
This result of calibration was found accurate as shown on date and place of calibration only.

This reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor $k = 2.11$, providing a level of confidence of approximately 95%

Eccentric error

Load test : 50 g

A B C D E
0.0002 0.0001 -0.0003 -0.0001 0.0000 g



Repeatability

Load test : 200 g

Stdev. : 0.00005 g

- o0o -





Calibratech Co.,Ltd.

7/106-7 Moo 2, Sukhprachasan 3 Rd., Bangpood, Pakkred, Nonthaburi 11120

Tel.(02) 964-6211 Fax.(02) 964-5155, e-mail : calibratech.cal@yahoo.com, calibratech.cal@hotmail.com

Certificate of Calibration

Certificate No. : 65-400523-1

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : COD Reactor

Manufacturer : Hanna

Model : HI839800

Range : N/A °C

Resolution : 0.1 °C

Serial No. : 05220009101

ID No. : N/A

Environment : Ambient Temperature : (23 ± 2) °C

Relative Humidity : (50 ± 15) %

Date of Received : 30 September 2022

Date of Calibration : 03 October 2022

Date of Issue : 03 October 2022

Calibration Method : This instrument was calibrated by In-house method direct measurement with Standard Digital Thermometer with TC Type T probe

The temperature scale used was based on ITS-90

Reference Standard Instruments :

Standard Digital Thermometer with TC Probe

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400029 & 400030	65-400272-1	24 Nov 2022	National Institute of Metrology Thailand (NIMT)
400029 & 400032	65-400274-1	25 Nov 2022	National Institute of Metrology Thailand (NIMT)

Approved by :

(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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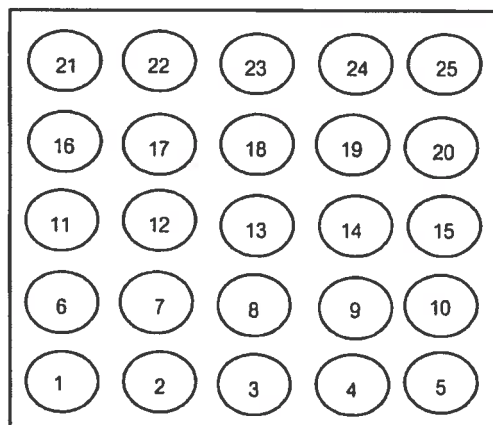
Certificate of Calibration

Certificate No. : 65-400523-1

Page : 2 of 2

Result of Calibration : Without Adjustment

Function : Temperature measurement



Controller

Test Point (° C)	UUC Setting (° C)	UUC Reading (° C)	Standard Reading at Position (° C)									
			1	2	3	4	5	6	7	8	9	10
150.0	150.0	150.0	150.6	150.1	152.0	150.1	149.7	149.3	151.3	152.0	150.9	150.4

Test Point (° C)	UUC Setting (° C)	UUC Reading (° C)	Standard Reading at Position (° C)									
			11	12	13	14	15	16	17	18	19	20
150.0	150.0	150.0	149.4	152.0	151.4	151.0	150.1	150.3	150.6	151.8	151.7	149.9

Test Point (° C)	UUC Setting (° C)	UUC Reading (° C)	Standard Reading at Position (° C)					Uncertainty (± ° C)
			21	22	23	24	25	
150.0	150.0	150.0	150.3	149.9	151.4	150.2	150.1	0.73

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

- o0o -

B



Certificate of Calibration

Certificate No. : 65-400508-2

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Air Chamber (Oven)

Manufacturer : LABTECH

Model : LDO-080F

Range : N/A °C

Resolution : 0.1 °C

Serial No. : 081029024

ID No. : INS007

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (26.0 to 27.0) °C

Relative Humidity : (48 to 52) %

Line Voltage : (225.0 to 226.4) V

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : CAL-M4004, TLAS G-20

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units
Standard Digital Thermometer with Thermocouple probe

