

ภาคผนวก ค

ผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

ภาคผนวก ค-1

คุณภาพอากาศจากแหล่งกำเนิด



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2526132

Date Received : Mar 24, 2025

Date Reported : Apr 01, 2025

Report Number: 3262120-1

Page 1 of 2

Sample Number 2526132-1
Sampled Date Mar 24, 2025
Sample Description Emission from Stationary Source
Location Furnace 1 (GPS 47P 0734130, 1404515)
Date Analysis Commenced Mar 25, 2025
Condition of Sample Extracted into three 2-L collection flasks and one 10-L air sampling bag

Stack Description

Ambient Pressure	758	mmHg	Diameter	1.40	m	Oxygen	5.7	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	8.7	%
Type of Process	Combustion		Stack Temperature	195	°C	Gas Velocity	7.0	m/s
Type of Fuel	Natural Gas		Moisture	13.30	%	Flow Rate (Actual O2)	21453	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 % O ₂	Result at 5.7 % O ₂	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing										
Carbon Monoxide	11:30 AM - 11:40 AM	ppm	-	1.0	18.2	19.90	690	-	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen	11:30 AM - 11:45 AM	ppm	-	1.06	3.8	4.16	200	25	United States Environmental Protection Agency, EPA Method 7	Rayong

Guideline :

Guideline

1). Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

2). Emission Air Standard according to EIA study of SPE-PE Plant, Approval Letter No. Tor Sor 1009.9/2341 dated Mar 5, B.E.2557.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-ก-0029

Approved by

D. J. J.

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-0001

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Life Sciences

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S:\Reports\Air Stack_O2_2GL.rpt (2:12PM)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2526132

Date Received : Mar 24, 2025

Date Reported : Apr 01, 2025

Report Number: 3262120-1

Page 2 of 2

Sample Number 2526132-1
Sampled Date Mar 24, 2025
Sample Description Emission from Stationary Source
Location Furnace 1 (GPS 47P 0734130, 1404515)
Date Analysis Commenced Mar 25, 2025
Condition of Sample Extracted into three 2-L collection flasks and one 10-L air sampling bag

Stack Description

Ambient Pressure	758	mmHg	Diameter	1.40	m	Oxygen	5.7	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	8.7	%
Type of Process	Combustion		Stack Temperature	195	°C	Gas Velocity	7.0	m/s
Type of Fuel	Natural Gas		Moisture	13.30	%	Flow Rate (Actual O2)	21453	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Carbon Monoxide	11:30 AM - 11:40 AM	g/s	-	-	0.136	-	-	Calculated	Rayong
Oxides of Nitrogen	11:30 AM - 11:45 AM	g/s	-	-	0.046	-	0.390	Calculated	Rayong

Guideline :

Guideline

1). Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

2). Emission Air Standard according to EIA study of SPE-PE Plant, Approval Letter No. Tor Sor 1009.9/2341 dated Mar 5, B.E.2557.

Sampling By : Jaradrawee Sriraksa ทะเบียนเลขที่ ว-323-ก-0058 , Saksit Phaisanphisit ทะเบียนเลขที่ ว-204-ก-0024

Remark :

- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-ก-0029

Approved by

D. J. J.

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2526132

Date Received : Mar 24, 2025

Date Reported : Apr 01, 2025

Report Number: 3262120-2

Page 1 of 1

Sample Number 2526132-1
Sampled Date Mar 24, 2025
Sample Description Emission from Stationary Source
Location Furnace 1 (GPS 47P 0734130, 1404515)
Date Analysis Commenced Mar 25, 2025
Condition of Sample Extracted into three 2-L collection flasks and one 10-L air sampling bag

Stack Description

Ambient Pressure	758	mmHg	Diameter	1.40	m	Oxygen	5.7	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	8.7	%
Type of Process	Combustion		Stack Temperature	195	°C	Gas Velocity	7.0	m/s
Type of Fuel	Natural Gas		Moisture	13.30	%	Flow Rate (Actual O2)	21453	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 % O ₂	Result at 5.7 % O ₂	Method	Testing Location
Air Testing								
Methane as Propane	11:30 AM - 11:40 AM	ppm	-	0.4	<0.4	<0.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	11:30 AM - 11:40 AM	ppm	-	0.4	<0.4	<0.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	11:30 AM - 11:40 AM	ppm	-	0.4	<0.4	<0.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Jaradrawee Sriruksa , Saksit Phaisanphisut

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525783

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261120-1

Page 1 of 1

Sample Number 2525783-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Spin Dryer 1 (GPS 47P 0733967, 1404426)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.63 x 0.63	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Square		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	40.0	°C	Gas Velocity	6.1	m/s
Type of Fuel	-		Moisture	2.27	%	Flow Rate (Actual O2)	8102	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide	10:50 AM - 11:10 AM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Jaradrawee Sriruksa ทะเบียนเลขที่ ๖-323-๖-0058

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ๖-323-๖-0029

Approved by

D. Chanchon

Dej Chanchon
Senior Manager
ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525783

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261120-2

Page 1 of 1

Sample Number 2525783-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Spin Dryer 1 (GPS 47P 0733967, 1404426)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.63 x 0.63	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Square		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	40.0	°C	Gas Velocity	6.1	m/s
Type of Fuel	-		Moisture	2.27	%	Flow Rate (Actual O2)	8102	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Carbon dioxide	10:50 AM - 11:10 AM	ppm	-	1.0	439	United States Environmental Protection Agency, EPA Method 3	Rayong
Methane as Propane	10:50 AM - 11:10 AM	ppm	-	0.4	0.7	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	10:50 AM - 11:10 AM	ppm	-	0.4	15.7	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	10:50 AM - 11:10 AM	ppm	-	0.4	16.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Jaradrawee Sriruksa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525780

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261115-1

Page 1 of 1

Sample Number 2525780-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Hold Up Hopper 1 (GPS 47P 0733995, 1404455)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.25	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	44.0	°C	Gas Velocity	6.7	m/s
Type of Fuel	-		Moisture	2.49	%	Flow Rate (Actual O2)	1085	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide	11:40 AM - 12:00 PM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Sittipan Sanachaiw โทรเลขเลขที่ ร-323-จ-0009

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
โทรเลขเลขที่ ร-323-จ-0029

Approved by

D. Chanchon

Dej Chanchon
Senior Manager
โทรเลขเลขที่ ร-323-จ-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525780

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261115-2

Page 1 of 1

Sample Number 2525780-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Hold Up Hopper 1 (GPS 47P 0733995, 1404455)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.25	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	44.0	°C	Gas Velocity	6.7	m/s
Type of Fuel	-		Moisture	2.49	%	Flow Rate (Actual O2)	1085	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Carbon dioxide	11:40 AM - 12:00 PM	ppm	-	1.0	400	United States Environmental Protection Agency, EPA Method 3	Rayong
Methane as Propane	11:40 AM - 12:00 PM	ppm	-	0.4	0.7	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	11:40 AM - 12:00 PM	ppm	-	0.4	346	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	11:40 AM - 12:00 PM	ppm	-	0.4	347	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Sittipan Sanachiw

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525782

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261119-1

Page 1 of 1

Sample Number 2525782-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Blenders 1 (GPS 47P 0733984, 1404492)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.60	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	39.0	°C	Gas Velocity	3.2	m/s
Type of Fuel	-		Moisture	2.49	%	Flow Rate (Actual O2)	2980	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide	10:00 AM - 10:20 AM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Jaradrawee Sriruksa ทะเบียนเลขที่ ๖-323-๖-0058

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ๖-323-๖-0029

Approved by

D. Chanchon

Dej Chanchon
Senior Manager
ทะเบียนเลขที่ ๖-323-๓-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525782

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261119-2

Page 1 of 1

Sample Number 2525782-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Blenders 1 (GPS 47P 0733984, 1404492)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.60	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	39.0	°C	Gas Velocity	3.2	m/s
Type of Fuel	-		Moisture	2.49	%	Flow Rate (Actual O2)	2980	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Carbon dioxide	10:00 AM - 12:00 PM	ppm	-	1.0	429	United States Environmental Protection Agency, EPA Method 3	Rayong
Methane as Propane	10:00 AM - 10:20 AM	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	10:00 AM - 10:20 AM	ppm	-	0.4	182	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	10:00 AM - 10:20 AM	ppm	-	0.4	182	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Jaradrawee Sriruksa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2526139

Date Received : Mar 24, 2025

Date Reported : Apr 01, 2025

Report Number: 3262123-1

Page 1 of 2

Sample Number 2526139-1
Sampled Date Mar 24, 2025
Sample Description Emission from Stationary Source
Location Furnace 2 (GPS 47P 0734143, 1404493)
Date Analysis Commenced Mar 25, 2025
Condition of Sample Extracted into three 2-L collection flasks and one 10-L air sampling bag

Stack Description

Ambient Pressure	758	mmHg	Diameter	1.53	m	Oxygen	6.5	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	181	°C	Gas Velocity	5.4	m/s
Type of Fuel	Natural Gas		Moisture	11.09	%	Flow Rate (Actual O2)	20850	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 % O ₂	Result at 6.5 % O ₂	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing										
Carbon Monoxide	11:20 AM - 11:30 AM	ppm	-	1.0	138	142.96	690	-	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen	11:10 AM - 11:25 AM	ppm	-	1.06	12.0	12.43	200	25	United States Environmental Protection Agency, EPA Method 7	Rayong

Guideline :

Guideline

1). Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

2). Emission Air Standard according to EIA study of SPE-PE Plant, Approval Letter No. Tor Sor 1009.9/2341 dated Mar 5, B.E.2557.

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Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-ก-0029

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ก-0001

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Life Sciences

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S:\Reports_Air Stack_O2_2GL.rpt (2:58PM)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2526139

Date Received : Mar 24, 2025

Date Reported : Apr 01, 2025

Report Number: 3262123-1

Page 2 of 2

Sample Number 2526139-1
Sampled Date Mar 24, 2025
Sample Description Emission from Stationary Source
Location Furnace 2 (GPS 47P 0734143, 1404493)
Date Analysis Commenced Mar 25, 2025
Condition of Sample Extracted into three 2-L collection flasks and one 10-L air sampling bag

Stack Description

Ambient Pressure	758	mmHg	Diameter	1.53	m	Oxygen	6.5	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	181	°C	Gas Velocity	5.4	m/s
Type of Fuel	Natural Gas		Moisture	11.09	%	Flow Rate (Actual O2)	20850	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Carbon Monoxide	11:20 AM - 11:30 AM	g/s	-	-	0.946	-	-	Calculated	Rayong
Oxides of Nitrogen	11:10 AM - 11:25 AM	g/s	-	-	0.135	-	0.429	Calculated	Rayong

Guideline :

Guideline

- 1). Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)
- 2). Emission Air Standard according to EIA study of SPE-PE Plant, Approval Letter No. Tor Sor 1009/9/2341 dated Mar 5, B.E.2557.

Sampling By : Warawut Pubpa ทนายความที่ ๓-๓๒๓-๓-๐๐๓๓, Apisit Singha ทนายความที่ ๓-๒๐๔-๓-๐๐๒๓

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ๓-๓๒๓-๓-๐๐๒๓

Approved by

D. Changchon

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ๓-๓๒๓-๓-๐๐๐๑

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2526139

Date Received : Mar 24, 2025

Date Reported : Apr 01, 2025

Report Number: 3262123-2

Page 1 of 1

Sample Number 2526139-1
Sampled Date Mar 24, 2025
Sample Description Emission from Stationary Source
Location Furnace 2 (GPS 47P 0734143, 1404493)
Date Analysis Commenced Mar 25, 2025
Condition of Sample Extracted into three 2-L collection flasks and one 10-L air sampling bag

Stack Description

Ambient Pressure	758	mmHg	Diameter	1.53	m	Oxygen	6.5	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	181	°C	Gas Velocity	5.4	m/s
Type of Fuel	Natural Gas		Moisture	11.09	%	Flow Rate (Actual O2)	20850	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 % O ₂	Result at 6.5 % O ₂	Method	Testing Location
Air Testing								
Methane as Propane	11:20 AM - 11:30 AM	ppm	-	0.4	1.8	1.86	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	11:20 AM - 11:30 AM	ppm	-	0.4	1.0	1.04	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	11:20 AM - 11:30 AM	ppm	-	0.4	2.7	2.80	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Warawut Pubpa , Apisit Singha

Remark :

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Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525784

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261121-1

Page 1 of 1

Sample Number 2525784-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Spin Dryer 2 (GPS 47P 0733702, 1404276)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.63 x 0.80	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	44.0	°C	Gas Velocity	8.8	m/s
Type of Fuel	-		Moisture	2.49	%	Flow Rate (Actual O2)	14621	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide	10:55 AM - 11:15 AM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Sittipan Sanachiw โทร. 09-323-4-0009

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

โทร. 09-323-4-0029

Approved by

D. Changchon

Dej Changchon
Senior Manager

โทร. 09-323-4-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525784

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261121-2

Page 1 of 1

Sample Number 2525784-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Spin Dryer 2 (GPS 47P 0733702, 1404276)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.63 x 0.80	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	44.0	°C	Gas Velocity	8.8	m/s
Type of Fuel	-		Moisture	2.49	%	Flow Rate (Actual O2)	14621	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Carbon dioxide	10:55 AM - 11:15 AM	ppm	-	1.0	436	United States Environmental Protection Agency, EPA Method 3	Rayong
Methane as Propane	10:55 AM - 11:15 AM	ppm	-	0.4	0.6	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	10:55 AM - 11:15 AM	ppm	-	0.4	17.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	10:55 AM - 11:15 AM	ppm	-	0.4	18.0	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Sittipan Sanachiw

Remark :

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Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525785

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261122-1

Page 1 of 1

Sample Number 2525785-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Hold Up Hopper 2 (GPS 47P 0734013, 1404453)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.20	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	40.0	°C	Gas Velocity	12.0	m/s
Type of Fuel	-		Moisture	2.71	%	Flow Rate (Actual O2)	1246	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide	10:20 AM - 10:40 AM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Sittipan Sanachiw ทะเบียนเลขที่ ๖-323-๖-0009

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0029

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525785

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261122-2

Page 1 of 1

Sample Number 2525785-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Hold Up Hopper 2 (GPS 47P 0734013, 1404453)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.20	m	Oxygen	20.9	%
Ambient Temperature	33.7	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	40.0	°C	Gas Velocity	12.0	m/s
Type of Fuel	-		Moisture	2.71	%	Flow Rate (Actual O2)	1246	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Carbon dioxide	10:20 AM - 10:40 AM	ppm	-	1.0	425	United States Environmental Protection Agency, EPA Method 3	Rayong
Methane as Propane	10:20 AM - 10:40 AM	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	10:20 AM - 10:40 AM	ppm	-	0.4	151	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	10:20 AM - 10:40 AM	ppm	-	0.4	151	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Sittipan Sanachiw

Remark :

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Thanita Kulsuriwong

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525786

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261128-1

Page 1 of 1

Sample Number 2525786-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Blenders 2 (GPS 47P 0735113, 1405977)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.30	m	Oxygen	20.9	%
Ambient Temperature	33.6	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	44.0	°C	Gas Velocity	5.3	m/s
Type of Fuel	-		Moisture	2.04	%	Flow Rate (Actual O2)	1235	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide	09:35 AM - 09:55 AM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Sittipan Sanachiw โทร 09-323-4-0009

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

โทร 09-323-4-0029

Approved by

D. Changchon

Dej Changchon
Senior Manager

โทร 09-323-4-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta PhuT_PE (SPE)

Lot ID: 2525786

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number: 3261128-2

Page 1 of 1

Sample Number 2525786-1
Sampled Date Mar 28, 2025
Sample Description Emission from Stationary Source
Location Blenders 2 (GPS 47P 0735113, 1405977)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Extracted into two 10-L air sampling bags

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.30	m	Oxygen	20.9	%
Ambient Temperature	33.6	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	44.0	°C	Gas Velocity	5.3	m/s
Type of Fuel	-		Moisture	2.04	%	Flow Rate (Actual O2)	1235	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Carbon dioxide	09:35 AM - 09:55 AM	ppm	-	1.0	428	United States Environmental Protection Agency, EPA Method 3	Rayong
Methane as Propane	09:35 AM - 09:55 AM	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Non-Methane Hydrocarbon as Propane	09:35 AM - 09:55 AM	ppm	-	0.4	216	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong
Total Hydrocarbon as Propane	09:35 AM - 09:55 AM	ppm	-	0.4	216	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Sampling By : Sittipan Sanachiw

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

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Scientist (4)

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ภาคผนวก ค-2

คุณภาพอากาศในบรรยากาศ



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

111 True Digital Park West, Unicorn Building, 8th Floor, Sukhumvit Road, Bangchak, Prakanong, Bangkok Thailand 10260

P/O : 4503136460

Project Name : Environmental Quality Monitoring

Project Location :

Lot ID: 2525660

Date Received : Apr 01, 2025

Date Reported : Apr 03, 2025

Report Number : 3261019-1CS

Page 1 of 1

Sample Description Air Quality

Location บ้านฉางประจักษ์ (โรงพยาบาลส่งเสริมสุขภาพตำบลตากวน) (GPS 47P 0735531, 1402769)

Parameter Nitrogen dioxide (ppm)

Measurement Date Mar 24, 2025 - Mar 31, 2025

Measurement by Sitpawit Suwannarat

Time	2525660-1 Mar 24, 2025	2525660-2 Mar 25, 2025	2525660-3 Mar 26, 2025	2525660-4 Mar 27, 2025	2525660-5 Mar 28, 2025	2525660-6 Mar 29, 2025	2525660-7 Mar 30, 2025
11:00 AM - 12:00 PM	0.0150	0.0039	0.0037	0.0035	0.0031	0.0033	0.0056
12:00 PM - 01:00 PM	0.0127	0.0024	0.0032	0.0020	0.0032	0.0020	0.0040
01:00 PM - 02:00 PM	0.0034	0.0024	0.0049	0.0021	0.0068	0.0016	0.0043
02:00 PM - 03:00 PM	0.0044	0.0032	0.0040	0.0017	0.0071	0.0013	0.0074
03:00 PM - 04:00 PM	0.0030	0.0031	0.0039	0.0017	0.0097	0.0016	0.0022
04:00 PM - 05:00 PM	0.0030	0.0021	0.0018	0.0017	0.0081	0.0014	0.0031
05:00 PM - 06:00 PM	0.0035	0.0019	0.0016	0.0018	0.0042	0.0025	0.0025
06:00 PM - 07:00 PM	0.0035	0.0022	0.0022	0.0017	0.0072	0.0021	0.0026
07:00 PM - 08:00 PM	0.0045	0.0033	0.0032	0.0031	0.0078	0.0053	0.0033
08:00 PM - 09:00 PM	0.0050	0.0046	0.0048	0.0044	0.0088	0.0079	0.0039
09:00 PM - 10:00 PM	0.0054	0.0049	0.0047	0.0048	0.0114	0.0064	0.0066
10:00 PM - 11:00 PM	0.0037	0.0031	0.0035	0.0023	0.0122	0.0040	0.0046
11:00 PM - 12:00 AM	0.0037	0.0027	0.0027	0.0019	0.0068	0.0031	0.0042
12:00 AM - 01:00 AM	0.0018	0.0019	0.0021	0.0015	0.0044	0.0023	0.0040
01:00 AM - 02:00 AM	0.0022	0.0018	0.0019	0.0010	0.0041	0.0015	0.0049
02:00 AM - 03:00 AM	0.0013	0.0014	0.0015	0.0009	0.0031	0.0017	0.0050
03:00 AM - 04:00 AM	0.0011	0.0010	0.0008	0.0007	0.0029	0.0009	0.0059
04:00 AM - 05:00 AM	0.0018	0.0010	0.0007	0.0009	0.0027	0.0052	0.0052
05:00 AM - 06:00 AM	0.0012	0.0012	0.0009	0.0006	0.0016	0.0006	0.0053
06:00 AM - 07:00 AM	0.0017	0.0015	0.0013	0.0007	0.0017	0.0006	0.0055
07:00 AM - 08:00 AM	0.0040	0.0014	0.0021	0.0014	0.0027	0.0013	0.0053
08:00 AM - 09:00 AM	0.0124	0.0038	0.0037	0.0036	0.0039	0.0020	0.0058
09:00 AM - 10:00 AM	0.0153	0.0060	0.0058	0.0061	0.0078	0.0081	0.0062
10:00 AM - 11:00 AM	0.0073	0.0053	0.0052	0.0074	0.0068	0.0048	0.0060
Average	0.0050	0.0028	0.0029	0.0024	0.0058	0.0028	0.0047
1hr - Maximum	0.0153	0.0060	0.0058	0.0074	0.0122	0.0081	0.0074
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).

Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Orawan R.

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Life Sciences

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6506-83 EMAIL



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

111 True Digital Park West, Unicorn Building, 8th Floor, Sukhumvit Road, Bangchak, Prakanong, Bangkok Thailand 10260

P/O : 4503136460

Project Name : Environmental Quality Monitoring

Project Location :

Lot ID: 2525664

Date Received : Apr 01, 2025

Date Reported : Apr 03, 2025

Report Number : 3261021-1CS

Page 1 of 1

Sample Description Air Quality

Location บ้านฉางประจักษ์ (GPS 47P 0735346, 1406705)

Parameter Nitrogen dioxide (ppm)

Measurement Date Mar 24, 2025 - Mar 31, 2025

Measurement by Sitpawit Suwannarat

Time	2525664-1 Mar 24, 2025	2525664-2 Mar 25, 2025	2525664-3 Mar 26, 2025	2525664-4 Mar 27, 2025	2525664-5 Mar 28, 2025	2525664-6 Mar 29, 2025	2525664-7 Mar 30, 2025
10:00 AM - 11:00 AM	0.0117	0.0148	0.0101	0.0135	0.0237	0.0147	0.0079
11:00 AM - 12:00 PM	0.0133	0.0174	0.0097	0.0176	0.0227	0.0160	0.0095
12:00 PM - 01:00 PM	0.0132	0.0172	0.0089	0.0156	0.0191	0.0095	0.0085
01:00 PM - 02:00 PM	0.0165	0.0152	0.0147	0.0070	0.0132	0.0083	0.0094
02:00 PM - 03:00 PM	0.0107	0.0070	0.0172	0.0052	0.0115	0.0200	0.0127
03:00 PM - 04:00 PM	0.0082	0.0055	0.0122	0.0049	0.0247	0.0229	0.0096
04:00 PM - 05:00 PM	0.0067	0.0055	0.0094	0.0052	0.0238	0.0160	0.0101
05:00 PM - 06:00 PM	0.0074	0.0067	0.0085	0.0080	0.0171	0.0138	0.0123
06:00 PM - 07:00 PM	0.0091	0.0081	0.0080	0.0070	0.0110	0.0129	0.0092
07:00 PM - 08:00 PM	0.0086	0.0058	0.0058	0.0059	0.0107	0.0126	0.0071
08:00 PM - 09:00 PM	0.0052	0.0050	0.0057	0.0038	0.0102	0.0061	0.0052
09:00 PM - 10:00 PM	0.0109	0.0032	0.0045	0.0029	0.0078	0.0043	0.0052
10:00 PM - 11:00 PM	0.0034	0.0026	0.0029	0.0023	0.0046	0.0039	0.0071
11:00 PM - 12:00 AM	0.0040	0.0023	0.0019	0.0017	0.0043	0.0035	0.0070
12:00 AM - 01:00 AM	0.0047	0.0016	0.0016	0.0017	0.0040	0.0023	0.0070
01:00 AM - 02:00 AM	0.0043	0.0016	0.0018	0.0012	0.0041	0.0017	0.0067
02:00 AM - 03:00 AM	0.0041	0.0018	0.0016	0.0012	0.0035	0.0020	0.0066
03:00 AM - 04:00 AM	0.0086	0.0026	0.0029	0.0028	0.0036	0.0022	0.0066
04:00 AM - 05:00 AM	0.0056	0.0043	0.0038	0.0038	0.0056	0.0030	0.0070
05:00 AM - 06:00 AM	0.0074	0.0088	0.0070	0.0088	0.0087	0.0062	0.0064
06:00 AM - 07:00 AM	0.0041	0.0094	0.0073	0.0113	0.0106	0.0120	0.0071
07:00 AM - 08:00 AM	0.0058	0.0088	0.0062	0.0168	0.0070	0.0125	0.0083
08:00 AM - 09:00 AM	0.0101	0.0102	0.0083	0.0121	0.0068	0.0131	0.0092
09:00 AM - 10:00 AM	0.0053	0.0066	0.0076	0.0139	0.0082	0.0144	0.0121
Average	0.0079	0.0072	0.0070	0.0073	0.0111	0.0097	0.0082
1hr - Maximum	0.0165	0.0174	0.0172	0.0176	0.0247	0.0229	0.0127
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).

Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

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Life Sciences

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6506-83 EMAIL



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, 1-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525708

Date Received : Apr 01, 2025

Date Reported : Apr 03, 2025

Report Number: 3261054-1

Page 1 of 1

Sample Description	Air Quality						
Location	สถานีอนามัยเทศบาล (GPS 47P 0735187, 1405873)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Mar 24, 2025 - Mar 31, 2025						
Measurement by	Sitpawit Suwannarat						
Time	2525708-1 Mar 24, 2025	2525708-2 Mar 25, 2025	2525708-3 Mar 26, 2025	2525708-4 Mar 27, 2025	2525708-5 Mar 28, 2025	2525708-6 Mar 29, 2025	2525708-7 Mar 30, 2025
11:00 AM - 12:00 PM	0.0003	0.0002	0.0040	0.0084	0.0102	0.0026	0.0024
12:00 PM - 01:00 PM	<0.0001	0.0004	0.0043	0.0091	0.0099	0.0056	0.0040
01:00 PM - 02:00 PM	0.0001	0.0009	0.0037	0.0113	0.0099	0.0060	0.0055
02:00 PM - 03:00 PM	0.0004	0.0012	0.0027	0.0086	0.0079	0.0012	0.0055
03:00 PM - 04:00 PM	0.0003	0.0007	0.0024	0.0077	0.0069	0.0012	0.0025
04:00 PM - 05:00 PM	0.0012	0.0028	0.0028	0.0097	0.0093	0.0011	0.0035
05:00 PM - 06:00 PM	0.0023	0.0029	0.0034	0.0118	0.0088	0.0016	0.0086
06:00 PM - 07:00 PM	0.0011	0.0045	0.0057	0.0165	0.0101	0.0026	0.0102
07:00 PM - 08:00 PM	0.0010	0.0030	0.0057	0.0129	0.0040	0.0026	0.0039
08:00 PM - 09:00 PM	0.0007	0.0026	0.0038	0.0034	0.0025	0.0027	0.0047
09:00 PM - 10:00 PM	0.0012	0.0025	0.0033	0.0026	0.0026	0.0024	0.0054
10:00 PM - 11:00 PM	0.0044	0.0014	0.0022	0.0017	0.0014	0.0033	0.0035
11:00 PM - 12:00 AM	0.0032	0.0003	0.0028	0.0010	0.0008	0.0026	0.0038
12:00 AM - 01:00 AM	0.0023	0.0007	0.0015	0.0022	0.0009	0.0019	0.0049
01:00 AM - 02:00 AM	0.0018	0.0008	0.0011	0.0019	0.0006	0.0016	0.0064
02:00 AM - 03:00 AM	0.0025	0.0004	0.0011	0.0017	0.0005	0.0017	0.0091
03:00 AM - 04:00 AM	0.0033	0.0009	0.0022	0.0024	0.0009	0.0030	0.0128
04:00 AM - 05:00 AM	0.0036	0.0009	0.0037	0.0021	0.0012	0.0050	0.0203
05:00 AM - 06:00 AM	0.0033	0.0026	0.0040	0.0044	0.0024	0.0046	0.0135
06:00 AM - 07:00 AM	0.0020	0.0075	0.0057	0.0079	0.0052	0.0073	0.0147
07:00 AM - 08:00 AM	0.0029	0.0071	0.0064	0.0083	0.0063	0.0083	0.0104
08:00 AM - 09:00 AM	0.0028	0.0063	0.0053	0.0075	0.0075	0.0078	0.0078
09:00 AM - 10:00 AM	0.0019	0.0072	0.0067	0.0089	0.0077	0.0098	0.0083
10:00 AM - 11:00 AM	0.0003	0.0069	0.0053	0.0113	0.0041	0.0032	0.0133
Average	0.0018	0.0027	0.0037	0.0068	0.0051	0.0038	0.0077
1hr - Maximum	0.0044	0.0075	0.0067	0.0165	0.0102	0.0098	0.0203
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).

Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.

Orawan Rakyoung
Scientist (3)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, 1-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525708

Date Received : Apr 01, 2025

Date Reported : Apr 03, 2025

Report Number: 3274524-1

Page 1 of 1

Sample Description	Air Quality						
Location	ศูนย์วิจัยพืชไร่ จังหวัดระยอง (GPS 47P 0731794, 1408788)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Mar 24, 2025 - Mar 31, 2025						
Measurement by	Sitpawit Suwannarat						
	2525708-8	2525708-9	2525708-10	2525708-11	2525708-12	2525708-13	2525708-14
Time	Mar 24, 2025	Mar 25, 2025	Mar 26, 2025	Mar 27, 2025	Mar 28, 2025	Mar 29, 2025	Mar 30, 2025
01:00 PM - 02:00 PM	0.0073	0.0204	0.0113	0.0106	0.0044	0.0027	0.0115
02:00 PM - 03:00 PM	0.0075	0.0188	0.0068	0.0077	0.0041	0.0023	0.0100
03:00 PM - 04:00 PM	0.0101	0.0202	0.0118	0.0084	0.0055	0.0021	0.0075
04:00 PM - 05:00 PM	0.0166	0.0123	0.0122	0.0092	0.0075	0.0023	0.0063
05:00 PM - 06:00 PM	0.0170	0.0138	0.0094	0.0102	0.0044	0.0024	0.0068
06:00 PM - 07:00 PM	0.0128	0.0211	0.0107	0.0126	0.0046	0.0033	0.0094
07:00 PM - 08:00 PM	0.0098	0.0276	0.0125	0.0140	0.0122	0.0035	0.0088
08:00 PM - 09:00 PM	0.0137	0.0230	0.0172	0.0132	0.0146	0.0034	0.0059
09:00 PM - 10:00 PM	0.0149	0.0157	0.0147	0.0095	0.0129	0.0032	0.0032
10:00 PM - 11:00 PM	0.0142	0.0081	0.0070	0.0105	0.0087	0.0034	0.0025
11:00 PM - 12:00 AM	0.0114	0.0057	0.0076	0.0121	0.0037	0.0035	0.0019
12:00 AM - 01:00 AM	0.0108	0.0040	0.0089	0.0128	0.0009	0.0029	0.0012
01:00 AM - 02:00 AM	0.0114	0.0031	0.0113	0.0093	0.0010	0.0017	0.0011
02:00 AM - 03:00 AM	0.0077	0.0039	0.0030	0.0151	0.0014	0.0019	0.0011
03:00 AM - 04:00 AM	0.0097	0.0046	0.0030	0.0148	0.0021	0.0026	0.0015
04:00 AM - 05:00 AM	0.0087	0.0075	0.0035	0.0103	0.0029	0.0049	0.0016
05:00 AM - 06:00 AM	0.0060	0.0055	0.0034	0.0088	0.0043	0.0074	0.0032
06:00 AM - 07:00 AM	0.0108	0.0110	0.0070	0.0048	0.0047	0.0088	0.0073
07:00 AM - 08:00 AM	0.0231	0.0128	0.0099	0.0056	0.0060	0.0124	0.0121
08:00 AM - 09:00 AM	0.0196	0.0129	0.0147	0.0065	0.0038	0.0185	0.0121
09:00 AM - 10:00 AM	0.0204	0.0134	0.0173	0.0065	0.0033	0.0229	0.0207
10:00 AM - 11:00 AM	0.0227	0.0152	0.0182	0.0125	0.0034	0.0225	0.0190
11:00 AM - 12:00 PM	0.0239	0.0197	0.0191	0.0119	0.0031	0.0188	0.0146
12:00 PM - 01:00 PM	0.0256	0.0166	0.0146	0.0081	0.0025	0.0177	0.0247
Average	0.0140	0.0132	0.0106	0.0102	0.0051	0.0073	0.0081
1hr - Maximum	0.0256	0.0276	0.0191	0.0151	0.0146	0.0229	0.0247
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).

Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.