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400029 & 400030	65-400272-1	24 Nov 2022	National Institute of Metrology Thailand (NIMT)

Approved by :



(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-400508-2

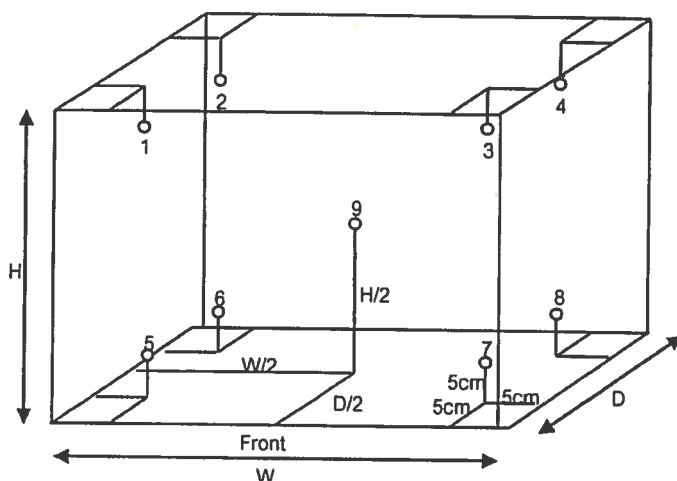
Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

This instrument was setting air ventilation at position 0 (close)



Inside of Chamber

W = 0.50 m

D = 0.40 m

H = 0.40 m

Capacity = 0.08 m³

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Temperature (°C) @ Sensor No.									Uncertainty (± °C)
			1	2	3	4	5	6	7	8	9	
104.0	104.0	104.0	104.3	103.4	104.6	104.2	103.2	103.5	104.1	105.3	105.3	1.7
180.0	180.0	180.0	179.1	178.7	180.0	179.1	178.6	178.9	178.9	181.6	181.8	2.9

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Uniformity (°C)	Measured Stability (°C)	Overall Variation (°C)
104.0	104.0	104.0	2.5	1.3	4.6
180.0	180.0	180.0	4.3	2.2	7.5

Remark The uncertainty is not combine uniformity of the air chamber

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

This reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k = 2 , providing a level of confidence of approximately 95%

- o0o -

B



Certificate of Calibration

Certificate No. : 65-400508-6

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.
20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Air Chamber (Incubator)
Manufacturer : Biobase **Model :** BJPX-B400II
Range : N/A °C **Resolution :** 0.1 °C
Serial No. : KYP400II2010002 **ID No. :** N/A

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.
Ambient Temperature : (24.6 to 26.8) °C
Relative Humidity : (58 to 60) %
Line Voltage : (225.0 to 226.5) V

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Bunjerd Masri

Calibration Method : CAL-M4004, TLAS G-20

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units
Standard Digital Thermometer with RTD Probe

ID No.	Cert. No.	Due Date	Traceability
400046 & 400047	65-400419-3	03 Feb 2023	National Institute of Metrology Thailand (NIMT)

Approved by :



(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-400508-6

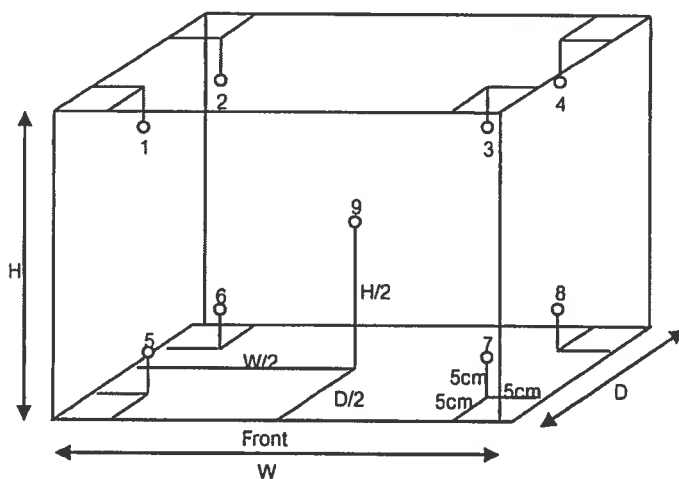
Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

This instrument was setting air ventilation at position 0 (close)



Inside of Chamber

W = 0.58 m

D = 0.55 m

H = 1.28 m

Capacity = 0.41 m³

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Temperature (°C) @ Sensor No.									Uncertainty (± °C)
			1	2	3	4	5	6	7	8	9	
20.0	20.0	20.0	20.18	20.15	20.21	20.13	20.07	20.07	20.11	20.07	20.02	0.44

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Uniformity (°C)	Measured Stability (°C)	Overall Variation (°C)
20.0	20.0	20.0	0.22	0.20	0.5

Remark The uncertainty is not combine uniformity of the air chamber

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

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

- o0o -

B



Certificate of Calibration

Certificate No. : 65-420082-2

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : pH Meter with electrode

pH meter

Manufacturer : Eutech

Model : PC 450

Range : N/A pH

Resolution : 0.01 pH

Serial No. : 2535550

ID No. : N/A

Electrode

Model : N/A

Serial No. : 01X099323

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (25.0 to 26.0)° C

Relative Humidity : (55 to 60) %

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpoon Chanpu

Calibration Method : In-house method CAL-M4201 direct measurement by using standard voltage calibrator and using certified reference material (CRM)

Reference Standard Instruments : This certification is traceable to the International System of Units

1. Multiproduct Calibrator

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400005	SG-E-00473/64	27 Aug 2023	National Institute of Metrology Thailand (NIMT)

2. Standard Buffer Solution

<u>pH</u>	<u>Cert. No.</u>	<u>Lot No.</u>	<u>Exp. Date</u>	<u>Traceability</u>
4.008	61235182	833447	19 Aug 2024	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025
6.985	61255708	833449	19 Aug 2023	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025
10.008	61244986	833448	19 Aug 2023	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025

Approved by :



(Bunjerd Masri)

Supervisor

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Certificate of Calibration

Certificate No. : 65-420082-2

Page : 2 of 2

Result of Calibration :

UUC Condition As-Received : Good

Function : Electrical measurement

pH meter

Performing standard curve by Multiproduct Calibrator at pH (4,7,10)

Adjustment Curve at nominal pH	Applied Voltage (mV)	Nominal Value (pH)	UUC Reading		Correction (mV)	Uncertainty (± mV)
			(pH)	(mV)		
4, 7, 10	177.4800	4	4.00	177.6	-0.1	0.12
	0.0000	7	7.02	0.0	0.0	0.086
	-177.4800	10	10.00	-177.5	0.0	0.12

Function : pH meter with electrode

Performing a three - buffer standard curve using buffer nominal pH (4,7,10)

Adjustment Curve at nominal pH	Standard Buffer (pH)	UUC Reading (pH)	Correction (pH)	Uncertainty (± pH)
4, 7, 10	4.008	4.01	0.00	0.0097
	6.985	7.00	-0.01	0.011
	10.008	10.00	0.00	0.014

Remark

UUC : Unit Under Calibration

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

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

- o0o -



Certificate of Calibration

Certificate No. : 65-400509-2

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.
20 Soi Kheharomklao 74 yeak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Digital Thermometer with Thermistor probe
Temperature Indicator

Manufacturer :	Eutech	Model :	PC 450
Range :	N/A °C	Resolution :	0.1 °C
Serial No. :	2535550	ID No. :	N/A
Thermistor probe			
Model :	N/A	Sheath Material :	Stainless
Diameter :	3.5 mm.	Length :	100 mm.
Serial No. :	CONSEN91W 141	ID No. :	N/A

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature :	(25.0 to 26.0) °C
Relative Humidity :	(55 to 60) %
Line Voltage :	(225.0 to 225.9) VAC

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : This instrument was calibrated by In-house method comparison technique CAL-M4003 by compared with PRT in the liquid bath at the constant controlled temperature.