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Scientist (3)

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S:\Reports_Air SOxNOx.rpt (2:50PM)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2525667

Date Received : Apr 01, 2025

Date Reported : Apr 08, 2025

Report Number : 3261028-1 CS

Sample Number : 2525667-1 to 7

Parameter : Wind Speed / Wind Direction

Location : บ้านฉางประจักษ์ (โรงพยาบาลส่งเสริมสุขภาพตำบลฉาง) (GPS 47P 0735531, 1402769)

Sampling Date : Mar 24 - Mar 31, 2025

Sampling by : Sitpawit Suwannarat

Time	Mar 24 - Mar 25, 2025		Mar 25 - Mar 26, 2025		Mar 26 - Mar 27, 2025		Mar 27 - Mar 28, 2025		Mar 28 - Mar 29, 2025		Mar 29 - Mar 30, 2025		Mar 30 - Mar 31, 2025	
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)
11:00 AM - 12:00 PM	0.3	130.0	SE	0.4	130.0	SE	2.0	136.0	SE	1.8	218.0	SW	0.4	71.0
12:00 PM - 01:00 PM	0.3	182.0	S	0.3	148.0	SSE	0.3	120.0	ESE	0.3	137.0	SE	1.0	106.0
01:00 PM - 02:00 PM	1.3	102.0	ESE	1.0	128.0	SE	1.9	146.0	SE	0.7	156.0	SSE	1.0	149.0
02:00 PM - 03:00 PM	2.4	99.0	E	1.0	152.0	SSE	0.3	142.0	SE	0.7	142.0	SE	0.9	189.0
03:00 PM - 04:00 PM	1.8	68.0	ENE	0.2	-	-	1.0	147.0	SSE	1.0	149.0	SSE	1.1	174.0
04:00 PM - 05:00 PM	0.3	136.0	SE	2.1	124.0	SE	1.6	122.0	ESE	1.6	124.0	SE	0.7	144.0
05:00 PM - 06:00 PM	0.3	117.0	ESE	0.3	133.0	SE	0.4	164.0	SSE	1.6	116.0	ESE	0.3	157.0
06:00 PM - 07:00 PM	0.8	98.0	E	0.3	136.0	SE	0.4	145.0	SE	0.6	182.0	S	0.3	139.0
07:00 PM - 08:00 PM	0.4	124.0	SE	0.4	165.0	SSE	0.7	144.0	SE	0.9	151.0	SSE	0.3	128.0
08:00 PM - 09:00 PM	0.4	141.0	SE	0.9	108.0	ESE	0.3	114.0	ESE	0.3	140.0	SE	0.3	155.0
09:00 PM - 10:00 PM	0.3	145.0	SE	1.8	170.0	S	0.4	137.0	SE	0.8	146.0	SE	0.5	136.0
10:00 PM - 11:00 PM	0.4	148.0	SSE	1.1	135.0	SE	0.3	112.0	ESE	0.3	159.0	SSE	0.3	126.0
11:00 PM - 12:00 AM	0.3	111.0	ESE	0.4	161.0	SSE	1.5	133.0	SE	0.5	159.0	SSE	0.5	122.0
12:00 AM - 01:00 AM	0.3	126.0	SE	0.3	167.0	SSE	0.7	137.0	SE	0.6	117.0	ESE	1.4	155.0
01:00 AM - 02:00 AM	0.7	110.0	ESE	0.3	145.0	SE	0.3	122.0	ESE	0.8	135.0	SE	0.3	158.0
02:00 AM - 03:00 AM	0.9	105.0	ESE	0.3	137.0	SE	1.4	97.0	E	2.7	156.0	SSE	0.6	150.0
03:00 AM - 04:00 AM	0.5	115.0	ESE	0.3	129.0	SE	1.0	132.0	SE	1.1	131.0	SE	0.9	179.0
04:00 AM - 05:00 AM	0.3	140.0	SE	1.1	108.0	ESE	0.5	144.0	SE	1.5	137.0	SE	0.5	154.0
05:00 AM - 06:00 AM	0.8	150.0	SSE	0.7	125.0	SE	0.9	130.0	SE	0.7	158.0	SSE	0.3	157.0
06:00 AM - 07:00 AM	1.3	161.0	SSE	1.2	121.0	ESE	1.1	154.0	SSE	1.9	100.0	E	0.4	149.0
07:00 AM - 08:00 AM	1.6	154.0	SSE	1.1	172.0	S	0.9	158.0	SSE	0.3	121.0	ESE	0.4	126.0
08:00 AM - 09:00 AM	0.7	137.0	SE	2.4	131.0	SE	1.0	138.0	SE	0.4	134.0	SE	1.2	162.0
09:00 AM - 10:00 AM	0.3	154.0	SSE	0.7	150.0	SSE	1.2	132.0	SE	0.9	138.0	SE	1.9	133.0
10:00 AM - 11:00 AM	0.9	128.0	SE	1.1	138.0	SE	1.6	126.0	SE	1.2	86.0	E	1.0	147.0

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

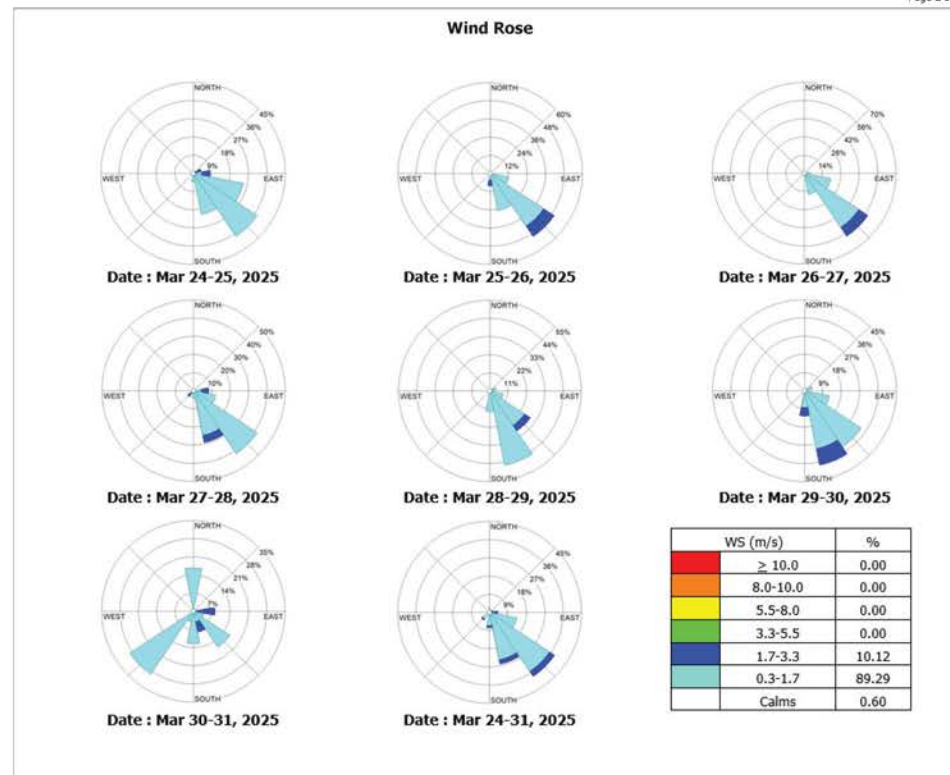
Lot ID: 2525667

Date Received : Apr 01, 2025

Date Reported : Apr 08, 2025

Report Number : 3261028-1 CS

Page 2 of 2



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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2525668
Date Received :Apr 01, 2025
Date Reported :Apr 08, 2025
Report Number :3261030-1 CS

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut, PE (SPE)

Sample Number : 2525668-1 to 7
Parameter : Wind Speed / Wind Direction
Location : บ้านนาหวาด (GPS 47P 0735346, 1406705)
Sampling Date : Mar 24 - Mar 31, 2025
Sampling by : Sitpawit Suwannarat

Time	Mar 24 - Mar 25, 2025			Mar 25 - Mar 26, 2025			Mar 26 - Mar 27, 2025			Mar 27 - Mar 28, 2025			Mar 28 - Mar 29, 2025			Mar 29 - Mar 30, 2025			Mar 30 - Mar 31, 2025		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
10:00 AM - 11:00 AM	1.4	204.0	SSW	3.9	203.0	SSW	3.4	129.0	SE	1.7	202.0	SSW	0.3	83.0	E	1.6	238.0	WSW	0.3	331.0	NNW
11:00 AM - 12:00 PM	0.5	53.0	NE	2.2	180.0	S	1.6	185.0	S	1.4	178.0	S	1.8	261.0	W	0.5	271.0	W	0.3	195.0	SSW
12:00 PM - 01:00 PM	2.7	220.0	SW	1.2	302.0	WNW	1.9	143.0	SE	1.8	213.0	SSW	2.6	190.0	S	2.4	182.0	S	1.1	211.0	SSW
01:00 PM - 02:00 PM	1.6	195.0	SSW	2.5	198.0	SSW	1.0	94.0	E	2.8	202.0	SSW	0.6	266.0	W	1.1	175.0	S	0.7	223.0	SW
02:00 PM - 03:00 PM	1.0	195.0	SSW	2.7	199.0	SSW	1.7	214.0	SW	0.5	215.0	SW	1.2	216.0	SW	1.0	225.0	SW	1.2	189.0	S
03:00 PM - 04:00 PM	1.3	232.0	SW	0.7	242.0	WSW	1.0	197.0	SSW	1.1	183.0	S	0.3	258.0	WSW	3.0	200.0	SSW	1.1	266.0	W
04:00 PM - 05:00 PM	1.3	271.0	W	1.2	195.0	SSW	1.4	190.0	S	1.0	196.0	SSW	0.4	210.0	SSW	1.9	185.0	S	0.9	201.0	SSW
05:00 PM - 06:00 PM	0.5	225.0	SW	0.4	230.0	SW	1.9	198.0	SSW	0.5	308.0	NW	0.8	203.0	SSW	0.5	214.0	SW	0.9	230.0	SSW
06:00 PM - 07:00 PM	0.3	225.0	SW	0.3	204.0	SSW	1.1	228.0	SW	0.3	182.0	S	0.3	79.0	E	0.5	211.0	SSW	0.3	210.0	SSW
07:00 PM - 08:00 PM	1.1	217.0	SW	1.0	193.0	SSW	0.9	209.0	SSW	0.9	203.0	SSW	0.3	212.0	SSW	0.3	215.0	SW	0.3	30.0	NNE
08:00 PM - 09:00 PM	0.9	204.0	SSW	1.7	198.0	SSW	1.3	187.0	S	0.5	156.0	SSE	0.5	220.0	SW	0.6	177.0	S	0.8	20.0	NNE
09:00 PM - 10:00 PM	0.3	216.0	SW	0.3	188.0	S	0.4	157.0	SSE	0.7	187.0	S	0.6	180.0	S	0.3	210.0	SSW	1.2	9.0	N
10:00 PM - 11:00 PM	1.0	219.0	SW	0.3	225.0	SW	0.4	203.0	SSW	0.4	243.0	WSW	0.4	182.0	S	1.0	217.0	SW	0.5	359.0	N
11:00 PM - 12:00 AM	0.3	167.0	SSE	0.3	232.0	SW	1.3	186.0	S	0.8	216.0	SW	0.3	185.0	S	0.6	187.0	S	0.0	-	-
12:00 AM - 01:00 AM	1.1	207.0	SSW	0.3	226.0	SW	0.9	275.0	W	1.0	169.0	S	0.7	169.0	S	0.3	259.0	W	0.4	10.0	N
01:00 AM - 02:00 AM	0.6	191.0	S	0.4	185.0	S	0.3	215.0	SW	0.6	178.0	S	0.3	135.0	SE	1.3	193.0	SSW	0.5	359.0	N
02:00 AM - 03:00 AM	0.3	152.0	SSE	0.8	203.0	SSW	1.2	181.0	S	0.3	213.0	SSW	0.3	213.0	SSW	0.5	202.0	SSW	0.3	359.0	N
03:00 AM - 04:00 AM	0.3	204.0	SSW	0.3	196.0	SSW	0.3	216.0	SW	1.2	176.0	S	0.3	213.0	SSW	0.7	195.0	SSW	0.3	10.0	N
04:00 AM - 05:00 AM	0.4	143.0	SE	0.3	212.0	SSW	0.5	172.0	S	0.8	221.0	SW	0.8	177.0	S	0.4	200.0	SSW	0.3	8.0	N
05:00 AM - 06:00 AM	0.4	210.0	SSW	0.5	224.0	SW	1.1	193.0	SSW	1.0	238.0	WSW	0.3	267.0	W	1.3	240.0	WSW	0.3	359.0	N
06:00 AM - 07:00 AM	0.6	202.0	SSW	1.9	218.0	SW	1.6	156.0	SSE	1.6	166.0	SSE	0.7	249.0	WSW	0.3	217.0	SW	2.0	21.0	NNE
07:00 AM - 08:00 AM	0.5	0.0	N	1.1	162.0	SSE	1.3	79.0	E	1.6	199.0	SSW	0.3	232.0	SW	0.6	248.0	WSW	1.4	13.0	NNE
08:00 AM - 09:00 AM	0.3	268.0	W	0.4	301.0	WNW	3.4	125.0	SE	0.9	223.0	SW	0.4	245.0	WSW	1.9	171.0	S	0.9	28.0	NNE
09:00 AM - 10:00 AM	0.8	248.0	WSW	0.8	279.0	W	0.7	215.0	SW	0.9	209.0	SSW	1.4	191.0	S	1.2	187.0	S	0.3	39.0	N

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jitranont
Assistant General Manager

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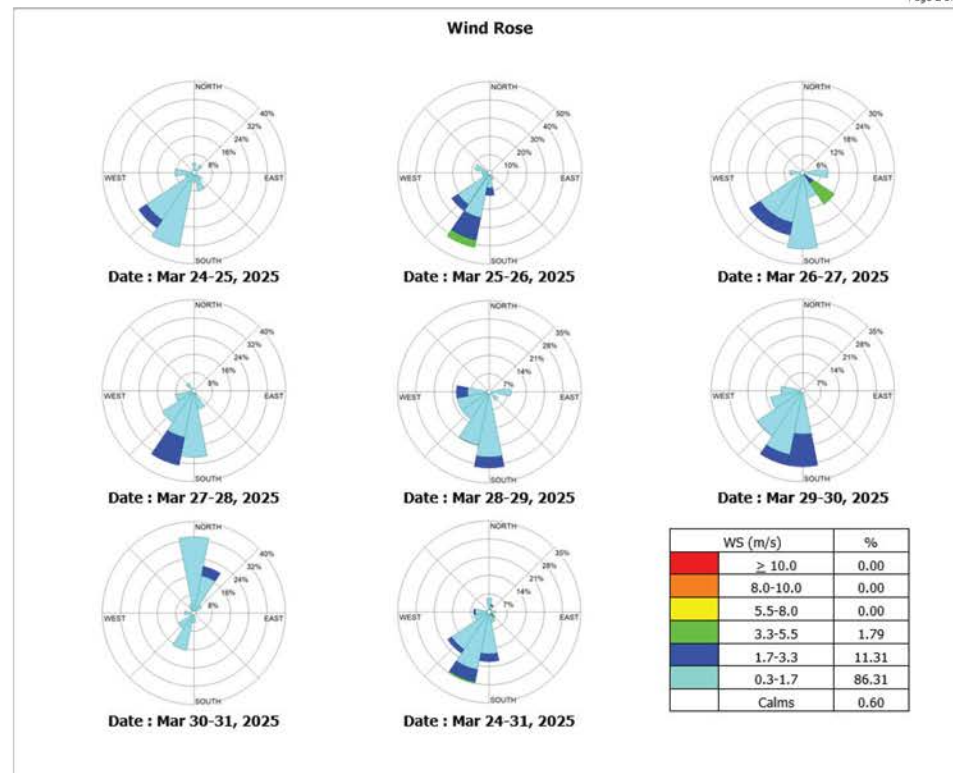


Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2525668
Date Received :Apr 01, 2025
Date Reported :Apr 08, 2025
Report Number :3261030-1 CS

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut, PE (SPE)



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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2525710

Date Received : Apr 01, 2025

Date Reported : Apr 08, 2025

Report Number : 3261068-1

Sample Number : 2525710-1 to 7

Parameter : Wind Speed / Wind Direction

Location : สถานีอนามัยตำบลท่าเรือ (GPS 47P 0735187, 1405873)

Sampling Date : Mar 24 - Mar 31, 2025

Sampling by : Sitpawit Suwannarat

Time	Mar 24 - Mar 25, 2025		Mar 25 - Mar 26, 2025		Mar 26 - Mar 27, 2025		Mar 27 - Mar 28, 2025		Mar 28 - Mar 29, 2025		Mar 29 - Mar 30, 2025		Mar 30 - Mar 31, 2025	
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)
11:00 AM - 12:00 PM	1.6	113.0	ESE	0.3	162.0	SSE	1.9	227.0	SW	2.7	177.0	S	0.5	194.0
12:00 PM - 01:00 PM	0.3	130.0	SE	1.7	151.0	SSE	0.3	188.0	S	1.1	183.0	S	0.3	271.0
01:00 PM - 02:00 PM	0.3	182.0	S	0.9	171.0	S	3.7	154.0	SSE	1.6	157.0	SSE	1.0	176.0
02:00 PM - 03:00 PM	1.3	102.0	ESE	1.8	123.0	ESE	1.0	163.0	SSE	2.2	161.0	SSE	1.0	116.0
03:00 PM - 04:00 PM	2.4	99.0	E	2.7	196.0	SSW	1.7	152.0	SSE	2.7	164.0	SSE	0.3	156.0
04:00 PM - 05:00 PM	1.8	68.0	ENE	1.2	209.0	SSW	0.8	125.0	SE	2.0	204.0	SSW	1.2	159.0
05:00 PM - 06:00 PM	0.3	136.0	SE	0.4	174.0	S	0.3	130.0	SE	0.6	161.0	SSE	1.2	194.0
06:00 PM - 07:00 PM	0.3	117.0	ESE	0.4	172.0	S	0.3	127.0	SE	1.4	188.0	S	0.3	160.0
07:00 PM - 08:00 PM	0.8	98.0	E	0.5	145.0	SE	0.3	188.0	S	1.1	151.0	SSE	0.3	163.0
08:00 PM - 09:00 PM	0.3	124.0	SE	1.7	172.0	S	1.5	177.0	S	0.3	158.0	SSE	0.3	161.0
09:00 PM - 10:00 PM	0.3	141.0	SE	0.3	168.0	SSE	0.3	162.0	SSE	0.3	162.0	SSE	0.5	186.0
10:00 PM - 11:00 PM	0.3	145.0	SE	0.3	140.0	SE	0.6	113.0	ESE	0.3	136.0	SE	0.6	166.0
11:00 PM - 12:00 AM	0.4	148.0	SSE	0.3	211.0	SSW	0.3	201.0	SSW	0.3	171.0	S	0.3	165.0
12:00 AM - 01:00 AM	0.3	149.0	SSE	0.6	126.0	SE	0.6	166.0	SSE	0.3	183.0	S	0.3	165.0
01:00 AM - 02:00 AM	0.3	173.0	S	0.6	148.0	SSE	1.9	172.0	S	0.4	139.0	SE	0.5	156.0
02:00 AM - 03:00 AM	0.3	190.0	S	0.9	195.0	SSW	0.4	138.0	SE	0.5	199.0	SSW	0.3	158.0
03:00 AM - 04:00 AM	0.3	170.0	S	0.7	175.0	S	0.4	150.0	SSE	0.3	184.0	S	0.3	216.0
04:00 AM - 05:00 AM	0.3	161.0	SSE	0.3	185.0	S	1.6	165.0	SSE	0.6	199.0	SSW	0.3	203.0
05:00 AM - 06:00 AM	0.6	144.0	SE	0.3	170.0	S	0.3	175.0	S	0.5	176.0	S	0.5	169.0
06:00 AM - 07:00 AM	0.6	132.0	SE	0.5	171.0	S	0.3	174.0	S	0.5	119.0	ESE	0.3	190.0
07:00 AM - 08:00 AM	0.5	172.0	S	0.7	146.0	SE	0.3	151.0	SSE	0.3	219.0	SW	0.3	159.0
08:00 AM - 09:00 AM	1.9	159.0	SSE	2.2	235.0	SW	0.5	181.0	S	0.9	119.0	ESE	0.3	147.0
09:00 AM - 10:00 AM	1.1	182.0	S	0.9	165.0	SSE	2.1	234.0	SW	0.6	265.0	W	3.5	144.0
10:00 AM - 11:00 AM	0.3	148.0	SSE	3.0	203.0	SSW	2.0	225.0	SW	0.8	213.0	SSW	2.5	189.0

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

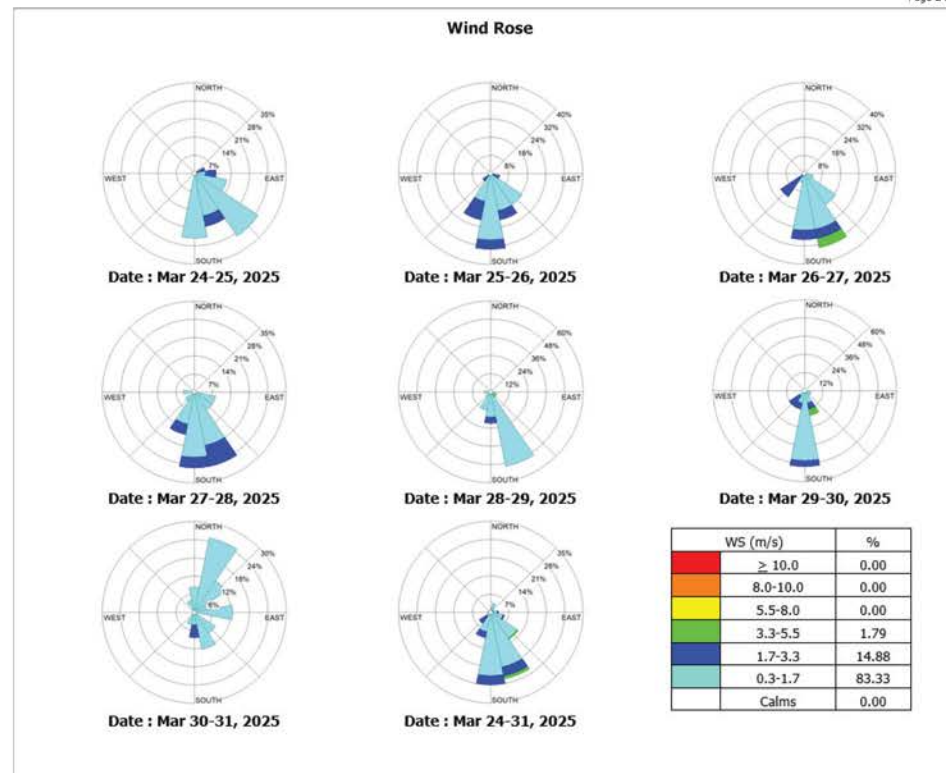
Lot ID: 2525710

Date Received : Apr 01, 2025

Date Reported : Apr 08, 2025

Report Number : 3261068-1

Page 2 of 2



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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2525710

Date Received : Apr 01, 2025

Date Reported : Apr 08, 2025

Report Number : 3261068-1

Sample Number : 2525710-8 to 14

Parameter : Wind Speed / Wind Direction

Location : ศูนย์วิจัยปิโตรเลียม จ.ระยอง (GPS 47P 0731794, 1408788)

Sampling Date : Mar 24 - Mar 31, 2025

Sampling by : Sitpawit Suwannarat

Time	Mar 24 - Mar 25, 2025		Mar 25 - Mar 26, 2025		Mar 26 - Mar 27, 2025		Mar 27 - Mar 28, 2025		Mar 28 - Mar 29, 2025		Mar 29 - Mar 30, 2025		Mar 30 - Mar 31, 2025	
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)
01:00 PM - 02:00 PM	0.3	337.0	NNW	1.4	233.0	SW	0.6	179.0	S	2.1	140.0	SE	2.3	230.0
02:00 PM - 03:00 PM	1.0	101.0	E	0.7	191.0	S	0.9	158.0	SSE	0.4	140.0	SE	0.9	179.0
03:00 PM - 04:00 PM	0.3	218.0	SW	1.2	238.0	WSW	0.8	241.0	WSW	1.0	251.0	WSW	1.4	310.0
04:00 PM - 05:00 PM	1.3	231.0	SW	0.9	160.0	SSE	0.7	273.0	W	0.8	293.0	WNW	1.1	237.0
05:00 PM - 06:00 PM	2.8	204.0	SSW	0.6	130.0	SE	1.1	257.0	WSW	0.8	170.0	S	0.6	138.0
06:00 PM - 07:00 PM	0.4	217.0	SW	0.5	223.0	SW	1.0	214.0	SW	0.4	263.0	W	1.0	330.0
07:00 PM - 08:00 PM	1.0	174.0	S	0.5	231.0	SW	0.3	189.0	S	0.3	226.0	SW	0.3	215.0
08:00 PM - 09:00 PM	0.3	167.0	SSE	0.3	212.0	SSW	0.3	181.0	S	0.3	158.0	SSE	0.3	235.0
09:00 PM - 10:00 PM	0.3	218.0	SW	0.3	153.0	SSE	0.4	246.0	WSW	0.6	208.0	SSW	0.3	113.0
10:00 PM - 11:00 PM	0.3	252.0	WSW	0.3	235.0	SW	0.4	112.0	ESE	0.3	252.0	WSW	0.6	119.0
11:00 PM - 12:00 AM	0.5	224.0	SW	0.3	195.0	SSW	0.3	137.0	SE	0.5	152.0	SSE	0.3	185.0
12:00 AM - 01:00 AM	0.3	228.0	SW	0.6	205.0	SSW	0.4	232.0	SW	0.5	189.0	S	0.3	239.0
01:00 AM - 02:00 AM	0.6	229.0	SW	0.6	137.0	SE	0.3	181.0	S	0.3	230.0	SW	0.3	235.0
02:00 AM - 03:00 AM	0.3	217.0	SW	0.5	186.0	S	0.3	238.0	WSW	0.8	218.0	SW	0.5	186.0
03:00 AM - 04:00 AM	0.5	241.0	WSW	0.5	107.0	ESE	0.5	162.0	SSE	0.5	210.0	SSW	0.9	281.0
04:00 AM - 05:00 AM	0.4	228.0	SW	0.3	253.0	WSW	0.3	181.0	S	0.6	195.0	SSW	0.3	233.0
05:00 AM - 06:00 AM	0.4	229.0	SW	0.3	222.0	SW	0.3	215.0	SW	0.3	171.0	S	0.3	236.0
06:00 AM - 07:00 AM	0.3	229.0	SW	0.3	174.0	S	0.6	245.0	SSW	0.3	202.0	SSW	0.6	193.0
07:00 AM - 08:00 AM	0.3	74.0	ENE	0.3	238.0	WSW	0.3	149.0	SSE	0.3	107.0	ESE	0.9	292.0
08:00 AM - 09:00 AM	0.6	74.0	ENE	0.5	237.0	WSW	0.7	199.0	SSW	0.8	229.0	SW	0.7	232.0
09:00 AM - 10:00 AM	0.3	0.0	N	0.6	129.0	SE	0.5	250.0	WSW	0.8	238.0	WSW	0.3	252.0
10:00 AM - 11:00 AM	1.6	208.0	SSW	0.3	224.0	SW	0.5	216.0	SW	1.7	271.0	W	0.3	235.0
11:00 AM - 12:00 PM	0.6	243.0	WSW	0.7	204.0	SSW	0.4	210.0	SSW	0.9	98.0	E	0.4	186.0
12:00 PM - 01:00 PM	0.5	170.0	S	1.2	122.0	ESE	0.3	246.0	WSW	0.6	243.0	WSW	0.7	119.0

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

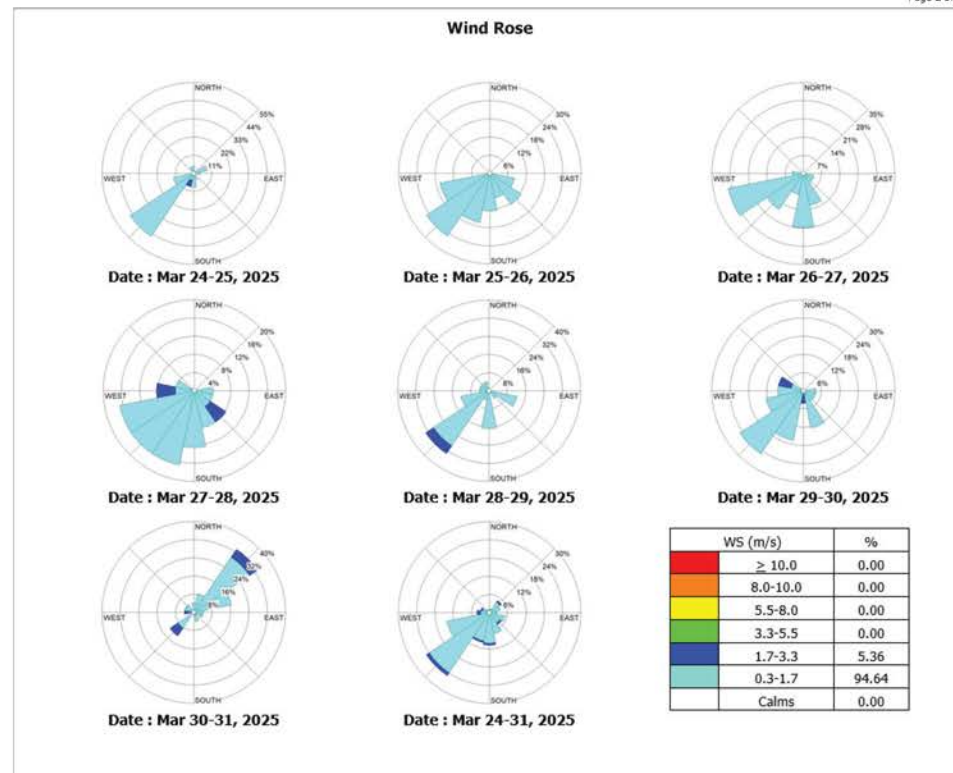
Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2525710

Date Received : Apr 01, 2025

Date Reported : Apr 08, 2025

Report Number : 3261068-1



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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 1 of 12

Sample Number 2525729-1
Sampled Date Mar 24, 2025
Sample Description Air Quality
Location บ้านฉางประจักษ์ (โรงพยาบาลส่งเสริมสุขภาพตำบลตากวน) (GPS 47P 0735520, 1402767)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	24/03/25 - 25/03/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 2 of 12

Sample Number 2525729-2
Sampled Date Mar 25, 2025
Sample Description Air Quality
Location บ้านฉางประจักษ์ (โรงพยาบาลส่งเสริมสุขภาพตำบลตากวน) (GPS 47P 0735520, 1402767)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	25/03/25 - 26/03/25	ppm	-	0.4	0.6	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 3 of 12

Sample Number 2525729-3
Sampled Date Mar 26, 2025
Sample Description Air Quality
Location บ้านฉางประจักษ์ (โรงงานพลาสติกอุตสาหกรรม) (GPS 47P 0735520, 1402767)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	26/03/25 - 27/03/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

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Sample Number 2525729-4
Sampled Date Mar 24, 2025
Sample Description Air Quality
Location บ้านฉางประจักษ์ (GPS 47P 0735346, 1406705)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	24/03/25 - 25/03/25	ppm	-	0.4	0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

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Sample Number 2525729-5
Sampled Date Mar 25, 2025
Sample Description Air Quality
Location ม่วงมฤตภูมิ (GPS 47P 0735346, 1406705)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	25/03/25 - 26/03/25	ppm	-	0.4	0.7	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Analysis / Test Report

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8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 6 of 12

Sample Number 2525729-6
Sampled Date Mar 26, 2025
Sample Description Air Quality
Location ม่วงมฤตภูมิ (GPS 47P 0735346, 1406705)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	26/03/25 - 27/03/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
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P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

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Sample Number 2525729-7
Sampled Date Mar 24, 2025
Sample Description Air Quality
Location สถานีอนามัยเทศบาล (GPS 47P 0735187, 1405873)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	24/03/25 - 25/03/25	ppm	-	0.4	0.5	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

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8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 8 of 12

Sample Number 2525729-8
Sampled Date Mar 25, 2025
Sample Description Air Quality
Location สถานีอนามัยเทศบาล (GPS 47P 0735187, 1405873)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	25/03/25 - 26/03/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
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P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 9 of 12

Sample Number 2525729-9
Sampled Date Mar 26, 2025
Sample Description Air Quality
Location สถานีอนามัยเทศบาล (GPS 47P 0735187, 1405873)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	26/03/25 - 27/03/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
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P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

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Sample Number 2525729-10
Sampled Date Mar 24, 2025
Sample Description Air Quality
Location สถานีอนามัยวัด จังหวัดระยอง (GPS 47P 0731794, 1408788)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	24/03/25 - 25/03/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

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P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

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Sample Number 2525729-11
Sampled Date Mar 25, 2025
Sample Description Air Quality
Location ศูนย์วิจัยปิโตรเลียมฯ (GPS 47P 0731794, 1408788)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	25/03/25 - 26/03/25	ppm	-	0.4	1.2	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
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Thanita Kulsuriwong
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8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2525729