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units

1. Platinum Resistance Thermometer (PRT)

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400002	TT-0074-22	20 Jun 2024	National Institute of Metrology Thailand (NIMT)

2. Standard Digital Thermometer

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400033	22E569	22 Feb 2024	National Institute of Metrology Thailand (NIMT)

Approved by :


(Bunjerd Masri)
Supervisor

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CAL

Calibratech Co.,Ltd.

7/106-7 Moo 2, Sukhaprachasan 3 Rd., Bangpood, Pakkred, Nonthaburi 11120

Tel.(02) 964-6211 Fax.(02) 964-5155, e-mail : calibratech-cal@yahoo.com, calibratech-cal@hotmail.com

Certificate of Calibration

Certificate No. : 65-400509-2

Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

Immersion Depth (mm.)	Standard Reading (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
100	20.005	20.1	-0.1	0.19
100	25.006	25.1	-0.1	0.19
100	30.005	30.1	-0.1	0.19

Remark

UUC : Unit Under Calibration

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

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

- o0o -



Certificate of Calibration

Certificate No. : 65-420082-1

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : pH Meter with electrode

pH meter

Manufacturer : Eutech

Model : PC 700

Range : N/A pH

Resolution : 0.01 pH

Serial No. : 2728583

ID No. : N/A

Electrode

Model : N/A

Serial No. : 01X099323

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (25.0 to 26.0)° C

Relative Humidity : (55 to 60) %

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : In-house method CAL-M4201 direct measurement by using standard voltage calibrator and using certified reference material (CRM)

Reference Standard Instruments : This certification is traceable to the International System of Units

1. Multiproduct Calibrator

ID No.	Cert. No.	Due Date	Traceability
400005	SG-E-00473/64	27 Aug 2023	National Institute of Metrology Thailand (NIMT)

2. Standard Buffer Solution

pH	Cert. No.	Lot No.	Exp. Date	Traceability
4.008	61235182	833447	19 Aug 2024	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025
6.985	61255708	833449	19 Aug 2023	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025
10.008	61244986	833448	19 Aug 2023	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025

Approved by :



(Bunjerd Masri)

Supervisor

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Certificate of Calibration

Certificate No. : 65-420082-1

Page : 2 of 2

Result of Calibration :

UUC Condition As-Received : Good

Function : Electrical measurement

pH meter

Performing standard curve by Multiproduct Calibrator at pH (4,7,10)

Adjustment Curve at nominal pH	Applied Voltage (mV)	Nominal Value (pH)	UUC Reading		Correction (mV)	Uncertainty (± mV)
			(pH)	(mV)		
4, 7, 10	177.4800	4	4.00	166.7	10.8	0.12
	0.0000	7	7.00	-8.4	8.4	0.086
	-177.4800	10	10.00	-183.5	6.0	0.12

Function : pH meter with electrode

Performing a three - buffer standard curve using buffer nominal pH (4,7,10)

Adjustment Curve at nominal pH	Standard Buffer (pH)	UUC Reading (pH)	Correction (pH)	Uncertainty (± pH)
4, 7, 10	4.008	4.01	0.00	0.0097
	6.985	7.00	-0.01	0.011
	10.008	10.01	0.00	0.014

Remark

UUC : Unit Under Calibration

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

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

- o0o -



Certificate of Calibration

Certificate No. : 65-400509-1

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 yeak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Digital Thermometer with Thermistor probe

Temperature Indicator

Manufacturer : Eutech

Model : PC 700

Range : N/A °C

Resolution : 0.1 °C

Serial No. : 2728583

ID No. : N/A

Thermistor probe

Model : N/A

Sheath Material : Stainless

Diameter : 3.5 mm.

Length : 100 mm.

Serial No. : CONSEN9501D 028

ID No. : N/A

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (25.0 to 26.0) °C

Relative Humidity : (55 to 60) %

Line Voltage : (225.0 to 225.9) VAC

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : This instrument was calibrated by In-house method comparison technique CAL-M4003 by compared with PRT in the liquid bath at the constant controlled temperature.

The temperature scale used was based on ITS-90


Reference Standard Instruments : This certification is traceable to the International System of Units

1. Platinum Resistance Thermometer (PRT)

ID No.	Cert. No.	Due Date	Traceability
400002	TT-0074-22	20 Jun 2024	National Institute of Metrology Thailand (NIMT)

2. Standard Digital Thermometer

ID No.	Cert. No.	Due Date	Traceability
400033	22E569	22 Feb 2024	National Institute of Metrology Thailand (NIMT)

Approved by : 
(Bunjerd Masri)
Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-400509-1

Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

Immersion Depth (mm.)	Standard Reading (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
100	20.003	20.3	-0.3	0.19
100	25.002	25.3	-0.3	0.19
100	30.004	30.3	-0.3	0.19

Remark

UUC : Unit Under Calibration

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

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

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B/



Certificate of Calibration

Certificate No. : 65-420082-3

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.
20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : pH Meter with electrode

pH meter

Manufacturer : Eutech

Model : PC 700

Range : N/A pH

Resolution : 0.01 pH

Serial No. : 3082600

ID No. : N/A

Electrode

Model : N/A

Serial No. : 01X099320

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (25.0 to 26.0)° C

Relative Humidity : (55 to 60) %

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : In-house method CAL-M4201 direct measurement by using standard voltage calibrator and using certified reference material (CRM)

Reference Standard Instruments : This certification is traceable to the International System of Units

1. Multiproduct Calibrator

ID No.	Cert. No.	Due Date	Traceability
400005	SG-E-00473/64	27 Aug 2023	National Institute of Metrology Thailand (NIMT)

2. Standard Buffer Solution

pH	Cert. No.	Lot No.	Exp. Date	Traceability
4.008	61235182	833447	19 Aug 2024	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025
6.985	61255708	833449	19 Aug 2023	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025
10.008	61244986	833448	19 Aug 2023	CPA Chem Ltd. Accredited to ISO 17034 and ISO/IEC 17025

Approved by :



(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-420082-3

Page : 2 of 2

Result of Calibration :

UUC Condition As-Received : Good

Function : Electrical measurement

pH meter

Performing standard curve by Multiproduct Calibrator at pH (4,7,10)

Adjustment Curve at nominal pH	Applied Voltage (mV)	Nominal Value (pH)	UUC Reading		Correction (mV)	Uncertainty (± mV)
			(pH)	(mV)		
4, 7, 10	177.4800	4	4.00	177.4	0.1	0.12
	0.0000	7	7.00	0.0	0.0	0.086
	-177.4800	10	10.00	-177.4	-0.1	0.12

Function : pH meter with electrode

Performing a three - buffer standard curve using buffer nominal pH (4,7,10)

Adjustment Curve at nominal pH	Standard Buffer (pH)	UUC Reading (pH)	Correction (pH)	Uncertainty (± pH)
4, 7, 10	4.008	4.01	0.00	0.0097
	6.985	7.00	-0.01	0.011
	10.008	10.01	0.00	0.014

Remark

UUC : Unit Under Calibration

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

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

- o0o -



Certificate of Calibration

Certificate No. : 65-400509-3

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 year 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Digital Thermometer with Thermistor probe
Temperature Indicator

Manufacturer : Eutech **Model :** PC 700

Range : N/A °C **Resolution :** 0.1 °C

Serial No. : 3082600 **ID No. :** N/A

Thermistor probe

Model : N/A **Sheath Material :** Stainless

Diameter : 3.5 mm. **Length :** 100 mm.