Date Received : Mar 28, 2025

Date Reported : Apr 04, 2025

Report Number : 3261077-1C5

Page 12 of 12

Sample Number 2525729-12
Sampled Date Mar 26, 2025
Sample Description Air Quality
Location ศูนย์วิจัยปิโตรเลียมฯ (GPS 47P 0731794, 1408788)
Date Analysis Commenced Mar 29, 2025
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon as Propane	26/04/25 - 27/04/25	ppm	-	0.4	<0.4	Total Hydrocarbon Analyzer (FID)	Rayong

Sampled By : Sitpawit Suwannarat

Remark :

- LOD : Limit of Detection
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Thanita Kulsuriwong
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ภาคผนวก ค-3

ปริมาณสารอินทรีย์ระเหยในบรรยากาศ (VOCs)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 24143075

Date Received : Jan 07, 2025

Date Reported : Jan 15, 2025

Report Number : 3199833-1C5

Page 1 of 3

Sample Number 24143075-1
Sampled Date Jan 06, 2025
Sample Description Air Quality
Location บ้านนาหนองพลับ (GPS 47P 0735350, 1406704)
Date Analysis Commenced Jan 08, 2025
Condition of Sample Drawn into one 6-L Canister and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 25.9 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	06/01/25 - 07/01/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	06/01/25 - 07/01/25	ug/m3	0.05	0.16	2.88	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	06/01/25 - 07/01/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	06/01/25 - 07/01/25	ug/m3	0.60	1.76	3.74	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	06/01/25 - 07/01/25	ug/m3	0.30	0.86	4.58	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	06/01/25 - 07/01/25	ug/m3	0.60	1.88	20.43	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Map Ta Phut Community station has moderate traffic. Normal activity, Clear sky, Nearby school and community

Sampled By : Anurak Tongkhajonsakda

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Chontichak

Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 24143075

Date Received : Jan 07, 2025

Date Reported : Jan 15, 2025

Report Number : 3199833-1C5

Page 2 of 3

Sample Number 24143075-2
Sampled Date Jan 06, 2025
Sample Description Air Quality
Location โรงเรือนบ้านหนองพลับ (GPS 47P 0723821, 1403299)
Date Analysis Commenced Jan 08, 2025
Condition of Sample Drawn into one 6-L Canister and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 28.5 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	06/01/25 - 07/01/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	06/01/25 - 07/01/25	ug/m3	0.05	0.16	3.51	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	06/01/25 - 07/01/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	06/01/25 - 07/01/25	ug/m3	0.60	1.76	2.61	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	06/01/25 - 07/01/25	ug/m3	0.30	0.86	7.23	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	06/01/25 - 07/01/25	ug/m3	0.60	1.88	7.46	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Nong Fab School station has moderate traffic. Normal activity, Clear sky, Nearby school, temple and community

Sampled By : Anurak Tongkhajonsakda

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Chontichak

Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 24143075

Date Received : Jan 07, 2025

Date Reported : Jan 15, 2025

Report Number : 3199833-1C5

Page 3 of 3

Sample Number 24143075-3
Sampled Date Jan 06, 2025
Sample Description Air Quality
Location สถานีอนามัยมาบตาพุด (GPS 47P 0735207, 1405888)
Date Analysis Commenced Jan 08, 2025
Condition of Sample Drawn into one 6-L Canister and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 28.4 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	06/01/25 - 07/01/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	06/01/25 - 07/01/25	ug/m3	0.05	0.16	2.62	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	06/01/25 - 07/01/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	06/01/25 - 07/01/25	ug/m3	0.60	1.76	1.90	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	06/01/25 - 07/01/25	ug/m3	0.30	0.86	4.47	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	06/01/25 - 07/01/25	ug/m3	0.60	1.88	17.04	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Map Ta Phut Public Health Center station has moderate traffic. Normal activity, Clear sky, Nearby temple, school and community

Sampled By : Anurak Tongkhajonsakda

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

Chontichak

Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 24143076

Date Received : Jan 07, 2025

Date Reported : Jan 13, 2025

Report Number : 3199836-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 1 of 2

Sample Number 24143076-1
Parameter Wind Speed / Wind Direction
Location สถานีอนามัยมาบตาพุด (GPS 47P 0735207, 1405888)
Sampling Date Jan 06 - Jan 07, 2025
Sampling by Anurak Tongkhajonsakda

Time	Jan 06 - Jan 07, 2025		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	3.1	46.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	2.4	56.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.1	123.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.7	94.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.6	59.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.4	40.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.2	55.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.0	126.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.2	148.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.5	182.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.0	28.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.3	95.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.0	95.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.8	130.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuht Jitranont

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

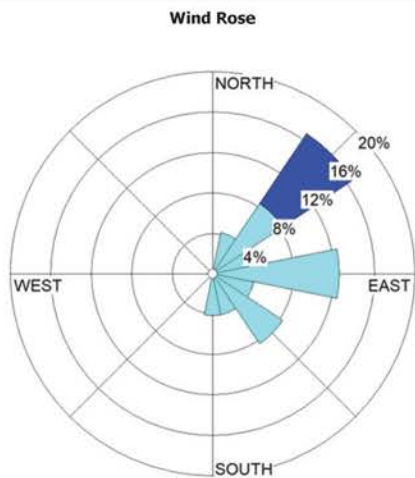
Lot ID: 24143076

Date Received : Jan 07, 2025

Date Reported : Jan 13, 2025

Report Number : 3199836-1

Page 2 of 2



Date : Jan 06-07, 2025

WS (m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	8.33
0.3-1.7	50.00
Calms	41.67

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 252618

Date Received : Feb 04, 2025

Date Reported : Feb 14, 2025

Report Number : 3209549-1C5

Page 1 of 3

Sample Number : 252618-1
Sampled Date : Feb 03, 2025
Sample Description : Air Quality
Location : บ้านนาเกลือ (GPS 47P 0735350, 1406704)
Date Analysis Commenced : Feb 05, 2025
Condition of Sample : Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure : 756 mmHg
Atmospheric Temperature : 30.5 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	03/02/25 - 04/02/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/02/25 - 04/02/25	ug/m3	0.05	0.16	2.17	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	03/02/25 - 04/02/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	03/02/25 - 04/02/25	ug/m3	0.60	1.76	2.33	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	03/02/25 - 04/02/25	ug/m3	0.30	0.86	3.37	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	03/02/25 - 04/02/25	ug/m3	0.60	1.88	5.50	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Map Ta Phut Community station has moderate traffic. Normal activity, Clear sky, Nearby school and community

Sampled By : Jittakorn Sriwasa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 252618

Date Received : Feb 04, 2025

Date Reported : Feb 14, 2025

Report Number : 3209549-1C5

Page 2 of 3

Sample Number 252618-2
Sampled Date Feb 03, 2025
Sample Description Air Quality
Location โรงเรือนฟาร์มหนองพูน (GPS 47P 0723821, 1403299)
Date Analysis Commenced Feb 05, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 29.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	03/02/25 - 04/02/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/02/25 - 04/02/25	ug/m3	0.05	0.16	1.09	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	03/02/25 - 04/02/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	03/02/25 - 04/02/25	ug/m3	0.60	1.76	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	03/02/25 - 04/02/25	ug/m3	0.30	0.86	1.00	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	03/02/25 - 04/02/25	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Nong Fab School station has moderate traffic. Normal activity, Clear sky, Nearby school, temple and community

Sampled By : Jittakorn Sriwasa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 252618

Date Received : Feb 04, 2025

Date Reported : Feb 14, 2025

Report Number : 3209549-1C5

Page 3 of 3

Sample Number 252618-3
Sampled Date Feb 03, 2025
Sample Description Air Quality
Location สถานีอนามัยมาตาพุด (GPS 47P 0735207, 1405888)
Date Analysis Commenced Feb 05, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	03/02/25 - 04/02/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/02/25 - 04/02/25	ug/m3	0.05	0.16	1.66	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	03/02/25 - 04/02/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	03/02/25 - 04/02/25	ug/m3	0.60	1.76	3.24	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	03/02/25 - 04/02/25	ug/m3	0.30	0.86	2.68	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	03/02/25 - 04/02/25	ug/m3	0.60	1.88	8.44	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Map Ta Phut Public Health Center station has moderate traffic. Normal activity, Clear sky, Nearby temple, school and community

Sampled By : Jittakorn Sriwasa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

Lot ID: 252628

Date Received :Feb 05, 2025

Date Reported :Feb 07, 2025

Report Number :3209550-1

Sample Number 252628-1

Parameter Wind Speed / Wind Direction

Location สถานีอนามัยมาบตาพุด (GPS 47P 0735207, 1405888)

Sampling Date Feb 03 - Feb 04, 2025

Sampling by Jittakorn Sriwasa

Time	Feb 03 - Feb 04, 2025											
	WS (m/s)	WD (deg)										
10:00 AM - 11:00 AM	1.2	200.0	SSW	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	3.9	212.0	SSW	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.9	214.0	SW	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.7	202.0	SSW	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.2	205.0	SSW	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	2.2	210.0	SSW	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	1.3	152.0	SSE	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.2	210.0	SSW	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.7	199.0	SSW	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.4	197.0	SSW	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.6	196.0	SSW	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.7	198.0	SSW	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.9	206.0	SSW	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.2	194.0	SSW	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.6	208.0	SSW	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.9	211.0	SSW	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.2	64.0	ENE	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.5	0.0	N	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	2.6	0.0	N	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

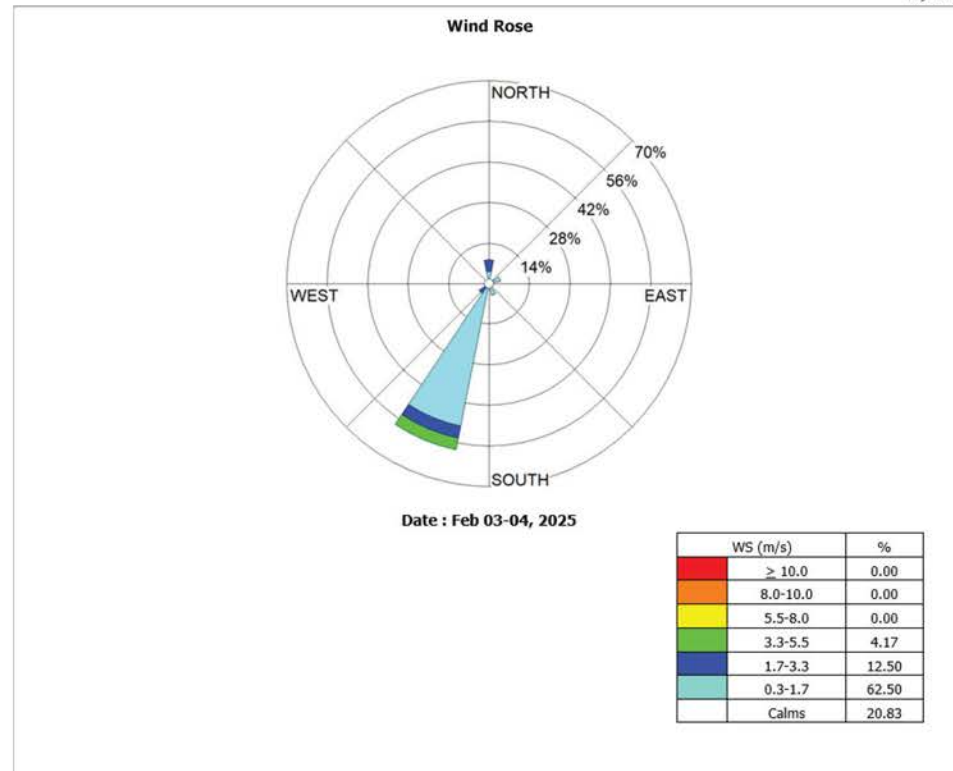
Project Location : Map Ta Phut, PE (SPE)

Lot ID: 252628

Date Received :Feb 05, 2025

Date Reported :Feb 07, 2025

Report Number :3209550-1



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Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2519433

Date Received : Mar 04, 2025

Date Reported : Mar 13, 2025

Report Number : 3245069-1C5

Page 1 of 3

Sample Number 2519433-1
Sampled Date Mar 03, 2025
Sample Description Air Quality
Location บ้านนาหนองพลับ (GPS 47P 0735350, 1406704)
Date Analysis Commenced Mar 05, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 29.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	03/03/25 - 04/03/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/03/25 - 04/03/25	ug/m3	0.05	0.16	0.83	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	03/03/25 - 04/03/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	03/03/25 - 04/03/25	ug/m3	0.60	1.76	3.17	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	03/03/25 - 04/03/25	ug/m3	0.30	0.86	1.96	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	03/03/25 - 04/03/25	ug/m3	0.60	1.88	2.04	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Map Ta Phut Community station has moderate traffic. Normal activity, Clear sky, Nearby school and community

Sampled By : Sawai Tonpho

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2519433

Date Received : Mar 04, 2025

Date Reported : Mar 13, 2025

Report Number : 3245069-1C5

Page 2 of 3

Sample Number 2519433-2
Sampled Date Mar 03, 2025
Sample Description Air Quality
Location โรงเรียนบ้านหนองพลับ (GPS 47P 0723821, 1403299)
Date Analysis Commenced Mar 05, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 29.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	03/03/25 - 04/03/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/03/25 - 04/03/25	ug/m3	0.05	0.16	0.45	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	03/03/25 - 04/03/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	03/03/25 - 04/03/25	ug/m3	0.60	1.76	2.68	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	03/03/25 - 04/03/25	ug/m3	0.30	0.86	<0.86	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	03/03/25 - 04/03/25	ug/m3	0.60	1.88	<1.88	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Nong Fab School station has moderate traffic. Normal activity, Clear sky, Nearby school, temple and community

Sampled By : Sawai Tonpho

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2519433

Date Received : Mar 04, 2025

Date Reported : Mar 13, 2025

Report Number : 3245069-1C5

Page 3 of 3

Sample Number 2519433-3
Sampled Date Mar 03, 2025
Sample Description Air Quality
Location สถานีอนามัยนาตาพุด (GPS 47P 0735207, 1405888)
Date Analysis Commenced Mar 05, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 29.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	03/03/25 - 04/03/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/03/25 - 04/03/25	ug/m3	0.05	0.16	1.47	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	03/03/25 - 04/03/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	03/03/25 - 04/03/25	ug/m3	0.60	1.76	3.67	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	03/03/25 - 04/03/25	ug/m3	0.30	0.86	2.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	03/03/25 - 04/03/25	ug/m3	0.60	1.88	2.26	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Map Ta Phut Public Health Center station has moderate traffic. Normal activity, Clear sky, Nearby temple, school and community

Sampled By : Sawai Tonpho

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2519437

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3245073-1

Page 1 of 2

Sample Number 2519437-1
Parameter Wind Speed / Wind Direction
Location สถานีอนามัยนาตาพุด (GPS 47P 0735207, 1405888)
Sampling Date Mar 03 - Mar 04, 2025
Sampling by Sawai Tonpho

Time	Mar 03 - Mar 04, 2025		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.4	176.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.2	176.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	1.2	182.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.4	178.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.6	176.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.4	186.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.8	164.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.6	180.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.2	177.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.0	168.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.2	148.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.6	160.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.2	155.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.8	157.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.2	162.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	1.2	142.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.6	156.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	1.4	164.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	1.2	152.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.8	155.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.4	158.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.6	150.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.6	164.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.2	168.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

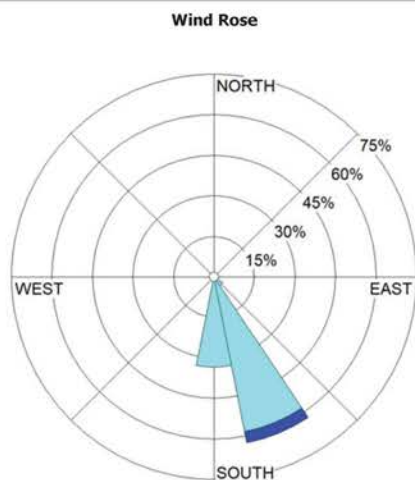
Lot ID: 2519437

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3245073-1

Page 2 of 2



Date : Mar 03-04, 2025

WS (m/s)	%
> 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	4.17
0.3-1.7	95.83
Calms	0.00

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2529507

Date Received : Apr 02, 2025

Date Reported : Apr 10, 2025

Report Number : 3268471-1C5

Page 1 of 3

Sample Number 2529507-1
Sampled Date Apr 01, 2025
Sample Description Air Quality
Location บ้านนาหว้า (GPS 47P 0735350, 1406704)
Date Analysis Commenced Apr 03, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 757 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	01/04/25 - 02/04/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/04/25 - 02/04/25	ug/m3	0.05	0.16	2.24	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	01/04/25 - 02/04/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	01/04/25 - 02/04/25	ug/m3	0.60	1.76	2.61	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/04/25 - 02/04/25	ug/m3	0.30	0.86	5.65	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	01/04/25 - 02/04/25	ug/m3	0.60	1.88	4.75	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Map Ta Phut Community station has moderate traffic. Normal activity, Cloudy, Nearby school and community

Sampled By : Saknarin Jaraskay

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2529507

Date Received : Apr 02, 2025

Date Reported : Apr 10, 2025

Report Number : 3268471-1C5

Page 2 of 3

Sample Number 2529507-2
Sampled Date Apr 01, 2025
Sample Description Air Quality
Location โรงเรือนฟาร์มหนองพูน (GPS 47P 0723821, 1403299)
Date Analysis Commenced Apr 03, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 757 mmHg
Atmospheric Temperature 28.9 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	01/04/25 - 02/04/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/04/25 - 02/04/25	ug/m3	0.05	0.16	1.79	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	01/04/25 - 02/04/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	01/04/25 - 02/04/25	ug/m3	0.60	1.76	<1.76	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/04/25 - 02/04/25	ug/m3	0.30	0.86	5.09	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	01/04/25 - 02/04/25	ug/m3	0.60	1.88	Not Detected	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Nong Fab School station has moderate traffic. Normal activity, Cloudy, Nearby school, temple and community

Sampled By : Saknarin Jaraskay

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2529507

Date Received : Apr 02, 2025

Date Reported : Apr 10, 2025

Report Number : 3268471-1C5

Page 3 of 3

Sample Number 2529507-3
Sampled Date Apr 01, 2025
Sample Description Air Quality
Location สถานีอนามัยนาตาพุด (GPS 47P 0735207, 1405888)
Date Analysis Commenced Apr 03, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 757 mmHg
Atmospheric Temperature 31.3 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	01/04/25 - 02/04/25	ug/m3	0.20	0.60	Not Detected	1100	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	01/04/25 - 02/04/25	ug/m3	0.05	0.16	2.81	7.6	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	01/04/25 - 02/04/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	01/04/25 - 02/04/25	ug/m3	0.60	1.76	2.96	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Propene (Propylene)	01/04/25 - 02/04/25	ug/m3	0.30	0.86	5.34	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong
Toluene	01/04/25 - 02/04/25	ug/m3	0.60	1.88	8.74	No Standard	Based on US EPA Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Map Ta Phut Public Health Center station has moderate traffic. Normal activity, Cloudy, Nearby temple, school and community

Sampled By : Saknarin Jaraskay

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2529509

Date Received : Apr 02, 2025

Date Reported : Apr 08, 2025

Report Number : 3268518-1

Sample Number : 2529509-1

Parameter : Wind Speed / Wind Direction

Location : สถานีอนามัยตำบล (GPS 47P 0735207, 1405888)

Sampling Date : Apr 01 - Apr 02, 2025

Sampling by : Saknarin Jaraskay

Time	Apr 01 - Apr 02, 2025											
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.8	62.0	ENE	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	2.0	188.0	S	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.5	162.0	SSE	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.1	206.0	SSW	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	2.2	208.0	SSW	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.8	183.0	S	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.5	198.0	SSW	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.7	305.0	NW	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.5	230.0	SW	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.0	314.0	NW	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.6	86.0	E	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.3	69.0	ENE	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.8	349.0	N	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.4	20.0	NNE	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.2	35.0	NE	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

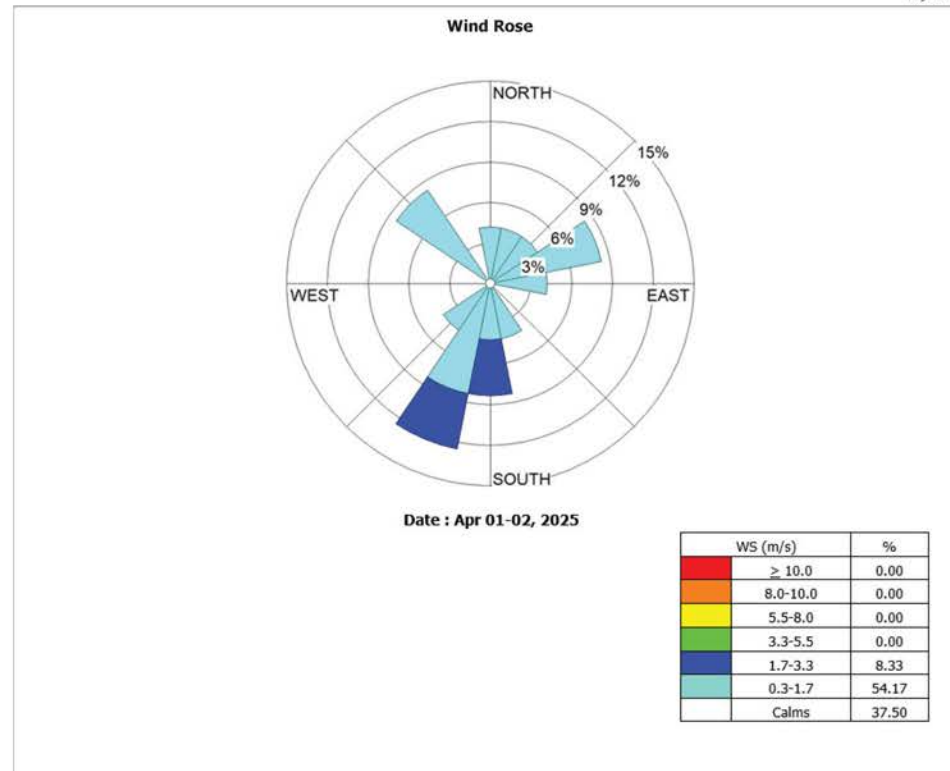
Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2529509

Date Received : Apr 02, 2025

Date Reported : Apr 08, 2025

Report Number : 3268518-1



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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540923

Date Received : May 06, 2025

Date Reported : May 17, 2025

Report Number : 3295309-1C5

Page 1 of 3

Sample Number 2540923-1
Sampled Date May 05, 2025
Sample Description Air Quality
Location บ้านนาหว้า (GPS 47P 0735350, 1406704)
Date Analysis Commenced May 08, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 29.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	05/05/25 - 06/05/25	ug/m3	0.20	0.60	Not Detected	1100	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Benzene	05/05/25 - 06/05/25	ug/m3	0.05	0.16	0.58	7.6	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	05/05/25 - 06/05/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	05/05/25 - 06/05/25	ug/m3	0.60	1.76	Not Detected	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Propene (Propylene)	05/05/25 - 06/05/25	ug/m3	0.30	0.86	1.41	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Toluene	05/05/25 - 06/05/25	ug/m3	0.60	1.88	<1.88	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Map Ta Phut Community station has moderate traffic. Normal activity, Light rain, Nearby school and community

Sampled By : Chatchai Sukpia

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540923

Date Received : May 06, 2025

Date Reported : May 17, 2025

Report Number : 3295309-1C5

Page 2 of 3

Sample Number 2540923-2
Sampled Date May 05, 2025
Sample Description Air Quality
Location โรงเรียนบ้านหนองพลับ (GPS 47P 0723821, 1403299)
Date Analysis Commenced May 08, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 28.7 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	05/05/25 - 06/05/25	ug/m3	0.20	0.60	Not Detected	1100	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Benzene	05/05/25 - 06/05/25	ug/m3	0.05	0.16	0.70	7.6	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	05/05/25 - 06/05/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	05/05/25 - 06/05/25	ug/m3	0.60	1.76	Not Detected	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Propene (Propylene)	05/05/25 - 06/05/25	ug/m3	0.30	0.86	<0.86	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Toluene	05/05/25 - 06/05/25	ug/m3	0.60	1.88	Not Detected	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Nong Fab School station has moderate traffic. Normal activity, Light rain, Nearby school, temple and community

Sampled By : Chatchai Sukpia

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540923

Date Received : May 06, 2025

Date Reported : May 17, 2025

Report Number : 3295309-1C5

Page 3 of 3

Sample Number 2540923-3
Sampled Date May 05, 2025
Sample Description Air Quality
Location สถานีอนามัยตลาดพลู (GPS 47P 0735207, 1405888)
Date Analysis Commenced May 08, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 756 mmHg
Atmospheric Temperature 29.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	05/05/25 - 06/05/25	ug/m3	0.20	0.60	Not Detected	1100	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Benzene	05/05/25 - 06/05/25	ug/m3	0.05	0.16	0.83	7.6	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	05/05/25 - 06/05/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	05/05/25 - 06/05/25	ug/m3	0.60	1.76	Not Detected	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Propene (Propylene)	05/05/25 - 06/05/25	ug/m3	0.30	0.86	1.58	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Toluene	05/05/25 - 06/05/25	ug/m3	0.60	1.88	Not Detected	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Map Ta Phut Public Health Center station has moderate traffic. Normal activity, Light rain, Nearby temple, school and community

Sampled By : Chatchai Sukpia

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540924

Date Received : May 06, 2025

Date Reported : May 14, 2025

Report Number : 3295311-1

Page 1 of 2

Sample Number 2540924-1
Parameter Wind Speed / Wind Direction
Location สถานีอนามัยตลาดพลู (GPS 47P 0735207, 1405888)
Sampling Date May 05 - May 06, 2025
Sampling by Chatchai Sukpia

Time	May 05 - May 06, 2025		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	1.2	175.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	2.6	212.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	2.3	237.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.3	308.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.7	236.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	1.5	217.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	2.2	248.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.7	262.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.3	238.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	2.6	199.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.9	116.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.9	208.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	2.3	203.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.7	241.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.9	180.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	2.1	226.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.2	318.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.6	310.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

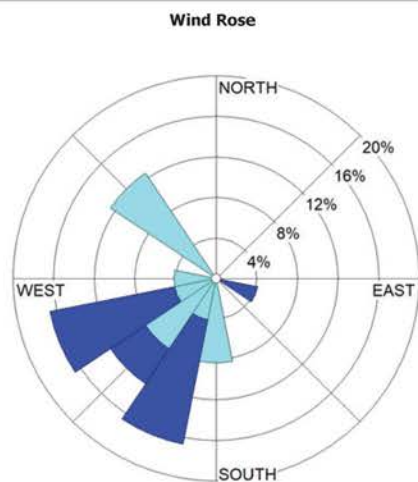
Lot ID: 2540924

Date Received : May 06, 2025

Date Reported : May 14, 2025

Report Number : 3295311-1

Page 2 of 2



Date : May 05-06, 2025

WS (m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	33.33
0.3-1.7	41.67
Calms	25.00

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2549601

Date Received : Jun 05, 2025

Date Reported : Jun 18, 2025

Report Number : 3316096-1C5

Page 1 of 3

Sample Number : 2549601-1
Sampled Date : Jun 04, 2025
Sample Description : Air Quality
Location : มบ.ท่าพระอุตสาหกรรม (GPS 47P 0735350, 1406704)
Date Analysis Commenced : Jun 06, 2025
Condition of Sample : Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure : 755 mmHg
Atmospheric Temperature : 29.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	04/06/25 - 05/06/25	ug/m3	0.20	0.60	<0.60	1100	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Benzene	04/06/25 - 05/06/25	ug/m3	0.05	0.16	3.90	7.6	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	04/06/25 - 05/06/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	04/06/25 - 05/06/25	ug/m3	0.60	1.76	4.09	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Propene (Propylene)	04/06/25 - 05/06/25	ug/m3	0.30	0.86	7.02	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Toluene	04/06/25 - 05/06/25	ug/m3	0.60	1.88	6.33	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Map Ta Phut Community station has moderate traffic. Normal activity, Light rain, Nearby school and community

Sampled By : Suphachai Wongsurichai

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Tanyatarn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2549601

Date Received : Jun 05, 2025

Date Reported : Jun 18, 2025

Report Number : 3316096-1C5

Page 2 of 3

Sample Number 2549601-2
Sampled Date Jun 04, 2025
Sample Description Air Quality
Location โรงเรือนฟาร์มหนองเพน (GPS 47P 0723821, 1403299)
Date Analysis Commenced Jun 06, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 29.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	04/06/25 - 05/06/25	ug/m3	0.20	0.60	Not Detected	1100	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Benzene	04/06/25 - 05/06/25	ug/m3	0.05	0.16	1.73	7.6	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	04/06/25 - 05/06/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	04/06/25 - 05/06/25	ug/m3	0.60	1.76	Not Detected	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Propene (Propylene)	04/06/25 - 05/06/25	ug/m3	0.30	0.86	1.17	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Toluene	04/06/25 - 05/06/25	ug/m3	0.60	1.88	4.30	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Ban Nong Fab School station has moderate traffic. Normal activity, Light rain, Nearby school, temple and community

Sampled By : Suphachai Wongsurichai

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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4989-122/ EMAIL



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2549601

Date Received : Jun 05, 2025

Date Reported : Jun 18, 2025

Report Number : 3316096-1C5

Page 3 of 3

Sample Number 2549601-3
Sampled Date Jun 04, 2025
Sample Description Air Quality
Location ศูนย์บริการสาธารณสุขวัดโสมนัส (โรงพยาบาลส่งเสริมสุขภาพตำบลฉะมาศพุด) (GPS 47P 0735207, 1405888)
Date Analysis Commenced Jun 06, 2025
Condition of Sample Drawn into one 6-L Canister and one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 29.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
1,4-Dichlorobenzene	04/06/25 - 05/06/25	ug/m3	0.20	0.60	Not Detected	1100	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Benzene	04/06/25 - 05/06/25	ug/m3	0.05	0.16	2.56	7.6	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	PCD	Rayong
Ethylene Glycol	04/06/25 - 05/06/25	ug/m3	0.5	7.0	Not Detected	No Standard	Based on NIOSH, 5523	-	Bangkok
Hexane	04/06/25 - 05/06/25	ug/m3	0.60	1.76	5.08	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Propene (Propylene)	04/06/25 - 05/06/25	ug/m3	0.30	0.86	6.06	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong
Toluene	04/06/25 - 05/06/25	ug/m3	0.60	1.88	8.22	No Standard	Based on U.S. Environmental Protection Agency, Compendium Method, TO-15	-	Rayong

Guideline :

NEB : Notification of National Environment Board, B.E. 2560 (2017)

PCD : Notification of the Pollution Control Department, which was published in the Royal Government Gazette Vol. 126 Special Part 13 D dated January 27, B.E. 2552 (2009)

Note : Wat Sopon Public Health Service Center (Map Ta Phut Public Health Center station) has moderate traffic. Normal activity, Light rain, Nearby temple, school and community

Sampled By : Suphachai Wongsurichai

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2549605

Date Received :Jun 05, 2025

Date Reported :Jun 12, 2025

Report Number :3316101-1

Sample Number : 2549605-1

Parameter : Wind Speed / Wind Direction

Location : ศูนย์บริการสาธารณสุขสุวิทย์โสภณ (โรงพยาบาลส่งเสริมสุขภาพตำบลบางตาตุบ) (GPS 47P 0735207, 1405888)

Sampling Date : Jun 04 - Jun 05, 2025

Sampling by : Suphachai Wongsurichai

Time	Jun 04 - Jun 05, 2025											
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	3.0	194.0	SSW	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	4.9	198.0	SSW	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.3	221.0	SW	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.9	202.0	SSW	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.5	202.0	SSW	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	3.5	221.0	SW	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.4	201.0	SSW	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.0	203.0	SSW	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.8	178.0	S	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	2.3	186.0	S	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	3.1	189.0	S	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.9	177.0	S	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.5	343.0	NNW	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.5	318.0	NW	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.4	289.0	WNW	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	2.5	267.0	W	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.4	344.0	NNW	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.3	319.0	NW	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.6	276.0	W	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.8	310.0	NW	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

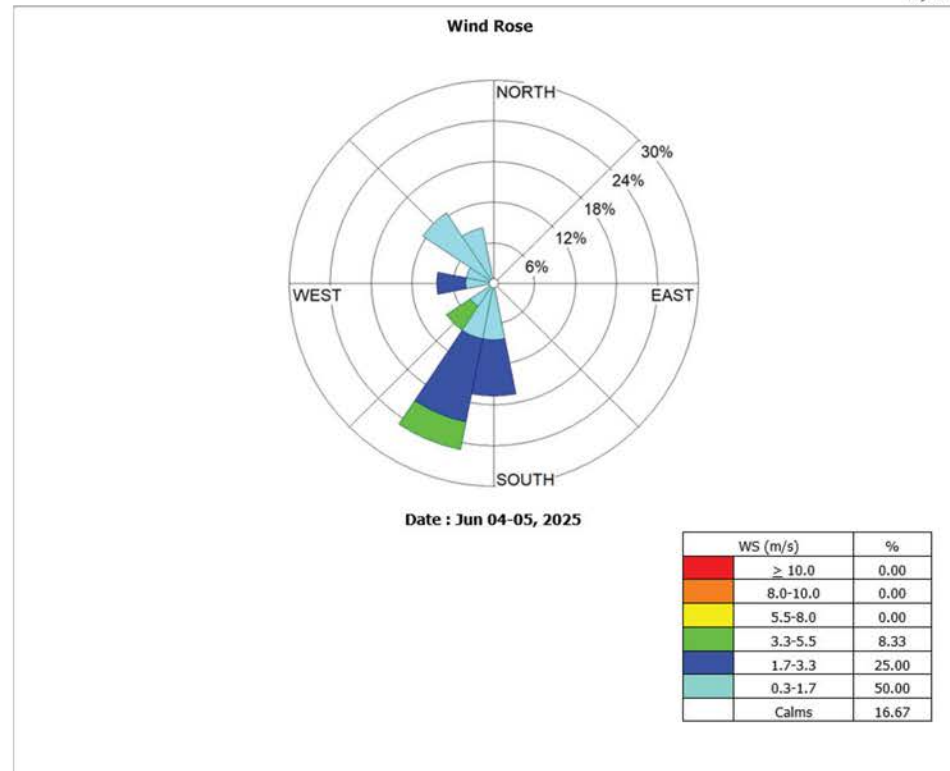
Project Location : Map Ta Phut, PE (SPE)

Lot ID: 2549605

Date Received :Jun 05, 2025

Date Reported :Jun 12, 2025

Report Number :3316101-1



Location : ศูนย์บริการสาธารณสุขสุวิทย์โสภณ (โรงพยาบาลส่งเสริมสุขภาพตำบลบางตาตุบ) (GPS 47P 0735207, 1405888)

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ภาคผนวก ค-4

คุณภาพอากาศในสถานประกอบการ



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517416

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3242063-1

Page 1 of 6

Sample Number 2517416-1
Sampled Date Feb 25, 2025
Sample Description Air Quality
Location Spin Dryer 1
Date Analysis Commenced Feb 27, 2025
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 760 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Satcha Phetsawaeng

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517416

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3242063-1

Page 2 of 6

Sample Number 2517416-2
Sampled Date Feb 25, 2025
Sample Description Air Quality
Location Pelletizer 1
Date Analysis Commenced Feb 27, 2025
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 760 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Satcha Phetsawaeng

Remark :

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P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517416

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3242063-1

Page 3 of 6

Sample Number 2517416-3
Sampled Date Feb 25, 2025
Sample Description Air Quality
Location Hold Up Hopper 1
Date Analysis Commenced Feb 27, 2025
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 760 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Satcha Phetsawaeng

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Client : Siam Polyethylene Co., Ltd.

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P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517416

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3242063-1

Page 4 of 6

Sample Number 2517416-4
Sampled Date Feb 25, 2025
Sample Description Air Quality
Location Spin Dryer 2
Date Analysis Commenced Feb 27, 2025
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 760 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Satcha Phetsawaeng

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P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517416

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3242063-1

Page 5 of 6

Sample Number 2517416-5
Sampled Date Feb 25, 2025
Sample Description Air Quality
Location Pelletizer 2
Date Analysis Commenced Feb 27, 2025
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 760 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Satcha Phetsawaeng

Remark :

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517416

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3242063-1

Page 6 of 6

Sample Number 2517416-6
Sampled Date Feb 25, 2025
Sample Description Air Quality
Location Hold Up Hopper 2
Date Analysis Commenced Feb 27, 2025
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 760 mmHg
Atmospheric Temperature 30.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Satcha Phetsawaeng

Remark :

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Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540925

Date Received : May 30, 2025

Date Reported : Jun 12, 2025

Report Number : 3295312-1

Page 1 of 6

Sample Number 2540925-1
Sampled Date May 29, 2025
Sample Description Air Quality
Location Spin Dryer 1
Date Analysis Commenced May 31, 2025
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.3 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	09:10 AM - 11:10 AM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apichart Wilars

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorm Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540925

Date Received : May 30, 2025

Date Reported : Jun 12, 2025

Report Number : 3295312-1

Page 2 of 6

Sample Number 2540925-2
Sampled Date May 29, 2025
Sample Description Air Quality
Location Pelletizer 1
Date Analysis Commenced May 31, 2025
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	09:15 AM - 11:15 AM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

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Sampled By : Apichart Wilars

Remark :

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P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540925

Date Received : May 30, 2025

Date Reported : Jun 12, 2025

Report Number : 3295312-1

Page 3 of 6

Sample Number 2540925-3
Sampled Date May 29, 2025
Sample Description Air Quality
Location Hold Up Hopper 1
Date Analysis Commenced May 31, 2025
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.7 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	09:05 AM - 11:05 AM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apichart Wilars

Remark :

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Analysis / Test Report

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P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540925

Date Received : May 30, 2025

Date Reported : Jun 12, 2025

Report Number : 3295312-1

Page 4 of 6

Sample Number 2540925-4
Sampled Date May 29, 2025
Sample Description Air Quality
Location Spin Dryer 2
Date Analysis Commenced May 31, 2025
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 30.6 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	08:55 AM - 10:55 AM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apichart Wilars

Remark :

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P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540925

Date Received : May 30, 2025

Date Reported : Jun 12, 2025

Report Number : 3295312-1

Page 5 of 6

Sample Number 2540925-5
Sampled Date May 29, 2025
Sample Description Air Quality
Location Pelletizer 2
Date Analysis Commenced May 31, 2025
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 30.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	09:00 AM - 11:00 AM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apichart Wilars

Remark :

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Supervisor

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540925

Date Received : May 30, 2025

Date Reported : Jun 12, 2025

Report Number : 3295312-1

Page 6 of 6

Sample Number 2540925-6
Sampled Date May 29, 2025
Sample Description Air Quality
Location Hold Up Hopper 2
Date Analysis Commenced May 31, 2025
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 755 mmHg
Atmospheric Temperature 30.4 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
n-Octane	08:50 AM - 10:50 AM	ppm	-	0.10	<0.10	500	NIOSH (2003), 1500	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apichart Wilars

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Tanyatorm Mongkonjirawut
Supervisor

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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ภาคผนวก ค-5

ระดับเสียงโดยทั่วไป และระดับเสียงพื้นฐาน



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253184-1

Page 1 of 1

Sample Number 2517432-1
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Feb 25 - Feb 26, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	66.1	74.7	65.6
12:00 PM - 01:00 PM	65.9	70.8	65.4
01:00 PM - 02:00 PM	65.9	77.4	65.3
02:00 PM - 03:00 PM	66.2	77.2	65.6
03:00 PM - 04:00 PM	66.4	74.7	65.9
04:00 PM - 05:00 PM	66.0	79.5	65.5
05:00 PM - 06:00 PM	65.9	70.0	65.5
06:00 PM - 07:00 PM	66.0	69.9	65.6
07:00 PM - 08:00 PM	66.7	74.2	66.0
08:00 PM - 09:00 PM	66.9	72.5	66.3
09:00 PM - 10:00 PM	66.6	71.8	66.0
10:00 PM - 11:00 PM	66.5	74.7	65.9
11:00 PM - 12:00 AM	66.5	71.5	65.9
12:00 AM - 01:00 AM	66.7	73.8	66.1
01:00 AM - 02:00 AM	66.5	77.7	65.9
02:00 AM - 03:00 AM	67.4	83.0	66.4
03:00 AM - 04:00 AM	67.5	85.3	66.2
04:00 AM - 05:00 AM	66.1	77.6	65.7
05:00 AM - 06:00 AM	65.7	73.0	65.3
06:00 AM - 07:00 AM	65.8	73.7	65.4
07:00 AM - 08:00 AM	68.0	95.2	65.9
08:00 AM - 09:00 AM	66.9	78.2	66.2
09:00 AM - 10:00 AM	66.7	79.0	66.0
10:00 AM - 11:00 AM	66.6	72.0	66.0

Leq Average 24 hrs. (dB(A))

66.5

Lmax (dB(A))

95.2

L90 (dB(A))

65.9

Ldn (dB(A))

73.0

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:45PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253185-1

Page 1 of 1

Sample Number 2517432-2
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	66.7	76.0	65.9
12:00 PM - 01:00 PM	66.5	69.6	65.9
01:00 PM - 02:00 PM	69.4	90.8	66.7
02:00 PM - 03:00 PM	67.4	82.3	66.5
03:00 PM - 04:00 PM	66.6	73.6	66.0
04:00 PM - 05:00 PM	66.3	76.7	65.2
05:00 PM - 06:00 PM	66.4	78.3	65.4
06:00 PM - 07:00 PM	66.8	77.5	65.9
07:00 PM - 08:00 PM	66.1	71.0	65.5
08:00 PM - 09:00 PM	67.6	77.3	66.5
09:00 PM - 10:00 PM	67.6	77.5	66.6
10:00 PM - 11:00 PM	67.5	81.8	66.5
11:00 PM - 12:00 AM	67.2	78.3	66.4
12:00 AM - 01:00 AM	66.6	77.6	66.0
01:00 AM - 02:00 AM	66.5	73.8	66.0
02:00 AM - 03:00 AM	66.7	73.1	66.0
03:00 AM - 04:00 AM	66.6	76.1	66.0
04:00 AM - 05:00 AM	65.9	70.2	65.4
05:00 AM - 06:00 AM	65.6	68.4	65.3
06:00 AM - 07:00 AM	65.6	70.2	65.2
07:00 AM - 08:00 AM	67.9	90.5	65.3
08:00 AM - 09:00 AM	66.3	73.6	65.6
09:00 AM - 10:00 AM	66.0	70.9	65.1
10:00 AM - 11:00 AM	66.0	70.0	65.3

Leq Average 24 hrs. (dB(A))

66.8

Lmax (dB(A))

90.8

L90 (dB(A))

65.9

Ldn (dB(A))

73.0

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:46PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253186-1

Page 1 of 1

Sample Number 2517432-3
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Feb 27 - Feb 28, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	66.1	70.0	65.3
12:00 PM - 01:00 PM	66.5	71.1	65.8
01:00 PM - 02:00 PM	66.6	74.7	65.8
02:00 PM - 03:00 PM	69.8	97.5	66.4
03:00 PM - 04:00 PM	67.2	81.1	66.3
04:00 PM - 05:00 PM	67.7	86.8	66.0
05:00 PM - 06:00 PM	66.9	73.1	66.1
06:00 PM - 07:00 PM	66.7	71.7	66.0
07:00 PM - 08:00 PM	66.5	71.8	65.9
08:00 PM - 09:00 PM	67.0	81.7	66.2
09:00 PM - 10:00 PM	67.1	84.2	66.2
10:00 PM - 11:00 PM	66.6	72.4	66.2
11:00 PM - 12:00 AM	66.6	70.3	66.1
12:00 AM - 01:00 AM	66.6	72.0	66.1
01:00 AM - 02:00 AM	66.7	74.8	66.2
02:00 AM - 03:00 AM	66.7	71.1	66.3
03:00 AM - 04:00 AM	67.6	76.3	66.6
04:00 AM - 05:00 AM	66.7	71.4	66.3
05:00 AM - 06:00 AM	66.6	68.7	66.3
06:00 AM - 07:00 AM	66.8	73.6	66.4
07:00 AM - 08:00 AM	67.1	81.5	66.4
08:00 AM - 09:00 AM	69.0	76.1	67.4
09:00 AM - 10:00 AM	69.1	79.1	67.6
10:00 AM - 11:00 AM	69.3	76.0	67.6

Leq Average 24 hrs. (dB(A)) 67.4

Lmax (dB(A)) 97.5

L90 (dB(A)) 66.2

Ldn (dB(A)) 73.3

Standard (dB(A)) 70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:46PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253187-1

Page 1 of 1

Sample Number 2517432-4
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Feb 28 - Mar 01, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	67.8	74.4	66.8
12:00 PM - 01:00 PM	68.6	76.0	67.1
01:00 PM - 02:00 PM	69.2	82.6	67.5
02:00 PM - 03:00 PM	67.8	85.8	66.7
03:00 PM - 04:00 PM	69.1	76.4	67.6
04:00 PM - 05:00 PM	67.5	73.8	66.9
05:00 PM - 06:00 PM	67.4	71.6	66.8
06:00 PM - 07:00 PM	67.4	81.3	66.7
07:00 PM - 08:00 PM	67.4	70.3	66.8
08:00 PM - 09:00 PM	67.5	70.8	66.9
09:00 PM - 10:00 PM	69.0	77.5	67.4
10:00 PM - 11:00 PM	68.4	76.0	67.2
11:00 PM - 12:00 AM	67.4	72.0	66.8
12:00 AM - 01:00 AM	67.6	72.7	66.9
01:00 AM - 02:00 AM	69.2	77.5	67.6
02:00 AM - 03:00 AM	67.6	75.2	66.6
03:00 AM - 04:00 AM	69.1	74.8	67.4
04:00 AM - 05:00 AM	67.4	74.7	66.4
05:00 AM - 06:00 AM	66.6	78.5	65.5
06:00 AM - 07:00 AM	66.0	73.4	65.4
07:00 AM - 08:00 AM	66.1	72.8	65.4
08:00 AM - 09:00 AM	66.0	77.4	65.3
09:00 AM - 10:00 AM	66.7	87.5	65.4
10:00 AM - 11:00 AM	66.1	76.4	65.4

Leq Average 24 hrs. (dB(A)) 67.7

Lmax (dB(A)) 87.5

L90 (dB(A)) 66.8

Ldn (dB(A)) 74.2

Standard (dB(A)) 70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:46PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253188-1

Page 1 of 1

Sample Number 2517432-5
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	67.4	75.7	66.0
12:00 PM - 01:00 PM	65.9	72.3	65.2
01:00 PM - 02:00 PM	65.9	78.7	65.1
02:00 PM - 03:00 PM	66.1	77.0	65.3
03:00 PM - 04:00 PM	67.6	84.9	65.8
04:00 PM - 05:00 PM	66.6	83.1	65.8
05:00 PM - 06:00 PM	68.4	76.1	66.7
06:00 PM - 07:00 PM	66.7	75.6	66.0
07:00 PM - 08:00 PM	66.5	72.8	66.0
08:00 PM - 09:00 PM	66.6	71.7	66.0
09:00 PM - 10:00 PM	67.4	75.6	66.4
10:00 PM - 11:00 PM	68.0	77.6	66.8
11:00 PM - 12:00 AM	67.0	74.9	66.1
12:00 AM - 01:00 AM	68.5	78.5	67.0
01:00 AM - 02:00 AM	67.1	74.3	66.5
02:00 AM - 03:00 AM	67.2	72.3	66.5
03:00 AM - 04:00 AM	67.1	74.0	66.5
04:00 AM - 05:00 AM	68.7	75.7	67.3
05:00 AM - 06:00 AM	68.3	88.9	66.8
06:00 AM - 07:00 AM	67.9	74.9	66.7
07:00 AM - 08:00 AM	67.0	84.2	66.2
08:00 AM - 09:00 AM	67.1	74.0	66.5
09:00 AM - 10:00 AM	67.1	72.7	66.5
10:00 AM - 11:00 AM	67.1	75.4	66.4

Leq Average 24 hrs. (dB(A))

67.3

Lmax (dB(A))

88.9

L90 (dB(A))

66.4

Ldn (dB(A))

74.1

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:47PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253189-1

Page 1 of 1

Sample Number 2517432-6
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	68.8	75.8	67.2
12:00 PM - 01:00 PM	67.7	74.4	66.6
01:00 PM - 02:00 PM	66.6	71.6	66.0
02:00 PM - 03:00 PM	67.2	74.9	66.4
03:00 PM - 04:00 PM	67.0	71.0	66.5
04:00 PM - 05:00 PM	67.2	77.7	66.2
05:00 PM - 06:00 PM	66.0	82.9	65.5
06:00 PM - 07:00 PM	66.1	73.5	65.6
07:00 PM - 08:00 PM	66.9	77.8	66.2
08:00 PM - 09:00 PM	67.0	73.0	66.2
09:00 PM - 10:00 PM	67.1	75.7	66.3
10:00 PM - 11:00 PM	66.9	75.7	66.2
11:00 PM - 12:00 AM	67.4	76.7	66.3
12:00 AM - 01:00 AM	68.5	75.3	67.1
01:00 AM - 02:00 AM	68.5	75.0	67.2
02:00 AM - 03:00 AM	66.9	73.2	66.2
03:00 AM - 04:00 AM	66.8	75.8	66.1
04:00 AM - 05:00 AM	66.6	73.4	66.0
05:00 AM - 06:00 AM	66.6	71.3	66.0
06:00 AM - 07:00 AM	67.5	75.2	66.4
07:00 AM - 08:00 AM	68.4	85.1	67.0
08:00 AM - 09:00 AM	66.4	80.1	65.8
09:00 AM - 10:00 AM	66.4	80.8	65.8
10:00 AM - 11:00 AM	66.9	74.3	66.2

Leq Average 24 hrs. (dB(A))

67.2

Lmax (dB(A))

85.1

L90 (dB(A))

66.2

Ldn (dB(A))

73.7

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:48PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517432

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253190-1

Page 1 of 1

Sample Number 2517432-7
Parameter Noise (Leq 24 hrs.)
Location บริเวณรั้วด้านทิศเหนือของโรงงาน (GPS 47P 0734090, 1404555)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623387

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	68.1	85.4	66.1
12:00 PM - 01:00 PM	68.7	76.5	67.1
01:00 PM - 02:00 PM	66.4	78.4	65.4
02:00 PM - 03:00 PM	66.1	75.9	64.9
03:00 PM - 04:00 PM	67.7	75.9	66.1
04:00 PM - 05:00 PM	67.1	76.9	66.2
05:00 PM - 06:00 PM	67.5	76.4	66.5
06:00 PM - 07:00 PM	66.7	71.1	66.1
07:00 PM - 08:00 PM	66.7	76.9	65.8
08:00 PM - 09:00 PM	65.7	70.3	65.1
09:00 PM - 10:00 PM	65.5	76.8	64.8
10:00 PM - 11:00 PM	67.4	81.4	66.0
11:00 PM - 12:00 AM	67.9	74.8	66.3
12:00 AM - 01:00 AM	67.4	74.9	66.1
01:00 AM - 02:00 AM	65.9	77.5	65.3
02:00 AM - 03:00 AM	66.0	70.2	65.3
03:00 AM - 04:00 AM	66.5	77.3	65.8
04:00 AM - 05:00 AM	65.8	75.4	65.2
05:00 AM - 06:00 AM	67.2	74.8	66.0
06:00 AM - 07:00 AM	66.6	75.4	65.7
07:00 AM - 08:00 AM	67.7	81.7	66.3
08:00 AM - 09:00 AM	66.2	74.6	65.6
09:00 AM - 10:00 AM	66.7	72.4	66.1
10:00 AM - 11:00 AM	67.0	77.1	65.9

Leq Average 24 hrs. (dB(A)) 66.9

Lmax (dB(A)) 85.4

L90 (dB(A)) 65.9

Ldn (dB(A)) 73.3

Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (1:47PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253219-1

Page 1 of 1

Sample Number 2517435-1
Parameter Noise (Leq 24 hrs.)
Location ชุมชนวัดโสมกวน (GPS 47P 0735038, 1405843)
Measurement Date Feb 25 - Feb 26, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	56.8	84.6	51.6
12:00 PM - 01:00 PM	53.1	79.8	47.2
01:00 PM - 02:00 PM	51.8	77.8	45.9
02:00 PM - 03:00 PM	50.9	73.8	44.9
03:00 PM - 04:00 PM	50.9	71.8	46.6
04:00 PM - 05:00 PM	55.6	78.6	48.6
05:00 PM - 06:00 PM	55.5	74.5	49.6
06:00 PM - 07:00 PM	57.5	77.2	50.1
07:00 PM - 08:00 PM	53.3	71.8	49.9
08:00 PM - 09:00 PM	52.8	71.3	49.0
09:00 PM - 10:00 PM	55.0	72.1	49.7
10:00 PM - 11:00 PM	57.1	73.3	47.9
11:00 PM - 12:00 AM	59.1	74.2	47.8
12:00 AM - 01:00 AM	59.0	67.6	53.2
01:00 AM - 02:00 AM	58.3	70.0	52.6
02:00 AM - 03:00 AM	57.1	68.3	50.4
03:00 AM - 04:00 AM	52.2	61.5	43.8
04:00 AM - 05:00 AM	47.6	67.3	43.6
05:00 AM - 06:00 AM	47.5	65.3	43.7
06:00 AM - 07:00 AM	51.7	68.5	48.4
07:00 AM - 08:00 AM	55.6	78.8	50.9
08:00 AM - 09:00 AM	55.6	72.7	51.2
09:00 AM - 10:00 AM	55.9	70.4	51.1
10:00 AM - 11:00 AM	53.8	70.9	48.6

Leq Average 24 hrs. (dB(A)) 55.3

Lmax (dB(A)) 84.6

L90 (dB(A)) 48.6

Ldn (dB(A)) 62.4

Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
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S:\Reports_Air Noise.rpt (2:07PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253220-1

Page 1 of 1

Sample Number 2517435-2
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนวัดโสมถะ (GPS 47P 0735038, 1405843)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	52.7	77.2	46.6
12:00 PM - 01:00 PM	51.2	68.7	46.3
01:00 PM - 02:00 PM	53.2	77.3	48.0
02:00 PM - 03:00 PM	51.5	72.9	46.9
03:00 PM - 04:00 PM	54.5	74.2	46.7
04:00 PM - 05:00 PM	54.3	72.3	46.7
05:00 PM - 06:00 PM	55.7	74.0	48.5
06:00 PM - 07:00 PM	54.9	81.2	49.1
07:00 PM - 08:00 PM	52.0	69.8	47.8
08:00 PM - 09:00 PM	50.6	65.7	47.4
09:00 PM - 10:00 PM	51.8	69.7	45.5
10:00 PM - 11:00 PM	56.2	74.0	48.1
11:00 PM - 12:00 AM	56.8	66.5	52.0
12:00 AM - 01:00 AM	55.1	67.5	48.8
01:00 AM - 02:00 AM	50.6	65.1	45.0
02:00 AM - 03:00 AM	48.8	62.5	44.0
03:00 AM - 04:00 AM	48.0	71.2	43.8
04:00 AM - 05:00 AM	52.2	65.3	44.9
05:00 AM - 06:00 AM	55.2	72.9	48.9
06:00 AM - 07:00 AM	55.3	74.2	49.5
07:00 AM - 08:00 AM	57.2	74.4	51.1
08:00 AM - 09:00 AM	55.8	73.5	50.9
09:00 AM - 10:00 AM	52.2	68.4	48.1
10:00 AM - 11:00 AM	53.9	75.7	48.9

Leq Average 24 hrs. (dB(A)) 53.9

Lmax (dB(A))

81.2

L90 (dB(A))

47.8

Ldn (dB(A))

60.5

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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Supot Salamteh
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S:\Reports_Air Noise rpt (2.08PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253221-1

Page 1 of 1

Sample Number 2517435-3
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนวัดโสมถะ (GPS 47P 0735038, 1405843)
Measurement Date Feb 27 - Feb 28, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	52.0	68.9	49.2
12:00 PM - 01:00 PM	52.2	68.6	48.9
01:00 PM - 02:00 PM	51.9	69.8	48.4
02:00 PM - 03:00 PM	50.5	66.2	47.6
03:00 PM - 04:00 PM	51.5	69.8	48.4
04:00 PM - 05:00 PM	52.3	71.4	49.1
05:00 PM - 06:00 PM	55.0	74.9	50.1
06:00 PM - 07:00 PM	56.5	80.6	50.0
07:00 PM - 08:00 PM	53.8	72.3	48.8
08:00 PM - 09:00 PM	53.0	73.4	47.7
09:00 PM - 10:00 PM	55.6	65.8	48.6
10:00 PM - 11:00 PM	55.7	70.4	46.4
11:00 PM - 12:00 AM	55.2	65.0	46.8
12:00 AM - 01:00 AM	50.0	63.7	44.4
01:00 AM - 02:00 AM	48.0	67.9	43.8
02:00 AM - 03:00 AM	46.6	67.2	43.7
03:00 AM - 04:00 AM	45.5	60.9	43.7
04:00 AM - 05:00 AM	46.9	61.4	44.0
05:00 AM - 06:00 AM	48.0	65.9	44.9
06:00 AM - 07:00 AM	53.6	74.4	48.9
07:00 AM - 08:00 AM	56.1	74.7	51.3
08:00 AM - 09:00 AM	55.0	72.6	50.8
09:00 AM - 10:00 AM	55.9	72.3	48.8
10:00 AM - 11:00 AM	53.9	71.5	47.8

Leq Average 24 hrs. (dB(A)) 53.3

Lmax (dB(A))

80.6

L90 (dB(A))

48.4

Ldn (dB(A))

58.4

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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Supot Salamteh
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S:\Reports_Air Noise rpt (2.08PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253222-1

Page 1 of 1

Sample Number 2517435-4
Parameter Noise (Leq 24 hrs.)
Location มุมชนวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 28 - Mar 01, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	52.2	68.7	47.7
12:00 PM - 01:00 PM	52.9	80.0	47.9
01:00 PM - 02:00 PM	53.2	75.5	48.7
02:00 PM - 03:00 PM	54.2	76.4	48.3
03:00 PM - 04:00 PM	57.0	79.4	49.2
04:00 PM - 05:00 PM	55.4	81.8	49.7
05:00 PM - 06:00 PM	53.3	70.7	49.6
06:00 PM - 07:00 PM	55.0	85.9	49.3
07:00 PM - 08:00 PM	53.1	73.3	48.0
08:00 PM - 09:00 PM	54.8	75.5	51.4
09:00 PM - 10:00 PM	55.1	83.1	50.7
10:00 PM - 11:00 PM	50.6	68.2	47.7
11:00 PM - 12:00 AM	50.3	75.4	47.3
12:00 AM - 01:00 AM	50.2	73.5	46.5
01:00 AM - 02:00 AM	47.8	66.4	44.6
02:00 AM - 03:00 AM	48.3	69.5	44.3
03:00 AM - 04:00 AM	47.2	67.2	43.2
04:00 AM - 05:00 AM	50.7	66.2	44.3
05:00 AM - 06:00 AM	52.1	64.4	44.8
06:00 AM - 07:00 AM	57.5	78.3	48.2
07:00 AM - 08:00 AM	56.1	80.5	50.7
08:00 AM - 09:00 AM	52.8	72.9	48.8
09:00 AM - 10:00 AM	52.8	80.0	47.9
10:00 AM - 11:00 AM	52.8	74.0	47.9

Leq Average 24 hrs. (dB(A))

53.5

Lmax (dB(A))

85.9

L90 (dB(A))

47.9

Ldn (dB(A))

58.6

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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Supot Salamteh
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S:\Reports_Air Noise rpt (2.08PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253223-1

Page 1 of 1

Sample Number 2517435-5
Parameter Noise (Leq 24 hrs.)
Location มุมชนวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	52.2	68.7	48.1
12:00 PM - 01:00 PM	52.0	66.6	48.4
01:00 PM - 02:00 PM	52.3	64.3	48.6
02:00 PM - 03:00 PM	52.0	64.5	48.3
03:00 PM - 04:00 PM	52.1	68.8	48.6
04:00 PM - 05:00 PM	53.2	69.9	49.8
05:00 PM - 06:00 PM	54.9	74.3	51.0
06:00 PM - 07:00 PM	57.3	78.7	50.5
07:00 PM - 08:00 PM	54.7	78.4	49.9
08:00 PM - 09:00 PM	54.1	84.7	50.1
09:00 PM - 10:00 PM	53.9	79.7	48.3
10:00 PM - 11:00 PM	52.1	70.6	48.0
11:00 PM - 12:00 AM	56.7	84.0	47.7
12:00 AM - 01:00 AM	49.7	68.4	46.2
01:00 AM - 02:00 AM	48.1	67.2	45.2
02:00 AM - 03:00 AM	48.3	64.0	45.0
03:00 AM - 04:00 AM	47.5	62.2	44.8
04:00 AM - 05:00 AM	48.2	65.0	44.6
05:00 AM - 06:00 AM	47.8	63.4	44.9
06:00 AM - 07:00 AM	50.8	64.0	47.8
07:00 AM - 08:00 AM	54.0	77.0	49.1
08:00 AM - 09:00 AM	54.8	73.1	49.1
09:00 AM - 10:00 AM	54.1	73.1	49.6
10:00 AM - 11:00 AM	54.7	73.2	51.5

Leq Average 24 hrs. (dB(A))

53.1

Lmax (dB(A))

84.7

L90 (dB(A))

48.3

Ldn (dB(A))

58.1

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise rpt (2.08PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253224-1

Page 1 of 1

Sample Number 2517435-6
Parameter Noise (Leq 24 hrs.)
Location มุมชนวัดโสมกู่ (GPS 47P 0735038, 1405843)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	53.7	74.0	50.6
12:00 PM - 01:00 PM	52.5	68.9	49.2
01:00 PM - 02:00 PM	52.2	68.0	49.0
02:00 PM - 03:00 PM	52.5	68.8	49.1
03:00 PM - 04:00 PM	52.1	67.1	48.7
04:00 PM - 05:00 PM	51.9	73.9	48.4
05:00 PM - 06:00 PM	53.3	78.0	49.9
06:00 PM - 07:00 PM	57.8	88.7	49.9
07:00 PM - 08:00 PM	54.8	67.9	51.2
08:00 PM - 09:00 PM	55.9	76.9	52.0
09:00 PM - 10:00 PM	54.1	77.9	48.6
10:00 PM - 11:00 PM	50.0	67.2	46.2
11:00 PM - 12:00 AM	50.0	69.6	45.7
12:00 AM - 01:00 AM	50.0	70.1	45.6
01:00 AM - 02:00 AM	47.6	63.4	44.4
02:00 AM - 03:00 AM	46.8	68.5	44.0
03:00 AM - 04:00 AM	48.8	74.1	44.7
04:00 AM - 05:00 AM	48.5	74.1	45.3
05:00 AM - 06:00 AM	49.0	65.9	46.1
06:00 AM - 07:00 AM	53.0	74.1	49.4
07:00 AM - 08:00 AM	54.5	71.6	51.4
08:00 AM - 09:00 AM	54.4	74.0	50.9
09:00 AM - 10:00 AM	53.9	71.3	49.8
10:00 AM - 11:00 AM	55.1	81.3	50.7

Leq Average 24 hrs. (dB(A)) 53.0

Lmax (dB(A)) 88.7

L90 (dB(A)) 49.0

Ldn (dB(A)) 57.1

Standard (dB(A)) 70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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Supot Salamteh
Section Head

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S:\Reports_Air Noise rpt (2.09PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517435

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253225-1

Page 1 of 1

Sample Number 2517435-7
Parameter Noise (Leq 24 hrs.)
Location มุมชนวัดโสมกู่ (GPS 47P 0735038, 1405843)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	54.1	69.4	52.1
12:00 PM - 01:00 PM	54.4	68.6	52.3
01:00 PM - 02:00 PM	54.3	71.6	52.2
02:00 PM - 03:00 PM	54.9	73.3	52.5
03:00 PM - 04:00 PM	53.8	67.6	52.2
04:00 PM - 05:00 PM	55.1	77.0	52.2
05:00 PM - 06:00 PM	55.4	73.5	53.0
06:00 PM - 07:00 PM	56.5	79.4	53.5
07:00 PM - 08:00 PM	55.4	71.9	53.1
08:00 PM - 09:00 PM	55.5	67.8	53.1
09:00 PM - 10:00 PM	55.0	81.0	52.3
10:00 PM - 11:00 PM	54.6	71.3	51.6
11:00 PM - 12:00 AM	54.5	68.7	51.4
12:00 AM - 01:00 AM	53.5	69.2	51.2
01:00 AM - 02:00 AM	52.8	69.2	51.0
02:00 AM - 03:00 AM	52.7	73.1	51.0
03:00 AM - 04:00 AM	52.1	68.8	51.0
04:00 AM - 05:00 AM	52.4	67.6	51.3
05:00 AM - 06:00 AM	53.6	73.0	51.8
06:00 AM - 07:00 AM	54.9	66.6	53.2
07:00 AM - 08:00 AM	56.6	71.8	54.2
08:00 AM - 09:00 AM	56.9	76.0	53.6
09:00 AM - 10:00 AM	58.4	72.8	54.3
10:00 AM - 11:00 AM	55.6	74.8	52.5