Serial No. : CONSEN9501D 102 **ID No. :** N/A

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (25.0 to 26.0) °C

Relative Humidity : (55 to 60) %

Line Voltage : (225.0 to 225.9) VAC

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Permpon Chanpu

Calibration Method : This instrument was calibrated by In-house method comparison technique CAL-M4003 by compared with PRT in the liquid bath at the constant controlled temperature.

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units

1. Platinum Resistance Thermometer (PRT)

ID No.	Cert. No.	Due Date	Traceability
400002	TT-0074-22	20 Jun 2024	National Institute of Metrology Thailand (NIMT)

2. Standard Digital Thermometer

ID No.	Cert. No.	Due Date	Traceability
400033	22E569	22 Feb 2024	National Institute of Metrology Thailand (NIMT)

Approved by :



(Bunjerd Masri)

Supervisor

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Certificate of Calibration

Certificate No. : 65-400509-3

Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

Immersion Depth (mm.)	Standard Reading (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
100	20.002	20.2	-0.2	0.19
100	25.005	25.2	-0.2	0.19
100	30.003	30.2	-0.2	0.19

Remark

UUC : Unit Under Calibration

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

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

- o0o -



Certificate of Calibration

Certificate No. : 65-400508-1

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.
20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Air Chamber (Refrigerator)
Manufacturer : Every Digital **Model :** N/A
Range : N/A °C **Resolution :** 0.1 °C
Serial No. : ASS1001 **ID No. :** INS005

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.
Ambient Temperature : (24.6 to 26.8) °C
Relative Humidity : (58 to 60) %
Line Voltage : (225.0 to 226.5) V

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Bunjerd Masri

Calibration Method : CAL-M4004, TLAS G-20

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units
Standard Digital Thermometer with Thermocouple probe

ID No.	Cert. No.	Due Date	Traceability
400046 & 400023	65-400157-1	02 Oct 2022	National Institute of Metrology Thailand (NIMT)

Approved by :



(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-400508-1

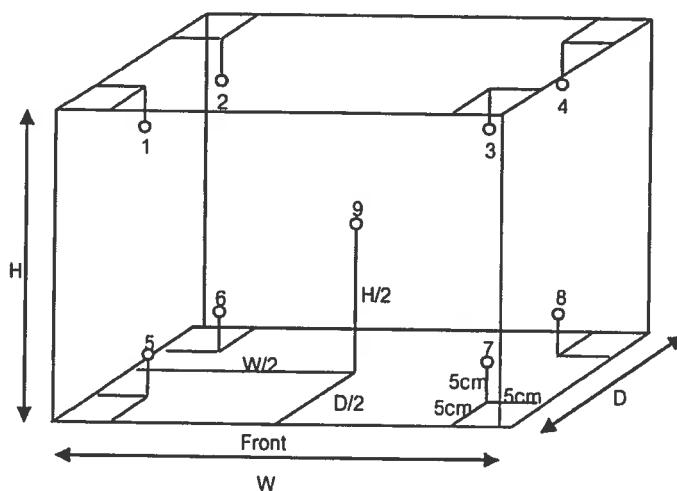
Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

This instrument was setting air ventilation at position 0 (close)



Inside of Chamber

W = 1.00 m

D = 0.50 m

H = 1.35 m

Capacity = 0.68 m³

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Temperature (°C) @ Sensor No.									Uncertainty (± °C)
			1	2	3	4	5	6	7	8	9	
4.0	3.0	3.0	4.3	4.1	3.9	4.2	4.1	4.2	4.1	4.3	4.0	0.63

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Uniformity (°C)	Measured Stability (°C)	Overall Variation (°C)
4.0	3.0	3.0	0.6	0.3	0.8

Remark The uncertainty is not combine uniformity of the air chamber

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

This reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k = 2 , providing a level of confidence of approximately 95%

- o0o -

B



Certificate of Calibration

Certificate No. : 65-400508-4

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Air Chamber (Refrigerator)

Manufacturer : S-Cool

Model : N/A

Range : N/A °C

Resolution : 1 °C

Serial No. : Eco-Ins14

ID No. : N/A

Environment : On site calibration was carried out at the Laboratory, Ecotech Water Systems Co., Ltd.