Leq Average 24 hrs. (dB(A)) 55.0

Lmax (dB(A)) 81.0

L90 (dB(A)) 52.2

Ldn (dB(A)) 60.3

Standard (dB(A)) 70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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Section Head

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S:\Reports_Air Noise rpt (2.09PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253226-1

Page 1 of 1

Sample Number 2517440-1
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนตาพุด-อ่าวประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Feb 25 - Feb 26, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	50.4	71.5	43.7
12:00 PM - 01:00 PM	49.1	71.1	42.7
01:00 PM - 02:00 PM	47.6	65.3	41.5
02:00 PM - 03:00 PM	48.7	69.2	43.0
03:00 PM - 04:00 PM	51.8	71.9	45.5
04:00 PM - 05:00 PM	50.5	68.7	46.1
05:00 PM - 06:00 PM	51.0	68.7	46.1
06:00 PM - 07:00 PM	50.2	69.0	46.6
07:00 PM - 08:00 PM	49.7	69.9	46.0
08:00 PM - 09:00 PM	49.4	71.4	45.1
09:00 PM - 10:00 PM	48.2	67.6	44.7
10:00 PM - 11:00 PM	48.4	66.5	44.8
11:00 PM - 12:00 AM	46.9	69.7	43.8
12:00 AM - 01:00 AM	47.7	65.5	43.4
01:00 AM - 02:00 AM	44.4	62.4	40.7
02:00 AM - 03:00 AM	45.0	66.5	39.8
03:00 AM - 04:00 AM	44.5	65.3	39.8
04:00 AM - 05:00 AM	45.6	61.3	41.0
05:00 AM - 06:00 AM	50.6	64.3	44.8
06:00 AM - 07:00 AM	52.5	71.3	48.2
07:00 AM - 08:00 AM	54.9	82.9	47.7
08:00 AM - 09:00 AM	51.2	76.3	45.0
09:00 AM - 10:00 AM	48.4	66.2	43.3
10:00 AM - 11:00 AM	48.2	75.1	42.6

Leq Average 24 hrs. (dB(A))

49.7

Lmax (dB(A))

82.9

L90 (dB(A))

43.8

Ldn (dB(A))

55.0

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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S:\Reports_Air Noise rpt (2:10PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253227-1

Page 1 of 1

Sample Number 2517440-2
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนตาพุด-อ่าวประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	48.5	66.5	42.6
12:00 PM - 01:00 PM	49.5	70.6	43.3
01:00 PM - 02:00 PM	48.2	70.1	42.9
02:00 PM - 03:00 PM	49.3	67.1	43.8
03:00 PM - 04:00 PM	50.1	72.7	44.4
04:00 PM - 05:00 PM	51.0	70.7	46.3
05:00 PM - 06:00 PM	49.4	69.5	45.9
06:00 PM - 07:00 PM	52.1	65.8	46.9
07:00 PM - 08:00 PM	50.0	75.0	45.2
08:00 PM - 09:00 PM	48.3	68.2	44.1
09:00 PM - 10:00 PM	50.8	69.9	46.0
10:00 PM - 11:00 PM	49.5	67.7	46.1
11:00 PM - 12:00 AM	48.2	65.8	45.5
12:00 AM - 01:00 AM	48.5	72.1	45.6
01:00 AM - 02:00 AM	45.5	63.8	43.2
02:00 AM - 03:00 AM	45.4	66.8	43.3
03:00 AM - 04:00 AM	45.3	65.0	41.3
04:00 AM - 05:00 AM	50.6	72.3	44.2
05:00 AM - 06:00 AM	49.4	74.0	44.6
06:00 AM - 07:00 AM	49.7	84.6	44.1
07:00 AM - 08:00 AM	51.4	74.8	44.6
08:00 AM - 09:00 AM	50.6	72.7	44.0
09:00 AM - 10:00 AM	52.4	76.6	43.9
10:00 AM - 11:00 AM	51.1	75.3	43.7

Leq Average 24 hrs. (dB(A))

49.7

Lmax (dB(A))

84.6

L90 (dB(A))

44.1

Ldn (dB(A))

55.2

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

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Supot Salamteh
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S:\Reports_Air Noise rpt (2:11PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253228-1

Page 1 of 1

Sample Number 2517440-3
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนตาพุด-อ่าวประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Feb 27 - Feb 28, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	49.1	72.2	42.4
12:00 PM - 01:00 PM	52.5	80.0	42.9
01:00 PM - 02:00 PM	53.5	75.8	44.7
02:00 PM - 03:00 PM	52.9	75.4	44.4
03:00 PM - 04:00 PM	54.2	78.4	44.5
04:00 PM - 05:00 PM	50.8	73.6	45.2
05:00 PM - 06:00 PM	50.3	73.3	45.4
06:00 PM - 07:00 PM	50.7	77.4	45.4
07:00 PM - 08:00 PM	48.4	72.3	44.2
08:00 PM - 09:00 PM	45.5	67.3	43.5
09:00 PM - 10:00 PM	44.0	63.5	42.4
10:00 PM - 11:00 PM	42.9	61.7	40.8
11:00 PM - 12:00 AM	43.1	55.9	41.0
12:00 AM - 01:00 AM	45.5	65.2	42.3
01:00 AM - 02:00 AM	45.5	66.0	42.1
02:00 AM - 03:00 AM	48.5	66.8	43.5
03:00 AM - 04:00 AM	51.7	75.1	44.4
04:00 AM - 05:00 AM	48.3	65.4	44.7
05:00 AM - 06:00 AM	48.9	61.9	47.0
06:00 AM - 07:00 AM	51.8	68.1	44.5
07:00 AM - 08:00 AM	54.0	70.1	46.4
08:00 AM - 09:00 AM	53.2	73.8	45.0
09:00 AM - 10:00 AM	50.5	62.5	43.4
10:00 AM - 11:00 AM	50.9	71.1	42.9

Leq Average 24 hrs. (dB(A))

50.6

Lmax (dB(A))

80.0

L90 (dB(A))

44.2

Ldn (dB(A))

55.4

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise rpt (2:11PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253229-1

Page 1 of 1

Sample Number 2517440-4
Parameter Noise (Leq 24 hrs.)
Location หมู่ชนตาพุด-อ่าวประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Feb 28 - Mar 01, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	50.9	64.9	43.6
12:00 PM - 01:00 PM	52.7	76.0	43.3
01:00 PM - 02:00 PM	49.1	66.9	44.8
02:00 PM - 03:00 PM	49.5	68.6	45.5
03:00 PM - 04:00 PM	51.0	71.5	46.4
04:00 PM - 05:00 PM	51.5	68.9	47.3
05:00 PM - 06:00 PM	50.6	77.0	45.7
06:00 PM - 07:00 PM	49.7	69.6	45.6
07:00 PM - 08:00 PM	49.7	77.1	44.8
08:00 PM - 09:00 PM	49.1	68.3	44.4
09:00 PM - 10:00 PM	47.8	70.8	42.7
10:00 PM - 11:00 PM	50.1	68.8	45.0
11:00 PM - 12:00 AM	50.5	72.5	45.6
12:00 AM - 01:00 AM	48.7	67.4	45.1
01:00 AM - 02:00 AM	50.2	73.3	42.3
02:00 AM - 03:00 AM	48.1	73.6	42.1
03:00 AM - 04:00 AM	55.6	74.9	42.2
04:00 AM - 05:00 AM	58.9	75.7	43.7
05:00 AM - 06:00 AM	58.4	75.5	45.9
06:00 AM - 07:00 AM	58.0	75.9	46.8
07:00 AM - 08:00 AM	56.5	76.2	45.7
08:00 AM - 09:00 AM	49.1	69.4	44.5
09:00 AM - 10:00 AM	49.5	70.4	44.0
10:00 AM - 11:00 AM	48.6	70.6	43.4

Leq Average 24 hrs. (dB(A))

53.0

Lmax (dB(A))

77.1

L90 (dB(A))

44.8

Ldn (dB(A))

61.1

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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4989-122/ EMAIL

S:\Reports_Air Noise rpt (2:12PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253230-1

Page 1 of 1

Sample Number 2517440-5
Parameter Noise (Leq 24 hrs.)
Location มุมชนตากวน-อ่าวประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	49.4	71.6	43.9
12:00 PM - 01:00 PM	50.1	73.2	45.0
01:00 PM - 02:00 PM	48.9	70.3	44.6
02:00 PM - 03:00 PM	50.1	72.0	44.9
03:00 PM - 04:00 PM	50.8	72.6	45.0
04:00 PM - 05:00 PM	51.4	71.1	47.1
05:00 PM - 06:00 PM	52.2	72.8	47.3
06:00 PM - 07:00 PM	51.1	68.1	47.5
07:00 PM - 08:00 PM	50.3	67.2	46.2
08:00 PM - 09:00 PM	50.0	72.9	45.5
09:00 PM - 10:00 PM	49.4	69.4	45.6
10:00 PM - 11:00 PM	50.5	73.3	44.8
11:00 PM - 12:00 AM	49.2	69.2	45.1
12:00 AM - 01:00 AM	48.1	68.3	44.1
01:00 AM - 02:00 AM	47.0	67.5	42.5
02:00 AM - 03:00 AM	45.8	69.2	42.4
03:00 AM - 04:00 AM	45.8	62.9	42.0
04:00 AM - 05:00 AM	47.3	62.7	43.0
05:00 AM - 06:00 AM	50.3	65.1	45.9
06:00 AM - 07:00 AM	53.5	74.8	47.8
07:00 AM - 08:00 AM	51.1	66.1	45.4
08:00 AM - 09:00 AM	49.8	68.1	44.6
09:00 AM - 10:00 AM	49.3	71.2	44.8
10:00 AM - 11:00 AM	50.0	69.1	44.9

Leq Average 24 hrs. (dB(A)) 50.0

Lmax (dB(A)) 74.8

L90 (dB(A)) 44.9

Ldn (dB(A)) 55.9

Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (2:13PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number: 3253231-1

Page 1 of 1

Sample Number 2517440-6
Parameter Noise (Leq 24 hrs.)
Location มุมชนตากวน-อ่าวประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	48.6	67.1	44.0
12:00 PM - 01:00 PM	48.9	67.4	44.0
01:00 PM - 02:00 PM	49.0	71.0	44.7
02:00 PM - 03:00 PM	49.2	67.6	45.2
03:00 PM - 04:00 PM	49.6	67.4	45.7
04:00 PM - 05:00 PM	51.5	75.9	46.8
05:00 PM - 06:00 PM	54.9	83.6	47.2
06:00 PM - 07:00 PM	52.4	75.8	47.3
07:00 PM - 08:00 PM	50.1	71.0	45.9
08:00 PM - 09:00 PM	51.1	76.6	45.5
09:00 PM - 10:00 PM	49.4	70.6	45.2
10:00 PM - 11:00 PM	48.9	70.7	44.3
11:00 PM - 12:00 AM	46.8	66.2	43.3
12:00 AM - 01:00 AM	46.9	68.1	43.5
01:00 AM - 02:00 AM	45.2	62.0	41.9
02:00 AM - 03:00 AM	45.6	68.4	41.7
03:00 AM - 04:00 AM	46.0	65.5	41.9
04:00 AM - 05:00 AM	47.5	65.1	43.0
05:00 AM - 06:00 AM	51.8	68.7	46.3
06:00 AM - 07:00 AM	54.5	82.1	48.0
07:00 AM - 08:00 AM	54.3	74.5	47.0
08:00 AM - 09:00 AM	50.4	66.0	45.3
09:00 AM - 10:00 AM	50.4	72.0	44.6
10:00 AM - 11:00 AM	53.4	74.4	47.1

Leq Average 24 hrs. (dB(A)) 50.7

Lmax (dB(A)) 83.6

L90 (dB(A)) 45.2

Ldn (dB(A)) 56.1

Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
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S:\Reports_Air Noise.rpt (2:13PM)



Analysis / Test Report



TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150
P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517440
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number: 3253232-1

Page 1 of 1

Sample Number 2517440-7
Parameter Noise (Leq 24 hrs.)
Location มุมชนตากวน-ฉะบะ (GPS 47P 0735578, 1402792)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 900074

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	49.2	63.4	44.7
12:00 PM - 01:00 PM	49.3	69.7	44.0
01:00 PM - 02:00 PM	48.7	65.2	44.1
02:00 PM - 03:00 PM	49.4	72.8	44.3
03:00 PM - 04:00 PM	50.2	69.3	45.2
04:00 PM - 05:00 PM	51.6	70.6	47.3
05:00 PM - 06:00 PM	51.3	75.4	46.6
06:00 PM - 07:00 PM	51.0	66.6	47.4
07:00 PM - 08:00 PM	49.6	72.5	45.0
08:00 PM - 09:00 PM	49.0	75.7	44.9
09:00 PM - 10:00 PM	48.6	67.6	44.2
10:00 PM - 11:00 PM	47.7	65.8	43.2
11:00 PM - 12:00 AM	47.7	70.4	43.0
12:00 AM - 01:00 AM	47.4	64.6	43.0
01:00 AM - 02:00 AM	43.7	62.9	40.6
02:00 AM - 03:00 AM	45.3	66.9	39.9
03:00 AM - 04:00 AM	46.1	66.1	39.9
04:00 AM - 05:00 AM	47.9	62.8	42.1
05:00 AM - 06:00 AM	51.4	65.5	46.3
06:00 AM - 07:00 AM	53.6	75.6	47.5
07:00 AM - 08:00 AM	52.5	73.1	46.6
08:00 AM - 09:00 AM	50.0	69.1	44.5
09:00 AM - 10:00 AM	49.4	72.1	43.2
10:00 AM - 11:00 AM	50.0	67.7	43.7

Leq Average 24 hrs. (dB(A)) 49.7
Lmax (dB(A)) 75.7
L90 (dB(A)) 44.2
Ldn (dB(A)) 55.5
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่ไต่จากกฎประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
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S:\Reports_Air Noise rpt (2:12PM)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251092-1

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517446-1
Parameter Noise Level (Leq 5 min)
Location มุมชนวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 25 - Feb 26, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 25, 2025	Leq	L90	Feb 25, 2025	Leq	L90	Feb 25, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	54.5	52.6	01:40 PM - 01:45 PM	48.7	45.0	04:20 PM - 04:25 PM	60.3	49.0
11:05 AM - 11:10 AM	54.3	52.2	01:45 PM - 01:50 PM	52.3	46.5	04:25 PM - 04:30 PM	53.0	49.2
11:10 AM - 11:15 AM	54.5	52.9	01:50 PM - 01:55 PM	49.4	45.7	04:30 PM - 04:35 PM	52.6	48.8
11:15 AM - 11:20 AM	54.0	52.4	01:55 PM - 02:00 PM	51.3	44.7	04:35 PM - 04:40 PM	51.4	47.9
11:20 AM - 11:25 AM	53.6	52.2	02:00 PM - 02:05 PM	50.8	43.8	04:40 PM - 04:45 PM	54.0	47.9
11:25 AM - 11:30 AM	54.8	52.7	02:05 PM - 02:10 PM	49.5	43.5	04:45 PM - 04:50 PM	51.7	47.7
11:30 AM - 11:35 AM	55.6	53.0	02:10 PM - 02:15 PM	50.2	44.4	04:50 PM - 04:55 PM	59.1	48.9
11:35 AM - 11:40 AM	54.9	52.1	02:15 PM - 02:20 PM	49.3	44.3	04:55 PM - 05:00 PM	55.3	49.6
11:40 AM - 11:45 AM	64.6	52.8	02:20 PM - 02:25 PM	48.5	44.4	05:00 PM - 05:05 PM	55.3	50.8
11:45 AM - 11:50 AM	54.4	45.9	02:25 PM - 02:30 PM	53.5	46.6	05:05 PM - 05:10 PM	54.5	49.4
11:50 AM - 11:55 AM	53.3	46.8	02:30 PM - 02:35 PM	47.8	44.2	05:10 PM - 05:15 PM	52.4	48.8
11:55 AM - 12:00 PM	50.7	46.6	02:35 PM - 02:40 PM	52.6	44.6	05:15 PM - 05:20 PM	50.9	47.6
12:00 PM - 12:05 PM	59.7	50.8	02:40 PM - 02:45 PM	53.1	44.8	05:20 PM - 05:25 PM	54.2	48.7
12:05 PM - 12:10 PM	53.4	48.2	02:45 PM - 02:50 PM	51.6	45.9	05:25 PM - 05:30 PM	53.6	49.8
12:10 PM - 12:15 PM	51.1	47.6	02:50 PM - 02:55 PM	49.8	45.4	05:30 PM - 05:35 PM	54.4	50.1
12:15 PM - 12:20 PM	51.3	46.7	02:55 PM - 03:00 PM	50.3	46.2	05:35 PM - 05:40 PM	54.7	50.0
12:20 PM - 12:25 PM	50.4	46.3	03:00 PM - 03:05 PM	50.6	44.7	05:40 PM - 05:45 PM	59.1	50.9
12:25 PM - 12:30 PM	52.2	46.5	03:05 PM - 03:10 PM	52.1	45.4	05:45 PM - 05:50 PM	60.0	49.9
12:30 PM - 12:35 PM	50.0	45.9	03:10 PM - 03:15 PM	49.5	46.0	05:50 PM - 05:55 PM	53.1	49.0
12:35 PM - 12:40 PM	51.3	46.8	03:15 PM - 03:20 PM	53.7	46.2	05:55 PM - 06:00 PM	53.8	49.7
12:40 PM - 12:45 PM	50.9	46.6	03:20 PM - 03:25 PM	49.4	45.9	06:00 PM - 06:05 PM	60.0	49.9
12:45 PM - 12:50 PM	51.7	46.1	03:25 PM - 03:30 PM	50.0	46.4	06:05 PM - 06:10 PM	60.7	49.2
12:50 PM - 12:55 PM	51.3	45.8	03:30 PM - 03:35 PM	49.4	46.1	06:10 PM - 06:15 PM	53.9	50.2
12:55 PM - 01:00 PM	50.0	46.8	03:35 PM - 03:40 PM	49.1	45.9	06:15 PM - 06:20 PM	53.6	50.2
01:00 PM - 01:05 PM	49.4	45.5	03:40 PM - 03:45 PM	49.4	46.8	06:20 PM - 06:25 PM	52.6	49.7
01:05 PM - 01:10 PM	58.0	45.2	03:45 PM - 03:50 PM	51.3	47.9	06:25 PM - 06:30 PM	52.7	49.9
01:10 PM - 01:15 PM	49.7	44.6	03:50 PM - 03:55 PM	51.8	48.6	06:30 PM - 06:35 PM	60.8	51.1
01:15 PM - 01:20 PM	49.6	45.3	03:55 PM - 04:00 PM	51.3	47.6	06:35 PM - 06:40 PM	59.0	50.8
01:20 PM - 01:25 PM	50.5	47.2	04:00 PM - 04:05 PM	56.9	49.4	06:40 PM - 06:45 PM	59.2	50.6
01:25 PM - 01:30 PM	49.0	45.3	04:05 PM - 04:10 PM	52.3	48.1	06:45 PM - 06:50 PM	56.7	49.9
01:30 PM - 01:35 PM	49.1	46.7	04:10 PM - 04:15 PM	52.4	48.6	06:50 PM - 06:55 PM	51.7	49.3
01:35 PM - 01:40 PM	52.0	48.0	04:15 PM - 04:20 PM	55.4	47.5	06:55 PM - 07:00 PM	54.3	49.8

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayu J.

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251092-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number : 2517446-1
Parameter : Noise Level (Leq 5 min)
Location : ฐานวัดใกล้ถนน (GPS 47P 0735038, 1405843)
Measurement Date : Feb 25 - Feb 26, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 623388

Page 2 of 3

Feb 25, 2025			Feb 25 - Feb 26, 2025			Feb 26, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	55.2	52.4	09:40 PM - 09:45 PM	55.0	47.1	12:20 AM - 12:25 AM	58.4	46.3
07:05 PM - 07:10 PM	52.5	49.9	09:45 PM - 09:50 PM	57.7	54.6	12:25 AM - 12:30 AM	60.6	56.8
07:10 PM - 07:15 PM	51.5	49.1	09:50 PM - 09:55 PM	57.3	54.8	12:30 AM - 12:35 AM	56.7	46.0
07:15 PM - 07:20 PM	51.0	48.8	09:55 PM - 10:00 PM	55.5	45.9	12:35 AM - 12:40 AM	58.2	45.6
07:20 PM - 07:25 PM	53.5	49.0	10:00 PM - 10:05 PM	55.9	49.3	12:40 AM - 12:45 AM	59.4	55.1
07:25 PM - 07:30 PM	53.8	50.2	10:05 PM - 10:10 PM	54.3	46.9	12:45 AM - 12:50 AM	59.6	56.8
07:30 PM - 07:35 PM	52.3	50.3	10:10 PM - 10:15 PM	54.8	47.9	12:50 AM - 12:55 AM	59.3	55.8
07:35 PM - 07:40 PM	53.3	50.1	10:15 PM - 10:20 PM	56.0	47.6	12:55 AM - 01:00 AM	59.6	56.5
07:40 PM - 07:45 PM	53.7	50.3	10:20 PM - 10:25 PM	59.1	49.9	01:00 AM - 01:05 AM	59.8	56.0
07:45 PM - 07:50 PM	55.7	49.9	10:25 PM - 10:30 PM	57.7	48.2	01:05 AM - 01:10 AM	60.9	56.7
07:50 PM - 07:55 PM	51.9	48.2	10:30 PM - 10:35 PM	58.2	49.9	01:10 AM - 01:15 AM	57.2	48.5
07:55 PM - 08:00 PM	52.9	48.9	10:35 PM - 10:40 PM	55.3	46.7	01:15 AM - 01:20 AM	59.6	54.9
08:00 PM - 08:05 PM	54.1	49.4	10:40 PM - 10:45 PM	56.3	46.2	01:20 AM - 01:25 AM	58.5	53.3
08:05 PM - 08:10 PM	50.7	48.6	10:45 PM - 10:50 PM	58.3	46.8	01:25 AM - 01:30 AM	58.5	54.2
08:10 PM - 08:15 PM	53.1	48.1	10:50 PM - 10:55 PM	58.2	46.2	01:30 AM - 01:35 AM	58.7	46.9
08:15 PM - 08:20 PM	52.4	49.2	10:55 PM - 11:00 PM	58.0	46.1	01:35 AM - 01:40 AM	58.2	54.2
08:20 PM - 08:25 PM	50.9	48.6	11:00 PM - 11:05 PM	58.6	46.9	01:40 AM - 01:45 AM	58.6	46.7
08:25 PM - 08:30 PM	50.6	48.0	11:05 PM - 11:10 PM	58.2	46.7	01:45 AM - 01:50 AM	54.1	45.3
08:30 PM - 08:35 PM	55.3	50.0	11:10 PM - 11:15 PM	58.7	46.7	01:50 AM - 01:55 AM	56.0	46.4
08:35 PM - 08:40 PM	53.4	50.2	11:15 PM - 11:20 PM	57.5	45.8	01:55 AM - 02:00 AM	55.5	45.5
08:40 PM - 08:45 PM	52.2	49.6	11:20 PM - 11:25 PM	59.2	47.0	02:00 AM - 02:05 AM	56.1	45.8
08:45 PM - 08:50 PM	52.4	49.1	11:25 PM - 11:30 PM	58.7	47.6	02:05 AM - 02:10 AM	56.9	49.8
08:50 PM - 08:55 PM	53.2	48.4	11:30 PM - 11:35 PM	60.5	47.5	02:10 AM - 02:15 AM	57.6	47.6
08:55 PM - 09:00 PM	53.3	48.3	11:35 PM - 11:40 PM	60.6	50.6	02:15 AM - 02:20 AM	56.3	47.4
09:00 PM - 09:05 PM	54.3	47.8	11:40 PM - 11:45 PM	59.5	46.6	02:20 AM - 02:25 AM	60.3	55.2
09:05 PM - 09:10 PM	54.5	48.6	11:45 PM - 11:50 PM	55.7	46.9	02:25 AM - 02:30 AM	57.6	47.8
09:10 PM - 09:15 PM	53.8	47.7	11:50 PM - 11:55 PM	60.4	48.4	02:30 AM - 02:35 AM	58.0	54.9
09:15 PM - 09:20 PM	52.0	46.7	11:55 PM - 12:00 AM	59.2	49.9	02:35 AM - 02:40 AM	55.6	44.6
09:20 PM - 09:25 PM	51.5	47.2	12:00 AM - 12:05 AM	58.5	46.8	02:40 AM - 02:45 AM	55.7	48.7
09:25 PM - 09:30 PM	53.7	46.7	12:05 AM - 12:10 AM	59.0	46.1	02:45 AM - 02:50 AM	55.8	45.5
09:30 PM - 09:35 PM	54.4	47.1	12:10 AM - 12:15 AM	57.4	46.5	02:50 AM - 02:55 AM	57.7	53.3
09:35 PM - 09:40 PM	56.0	47.4	12:15 AM - 12:20 AM	60.3	52.4	02:55 AM - 03:00 AM	53.5	44.1

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Assistant General Manager

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251092-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number : 2517446-1
Parameter : Noise Level (Leq 5 min)
Location : ฐานวัดใกล้ถนน (GPS 47P 0735038, 1405843)
Measurement Date : Feb 25 - Feb 26, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 623388

Page 3 of 3

Feb 26, 2025			Feb 26, 2025			Feb 26, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	54.6	45.0	05:40 AM - 05:45 AM	47.7	44.3	08:20 AM - 08:25 AM	54.3	50.2
03:05 AM - 03:10 AM	53.0	43.7	05:45 AM - 05:50 AM	47.4	44.8	08:25 AM - 08:30 AM	53.7	49.7
03:10 AM - 03:15 AM	53.7	43.2	05:50 AM - 05:55 AM	47.4	44.6	08:30 AM - 08:35 AM	55.8	50.7
03:15 AM - 03:20 AM	51.2	43.0	05:55 AM - 06:00 AM	48.4	45.0	08:35 AM - 08:40 AM	57.8	52.1
03:20 AM - 03:25 AM	48.2	44.0	06:00 AM - 06:05 AM	48.2	44.4	08:40 AM - 08:45 AM	57.7	53.8
03:25 AM - 03:30 AM	54.8	44.3	06:05 AM - 06:10 AM	47.9	44.2	08:45 AM - 08:50 AM	56.8	52.3
03:30 AM - 03:35 AM	54.6	44.2	06:10 AM - 06:15 AM	49.5	46.3	08:50 AM - 08:55 AM	55.2	49.8
03:35 AM - 03:40 AM	52.9	43.6	06:15 AM - 06:20 AM	48.8	45.7	08:55 AM - 09:00 AM	56.6	50.8
03:40 AM - 03:45 AM	45.5	43.1	06:20 AM - 06:25 AM	50.1	47.4	09:00 AM - 09:05 AM	57.6	53.4
03:45 AM - 03:50 AM	48.5	43.2	06:25 AM - 06:30 AM	49.9	48.0	09:05 AM - 09:10 AM	56.6	49.2
03:50 AM - 03:55 AM	46.7	43.5	06:30 AM - 06:35 AM	52.1	48.2	09:10 AM - 09:15 AM	56.4	52.5
03:55 AM - 04:00 AM	50.9	43.9	06:35 AM - 06:40 AM	51.4	48.4	09:15 AM - 09:20 AM	54.3	49.1
04:00 AM - 04:05 AM	49.7	43.9	06:40 AM - 06:45 AM	52.2	50.2	09:20 AM - 09:25 AM	57.2	52.0
04:05 AM - 04:10 AM	48.4	44.0	06:45 AM - 06:50 AM	52.6	50.5	09:25 AM - 09:30 AM	56.2	51.0
04:10 AM - 04:15 AM	45.6	43.9	06:50 AM - 06:55 AM	54.3	50.4	09:30 AM - 09:35 AM	54.0	50.0
04:15 AM - 04:20 AM	50.1	44.2	06:55 AM - 07:00 AM	55.5	50.8	09:35 AM - 09:40 AM	55.5	51.5
04:20 AM - 04:25 AM	47.9	42.9	07:00 AM - 07:05 AM	55.1	50.7	09:40 AM - 09:45 AM	56.1	52.2
04:25 AM - 04:30 AM	46.6	43.8	07:05 AM - 07:10 AM	54.2	51.0	09:45 AM - 09:50 AM	55.9	51.4
04:30 AM - 04:35 AM	46.6	43.9	07:10 AM - 07:15 AM	59.9	51.1	09:50 AM - 09:55 AM	56.2	49.4
04:35 AM - 04:40 AM	46.6	43.9	07:15 AM - 07:20 AM	53.1	50.0	09:55 AM - 10:00 AM	52.2	48.2
04:40 AM - 04:45 AM	46.6	43.3	07:20 AM - 07:25 AM	57.8	51.1	10:00 AM - 10:05 AM	57.0	50.1
04:45 AM - 04:50 AM	46.8	43.6	07:25 AM - 07:30 AM	53.7	51.0	10:05 AM - 10:10 AM	54.7	49.6
04:50 AM - 04:55 AM	47.2	43.0	07:30 AM - 07:35 AM	54.0	50.9	10:10 AM - 10:15 AM	53.6	50.1
04:55 AM - 05:00 AM	46.0	42.5	07:35 AM - 07:40 AM	55.6	51.0	10:15 AM - 10:20 AM	53.1	48.0
05:00 AM - 05:05 AM	45.6	43.1	07:40 AM - 07:45 AM	55.1	51.6	10:20 AM - 10:25 AM	54.4	49.7
05:05 AM - 05:10 AM	45.9	43.1	07:45 AM - 07:50 AM	54.9	50.7	10:25 AM - 10:30 AM	52.8	48.0
05:10 AM - 05:15 AM	46.4	43.0	07:50 AM - 07:55 AM	54.7	51.1	10:30 AM - 10:35 AM	53.0	48.2
05:15 AM - 05:20 AM	46.4	43.3	07:55 AM - 08:00 AM	53.0	50.9	10:35 AM - 10:40 AM	53.5	48.5
05:20 AM - 05:25 AM	49.7	43.3	08:00 AM - 08:05 AM	53.9	51.2	10:40 AM - 10:45 AM	51.8	47.3
05:25 AM - 05:30 AM	46.5	42.5	08:05 AM - 08:10 AM	54.2	50.7	10:45 AM - 10:50 AM	52.8	47.5
05:30 AM - 05:35 AM	48.3	42.5	08:10 AM - 08:15 AM	53.8	50.5	10:50 AM - 10:55 AM	53.7	48.4
05:35 AM - 05:40 AM	48.2	43.7	08:15 AM - 08:20 AM	54.1	50.8	10:55 AM - 11:00 AM	53.1	46.3

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251093-1

Page 1 of 3

Sample Number 2517446-2
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 26, 2025			Feb 26, 2025			Feb 26, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	53.4	47.7	01:40 PM - 01:45 PM	58.6	48.8	04:20 PM - 04:25 PM	56.1	45.7
11:05 AM - 11:10 AM	56.1	46.9	01:45 PM - 01:50 PM	51.5	48.6	04:25 PM - 04:30 PM	53.8	47.4
11:10 AM - 11:15 AM	52.6	46.8	01:50 PM - 01:55 PM	54.2	48.0	04:30 PM - 04:35 PM	54.8	47.6
11:15 AM - 11:20 AM	53.7	47.0	01:55 PM - 02:00 PM	50.8	46.0	04:35 PM - 04:40 PM	55.5	46.1
11:20 AM - 11:25 AM	53.9	48.3	02:00 PM - 02:05 PM	51.0	45.6	04:40 PM - 04:45 PM	52.7	47.7
11:25 AM - 11:30 AM	49.6	45.6	02:05 PM - 02:10 PM	50.1	46.9	04:45 PM - 04:50 PM	55.2	46.9
11:30 AM - 11:35 AM	49.4	45.9	02:10 PM - 02:15 PM	51.3	47.8	04:50 PM - 04:55 PM	55.3	45.8
11:35 AM - 11:40 AM	46.5	43.4	02:15 PM - 02:20 PM	55.2	46.1	04:55 PM - 05:00 PM	55.2	48.4
11:40 AM - 11:45 AM	54.1	45.6	02:20 PM - 02:25 PM	50.5	45.7	05:00 PM - 05:05 PM	55.9	49.1
11:45 AM - 11:50 AM	53.0	46.5	02:25 PM - 02:30 PM	50.1	46.1	05:05 PM - 05:10 PM	58.2	49.3
11:50 AM - 11:55 AM	50.4	46.3	02:30 PM - 02:35 PM	51.8	45.6	05:10 PM - 05:15 PM	56.2	47.8
11:55 AM - 12:00 PM	51.6	46.9	02:35 PM - 02:40 PM	47.9	44.9	05:15 PM - 05:20 PM	55.1	47.8
12:00 PM - 12:05 PM	51.8	46.7	02:40 PM - 02:45 PM	50.9	46.6	05:20 PM - 05:25 PM	56.2	47.7
12:05 PM - 12:10 PM	50.5	46.9	02:45 PM - 02:50 PM	51.7	47.4	05:25 PM - 05:30 PM	55.4	48.3
12:10 PM - 12:15 PM	51.0	46.8	02:50 PM - 02:55 PM	51.8	48.6	05:30 PM - 05:35 PM	55.7	49.2
12:15 PM - 12:20 PM	52.6	46.3	02:55 PM - 03:00 PM	51.6	48.9	05:35 PM - 05:40 PM	56.4	48.8
12:20 PM - 12:25 PM	49.5	45.6	03:00 PM - 03:05 PM	56.3	47.5	05:40 PM - 05:45 PM	58.3	48.7
12:25 PM - 12:30 PM	50.3	44.6	03:05 PM - 03:10 PM	59.1	47.4	05:45 PM - 05:50 PM	53.3	48.3
12:30 PM - 12:35 PM	50.4	46.0	03:10 PM - 03:15 PM	58.0	46.1	05:50 PM - 05:55 PM	50.6	48.4
12:35 PM - 12:40 PM	53.0	45.4	03:15 PM - 03:20 PM	55.4	46.8	05:55 PM - 06:00 PM	51.5	48.1
12:40 PM - 12:45 PM	50.6	45.0	03:20 PM - 03:25 PM	55.4	46.2	06:00 PM - 06:05 PM	52.4	49.0
12:45 PM - 12:50 PM	51.5	47.2	03:25 PM - 03:30 PM	51.1	48.4	06:05 PM - 06:10 PM	52.0	49.0
12:50 PM - 12:55 PM	51.2	47.6	03:30 PM - 03:35 PM	50.9	46.1	06:10 PM - 06:15 PM	59.5	48.6
12:55 PM - 01:00 PM	50.4	46.9	03:35 PM - 03:40 PM	49.2	45.5	06:15 PM - 06:20 PM	52.6	47.5
01:00 PM - 01:05 PM	50.7	47.0	03:40 PM - 03:45 PM	51.4	46.5	06:20 PM - 06:25 PM	54.5	48.5
01:05 PM - 01:10 PM	50.7	47.2	03:45 PM - 03:50 PM	49.2	44.9	06:25 PM - 06:30 PM	55.4	49.0
01:10 PM - 01:15 PM	52.0	49.0	03:50 PM - 03:55 PM	51.7	47.9	06:30 PM - 06:35 PM	56.4	48.8
01:15 PM - 01:20 PM	52.0	48.0	03:55 PM - 04:00 PM	49.5	45.5	06:35 PM - 06:40 PM	54.3	50.1
01:20 PM - 01:25 PM	52.1	48.4	04:00 PM - 04:05 PM	54.1	46.4	06:40 PM - 06:45 PM	55.7	50.0
01:25 PM - 01:30 PM	51.7	48.1	04:05 PM - 04:10 PM	52.6	45.0	06:45 PM - 06:50 PM	53.1	49.5
01:30 PM - 01:35 PM	52.4	47.9	04:10 PM - 04:15 PM	52.5	45.5	06:50 PM - 06:55 PM	52.6	48.7
01:35 PM - 01:40 PM	53.2	48.6	04:15 PM - 04:20 PM	49.6	47.0	06:55 PM - 07:00 PM	52.7	49.3

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251093-1

Page 2 of 3

Sample Number 2517446-2
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 26, 2025			Feb 26 - Feb 27, 2025			Feb 27, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	51.4	48.9	09:40 PM - 09:45 PM	48.4	44.1	12:20 AM - 12:25 AM	54.8	52.2
07:05 PM - 07:10 PM	53.7	49.4	09:45 PM - 09:50 PM	47.3	44.3	12:25 AM - 12:30 AM	55.0	48.2
07:10 PM - 07:15 PM	50.0	47.0	09:50 PM - 09:55 PM	52.7	45.0	12:30 AM - 12:35 AM	55.3	47.4
07:15 PM - 07:20 PM	50.1	46.0	09:55 PM - 10:00 PM	51.6	44.9	12:35 AM - 12:40 AM	56.5	48.9
07:20 PM - 07:25 PM	53.4	47.5	10:00 PM - 10:05 PM	51.6	44.8	12:40 AM - 12:45 AM	55.0	47.2
07:25 PM - 07:30 PM	53.9	48.6	10:05 PM - 10:10 PM	52.8	44.9	12:45 AM - 12:50 AM	55.3	47.4
07:30 PM - 07:35 PM	51.6	47.8	10:10 PM - 10:15 PM	52.1	44.4	12:50 AM - 12:55 AM	54.7	47.2
07:35 PM - 07:40 PM	53.0	48.5	10:15 PM - 10:20 PM	55.1	44.7	12:55 AM - 01:00 AM	54.7	47.3
07:40 PM - 07:45 PM	52.3	48.3	10:20 PM - 10:25 PM	56.3	44.6	01:00 AM - 01:05 AM	52.6	46.5
07:45 PM - 07:50 PM	50.8	47.8	10:25 PM - 10:30 PM	55.0	45.3	01:05 AM - 01:10 AM	52.1	46.2
07:50 PM - 07:55 PM	50.5	47.0	10:30 PM - 10:35 PM	55.1	47.2	01:10 AM - 01:15 AM	51.8	45.7
07:55 PM - 08:00 PM	51.4	45.8	10:35 PM - 10:40 PM	55.5	47.2	01:15 AM - 01:20 AM	50.8	44.7
08:00 PM - 08:05 PM	50.7	47.0	10:40 PM - 10:45 PM	57.5	49.6	01:20 AM - 01:25 AM	51.6	45.5
08:05 PM - 08:10 PM	49.9	46.7	10:45 PM - 10:50 PM	59.2	50.3	01:25 AM - 01:30 AM	50.8	45.4
08:10 PM - 08:15 PM	49.1	46.3	10:50 PM - 10:55 PM	58.1	49.2	01:30 AM - 01:35 AM	49.0	45.0
08:15 PM - 08:20 PM	49.7	45.9	10:55 PM - 11:00 PM	58.3	53.0	01:35 AM - 01:40 AM	52.1	44.7
08:20 PM - 08:25 PM	50.8	47.8	11:00 PM - 11:05 PM	56.8	46.4	01:40 AM - 01:45 AM	47.2	44.2
08:25 PM - 08:30 PM	49.2	46.6	11:05 PM - 11:10 PM	57.1	48.4	01:45 AM - 01:50 AM	46.8	43.8
08:30 PM - 08:35 PM	51.0	48.6	11:10 PM - 11:15 PM	58.3	54.7	01:50 AM - 01:55 AM	49.6	43.8
08:35 PM - 08:40 PM	51.6	48.3	11:15 PM - 11:20 PM	57.4	52.3	01:55 AM - 02:00 AM	48.1	44.0
08:40 PM - 08:45 PM	51.8	48.9	11:20 PM - 11:25 PM	58.4	55.2	02:00 AM - 02:05 AM	46.9	44.3
08:45 PM - 08:50 PM	51.0	48.3	11:25 PM - 11:30 PM	57.1	53.3	02:05 AM - 02:10 AM	49.5	45.0
08:50 PM - 08:55 PM	50.8	47.4	11:30 PM - 11:35 PM	56.6	53.9	02:10 AM - 02:15 AM	50.6	44.4
08:55 PM - 09:00 PM	50.4	46.1	11:35 PM - 11:40 PM	55.6	46.9	02:15 AM - 02:20 AM	50.9	45.0
09:00 PM - 09:05 PM	52.5	45.1	11:40 PM - 11:45 PM	55.5	47.1	02:20 AM - 02:25 AM	49.7	42.8
09:05 PM - 09:10 PM	52.3	45.9	11:45 PM - 11:50 PM	56.8	53.1	02:25 AM - 02:30 AM	48.2	42.4
09:10 PM - 09:15 PM	48.5	45.4	11:50 PM - 11:55 PM	55.6	52.5	02:30 AM - 02:35 AM	48.1	43.2
09:15 PM - 09:20 PM	48.2	45.5	11:55 PM - 12:00 AM	54.1	48.6	02:35 AM - 02:40 AM	47.4	44.0
09:20 PM - 09:25 PM	51.2	46.3	12:00 AM - 12:05 AM	55.3	48.2	02:40 AM - 02:45 AM	47.7	44.5
09:25 PM - 09:30 PM	56.8	46.0	12:05 AM - 12:10 AM	55.0	51.6	02:45 AM - 02:50 AM	47.6	44.4
09:30 PM - 09:35 PM	52.2	47.6	12:10 AM - 12:15 AM	54.6	47.7	02:50 AM - 02:55 AM	47.9	44.5
09:35 PM - 09:40 PM	49.6	45.1	12:15 AM - 12:20 AM	54.9	48.4	02:55 AM - 03:00 AM	49.1	43.0

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251093-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 3 of 3

Sample Number 2517446-2
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 27, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 27, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 27, 2025 Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	45.7	42.7	05:40 AM - 05:45 AM	47.9	43.3	08:20 AM - 08:25 AM	55.2	50.4
03:05 AM - 03:10 AM	45.1	43.0	05:45 AM - 05:50 AM	54.8	44.7	08:25 AM - 08:30 AM	55.8	51.5
03:10 AM - 03:15 AM	46.9	43.5	05:50 AM - 05:55 AM	56.9	49.8	08:30 AM - 08:35 AM	56.3	51.9
03:15 AM - 03:20 AM	49.8	44.4	05:55 AM - 06:00 AM	54.2	46.7	08:35 AM - 08:40 AM	56.8	51.7
03:20 AM - 03:25 AM	46.2	44.0	06:00 AM - 06:05 AM	55.1	46.0	08:40 AM - 08:45 AM	53.4	50.1
03:25 AM - 03:30 AM	47.7	44.6	06:05 AM - 06:10 AM	55.4	47.5	08:45 AM - 08:50 AM	54.5	50.1
03:30 AM - 03:35 AM	45.4	43.9	06:10 AM - 06:15 AM	53.8	45.9	08:50 AM - 08:55 AM	55.9	49.9
03:35 AM - 03:40 AM	47.7	43.0	06:15 AM - 06:20 AM	54.7	47.0	08:55 AM - 09:00 AM	54.1	49.8
03:40 AM - 03:45 AM	45.2	42.9	06:20 AM - 06:25 AM	57.1	49.3	09:00 AM - 09:05 AM	53.0	49.4
03:45 AM - 03:50 AM	53.6	44.6	06:25 AM - 06:30 AM	57.7	52.2	09:05 AM - 09:10 AM	53.2	49.2
03:50 AM - 03:55 AM	46.6	44.4	06:30 AM - 06:35 AM	51.8	47.9	09:10 AM - 09:15 AM	52.4	48.4
03:55 AM - 04:00 AM	45.8	44.4	06:35 AM - 06:40 AM	53.5	50.3	09:15 AM - 09:20 AM	52.2	48.2
04:00 AM - 04:05 AM	49.2	44.6	06:40 AM - 06:45 AM	53.3	50.2	09:20 AM - 09:25 AM	51.1	48.2
04:05 AM - 04:10 AM	47.4	45.1	06:45 AM - 06:50 AM	58.3	50.4	09:25 AM - 09:30 AM	51.4	47.8
04:10 AM - 04:15 AM	50.5	45.0	06:50 AM - 06:55 AM	54.7	51.3	09:30 AM - 09:35 AM	52.5	48.4
04:15 AM - 04:20 AM	53.7	44.1	06:55 AM - 07:00 AM	53.5	50.3	09:35 AM - 09:40 AM	53.3	48.1
04:20 AM - 04:25 AM	51.9	44.6	07:00 AM - 07:05 AM	53.9	50.5	09:40 AM - 09:45 AM	51.8	46.6
04:25 AM - 04:30 AM	50.3	44.0	07:05 AM - 07:10 AM	55.5	50.6	09:45 AM - 09:50 AM	51.1	47.3
04:30 AM - 04:35 AM	50.8	43.7	07:10 AM - 07:15 AM	60.3	50.8	09:50 AM - 09:55 AM	52.1	47.8
04:35 AM - 04:40 AM	52.3	43.5	07:15 AM - 07:20 AM	54.8	51.0	09:55 AM - 10:00 AM	51.1	47.2
04:40 AM - 04:45 AM	51.5	43.6	07:20 AM - 07:25 AM	54.8	51.2	10:00 AM - 10:05 AM	51.3	47.8
04:45 AM - 04:50 AM	55.4	47.5	07:25 AM - 07:30 AM	57.6	51.1	10:05 AM - 10:10 AM	55.5	49.3
04:50 AM - 04:55 AM	54.6	47.7	07:30 AM - 07:35 AM	57.0	51.8	10:10 AM - 10:15 AM	59.3	48.4
04:55 AM - 05:00 AM	52.1	42.5	07:35 AM - 07:40 AM	54.7	51.7	10:15 AM - 10:20 AM	52.1	47.2
05:00 AM - 05:05 AM	56.1	46.0	07:40 AM - 07:45 AM	56.6	51.5	10:20 AM - 10:25 AM	53.2	49.8
05:05 AM - 05:10 AM	56.9	52.9	07:45 AM - 07:50 AM	53.9	51.0	10:25 AM - 10:30 AM	53.3	50.2
05:10 AM - 05:15 AM	48.3	42.4	07:50 AM - 07:55 AM	59.5	50.8	10:30 AM - 10:35 AM	54.5	49.7
05:15 AM - 05:20 AM	52.7	41.5	07:55 AM - 08:00 AM	60.2	51.5	10:35 AM - 10:40 AM	52.7	48.9
05:20 AM - 05:25 AM	57.7	53.3	08:00 AM - 08:05 AM	59.1	51.6	10:40 AM - 10:45 AM	50.5	48.6
05:25 AM - 05:30 AM	56.9	53.2	08:05 AM - 08:10 AM	55.1	51.5	10:45 AM - 10:50 AM	52.0	48.7
05:30 AM - 05:35 AM	55.6	43.5	08:10 AM - 08:15 AM	55.1	51.5	10:50 AM - 10:55 AM	50.9	48.6
05:35 AM - 05:40 AM	53.7	44.3	08:15 AM - 08:20 AM	55.4	50.5	10:55 AM - 11:00 AM	51.6	49.1

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251094-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517446-3
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 27 - Feb 28, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 27, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 27, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 27, 2025 Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	51.4	49.0	01:40 PM - 01:45 PM	51.3	48.6	04:20 PM - 04:25 PM	53.7	49.6
11:05 AM - 11:10 AM	51.4	48.8	01:45 PM - 01:50 PM	52.3	47.9	04:25 PM - 04:30 PM	50.1	47.5
11:10 AM - 11:15 AM	51.8	49.1	01:50 PM - 01:55 PM	50.8	48.3	04:30 PM - 04:35 PM	52.2	48.8
11:15 AM - 11:20 AM	51.3	48.9	01:55 PM - 02:00 PM	51.7	48.2	04:35 PM - 04:40 PM	52.5	49.6
11:20 AM - 11:25 AM	52.1	48.6	02:00 PM - 02:05 PM	50.6	48.1	04:40 PM - 04:45 PM	50.7	49.0
11:25 AM - 11:30 AM	51.4	49.1	02:05 PM - 02:10 PM	51.3	48.3	04:45 PM - 04:50 PM	54.1	48.8
11:30 AM - 11:35 AM	52.1	48.5	02:10 PM - 02:15 PM	50.0	47.1	04:50 PM - 04:55 PM	53.1	48.5
11:35 AM - 11:40 AM	52.3	49.5	02:15 PM - 02:20 PM	50.3	47.5	04:55 PM - 05:00 PM	51.7	48.7
11:40 AM - 11:45 AM	52.7	49.4	02:20 PM - 02:25 PM	49.5	46.8	05:00 PM - 05:05 PM	53.5	50.5
11:45 AM - 11:50 AM	52.1	49.4	02:25 PM - 02:30 PM	51.9	48.0	05:05 PM - 05:10 PM	54.2	49.9
11:50 AM - 11:55 AM	52.2	49.4	02:30 PM - 02:35 PM	49.7	47.0	05:10 PM - 05:15 PM	52.4	49.8
11:55 AM - 12:00 PM	53.3	50.5	02:35 PM - 02:40 PM	49.3	47.0	05:15 PM - 05:20 PM	52.3	48.9
12:00 PM - 12:05 PM	53.9	50.7	02:40 PM - 02:45 PM	50.2	47.4	05:20 PM - 05:25 PM	52.6	49.0
12:05 PM - 12:10 PM	51.5	48.5	02:45 PM - 02:50 PM	50.3	47.2	05:25 PM - 05:30 PM	53.3	49.4
12:10 PM - 12:15 PM	51.3	48.5	02:50 PM - 02:55 PM	52.0	48.5	05:30 PM - 05:35 PM	55.8	50.8
12:15 PM - 12:20 PM	50.7	48.8	02:55 PM - 03:00 PM	50.1	48.2	05:35 PM - 05:40 PM	54.1	51.4
12:20 PM - 12:25 PM	51.8	49.4	03:00 PM - 03:05 PM	50.8	48.2	05:40 PM - 05:45 PM	60.9	50.9
12:25 PM - 12:30 PM	54.4	49.6	03:05 PM - 03:10 PM	51.0	48.1	05:45 PM - 05:50 PM	54.2	50.6
12:30 PM - 12:35 PM	54.2	49.4	03:10 PM - 03:15 PM	50.3	48.2	05:50 PM - 05:55 PM	51.8	49.3
12:35 PM - 12:40 PM	50.8	48.5	03:15 PM - 03:20 PM	50.1	47.8	05:55 PM - 06:00 PM	54.5	49.9
12:40 PM - 12:45 PM	51.0	48.0	03:20 PM - 03:25 PM	49.7	47.4	06:00 PM - 06:05 PM	52.7	49.6
12:45 PM - 12:50 PM	50.7	48.4	03:25 PM - 03:30 PM	50.0	47.9	06:05 PM - 06:10 PM	52.3	50.1
12:50 PM - 12:55 PM	51.6	47.5	03:30 PM - 03:35 PM	52.1	48.7	06:10 PM - 06:15 PM	59.9	49.8
12:55 PM - 01:00 PM	51.9	49.0	03:35 PM - 03:40 PM	50.8	47.8	06:15 PM - 06:20 PM	52.2	49.6
01:00 PM - 01:05 PM	51.6	48.6	03:40 PM - 03:45 PM	52.5	48.5	06:20 PM - 06:25 PM	53.0	49.9
01:05 PM - 01:10 PM	52.5	48.5	03:45 PM - 03:50 PM	53.9	49.1	06:25 PM - 06:30 PM	60.2	49.9
01:10 PM - 01:15 PM	51.2	48.2	03:50 PM - 03:55 PM	52.5	48.5	06:30 PM - 06:35 PM	60.3	50.2
01:15 PM - 01:20 PM	52.1	48.6	03:55 PM - 04:00 PM	52.4	49.7	06:35 PM - 06:40 PM	58.0	50.0
01:20 PM - 01:25 PM	53.5	48.7	04:00 PM - 04:05 PM	52.4	49.5	06:40 PM - 06:45 PM	53.6	50.5
01:25 PM - 01:30 PM	51.3	48.7	04:05 PM - 04:10 PM	51.5	49.2	06:45 PM - 06:50 PM	53.6	50.1
01:30 PM - 01:35 PM	51.3	48.7	04:10 PM - 04:15 PM	52.0	49.8	06:50 PM - 06:55 PM	53.3	49.8
01:35 PM - 01:40 PM	52.1	48.3	04:15 PM - 04:20 PM	51.7	49.7	06:55 PM - 07:00 PM	54.0	49.9

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251094-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 2 of 3

Sample Number : 2517446-3
Parameter : Noise Level (Leq 5 min)
Location : ฐานวัดโหนด (GPS 47P 0735038, 1405843)
Measurement Date : Feb 27 - Feb 28, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 623388

Feb 27, 2025			Feb 27 - Feb 28, 2025			Feb 28, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	55.0	50.5	09:40 PM - 09:45 PM	55.6	47.6	12:20 AM - 12:25 AM	48.8	44.0
07:05 PM - 07:10 PM	54.4	50.4	09:45 PM - 09:50 PM	54.8	46.9	12:25 AM - 12:30 AM	49.8	43.8
07:10 PM - 07:15 PM	50.6	47.8	09:50 PM - 09:55 PM	54.9	45.1	12:30 AM - 12:35 AM	49.9	44.2
07:15 PM - 07:20 PM	52.7	48.5	09:55 PM - 10:00 PM	55.1	48.9	12:35 AM - 12:40 AM	47.1	44.0
07:20 PM - 07:25 PM	52.7	47.9	10:00 PM - 10:05 PM	54.8	45.0	12:40 AM - 12:45 AM	50.1	44.0
07:25 PM - 07:30 PM	51.5	47.8	10:05 PM - 10:10 PM	55.4	45.6	12:45 AM - 12:50 AM	50.6	43.6
07:30 PM - 07:35 PM	57.6	49.1	10:10 PM - 10:15 PM	57.3	45.2	12:50 AM - 12:55 AM	49.1	44.0
07:35 PM - 07:40 PM	51.2	48.5	10:15 PM - 10:20 PM	55.3	44.6	12:55 AM - 01:00 AM	45.8	44.0
07:40 PM - 07:45 PM	53.4	49.1	10:20 PM - 10:25 PM	55.7	44.9	01:00 AM - 01:05 AM	52.4	44.2
07:45 PM - 07:50 PM	55.2	48.4	10:25 PM - 10:30 PM	56.7	45.9	01:05 AM - 01:10 AM	52.9	44.3
07:50 PM - 07:55 PM	54.4	49.4	10:30 PM - 10:35 PM	52.8	46.4	01:10 AM - 01:15 AM	47.4	44.2
07:55 PM - 08:00 PM	51.4	47.4	10:35 PM - 10:40 PM	54.3	48.0	01:15 AM - 01:20 AM	46.9	43.9
08:00 PM - 08:05 PM	50.8	47.3	10:40 PM - 10:45 PM	55.1	49.2	01:20 AM - 01:25 AM	44.8	43.3
08:05 PM - 08:10 PM	50.5	47.0	10:45 PM - 10:50 PM	55.8	46.2	01:25 AM - 01:30 AM	46.2	43.4
08:10 PM - 08:15 PM	50.8	46.3	10:50 PM - 10:55 PM	55.8	45.7	01:30 AM - 01:35 AM	47.2	44.1
08:15 PM - 08:20 PM	49.9	46.0	10:55 PM - 11:00 PM	57.1	47.1	01:35 AM - 01:40 AM	45.0	43.8
08:20 PM - 08:25 PM	51.2	46.6	11:00 PM - 11:05 PM	57.7	51.6	01:40 AM - 01:45 AM	44.5	43.6
08:25 PM - 08:30 PM	51.9	47.3	11:05 PM - 11:10 PM	57.6	46.6	01:45 AM - 01:50 AM	44.9	43.8
08:30 PM - 08:35 PM	51.3	47.1	11:10 PM - 11:15 PM	54.2	45.7	01:50 AM - 01:55 AM	45.4	43.6
08:35 PM - 08:40 PM	55.1	48.9	11:15 PM - 11:20 PM	55.3	50.0	01:55 AM - 02:00 AM	44.7	43.4
08:40 PM - 08:45 PM	53.8	48.8	11:20 PM - 11:25 PM	53.9	44.9	02:00 AM - 02:05 AM	47.4	43.3
08:45 PM - 08:50 PM	55.1	48.8	11:25 PM - 11:30 PM	54.8	43.5	02:05 AM - 02:10 AM	46.6	44.4
08:50 PM - 08:55 PM	54.8	48.8	11:30 PM - 11:35 PM	56.4	46.1	02:10 AM - 02:15 AM	49.2	44.0
08:55 PM - 09:00 PM	55.2	48.5	11:35 PM - 11:40 PM	54.1	44.4	02:15 AM - 02:20 AM	45.1	43.8
09:00 PM - 09:05 PM	55.0	49.9	11:40 PM - 11:45 PM	54.6	45.1	02:20 AM - 02:25 AM	44.6	43.6
09:05 PM - 09:10 PM	55.4	48.4	11:45 PM - 11:50 PM	54.9	44.7	02:25 AM - 02:30 AM	46.0	43.6
09:10 PM - 09:15 PM	54.6	47.4	11:50 PM - 11:55 PM	53.7	46.0	02:30 AM - 02:35 AM	48.1	43.1
09:15 PM - 09:20 PM	55.0	47.7	11:55 PM - 12:00 AM	52.4	44.3	02:35 AM - 02:40 AM	44.6	43.1
09:20 PM - 09:25 PM	56.1	49.4	12:00 AM - 12:05 AM	51.4	44.8	02:40 AM - 02:45 AM	46.7	43.8
09:25 PM - 09:30 PM	56.3	49.2	12:05 AM - 12:10 AM	50.5	44.9	02:45 AM - 02:50 AM	45.6	43.6
09:30 PM - 09:35 PM	57.1	52.1	12:10 AM - 12:15 AM	53.2	45.3	02:50 AM - 02:55 AM	45.6	43.4
09:35 PM - 09:40 PM	56.2	46.6	12:15 AM - 12:20 AM	48.6	45.4	02:55 AM - 03:00 AM	47.0	44.0

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Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251094-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 3 of 3

Sample Number : 2517446-3
Parameter : Noise Level (Leq 5 min)
Location : ฐานวัดโหนด (GPS 47P 0735038, 1405843)
Measurement Date : Feb 27 - Feb 28, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 623388

Feb 28, 2025			Feb 28, 2025			Feb 28, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	46.8	44.0	05:40 AM - 05:45 AM	49.9	45.6	08:20 AM - 08:25 AM	55.4	51.9
03:05 AM - 03:10 AM	45.0	43.3	05:45 AM - 05:50 AM	48.3	45.5	08:25 AM - 08:30 AM	55.9	50.9
03:10 AM - 03:15 AM	44.6	43.1	05:50 AM - 05:55 AM	47.6	45.3	08:30 AM - 08:35 AM	56.8	53.3
03:15 AM - 03:20 AM	44.9	44.0	05:55 AM - 06:00 AM	49.9	46.1	08:35 AM - 08:40 AM	53.0	49.8
03:20 AM - 03:25 AM	45.5	43.9	06:00 AM - 06:05 AM	48.6	45.7	08:40 AM - 08:45 AM	53.4	49.2
03:25 AM - 03:30 AM	44.5	43.7	06:05 AM - 06:10 AM	49.7	45.6	08:45 AM - 08:50 AM	55.1	49.8
03:30 AM - 03:35 AM	46.0	43.7	06:10 AM - 06:15 AM	49.7	46.7	08:50 AM - 08:55 AM	54.2	48.6
03:35 AM - 03:40 AM	46.2	44.1	06:15 AM - 06:20 AM	48.8	46.4	08:55 AM - 09:00 AM	54.7	48.4
03:40 AM - 03:45 AM	45.8	43.7	06:20 AM - 06:25 AM	52.3	48.0	09:00 AM - 09:05 AM	54.6	48.2
03:45 AM - 03:50 AM	44.3	43.0	06:25 AM - 06:30 AM	52.5	48.2	09:05 AM - 09:10 AM	52.4	49.1
03:50 AM - 03:55 AM	45.2	44.1	06:30 AM - 06:35 AM	53.8	48.7	09:10 AM - 09:15 AM	50.1	47.1
03:55 AM - 04:00 AM	46.5	43.6	06:35 AM - 06:40 AM	52.5	49.2	09:15 AM - 09:20 AM	50.7	46.5
04:00 AM - 04:05 AM	45.4	43.4	06:40 AM - 06:45 AM	53.5	49.9	09:20 AM - 09:25 AM	52.8	47.8
04:05 AM - 04:10 AM	45.9	43.5	06:45 AM - 06:50 AM	54.0	50.5	09:25 AM - 09:30 AM	51.5	48.3
04:10 AM - 04:15 AM	45.0	43.5	06:50 AM - 06:55 AM	58.7	51.5	09:30 AM - 09:35 AM	54.6	48.0
04:15 AM - 04:20 AM	46.6	43.6	06:55 AM - 07:00 AM	56.2	51.0	09:35 AM - 09:40 AM	55.8	48.0
04:20 AM - 04:25 AM	48.2	43.8	07:00 AM - 07:05 AM	54.8	51.9	09:40 AM - 09:45 AM	60.5	51.0
04:25 AM - 04:30 AM	46.4	44.2	07:05 AM - 07:10 AM	55.0	51.2	09:45 AM - 09:50 AM	58.2	49.6
04:30 AM - 04:35 AM	47.6	44.4	07:10 AM - 07:15 AM	54.4	51.2	09:50 AM - 09:55 AM	58.6	50.0
04:35 AM - 04:40 AM	47.1	44.2	07:15 AM - 07:20 AM	56.5	51.2	09:55 AM - 10:00 AM	56.7	49.5
04:40 AM - 04:45 AM	47.2	44.6	07:20 AM - 07:25 AM	58.1	50.1	10:00 AM - 10:05 AM	54.6	49.3
04:45 AM - 04:50 AM	47.4	44.3	07:25 AM - 07:30 AM	55.3	51.3	10:05 AM - 10:10 AM	52.4	47.6
04:50 AM - 04:55 AM	47.3	44.7	07:30 AM - 07:35 AM	54.0	51.0	10:10 AM - 10:15 AM	51.9	48.4
04:55 AM - 05:00 AM	47.3	43.8	07:35 AM - 07:40 AM	55.9	51.0	10:15 AM - 10:20 AM	57.9	49.2
05:00 AM - 05:05 AM	46.8	44.6	07:40 AM - 07:45 AM	56.4	51.9	10:20 AM - 10:25 AM	51.6	47.3
05:05 AM - 05:10 AM	47.5	44.5	07:45 AM - 07:50 AM	57.3	51.8	10:25 AM - 10:30 AM	53.8	47.9
05:10 AM - 05:15 AM	46.0	44.3	07:50 AM - 07:55 AM	58.2	51.6	10:30 AM - 10:35 AM	51.7	47.6
05:15 AM - 05:20 AM	47.9	44.2	07:55 AM - 08:00 AM	54.7	51.6	10:35 AM - 10:40 AM	51.1	47.8
05:20 AM - 05:25 AM	48.7	44.5	08:00 AM - 08:05 AM	54.8	51.6	10:40 AM - 10:45 AM	52.4	47.5
05:25 AM - 05:30 AM	47.2	44.6	08:05 AM - 08:10 AM	55.5	52.1	10:45 AM - 10:50 AM	52.2	47.4
05:30 AM - 05:35 AM	47.7	44.7	08:10 AM - 08:15 AM	54.0	50.9	10:50 AM - 10:55 AM	55.5	46.7
05:35 AM - 05:40 AM	47.1	44.6	08:15 AM - 08:20 AM	56.1	50.4	10:55 AM - 11:00 AM	55.3	46.5

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Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251095-1