Ambient Temperature : (24.6 to 26.8) °C

Relative Humidity : (58 to 60) %

Line Voltage : (225.0 to 226.5) V

Date of Received : 30 September 2022

Date of Calibration : 30 September 2022

Date of Issue : 01 October 2022

Calibrated by : Bunjerd Masri

Calibration Method : CAL-M4004, TLAS G-20

The temperature scale used was based on ITS-90

Reference Standard Instruments : This certification is traceable to the International System of Units
Standard Digital Thermometer with RTD Probe

<u>ID No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceability</u>
400046 & 400043	65-400419-2	02 Feb 2023	National Institute of Metrology Thailand (NIMT)

Approved by :



(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-400508-4

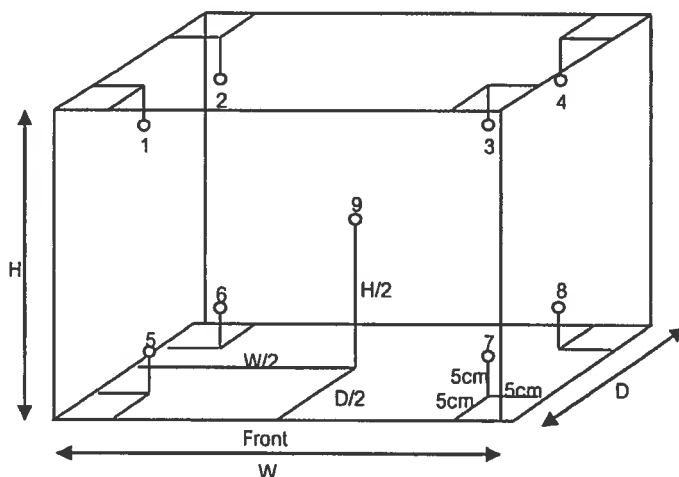
Page : 2 of 2

Result of Calibration : Without Adjustment

UUC Condition As-Received : Good

Function : Temperature measurement

This instrument was setting air ventilation at position 0 (close)



Inside of Chamber

W = 1.02 m

D = 0.44 m

H = 1.30 m

Capacity = 0.58 m³

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Temperature (°C) @ Sensor No.									Uncertainty (± °C)
			1	2	3	4	5	6	7	8	9	
4	4	4	5.18	4.99	4.44	3.88	5.05	5.20	4.41	3.66	4.04	1.3

Test Point (°C)	Setting Temperature (°C)	Indicating Temperature (°C)	Measured Uniformity (°C)	Measured Stability (°C)	Overall Variation (°C)
4.0	4.0	4.0	1.30	0.62	2.3

Remark The uncertainty is not combine uniformity of the air chamber

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

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

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CAL

Calibratech Co.,Ltd.

7/106-7 Moo 2, Sukhprachasan 3 Rd., Bangpood, Pakkred, Nonthaburi 11120

Tel.(02) 964-6211 Fax.(02) 964-5155, e-mail : calibratech_cal@yahoo.com, calibratech_cal@hotmail.com



NSC-TISI-TIS17025
CALIBRATION 0030

Certificate of Calibration

Certificate No. : 65-410116-1

Page : 1 of 2

Submitted by :

Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment :

Digital Thermo-Hygrometer

Manufacturer : Digicon

Model : TH-03A

Range Temperature : -10 °C to 50 °C Resolution : 0.1 °C

Range Humidity : 20 %R.H. to 99 %R.H. Resolution : 1 %R.H.