Page 1 of 3

Sample Number 2517446-4
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 28 - Mar 01, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 28, 2025	Leq	L90	Feb 28, 2025	Leq	L90	Feb 28, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	50.7	47.3	01:40 PM - 01:45 PM	51.7	47.6	04:20 PM - 04:25 PM	52.0	49.0
11:05 AM - 11:10 AM	50.3	46.4	01:45 PM - 01:50 PM	51.7	48.5	04:25 PM - 04:30 PM	54.8	49.5
11:10 AM - 11:15 AM	49.8	46.3	01:50 PM - 01:55 PM	53.8	48.7	04:30 PM - 04:35 PM	54.4	50.9
11:15 AM - 11:20 AM	51.9	46.5	01:55 PM - 02:00 PM	51.7	48.5	04:35 PM - 04:40 PM	52.0	49.0
11:20 AM - 11:25 AM	52.5	46.9	02:00 PM - 02:05 PM	52.2	47.8	04:40 PM - 04:45 PM	57.3	49.5
11:25 AM - 11:30 AM	52.2	47.7	02:05 PM - 02:10 PM	51.1	47.5	04:45 PM - 04:50 PM	52.3	49.3
11:30 AM - 11:35 AM	53.6	50.0	02:10 PM - 02:15 PM	51.8	47.7	04:50 PM - 04:55 PM	53.5	49.8
11:35 AM - 11:40 AM	53.5	49.1	02:15 PM - 02:20 PM	51.9	47.4	04:55 PM - 05:00 PM	53.9	49.5
11:40 AM - 11:45 AM	50.4	47.6	02:20 PM - 02:25 PM	52.4	48.4	05:00 PM - 05:05 PM	53.6	51.4
11:45 AM - 11:50 AM	52.7	47.3	02:25 PM - 02:30 PM	50.5	47.2	05:05 PM - 05:10 PM	53.3	49.4
11:50 AM - 11:55 AM	54.0	48.0	02:30 PM - 02:35 PM	52.3	47.7	05:10 PM - 05:15 PM	52.2	49.5
11:55 AM - 12:00 PM	51.8	47.1	02:35 PM - 02:40 PM	54.9	49.1	05:15 PM - 05:20 PM	54.6	49.8
12:00 PM - 12:05 PM	51.0	47.8	02:40 PM - 02:45 PM	59.6	49.4	05:20 PM - 05:25 PM	52.3	49.1
12:05 PM - 12:10 PM	51.0	47.4	02:45 PM - 02:50 PM	55.4	49.5	05:25 PM - 05:30 PM	51.8	48.8
12:10 PM - 12:15 PM	51.3	48.4	02:50 PM - 02:55 PM	51.2	48.3	05:30 PM - 05:35 PM	55.7	49.2
12:15 PM - 12:20 PM	54.1	47.8	02:55 PM - 03:00 PM	55.9	48.9	05:35 PM - 05:40 PM	53.5	49.8
12:20 PM - 12:25 PM	58.2	48.2	03:00 PM - 03:05 PM	51.1	48.1	05:40 PM - 05:45 PM	53.2	50.0
12:25 PM - 12:30 PM	52.3	48.4	03:05 PM - 03:10 PM	60.4	47.9	05:45 PM - 05:50 PM	52.6	48.9
12:30 PM - 12:35 PM	53.6	48.5	03:10 PM - 03:15 PM	60.5	48.3	05:50 PM - 05:55 PM	53.0	49.3
12:35 PM - 12:40 PM	50.4	46.8	03:15 PM - 03:20 PM	59.1	48.5	05:55 PM - 06:00 PM	52.2	48.9
12:40 PM - 12:45 PM	51.6	47.9	03:20 PM - 03:25 PM	51.8	48.5	06:00 PM - 06:05 PM	53.1	49.8
12:45 PM - 12:50 PM	51.4	47.6	03:25 PM - 03:30 PM	61.4	50.3	06:05 PM - 06:10 PM	53.3	49.3
12:50 PM - 12:55 PM	51.1	47.4	03:30 PM - 03:35 PM	55.0	49.5	06:10 PM - 06:15 PM	54.5	49.7
12:55 PM - 01:00 PM	50.5	47.9	03:35 PM - 03:40 PM	53.1	49.6	06:15 PM - 06:20 PM	53.5	48.1
01:00 PM - 01:05 PM	53.2	48.1	03:40 PM - 03:45 PM	53.1	50.3	06:20 PM - 06:25 PM	52.5	48.7
01:05 PM - 01:10 PM	52.6	48.8	03:45 PM - 03:50 PM	54.7	49.9	06:25 PM - 06:30 PM	54.4	50.9
01:10 PM - 01:15 PM	52.7	49.0	03:50 PM - 03:55 PM	52.9	49.4	06:30 PM - 06:35 PM	56.8	50.3
01:15 PM - 01:20 PM	50.7	48.1	03:55 PM - 04:00 PM	52.1	49.2	06:35 PM - 06:40 PM	60.9	50.7
01:20 PM - 01:25 PM	52.6	49.4	04:00 PM - 04:05 PM	55.0	50.3	06:40 PM - 06:45 PM	53.7	49.0
01:25 PM - 01:30 PM	56.0	50.3	04:05 PM - 04:10 PM	55.9	50.0	06:45 PM - 06:50 PM	52.5	48.5
01:30 PM - 01:35 PM	53.5	48.1	04:10 PM - 04:15 PM	53.5	49.4	06:50 PM - 06:55 PM	51.3	47.5
01:35 PM - 01:40 PM	54.9	48.8	04:15 PM - 04:20 PM	60.6	49.3	06:55 PM - 07:00 PM	50.8	47.2

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251095-1

Page 2 of 3

Sample Number 2517446-4
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 28 - Mar 01, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Feb 28, 2025	Leq	L90	Feb 28 - Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	52.2	47.5	09:40 PM - 09:45 PM	51.2	49.3	12:20 AM - 12:25 AM	51.8	45.3
07:05 PM - 07:10 PM	50.8	47.6	09:45 PM - 09:50 PM	50.8	48.6	12:25 AM - 12:30 AM	47.4	45.4
07:10 PM - 07:15 PM	51.1	47.2	09:50 PM - 09:55 PM	51.3	48.7	12:30 AM - 12:35 AM	48.1	45.3
07:15 PM - 07:20 PM	53.0	46.9	09:55 PM - 10:00 PM	51.0	48.5	12:35 AM - 12:40 AM	47.9	44.9
07:20 PM - 07:25 PM	53.3	46.8	10:00 PM - 10:05 PM	50.0	48.2	12:40 AM - 12:45 AM	47.3	45.4
07:25 PM - 07:30 PM	50.5	46.5	10:05 PM - 10:10 PM	51.0	48.1	12:45 AM - 12:50 AM	47.1	45.1
07:30 PM - 07:35 PM	53.3	47.8	10:10 PM - 10:15 PM	49.8	48.2	12:50 AM - 12:55 AM	47.3	45.5
07:35 PM - 07:40 PM	52.3	48.1	10:15 PM - 10:20 PM	49.9	47.9	12:55 AM - 01:00 AM	50.8	46.0
07:40 PM - 07:45 PM	53.3	49.2	10:20 PM - 10:25 PM	50.9	47.6	01:00 AM - 01:05 AM	46.9	45.5
07:45 PM - 07:50 PM	52.8	49.5	10:25 PM - 10:30 PM	49.5	48.0	01:05 AM - 01:10 AM	46.5	45.2
07:50 PM - 07:55 PM	54.3	49.1	10:30 PM - 10:35 PM	50.9	47.8	01:10 AM - 01:15 AM	48.1	44.5
07:55 PM - 08:00 PM	56.8	48.2	10:35 PM - 10:40 PM	53.0	47.1	01:15 AM - 01:20 AM	46.2	44.3
08:00 PM - 08:05 PM	54.4	47.8	10:40 PM - 10:45 PM	51.4	47.8	01:20 AM - 01:25 AM	45.3	43.4
08:05 PM - 08:10 PM	53.1	49.0	10:45 PM - 10:50 PM	50.1	47.0	01:25 AM - 01:30 AM	47.9	43.4
08:10 PM - 08:15 PM	52.9	48.2	10:50 PM - 10:55 PM	50.1	47.5	01:30 AM - 01:35 AM	47.6	45.9
08:15 PM - 08:20 PM	55.2	50.4	10:55 PM - 11:00 PM	48.8	46.7	01:35 AM - 01:40 AM	47.3	45.2
08:20 PM - 08:25 PM	56.7	51.6	11:00 PM - 11:05 PM	50.1	47.4	01:40 AM - 01:45 AM	51.8	44.9
08:25 PM - 08:30 PM	55.9	52.1	11:05 PM - 11:10 PM	50.6	47.3	01:45 AM - 01:50 AM	49.3	44.8
08:30 PM - 08:35 PM	55.2	52.9	11:10 PM - 11:15 PM	50.1	47.4	01:50 AM - 01:55 AM	46.8	44.0
08:35 PM - 08:40 PM	54.1	52.4	11:15 PM - 11:20 PM	53.4	47.7	01:55 AM - 02:00 AM	45.1	42.5
08:40 PM - 08:45 PM	55.0	52.9	11:20 PM - 11:25 PM	48.3	47.1	02:00 AM - 02:05 AM	45.0	42.5
08:45 PM - 08:50 PM	54.6	52.1	11:25 PM - 11:30 PM	51.5	47.0	02:05 AM - 02:10 AM	48.4	44.1
08:50 PM - 08:55 PM	53.5	51.6	11:30 PM - 11:35 PM	49.4	46.7	02:10 AM - 02:15 AM	47.4	46.4
08:55 PM - 09:00 PM	54.9	51.7	11:35 PM - 11:40 PM	48.9	46.7	02:15 AM - 02:20 AM	51.6	46.2
09:00 PM - 09:05 PM	55.5	51.1	11:40 PM - 11:45 PM	48.4	46.6	02:20 AM - 02:25 AM	49.6	45.2
09:05 PM - 09:10 PM	56.2	51.0	11:45 PM - 11:50 PM	48.9	47.1	02:25 AM - 02:30 AM	45.7	44.4
09:10 PM - 09:15 PM	59.8	50.3	11:50 PM - 11:55 PM	48.7	47.5	02:30 AM - 02:35 AM	51.3	43.1
09:15 PM - 09:20 PM	57.7	55.7	11:55 PM - 12:00 AM	51.5	48.7	02:35 AM - 02:40 AM	45.5	42.3
09:20 PM - 09:25 PM	54.7	50.0	12:00 AM - 12:05 AM	49.9	48.4	02:40 AM - 02:45 AM	44.8	43.8
09:25 PM - 09:30 PM	52.5	49.9	12:05 AM - 12:10 AM	52.8	48.5	02:45 AM - 02:50 AM	49.6	43.6
09:30 PM - 09:35 PM	55.6	50.0	12:10 AM - 12:15 AM	50.9	48.2	02:50 AM - 02:55 AM	47.5	44.2
09:35 PM - 09:40 PM	52.7	49.5	12:15 AM - 12:20 AM	53.7	47.7	02:55 AM - 03:00 AM	45.5	43.6

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Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251095-1

Page 3 of 3

Sample Number 2517446-4
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Feb 28 - Mar 01, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
03:00 AM - 03:05 AM	45.4	42.9	05:40 AM - 05:45 AM	53.6	44.5	08:20 AM - 08:25 AM	52.0	48.2
03:05 AM - 03:10 AM	47.3	43.3	05:45 AM - 05:50 AM	52.0	44.8	08:25 AM - 08:30 AM	53.6	48.6
03:10 AM - 03:15 AM	44.6	42.5	05:50 AM - 05:55 AM	50.0	45.4	08:30 AM - 08:35 AM	52.2	48.9
03:15 AM - 03:20 AM	47.4	43.2	05:55 AM - 06:00 AM	51.8	45.6	08:35 AM - 08:40 AM	53.7	48.2
03:20 AM - 03:25 AM	50.0	42.9	06:00 AM - 06:05 AM	52.2	46.1	08:40 AM - 08:45 AM	50.5	46.8
03:25 AM - 03:30 AM	45.9	42.7	06:05 AM - 06:10 AM	50.7	45.6	08:45 AM - 08:50 AM	50.5	47.8
03:30 AM - 03:35 AM	48.9	44.4	06:10 AM - 06:15 AM	52.6	46.4	08:50 AM - 08:55 AM	53.7	48.9
03:35 AM - 03:40 AM	46.2	44.1	06:15 AM - 06:20 AM	50.5	47.5	08:55 AM - 09:00 AM	53.6	47.7
03:40 AM - 03:45 AM	45.4	42.8	06:20 AM - 06:25 AM	51.0	47.6	09:00 AM - 09:05 AM	50.5	46.9
03:45 AM - 03:50 AM	49.7	42.0	06:25 AM - 06:30 AM	63.4	48.6	09:05 AM - 09:10 AM	53.6	48.8
03:50 AM - 03:55 AM	44.9	42.7	06:30 AM - 06:35 AM	63.9	48.6	09:10 AM - 09:15 AM	53.2	47.9
03:55 AM - 04:00 AM	45.7	43.7	06:35 AM - 06:40 AM	57.4	48.9	09:15 AM - 09:20 AM	52.4	47.3
04:00 AM - 04:05 AM	47.1	43.8	06:40 AM - 06:45 AM	53.3	49.6	09:20 AM - 09:25 AM	50.8	47.9
04:05 AM - 04:10 AM	50.4	43.7	06:45 AM - 06:50 AM	51.6	48.7	09:25 AM - 09:30 AM	51.5	47.1
04:10 AM - 04:15 AM	54.0	43.9	06:50 AM - 06:55 AM	52.6	48.6	09:30 AM - 09:35 AM	51.2	47.8
04:15 AM - 04:20 AM	49.9	44.3	06:55 AM - 07:00 AM	53.8	49.7	09:35 AM - 09:40 AM	52.0	47.6
04:20 AM - 04:25 AM	52.2	43.5	07:00 AM - 07:05 AM	53.2	50.4	09:40 AM - 09:45 AM	55.9	48.2
04:25 AM - 04:30 AM	52.2	44.1	07:05 AM - 07:10 AM	54.2	50.2	09:45 AM - 09:50 AM	53.1	47.9
04:30 AM - 04:35 AM	51.0	45.0	07:10 AM - 07:15 AM	55.1	49.9	09:50 AM - 09:55 AM	52.0	48.2
04:35 AM - 04:40 AM	47.8	44.4	07:15 AM - 07:20 AM	55.0	50.4	09:55 AM - 10:00 AM	54.1	48.3
04:40 AM - 04:45 AM	47.9	44.8	07:20 AM - 07:25 AM	58.5	50.4	10:00 AM - 10:05 AM	50.1	47.1
04:45 AM - 04:50 AM	51.6	44.8	07:25 AM - 07:30 AM	58.9	51.5	10:05 AM - 10:10 AM	50.8	47.3
04:50 AM - 04:55 AM	51.2	44.8	07:30 AM - 07:35 AM	56.5	51.3	10:10 AM - 10:15 AM	54.6	47.4
04:55 AM - 05:00 AM	46.3	43.6	07:35 AM - 07:40 AM	54.0	50.8	10:15 AM - 10:20 AM	57.2	47.6
05:00 AM - 05:05 AM	51.1	44.4	07:40 AM - 07:45 AM	55.3	50.2	10:20 AM - 10:25 AM	51.0	47.8
05:05 AM - 05:10 AM	47.8	44.8	07:45 AM - 07:50 AM	55.8	51.6	10:25 AM - 10:30 AM	51.7	48.6
05:10 AM - 05:15 AM	53.0	45.8	07:50 AM - 07:55 AM	58.3	50.2	10:30 AM - 10:35 AM	51.7	47.7
05:15 AM - 05:20 AM	52.0	45.1	07:55 AM - 08:00 AM	53.6	50.5	10:35 AM - 10:40 AM	52.0	48.3
05:20 AM - 05:25 AM	48.0	44.2	08:00 AM - 08:05 AM	53.4	51.1	10:40 AM - 10:45 AM	51.7	48.8
05:25 AM - 05:30 AM	54.2	43.6	08:05 AM - 08:10 AM	54.4	50.0	10:45 AM - 10:50 AM	53.3	48.3
05:30 AM - 05:35 AM	55.9	45.4	08:10 AM - 08:15 AM	52.4	49.4	10:50 AM - 10:55 AM	50.8	47.4
05:35 AM - 05:40 AM	47.3	43.1	08:15 AM - 08:20 AM	51.9	47.8	10:55 AM - 11:00 AM	52.7	48.1

Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251096-1

Page 1 of 3

Sample Number 2517446-5
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	52.5	48.2	01:40 PM - 01:45 PM	52.3	48.7	04:20 PM - 04:25 PM	52.8	48.9
11:05 AM - 11:10 AM	51.9	47.9	01:45 PM - 01:50 PM	53.4	48.6	04:25 PM - 04:30 PM	52.9	50.0
11:10 AM - 11:15 AM	52.1	48.0	01:50 PM - 01:55 PM	54.0	48.7	04:30 PM - 04:35 PM	52.2	50.4
11:15 AM - 11:20 AM	52.8	47.3	01:55 PM - 02:00 PM	53.0	48.3	04:35 PM - 04:40 PM	52.9	49.9
11:20 AM - 11:25 AM	51.4	47.7	02:00 PM - 02:05 PM	55.3	48.4	04:40 PM - 04:45 PM	53.0	49.5
11:25 AM - 11:30 AM	50.8	47.3	02:05 PM - 02:10 PM	51.2	48.5	04:45 PM - 04:50 PM	55.4	51.7
11:30 AM - 11:35 AM	52.6	48.7	02:10 PM - 02:15 PM	50.3	47.9	04:50 PM - 04:55 PM	54.9	50.9
11:35 AM - 11:40 AM	51.8	48.1	02:15 PM - 02:20 PM	51.6	48.5	04:55 PM - 05:00 PM	52.7	50.3
11:40 AM - 11:45 AM	54.3	49.8	02:20 PM - 02:25 PM	52.0	49.0	05:00 PM - 05:05 PM	56.7	51.9
11:45 AM - 11:50 AM	52.2	48.2	02:25 PM - 02:30 PM	53.3	48.9	05:05 PM - 05:10 PM	53.5	50.7
11:50 AM - 11:55 AM	51.2	47.6	02:30 PM - 02:35 PM	51.2	49.0	05:10 PM - 05:15 PM	53.4	50.1
11:55 AM - 12:00 PM	51.3	48.2	02:35 PM - 02:40 PM	51.3	47.8	05:15 PM - 05:20 PM	54.9	50.9
12:00 PM - 12:05 PM	51.4	48.6	02:40 PM - 02:45 PM	52.0	48.8	05:20 PM - 05:25 PM	55.4	50.5
12:05 PM - 12:10 PM	51.3	48.3	02:45 PM - 02:50 PM	50.9	47.6	05:25 PM - 05:30 PM	54.2	50.2
12:10 PM - 12:15 PM	52.1	48.2	02:50 PM - 02:55 PM	49.9	46.3	05:30 PM - 05:35 PM	53.5	50.9
12:15 PM - 12:20 PM	51.1	48.1	02:55 PM - 03:00 PM	51.9	48.7	05:35 PM - 05:40 PM	54.7	51.9
12:20 PM - 12:25 PM	52.4	48.0	03:00 PM - 03:05 PM	52.2	48.5	05:40 PM - 05:45 PM	53.2	51.2
12:25 PM - 12:30 PM	52.4	48.9	03:05 PM - 03:10 PM	51.8	48.8	05:45 PM - 05:50 PM	57.1	51.6
12:30 PM - 12:35 PM	52.7	48.8	03:10 PM - 03:15 PM	52.6	48.5	05:50 PM - 05:55 PM	55.9	50.9
12:35 PM - 12:40 PM	52.4	48.7	03:15 PM - 03:20 PM	52.5	48.3	05:55 PM - 06:00 PM	53.4	50.4
12:40 PM - 12:45 PM	52.0	48.7	03:20 PM - 03:25 PM	50.5	47.7	06:00 PM - 06:05 PM	52.9	50.1
12:45 PM - 12:50 PM	52.8	48.8	03:25 PM - 03:30 PM	53.3	50.0	06:05 PM - 06:10 PM	52.3	50.0
12:50 PM - 12:55 PM	51.8	48.1	03:30 PM - 03:35 PM	51.7	49.1	06:10 PM - 06:15 PM	53.4	49.7
12:55 PM - 01:00 PM	50.9	46.9	03:35 PM - 03:40 PM	53.4	49.5	06:15 PM - 06:20 PM	55.8	50.6
01:00 PM - 01:05 PM	52.4	49.0	03:40 PM - 03:45 PM	51.7	47.7	06:20 PM - 06:25 PM	55.5	50.3
01:05 PM - 01:10 PM	53.0	48.5	03:45 PM - 03:50 PM	50.2	46.9	06:25 PM - 06:30 PM	58.3	50.5
01:10 PM - 01:15 PM	52.2	49.3	03:50 PM - 03:55 PM	51.8	48.7	06:30 PM - 06:35 PM	64.1	51.5
01:15 PM - 01:20 PM	50.6	47.5	03:55 PM - 04:00 PM	52.5	49.0	06:35 PM - 06:40 PM	59.2	50.9
01:20 PM - 01:25 PM	50.0	48.0	04:00 PM - 04:05 PM	51.8	48.6	06:40 PM - 06:45 PM	53.7	51.8
01:25 PM - 01:30 PM	51.8	48.2	04:05 PM - 04:10 PM	52.8	48.7	06:45 PM - 06:50 PM	53.5	49.9
01:30 PM - 01:35 PM	50.6	48.2	04:10 PM - 04:15 PM	53.2	48.9	06:50 PM - 06:55 PM	54.1	49.9
01:35 PM - 01:40 PM	52.0	49.4	04:15 PM - 04:20 PM	51.9	48.4	06:55 PM - 07:00 PM	54.8	50.5

Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251096-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517446-5
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโหนด (GPS 47P 0735038, 1405843)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Page 2 of 3

Mar 01, 2025	Leq	L90	Mar 01 - Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	53.1	50.1	09:40 PM - 09:45 PM	53.6	48.9	12:20 AM - 12:25 AM	48.3	45.5
07:05 PM - 07:10 PM	58.4	50.0	09:45 PM - 09:50 PM	50.6	48.0	12:25 AM - 12:30 AM	48.0	46.0
07:10 PM - 07:15 PM	51.9	49.8	09:50 PM - 09:55 PM	50.2	47.6	12:30 AM - 12:35 AM	49.4	46.0
07:15 PM - 07:20 PM	52.5	49.2	09:55 PM - 10:00 PM	59.8	48.1	12:35 AM - 12:40 AM	49.1	45.4
07:20 PM - 07:25 PM	54.6	49.9	10:00 PM - 10:05 PM	51.4	48.1	12:40 AM - 12:45 AM	52.5	45.8
07:25 PM - 07:30 PM	53.0	49.5	10:05 PM - 10:10 PM	51.9	48.5	12:45 AM - 12:50 AM	49.2	46.4
07:30 PM - 07:35 PM	54.6	49.4	10:10 PM - 10:15 PM	51.2	47.8	12:50 AM - 12:55 AM	49.0	46.0
07:35 PM - 07:40 PM	53.0	50.2	10:15 PM - 10:20 PM	51.3	48.7	12:55 AM - 01:00 AM	47.5	45.5
07:40 PM - 07:45 PM	54.7	49.9	10:20 PM - 10:25 PM	54.9	48.4	01:00 AM - 01:05 AM	49.4	46.2
07:45 PM - 07:50 PM	52.8	49.4	10:25 PM - 10:30 PM	52.5	48.3	01:05 AM - 01:10 AM	48.0	45.0
07:50 PM - 07:55 PM	52.5	49.4	10:30 PM - 10:35 PM	51.5	48.0	01:10 AM - 01:15 AM	47.9	44.9
07:55 PM - 08:00 PM	58.5	51.4	10:35 PM - 10:40 PM	50.2	46.9	01:15 AM - 01:20 AM	47.6	45.1
08:00 PM - 08:05 PM	52.5	49.1	10:40 PM - 10:45 PM	52.1	47.6	01:20 AM - 01:25 AM	48.9	45.5
08:05 PM - 08:10 PM	58.0	50.8	10:45 PM - 10:50 PM	50.2	47.3	01:25 AM - 01:30 AM	47.0	45.0
08:10 PM - 08:15 PM	53.9	49.8	10:50 PM - 10:55 PM	52.6	47.3	01:30 AM - 01:35 AM	46.9	45.2
08:15 PM - 08:20 PM	53.6	49.2	10:55 PM - 11:00 PM	53.1	48.3	01:35 AM - 01:40 AM	50.6	45.5
08:20 PM - 08:25 PM	54.1	50.8	11:00 PM - 11:05 PM	52.8	48.1	01:40 AM - 01:45 AM	47.4	45.0
08:25 PM - 08:30 PM	54.7	50.9	11:05 PM - 11:10 PM	64.1	47.5	01:45 AM - 01:50 AM	47.9	44.8
08:30 PM - 08:35 PM	54.2	51.5	11:10 PM - 11:15 PM	52.4	47.9	01:50 AM - 01:55 AM	47.2	44.7
08:35 PM - 08:40 PM	53.0	50.5	11:15 PM - 11:20 PM	59.5	47.5	01:55 AM - 02:00 AM	46.9	44.7
08:40 PM - 08:45 PM	54.5	50.8	11:20 PM - 11:25 PM	51.7	48.0	02:00 AM - 02:05 AM	48.0	44.7
08:45 PM - 08:50 PM	53.5	50.1	11:25 PM - 11:30 PM	51.6	48.7	02:05 AM - 02:10 AM	47.8	44.7
08:50 PM - 08:55 PM	52.0	48.1	11:30 PM - 11:35 PM	53.1	48.1	02:10 AM - 02:15 AM	49.2	44.7
08:55 PM - 09:00 PM	51.6	48.1	11:35 PM - 11:40 PM	49.1	46.6	02:15 AM - 02:20 AM	48.9	44.8
09:00 PM - 09:05 PM	52.6	48.3	11:40 PM - 11:45 PM	48.8	45.9	02:20 AM - 02:25 AM	48.3	45.5
09:05 PM - 09:10 PM	51.9	47.6	11:45 PM - 11:50 PM	49.7	47.2	02:25 AM - 02:30 AM	48.7	45.5
09:10 PM - 09:15 PM	50.6	47.3	11:50 PM - 11:55 PM	59.9	48.8	02:30 AM - 02:35 AM	48.9	45.1
09:15 PM - 09:20 PM	54.5	48.8	11:55 PM - 12:00 AM	48.4	46.8	02:35 AM - 02:40 AM	48.7	45.8
09:20 PM - 09:25 PM	52.1	49.3	12:00 AM - 12:05 AM	49.3	47.2	02:40 AM - 02:45 AM	47.5	45.3
09:25 PM - 09:30 PM	54.7	49.1	12:05 AM - 12:10 AM	49.2	46.8	02:45 AM - 02:50 AM	47.4	45.1
09:30 PM - 09:35 PM	52.2	47.5	12:10 AM - 12:15 AM	49.4	47.0	02:50 AM - 02:55 AM	48.3	44.8
09:35 PM - 09:40 PM	51.9	48.6	12:15 AM - 12:20 AM	52.1	46.0	02:55 AM - 03:00 AM	46.6	44.3

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Assistant General Manager

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251096-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517446-5
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโหนด (GPS 47P 0735038, 1405843)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Page 3 of 3

Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
03:00 AM - 03:05 AM	47.2	44.8	05:40 AM - 05:45 AM	50.9	45.2	08:20 AM - 08:25 AM	54.6	49.0
03:05 AM - 03:10 AM	47.8	45.2	05:45 AM - 05:50 AM	48.2	46.0	08:25 AM - 08:30 AM	54.4	47.9
03:10 AM - 03:15 AM	46.9	45.0	05:50 AM - 05:55 AM	46.9	44.6	08:30 AM - 08:35 AM	52.5	48.6
03:15 AM - 03:20 AM	46.6	44.1	05:55 AM - 06:00 AM	47.9	45.7	08:35 AM - 08:40 AM	53.1	49.5
03:20 AM - 03:25 AM	46.8	44.0	06:00 AM - 06:05 AM	48.2	45.4	08:40 AM - 08:45 AM	53.2	49.0
03:25 AM - 03:30 AM	47.7	44.8	06:05 AM - 06:10 AM	49.1	46.6	08:45 AM - 08:50 AM	56.1	49.1
03:30 AM - 03:35 AM	48.9	44.9	06:10 AM - 06:15 AM	48.8	46.1	08:50 AM - 08:55 AM	57.5	50.5
03:35 AM - 03:40 AM	47.3	44.0	06:15 AM - 06:20 AM	50.1	47.8	08:55 AM - 09:00 AM	57.0	49.9
03:40 AM - 03:45 AM	47.6	44.7	06:20 AM - 06:25 AM	48.9	46.3	09:00 AM - 09:05 AM	53.9	47.6
03:45 AM - 03:50 AM	46.7	44.7	06:25 AM - 06:30 AM	49.8	47.5	09:05 AM - 09:10 AM	52.0	46.8
03:50 AM - 03:55 AM	48.4	45.5	06:30 AM - 06:35 AM	50.2	48.1	09:10 AM - 09:15 AM	53.5	49.0
03:55 AM - 04:00 AM	46.9	45.2	06:35 AM - 06:40 AM	52.1	49.1	09:15 AM - 09:20 AM	53.7	49.5
04:00 AM - 04:05 AM	47.1	44.7	06:40 AM - 06:45 AM	50.9	48.0	09:20 AM - 09:25 AM	53.7	50.6
04:05 AM - 04:10 AM	46.6	44.3	06:45 AM - 06:50 AM	51.8	48.4	09:25 AM - 09:30 AM	53.6	49.6
04:10 AM - 04:15 AM	48.3	43.3	06:50 AM - 06:55 AM	51.4	48.6	09:30 AM - 09:35 AM	55.5	49.3
04:15 AM - 04:20 AM	49.3	44.1	06:55 AM - 07:00 AM	54.2	49.6	09:35 AM - 09:40 AM	52.6	48.7
04:20 AM - 04:25 AM	50.7	44.6	07:00 AM - 07:05 AM	57.5	49.0	09:40 AM - 09:45 AM	53.5	48.6
04:25 AM - 04:30 AM	48.0	44.6	07:05 AM - 07:10 AM	52.1	49.1	09:45 AM - 09:50 AM	55.2	50.3
04:30 AM - 04:35 AM	46.9	44.6	07:10 AM - 07:15 AM	53.9	48.8	09:50 AM - 09:55 AM	55.0	51.7
04:35 AM - 04:40 AM	48.1	45.6	07:15 AM - 07:20 AM	54.1	49.7	09:55 AM - 10:00 AM	55.7	50.7
04:40 AM - 04:45 AM	48.7	45.4	07:20 AM - 07:25 AM	52.7	48.5	10:00 AM - 10:05 AM	54.6	51.3
04:45 AM - 04:50 AM	47.3	44.4	07:25 AM - 07:30 AM	54.2	50.0	10:05 AM - 10:10 AM	54.0	51.0
04:50 AM - 04:55 AM	48.3	44.1	07:30 AM - 07:35 AM	55.2	49.5	10:10 AM - 10:15 AM	55.0	51.2
04:55 AM - 05:00 AM	47.4	44.7	07:35 AM - 07:40 AM	51.9	49.0	10:15 AM - 10:20 AM	53.7	51.8
05:00 AM - 05:05 AM	45.7	44.4	07:40 AM - 07:45 AM	54.1	49.5	10:20 AM - 10:25 AM	54.4	52.4
05:05 AM - 05:10 AM	48.5	44.6	07:45 AM - 07:50 AM	52.6	48.3	10:25 AM - 10:30 AM	53.7	51.4
05:10 AM - 05:15 AM	46.9	44.9	07:50 AM - 07:55 AM	52.9	48.9	10:30 AM - 10:35 AM	55.2	51.4
05:15 AM - 05:20 AM	46.6	44.6	07:55 AM - 08:00 AM	53.2	49.0	10:35 AM - 10:40 AM	53.8	50.8
05:20 AM - 05:25 AM	47.2	44.5	08:00 AM - 08:05 AM	53.1	48.8	10:40 AM - 10:45 AM	57.6	51.3
05:25 AM - 05:30 AM	46.8	44.1	08:05 AM - 08:10 AM	55.3	49.2	10:45 AM - 10:50 AM	54.9	51.7
05:30 AM - 05:35 AM	47.9	44.8	08:10 AM - 08:15 AM	54.1	49.1	10:50 AM - 10:55 AM	53.9	51.9
05:35 AM - 05:40 AM	47.9	44.9	08:15 AM - 08:20 AM	53.6	48.0	10:55 AM - 11:00 AM	53.8	51.4