Serial No. : 365052106

ID No. : N/A

Environment :

Ambient Temperature : (23 ± 2) °C

Relative Humidity : (50 ± 15) %

Date of Received : 30 September 2022

Date of Calibration : 03 October to 05 October 2022

Date of Issue : 05 October 2022

Calibrated by : Chortip Samchusri

Calibration Method : This instrument was calibrated by In-house method comparison technique CAL-M4013 by compared with standard probe sensor humidity/temperature into humidity/temperature chamber.

Reference Standard Instruments : This certification is traceable to the International System of Units

Digital Indicator with Standard Probe Temp&Hum

ID No.

Cert. No.

Due Date

Traceability

400034 & 400035 SG-H-00713/65

07 Jan 2023

Success Gateway Co., Ltd., Accredited by TISI Calibration No.0268

Approved by :

(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-410116-1

Page : 2 of 2

UUC Condition As-Received : Good

Result of Calibration : Without Adjustment

Function : Temperature measurement (Mode : In)

Reference Humidity @ 50 %R.H.

Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
20.00	20.5	-0.5	0.46
24.97	25.4	-0.4	0.46
30.01	29.9	0.1	0.46

Result of Calibration : Without Adjustment

Function : Humidity measurement

Reference Temperature @ 25 °C

Standard Humidity (%R.H.)	UUC Reading (%R.H.)	Correction (%R.H.)	Uncertainty (± %R.H)
40.01	38	2	2.2
49.99	48	2	2.2
60.02	58	2	2.3

Remark

UUC : Unit Under Calibration

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

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

- o0o -

B/



Certificate of Calibration

Certificate No. : 65-410116-2

Page : 1 of 2

Submitted by : Ecotech Water Systems Co., Ltd.

20 Soi Kheharomklao 74 Yak 6, Ratphatthana, Saphansung, Bangkok 10240

Equipment : Digital Thermo-Hygrometer

Manufacturer : Digicon Model : TH-03A
Range Temperature : -10 °C to 50 °C Resolution : 0.1 °C
Range Humidity : 20 %R.H. to 99 %R.H. Resolution : 1 %R.H.
Serial No. : 365051554 ID No. : N/A

Environment : Ambient Temperature : (23 ± 2) °C

Relative Humidity : (50 ± 15) %

Date of Received : 30 September 2022

Date of Calibration : 03 October to 05 October 2022

Date of Issue : 05 October 2022

Calibrated by : Chortip Samchusri

Calibration Method : This instrument was calibrated by In-house method comparison technique CAL-M4013 by compared with standard probe sensor humidity/temperature into humidity/temperature chamber.

Reference Standard Instruments : This certification is traceable to the International System of Units

Digital Indicator with Standard Probe Temp&Hum

ID No.	Cert. No.	Due Date	Traceability
400034 & 400035	SG-H-00713/65	07 Jan 2023	Success Gateway Co., Ltd., Accredited by TISI Calibration No.0268

Approved by :



(Bunjerd Masri)

Supervisor

The Uncertainties are for a confidence probability of approximately 95%

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Certificate of Calibration

Certificate No. : 65-410116-2

Page : 2 of 2

UUC Condition As-Received : Good

Result of Calibration : Without Adjustment

Function : Temperature measurement (Mode : In)

Reference Humidity @ 50 %R.H.

Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
19.99	20.3	-0.3	0.46
25.00	25.2	-0.2	0.46
30.00	29.8	0.2	0.46

Result of Calibration : Without Adjustment

Function : Humidity measurement

Reference Temperature @ 25 °C

Standard Humidity (%R.H.)	UUC Reading (%R.H.)	Correction (%R.H.)	Uncertainty (± %R.H)
39.98	39	1	2.2
50.00	49	1	2.2
59.99	59	1	2.3

Remark

UUC : Unit Under Calibration

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

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

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