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received: Mar 04, 2025
Date Reported: Mar 08, 2025
Report Number: :3251097-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517446-6
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 02, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 02, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 02, 2025 Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	52.0	49.8	01:40 PM - 01:45 PM	51.7	49.3	04:20 PM - 04:25 PM	51.7	48.4
11:05 AM - 11:10 AM	52.8	49.7	01:45 PM - 01:50 PM	50.9	48.4	04:25 PM - 04:30 PM	50.3	47.7
11:10 AM - 11:15 AM	55.7	50.1	01:50 PM - 01:55 PM	52.7	48.8	04:30 PM - 04:35 PM	55.2	48.9
11:15 AM - 11:20 AM	52.0	49.2	01:55 PM - 02:00 PM	53.4	48.9	04:35 PM - 04:40 PM	50.8	48.8
11:20 AM - 11:25 AM	54.2	49.5	02:00 PM - 02:05 PM	51.6	48.8	04:40 PM - 04:45 PM	51.2	48.3
11:25 AM - 11:30 AM	53.4	48.8	02:05 PM - 02:10 PM	51.3	48.7	04:45 PM - 04:50 PM	52.1	49.9
11:30 AM - 11:35 AM	53.1	50.3	02:10 PM - 02:15 PM	51.0	48.2	04:50 PM - 04:55 PM	52.6	49.6
11:35 AM - 11:40 AM	53.3	51.9	02:15 PM - 02:20 PM	51.6	48.9	04:55 PM - 05:00 PM	53.5	49.8
11:40 AM - 11:45 AM	53.5	52.1	02:20 PM - 02:25 PM	53.1	49.5	05:00 PM - 05:05 PM	53.3	49.3
11:45 AM - 11:50 AM	56.4	52.3	02:25 PM - 02:30 PM	52.7	49.8	05:05 PM - 05:10 PM	53.1	49.9
11:50 AM - 11:55 AM	53.5	52.1	02:30 PM - 02:35 PM	53.4	50.1	05:10 PM - 05:15 PM	51.4	48.9
11:55 AM - 12:00 PM	51.4	49.0	02:35 PM - 02:40 PM	54.0	49.3	05:15 PM - 05:20 PM	54.7	50.1
12:00 PM - 12:05 PM	50.4	48.6	02:40 PM - 02:45 PM	54.8	49.3	05:20 PM - 05:25 PM	52.2	49.4
12:05 PM - 12:10 PM	51.1	48.6	02:45 PM - 02:50 PM	52.6	48.9	05:25 PM - 05:30 PM	50.9	48.5
12:10 PM - 12:15 PM	51.6	48.7	02:50 PM - 02:55 PM	50.3	48.5	05:30 PM - 05:35 PM	54.2	50.9
12:15 PM - 12:20 PM	54.1	49.0	02:55 PM - 03:00 PM	51.5	49.2	05:35 PM - 05:40 PM	53.4	50.6
12:20 PM - 12:25 PM	53.2	49.8	03:00 PM - 03:05 PM	51.7	49.2	05:40 PM - 05:45 PM	52.7	50.6
12:25 PM - 12:30 PM	53.4	49.6	03:05 PM - 03:10 PM	51.7	49.4	05:45 PM - 05:50 PM	54.1	50.4
12:30 PM - 12:35 PM	51.0	49.1	03:10 PM - 03:15 PM	52.4	49.4	05:50 PM - 05:55 PM	53.8	50.0
12:35 PM - 12:40 PM	51.0	48.9	03:15 PM - 03:20 PM	53.0	48.7	05:55 PM - 06:00 PM	53.9	50.2
12:40 PM - 12:45 PM	54.4	49.4	03:20 PM - 03:25 PM	51.7	48.6	06:00 PM - 06:05 PM	60.4	50.0
12:45 PM - 12:50 PM	52.9	49.4	03:25 PM - 03:30 PM	51.2	48.3	06:05 PM - 06:10 PM	53.5	50.3
12:50 PM - 12:55 PM	52.9	49.5	03:30 PM - 03:35 PM	52.7	48.8	06:10 PM - 06:15 PM	52.9	49.4
12:55 PM - 01:00 PM	51.7	49.3	03:35 PM - 03:40 PM	51.3	48.3	06:15 PM - 06:20 PM	53.3	50.2
01:00 PM - 01:05 PM	51.6	49.0	03:40 PM - 03:45 PM	51.5	48.3	06:20 PM - 06:25 PM	54.0	49.3
01:05 PM - 01:10 PM	52.6	49.6	03:45 PM - 03:50 PM	51.3	48.5	06:25 PM - 06:30 PM	54.3	49.6
01:10 PM - 01:15 PM	52.2	49.5	03:50 PM - 03:55 PM	53.4	49.1	06:30 PM - 06:35 PM	54.4	49.8
01:15 PM - 01:20 PM	53.2	49.2	03:55 PM - 04:00 PM	52.6	47.8	06:35 PM - 06:40 PM	55.2	49.7
01:20 PM - 01:25 PM	51.5	49.3	04:00 PM - 04:05 PM	51.1	46.8	06:40 PM - 06:45 PM	52.5	50.3
01:25 PM - 01:30 PM	51.2	48.9	04:05 PM - 04:10 PM	50.1	46.7	06:45 PM - 06:50 PM	52.3	49.9
01:30 PM - 01:35 PM	51.6	48.4	04:10 PM - 04:15 PM	50.9	47.1	06:50 PM - 06:55 PM	53.3	50.2
01:35 PM - 01:40 PM	53.1	48.3	04:15 PM - 04:20 PM	49.9	47.7	06:55 PM - 07:00 PM	65.8	50.2

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received: Mar 04, 2025
Date Reported: Mar 08, 2025
Report Number: :3251097-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 2 of 3

Sample Number 2517446-6
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 02, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 02 - Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	52.3	50.1	09:40 PM - 09:45 PM	51.4	47.6	12:20 AM - 12:25 AM	49.2	44.8
07:05 PM - 07:10 PM	53.9	51.1	09:45 PM - 09:50 PM	50.5	47.4	12:25 AM - 12:30 AM	48.8	44.3
07:10 PM - 07:15 PM	54.3	50.7	09:50 PM - 09:55 PM	51.5	46.2	12:30 AM - 12:35 AM	49.5	45.7
07:15 PM - 07:20 PM	53.9	51.2	09:55 PM - 10:00 PM	50.8	46.7	12:35 AM - 12:40 AM	49.8	45.2
07:20 PM - 07:25 PM	53.9	50.9	10:00 PM - 10:05 PM	52.3	46.7	12:40 AM - 12:45 AM	49.4	45.2
07:25 PM - 07:30 PM	54.3	51.2	10:05 PM - 10:10 PM	50.8	47.0	12:45 AM - 12:50 AM	52.3	45.5
07:30 PM - 07:35 PM	53.6	50.8	10:10 PM - 10:15 PM	49.2	46.1	12:50 AM - 12:55 AM	46.2	44.5
07:35 PM - 07:40 PM	53.9	51.5	10:15 PM - 10:20 PM	49.6	46.5	12:55 AM - 01:00 AM	48.1	44.3
07:40 PM - 07:45 PM	53.7	50.8	10:20 PM - 10:25 PM	48.7	45.7	01:00 AM - 01:05 AM	49.4	45.2
07:45 PM - 07:50 PM	53.9	51.4	10:25 PM - 10:30 PM	50.0	46.5	01:05 AM - 01:10 AM	47.9	44.7
07:50 PM - 07:55 PM	56.5	49.5	10:30 PM - 10:35 PM	49.1	45.9	01:10 AM - 01:15 AM	47.8	44.3
07:55 PM - 08:00 PM	59.0	53.5	10:35 PM - 10:40 PM	48.4	45.7	01:15 AM - 01:20 AM	46.0	44.3
08:00 PM - 08:05 PM	57.4	54.3	10:40 PM - 10:45 PM	50.5	45.1	01:20 AM - 01:25 AM	46.3	44.0
08:05 PM - 08:10 PM	54.8	50.5	10:45 PM - 10:50 PM	49.9	46.1	01:25 AM - 01:30 AM	46.5	44.3
08:10 PM - 08:15 PM	56.3	50.7	10:50 PM - 10:55 PM	49.5	46.4	01:30 AM - 01:35 AM	46.8	44.1
08:15 PM - 08:20 PM	59.2	53.3	10:55 PM - 11:00 PM	50.3	45.8	01:35 AM - 01:40 AM	45.5	44.1
08:20 PM - 08:25 PM	54.5	51.8	11:00 PM - 11:05 PM	47.4	45.0	01:40 AM - 01:45 AM	46.4	44.3
08:25 PM - 08:30 PM	55.9	52.5	11:05 PM - 11:10 PM	48.5	44.9	01:45 AM - 01:50 AM	49.2	44.3
08:30 PM - 08:35 PM	55.7	51.8	11:10 PM - 11:15 PM	51.1	45.6	01:50 AM - 01:55 AM	48.3	44.5
08:35 PM - 08:40 PM	54.8	52.4	11:15 PM - 11:20 PM	50.2	46.9	01:55 AM - 02:00 AM	48.5	44.5
08:40 PM - 08:45 PM	56.2	52.3	11:20 PM - 11:25 PM	49.5	45.8	02:00 AM - 02:05 AM	50.3	44.7
08:45 PM - 08:50 PM	55.2	51.8	11:25 PM - 11:30 PM	53.3	45.2	02:05 AM - 02:10 AM	45.7	44.0
08:50 PM - 08:55 PM	53.9	50.7	11:30 PM - 11:35 PM	48.6	45.5	02:10 AM - 02:15 AM	44.5	42.7
08:55 PM - 09:00 PM	53.8	50.6	11:35 PM - 11:40 PM	50.2	46.3	02:15 AM - 02:20 AM	46.7	44.7
09:00 PM - 09:05 PM	57.4	50.7	11:40 PM - 11:45 PM	49.5	45.1	02:20 AM - 02:25 AM	45.5	44.2
09:05 PM - 09:10 PM	55.6	51.8	11:45 PM - 11:50 PM	50.8	45.4	02:25 AM - 02:30 AM	45.5	43.9
09:10 PM - 09:15 PM	54.8	48.7	11:50 PM - 11:55 PM	48.8	46.2	02:30 AM - 02:35 AM	45.7	43.9
09:15 PM - 09:20 PM	51.8	48.4	11:55 PM - 12:00 AM	49.0	46.1	02:35 AM - 02:40 AM	46.8	43.8
09:20 PM - 09:25 PM	49.6	46.9	12:00 AM - 12:05 AM	51.5	46.7	02:40 AM - 02:45 AM	47.5	44.1
09:25 PM - 09:30 PM	53.6	48.5	12:05 AM - 12:10 AM	52.8	47.6	02:45 AM - 02:50 AM	45.2	43.3
09:30 PM - 09:35 PM	58.8	48.7	12:10 AM - 12:15 AM	49.4	46.5	02:50 AM - 02:55 AM	47.3	44.0
09:35 PM - 09:40 PM	50.5	47.3	12:15 AM - 12:20 AM	48.9	45.7	02:55 AM - 03:00 AM	47.5	44.0

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received: Mar 04, 2025
Date Reported: Mar 08, 2025
Report Number: :3251097-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 3 of 3

Sample Number 2517446-6
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	46.7	44.6	05:40 AM - 05:45 AM	49.5	46.5	08:20 AM - 08:25 AM	53.6	50.4
03:05 AM - 03:10 AM	48.4	44.9	05:45 AM - 05:50 AM	48.6	46.6	08:25 AM - 08:30 AM	54.2	50.4
03:10 AM - 03:15 AM	52.4	44.5	05:50 AM - 05:55 AM	48.9	45.9	08:30 AM - 08:35 AM	54.2	50.1
03:15 AM - 03:20 AM	47.4	44.1	05:55 AM - 06:00 AM	50.9	47.6	08:35 AM - 08:40 AM	53.2	50.5
03:20 AM - 03:25 AM	47.5	45.2	06:00 AM - 06:05 AM	49.9	47.6	08:40 AM - 08:45 AM	53.4	49.9
03:25 AM - 03:30 AM	48.8	45.3	06:05 AM - 06:10 AM	49.3	47.3	08:45 AM - 08:50 AM	53.8	50.9
03:30 AM - 03:35 AM	48.0	45.3	06:10 AM - 06:15 AM	49.4	46.9	08:50 AM - 08:55 AM	53.9	51.2
03:35 AM - 03:40 AM	49.2	44.8	06:15 AM - 06:20 AM	50.4	48.0	08:55 AM - 09:00 AM	54.4	50.8
03:40 AM - 03:45 AM	46.5	44.9	06:20 AM - 06:25 AM	51.9	47.8	09:00 AM - 09:05 AM	52.9	49.8
03:45 AM - 03:50 AM	51.7	44.1	06:25 AM - 06:30 AM	51.7	48.9	09:05 AM - 09:10 AM	52.4	50.0
03:50 AM - 03:55 AM	46.9	44.8	06:30 AM - 06:35 AM	52.9	50.9	09:10 AM - 09:15 AM	53.0	49.4
03:55 AM - 04:00 AM	46.3	44.1	06:35 AM - 06:40 AM	51.5	49.7	09:15 AM - 09:20 AM	53.6	49.8
04:00 AM - 04:05 AM	47.8	45.0	06:40 AM - 06:45 AM	54.0	49.7	09:20 AM - 09:25 AM	54.4	49.7
04:05 AM - 04:10 AM	48.9	45.5	06:45 AM - 06:50 AM	54.5	51.2	09:25 AM - 09:30 AM	52.6	49.0
04:10 AM - 04:15 AM	48.3	45.4	06:50 AM - 06:55 AM	55.8	50.8	09:30 AM - 09:35 AM	54.8	49.9
04:15 AM - 04:20 AM	46.8	45.1	06:55 AM - 07:00 AM	56.4	51.0	09:35 AM - 09:40 AM	53.1	49.1
04:20 AM - 04:25 AM	47.8	45.9	07:00 AM - 07:05 AM	54.5	51.5	09:40 AM - 09:45 AM	54.9	50.2
04:25 AM - 04:30 AM	47.4	45.0	07:05 AM - 07:10 AM	53.4	51.1	09:45 AM - 09:50 AM	52.8	49.2
04:30 AM - 04:35 AM	47.3	44.4	07:10 AM - 07:15 AM	54.1	51.0	09:50 AM - 09:55 AM	54.8	49.4
04:35 AM - 04:40 AM	48.4	45.0	07:15 AM - 07:20 AM	54.0	51.1	09:55 AM - 10:00 AM	55.7	51.7
04:40 AM - 04:45 AM	48.6	45.8	07:20 AM - 07:25 AM	52.8	51.1	10:00 AM - 10:05 AM	54.5	49.8
04:45 AM - 04:50 AM	48.7	46.1	07:25 AM - 07:30 AM	53.7	50.9	10:05 AM - 10:10 AM	55.6	52.4
04:50 AM - 04:55 AM	47.7	45.6	07:30 AM - 07:35 AM	53.0	51.0	10:10 AM - 10:15 AM	54.8	49.8
04:55 AM - 05:00 AM	52.1	44.9	07:35 AM - 07:40 AM	55.1	52.3	10:15 AM - 10:20 AM	56.0	52.2
05:00 AM - 05:05 AM	49.3	46.0	07:40 AM - 07:45 AM	55.8	51.7	10:20 AM - 10:25 AM	51.2	48.3
05:05 AM - 05:10 AM	48.9	46.1	07:45 AM - 07:50 AM	55.3	51.7	10:25 AM - 10:30 AM	52.9	49.2
05:10 AM - 05:15 AM	48.8	45.1	07:50 AM - 07:55 AM	53.2	51.2	10:30 AM - 10:35 AM	57.2	49.7
05:15 AM - 05:20 AM	48.0	45.6	07:55 AM - 08:00 AM	56.7	51.8	10:35 AM - 10:40 AM	55.9	52.4
05:20 AM - 05:25 AM	48.5	45.8	08:00 AM - 08:05 AM	54.8	51.6	10:40 AM - 10:45 AM	54.4	49.5
05:25 AM - 05:30 AM	47.1	45.4	08:05 AM - 08:10 AM	55.0	52.0	10:45 AM - 10:50 AM	53.0	48.6
05:30 AM - 05:35 AM	49.5	46.5	08:10 AM - 08:15 AM	56.3	51.5	10:50 AM - 10:55 AM	53.4	49.5
05:35 AM - 05:40 AM	48.4	45.7	08:15 AM - 08:20 AM	55.1	51.4	10:55 AM - 11:00 AM	57.8	53.0

Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517446
Date Received: Mar 04, 2025
Date Reported: Mar 08, 2025
Report Number: :3251098-1

P/O : 4516885247
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517446-7
Parameter Noise Level (Leq 5 min)
Location ฐานวัดโกลน (GPS 47P 0735038, 1405843)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 03, 2025 Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	54.8	52.9	01:40 PM - 01:45 PM	55.2	52.2	04:20 PM - 04:25 PM	53.7	51.6
11:05 AM - 11:10 AM	54.3	52.8	01:45 PM - 01:50 PM	54.3	52.1	04:25 PM - 04:30 PM	55.9	51.4
11:10 AM - 11:15 AM	54.5	52.5	01:50 PM - 01:55 PM	52.6	51.4	04:30 PM - 04:35 PM	54.3	52.4
11:15 AM - 11:20 AM	55.3	52.1	01:55 PM - 02:00 PM	53.0	51.2	04:35 PM - 04:40 PM	54.5	52.3
11:20 AM - 11:25 AM	53.3	51.8	02:00 PM - 02:05 PM	54.9	52.8	04:40 PM - 04:45 PM	56.3	52.8
11:25 AM - 11:30 AM	53.2	51.9	02:05 PM - 02:10 PM	55.8	52.4	04:45 PM - 04:50 PM	54.5	52.6
11:30 AM - 11:35 AM	54.2	52.2	02:10 PM - 02:15 PM	55.1	52.2	04:50 PM - 04:55 PM	54.3	52.4
11:35 AM - 11:40 AM	53.6	52.0	02:15 PM - 02:20 PM	55.1	52.2	04:55 PM - 05:00 PM	53.9	52.2
11:40 AM - 11:45 AM	53.9	51.9	02:20 PM - 02:25 PM	53.3	51.8	05:00 PM - 05:05 PM	55.3	52.4
11:45 AM - 11:50 AM	53.9	51.5	02:25 PM - 02:30 PM	55.7	52.3	05:05 PM - 05:10 PM	54.0	52.4
11:50 AM - 11:55 AM	52.8	51.0	02:30 PM - 02:35 PM	54.1	52.3	05:10 PM - 05:15 PM	53.5	52.4
11:55 AM - 12:00 PM	54.5	52.1	02:35 PM - 02:40 PM	54.1	52.6	05:15 PM - 05:20 PM	57.0	52.6
12:00 PM - 12:05 PM	53.6	52.4	02:40 PM - 02:45 PM	54.4	53.0	05:20 PM - 05:25 PM	54.7	53.0
12:05 PM - 12:10 PM	54.6	52.6	02:45 PM - 02:50 PM	54.8	52.9	05:25 PM - 05:30 PM	54.5	52.7
12:10 PM - 12:15 PM	54.5	52.2	02:50 PM - 02:55 PM	56.0	52.2	05:30 PM - 05:35 PM	56.7	53.3
12:15 PM - 12:20 PM	53.3	52.0	02:55 PM - 03:00 PM	54.9	52.8	05:35 PM - 05:40 PM	56.6	53.4
12:20 PM - 12:25 PM	53.6	52.0	03:00 PM - 03:05 PM	54.3	52.4	05:40 PM - 05:45 PM	55.5	53.3
12:25 PM - 12:30 PM	53.9	52.1	03:05 PM - 03:10 PM	54.3	52.5	05:45 PM - 05:50 PM	54.9	53.6
12:30 PM - 12:35 PM	54.9	53.0	03:10 PM - 03:15 PM	54.0	52.6	05:50 PM - 05:55 PM	55.1	53.4
12:35 PM - 12:40 PM	53.9	52.5	03:15 PM - 03:20 PM	53.9	52.3	05:55 PM - 06:00 PM	55.5	53.1
12:40 PM - 12:45 PM	54.0	52.2	03:20 PM - 03:25 PM	52.9	51.4	06:00 PM - 06:05 PM	55.2	53.1
12:45 PM - 12:50 PM	53.3	51.8	03:25 PM - 03:30 PM	52.7	51.6	06:05 PM - 06:10 PM	55.3	53.2
12:50 PM - 12:55 PM	56.9	52.4	03:30 PM - 03:35 PM	54.4	52.1	06:10 PM - 06:15 PM	55.4	53.4
12:55 PM - 01:00 PM	54.6	52.2	03:35 PM - 03:40 PM	54.3	52.7	06:15 PM - 06:20 PM	55.4	53.2
01:00 PM - 01:05 PM	57.5	52.9	03:40 PM - 03:45 PM	54.1	53.0	06:20 PM - 06:25 PM	55.4	53.7
01:05 PM - 01:10 PM	54.1	53.0	03:45 PM - 03:50 PM	53.5	52.2	06:25 PM - 06:30 PM	56.9	54.2
01:10 PM - 01:15 PM	53.8	52.1	03:50 PM - 03:55 PM	53.5	51.9	06:30 PM - 06:35 PM	55.7	53.4
01:15 PM - 01:20 PM	54.1	51.8	03:55 PM - 04:00 PM	52.9	51.6	06:35 PM - 06:40 PM	56.6	53.9
01:20 PM - 01:25 PM	53.1	51.7	04:00 PM - 04:05 PM	53.5	51.6	06:40 PM - 06:45 PM	58.2	54.1
01:25 PM - 01:30 PM	54.4	52.0	04:05 PM - 04:10 PM	53.5	52.1	06:45 PM - 06:50 PM	56.0	53.7
01:30 PM - 01:35 PM	54.0	52.9	04:10 PM - 04:15 PM	53.7	52.2	06:50 PM - 06:55 PM	56.0	53.3
01:35 PM - 01:40 PM	53.7	52.4	04:15 PM - 04:20 PM	59.1	52.2	06:55 PM - 07:00 PM	59.2	52.9

Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251098-1

Page 2 of 3

Sample Number 2517446-7
Parameter Noise Level (Leq 5 min)
Location ทุงมะพร้าวโคกถนน (GPS 47P 0735038, 1405843)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 03, 2025	Leq	L90	Mar 03 - Mar 04, 2025	Leq	L90	Mar 04, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	55.6	52.6	09:40 PM - 09:45 PM	56.5	52.4	12:20 AM - 12:25 AM	53.4	50.9
07:05 PM - 07:10 PM	54.4	52.8	09:45 PM - 09:50 PM	53.4	51.7	12:25 AM - 12:30 AM	53.2	50.8
07:10 PM - 07:15 PM	54.1	53.1	09:50 PM - 09:55 PM	52.9	51.8	12:30 AM - 12:35 AM	51.9	50.9
07:15 PM - 07:20 PM	54.7	53.1	09:55 PM - 10:00 PM	53.4	51.9	12:35 AM - 12:40 AM	54.1	51.1
07:20 PM - 07:25 PM	55.4	52.9	10:00 PM - 10:05 PM	52.7	51.7	12:40 AM - 12:45 AM	52.4	51.3
07:25 PM - 07:30 PM	56.4	53.8	10:05 PM - 10:10 PM	53.5	52.0	12:45 AM - 12:50 AM	54.7	51.6
07:30 PM - 07:35 PM	55.3	53.7	10:10 PM - 10:15 PM	53.4	52.2	12:50 AM - 12:55 AM	52.3	51.4
07:35 PM - 07:40 PM	54.2	52.5	10:15 PM - 10:20 PM	54.9	51.6	12:55 AM - 01:00 AM	52.1	51.0
07:40 PM - 07:45 PM	55.2	53.4	10:20 PM - 10:25 PM	52.6	51.4	01:00 AM - 01:05 AM	52.8	51.1
07:45 PM - 07:50 PM	54.8	53.4	10:25 PM - 10:30 PM	53.9	51.4	01:05 AM - 01:10 AM	53.2	50.9
07:50 PM - 07:55 PM	56.1	52.5	10:30 PM - 10:35 PM	52.4	51.4	01:10 AM - 01:15 AM	53.4	51.2
07:55 PM - 08:00 PM	57.3	52.9	10:35 PM - 10:40 PM	53.4	51.6	01:15 AM - 01:20 AM	55.5	51.4
08:00 PM - 08:05 PM	56.2	53.2	10:40 PM - 10:45 PM	54.8	51.8	01:20 AM - 01:25 AM	51.9	51.1
08:05 PM - 08:10 PM	55.6	53.9	10:45 PM - 10:50 PM	57.7	51.8	01:25 AM - 01:30 AM	52.0	50.7
08:10 PM - 08:15 PM	54.8	51.8	10:50 PM - 10:55 PM	56.8	51.3	01:30 AM - 01:35 AM	52.2	50.8
08:15 PM - 08:20 PM	55.4	53.0	10:55 PM - 11:00 PM	55.3	51.2	01:35 AM - 01:40 AM	51.9	50.8
08:20 PM - 08:25 PM	55.1	53.3	11:00 PM - 11:05 PM	54.3	51.1	01:40 AM - 01:45 AM	51.7	51.0
08:25 PM - 08:30 PM	55.5	53.7	11:05 PM - 11:10 PM	54.2	51.6	01:45 AM - 01:50 AM	51.7	51.1
08:30 PM - 08:35 PM	55.7	53.7	11:10 PM - 11:15 PM	55.8	51.8	01:50 AM - 01:55 AM	53.3	51.3
08:35 PM - 08:40 PM	54.9	53.2	11:15 PM - 11:20 PM	55.5	52.1	01:55 AM - 02:00 AM	51.6	50.8
08:40 PM - 08:45 PM	55.6	53.0	11:20 PM - 11:25 PM	55.0	51.2	02:00 AM - 02:05 AM	51.3	50.8
08:45 PM - 08:50 PM	56.2	52.9	11:25 PM - 11:30 PM	53.6	51.3	02:05 AM - 02:10 AM	51.0	50.6
08:50 PM - 08:55 PM	55.3	52.7	11:30 PM - 11:35 PM	54.9	51.1	02:10 AM - 02:15 AM	51.8	50.8
08:55 PM - 09:00 PM	54.9	52.8	11:35 PM - 11:40 PM	54.8	51.2	02:15 AM - 02:20 AM	53.6	51.8
09:00 PM - 09:05 PM	58.8	53.1	11:40 PM - 11:45 PM	53.2	51.9	02:20 AM - 02:25 AM	57.1	51.7
09:05 PM - 09:10 PM	56.4	52.9	11:45 PM - 11:50 PM	52.4	51.5	02:25 AM - 02:30 AM	51.6	51.1
09:10 PM - 09:15 PM	53.7	52.3	11:50 PM - 11:55 PM	55.1	51.3	02:30 AM - 02:35 AM	51.3	50.8
09:15 PM - 09:20 PM	53.4	51.9	11:55 PM - 12:00 AM	53.7	51.1	02:35 AM - 02:40 AM	52.7	51.0
09:20 PM - 09:25 PM	54.2	52.2	12:00 AM - 12:05 AM	54.8	51.2	02:40 AM - 02:45 AM	51.8	50.9
09:25 PM - 09:30 PM	54.4	52.3	12:05 AM - 12:10 AM	54.7	50.9	02:45 AM - 02:50 AM	52.2	50.9
09:30 PM - 09:35 PM	53.9	52.2	12:10 AM - 12:15 AM	54.1	51.6	02:50 AM - 02:55 AM	52.1	51.0
09:35 PM - 09:40 PM	54.4	52.4	12:15 AM - 12:20 AM	53.1	51.4	02:55 AM - 03:00 AM	51.4	50.9

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Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517446

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251098-1

Page 3 of 3

Sample Number 2517446-7
Parameter Noise Level (Leq 5 min)
Location ทุงมะพร้าวโคกถนน (GPS 47P 0735038, 1405843)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 623388

Mar 04, 2025	Leq	L90	Mar 04, 2025	Leq	L90	Mar 04, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
03:00 AM - 03:05 AM	51.2	50.8	05:40 AM - 05:45 AM	56.2	51.7	08:20 AM - 08:25 AM	56.5	53.6
03:05 AM - 03:10 AM	51.7	51.0	05:45 AM - 05:50 AM	55.4	51.8	08:25 AM - 08:30 AM	55.3	53.3
03:10 AM - 03:15 AM	52.1	51.5	05:50 AM - 05:55 AM	53.3	52.0	08:30 AM - 08:35 AM	56.9	54.0
03:15 AM - 03:20 AM	51.6	51.2	05:55 AM - 06:00 AM	54.9	52.8	08:35 AM - 08:40 AM	57.2	53.7
03:20 AM - 03:25 AM	51.7	51.2	06:00 AM - 06:05 AM	53.9	52.0	08:40 AM - 08:45 AM	56.6	53.0
03:25 AM - 03:30 AM	53.0	50.7	06:05 AM - 06:10 AM	53.4	52.0	08:45 AM - 08:50 AM	55.3	53.0
03:30 AM - 03:35 AM	51.2	50.6	06:10 AM - 06:15 AM	53.1	52.1	08:50 AM - 08:55 AM	54.4	52.7
03:35 AM - 03:40 AM	51.3	50.7	06:15 AM - 06:20 AM	53.4	52.3	08:55 AM - 09:00 AM	61.1	53.5
03:40 AM - 03:45 AM	51.6	50.7	06:20 AM - 06:25 AM	54.9	52.7	09:00 AM - 09:05 AM	59.2	55.7
03:45 AM - 03:50 AM	52.0	51.0	06:25 AM - 06:30 AM	55.5	53.2	09:05 AM - 09:10 AM	59.0	54.6
03:50 AM - 03:55 AM	51.6	51.1	06:30 AM - 06:35 AM	55.1	53.6	09:10 AM - 09:15 AM	59.9	54.8
03:55 AM - 04:00 AM	54.8	51.3	06:35 AM - 06:40 AM	54.3	53.4	09:15 AM - 09:20 AM	60.1	56.0
04:00 AM - 04:05 AM	51.3	50.8	06:40 AM - 06:45 AM	55.7	53.7	09:20 AM - 09:25 AM	58.5	54.0
04:05 AM - 04:10 AM	51.4	50.9	06:45 AM - 06:50 AM	55.0	53.5	09:25 AM - 09:30 AM	57.9	54.4
04:10 AM - 04:15 AM	53.4	51.1	06:50 AM - 06:55 AM	55.7	53.8	09:30 AM - 09:35 AM	59.2	53.5
04:15 AM - 04:20 AM	52.2	51.2	06:55 AM - 07:00 AM	57.0	54.7	09:35 AM - 09:40 AM	57.3	53.8
04:20 AM - 04:25 AM	52.2	51.5	07:00 AM - 07:05 AM	57.0	54.6	09:40 AM - 09:45 AM	57.9	53.0
04:25 AM - 04:30 AM	52.2	51.5	07:05 AM - 07:10 AM	55.4	53.6	09:45 AM - 09:50 AM	57.9	54.4
04:30 AM - 04:35 AM	52.8	51.3	07:10 AM - 07:15 AM	55.3	53.6	09:50 AM - 09:55 AM	57.0	53.2
04:35 AM - 04:40 AM	53.0	51.0	07:15 AM - 07:20 AM	56.7	54.0	09:55 AM - 10:00 AM	55.1	52.8
04:40 AM - 04:45 AM	51.9	51.3	07:20 AM - 07:25 AM	55.3	54.3	10:00 AM - 10:05 AM	54.7	52.4
04:45 AM - 04:50 AM	52.3	51.2	07:25 AM - 07:30 AM	56.3	54.4	10:05 AM - 10:10 AM	54.6	51.5
04:50 AM - 04:55 AM	52.7	51.8	07:30 AM - 07:35 AM	56.3	53.9	10:10 AM - 10:15 AM	57.3	50.1
04:55 AM - 05:00 AM	53.3	51.8	07:35 AM - 07:40 AM	57.1	54.8	10:15 AM - 10:20 AM	54.1	52.5
05:00 AM - 05:05 AM	52.3	51.5	07:40 AM - 07:45 AM	57.3	54.4	10:20 AM - 10:25 AM	57.3	53.6
05:05 AM - 05:10 AM	51.9	51.2	07:45 AM - 07:50 AM	57.9	54.2	10:25 AM - 10:30 AM	56.2	53.1
05:10 AM - 05:15 AM	53.1	51.6	07:50 AM - 07:55 AM	57.8	54.6	10:30 AM - 10:35 AM	54.8	52.6
05:15 AM - 05:20 AM	52.4	51.4	07:55 AM - 08:00 AM	56.3	54.4	10:35 AM - 10:40 AM	54.1	52.4
05:20 AM - 05:25 AM	52.9	51.7	08:00 AM - 08:05 AM	57.1	54.3	10:40 AM - 10:45 AM	54.7	52.5
05:25 AM - 05:30 AM	53.0	51.9	08:05 AM - 08:10 AM	55.9	54.0	10:45 AM - 10:50 AM	54.8	52.5
05:30 AM - 05:35 AM	53.1	51.7	08:10 AM - 08:15 AM	55.8	53.8	10:50 AM - 10:55 AM	57.5	53.3
05:35 AM - 05:40 AM	52.6	51.5	08:15 AM - 08:20 AM	56.1	53.6	10:55 AM - 11:00 AM	55.1	52.4

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251103-1

P/O :

Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517448-1
Parameter Noise Level (Leq 5 min)
Location กรุงเทพมหานคร-ด่านพระยาสถ (GPS 47P 0735578, 1402792)
Measurement Date Feb 25 - Feb 26, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Page 1 of 3

Feb 25, 2025	Leq	L90	Feb 25, 2025	Leq	L90	Feb 25, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	50.8	46.2	01:40 PM - 01:45 PM	47.8	41.6	04:20 PM - 04:25 PM	50.5	45.2
11:05 AM - 11:10 AM	52.4	44.0	01:45 PM - 01:50 PM	45.1	40.0	04:25 PM - 04:30 PM	50.1	46.3
11:10 AM - 11:15 AM	48.5	43.4	01:50 PM - 01:55 PM	45.4	41.3	04:30 PM - 04:35 PM	50.9	45.1
11:15 AM - 11:20 AM	53.2	43.6	01:55 PM - 02:00 PM	46.7	40.7	04:35 PM - 04:40 PM	49.1	44.9
11:20 AM - 11:25 AM	53.9	43.0	02:00 PM - 02:05 PM	49.0	42.2	04:40 PM - 04:45 PM	49.9	46.4
11:25 AM - 11:30 AM	49.9	42.8	02:05 PM - 02:10 PM	50.8	42.8	04:45 PM - 04:50 PM	51.5	46.5
11:30 AM - 11:35 AM	46.6	42.2	02:10 PM - 02:15 PM	46.1	41.0	04:50 PM - 04:55 PM	50.2	47.3
11:35 AM - 11:40 AM	48.6	42.8	02:15 PM - 02:20 PM	47.0	40.0	04:55 PM - 05:00 PM	50.4	46.9
11:40 AM - 11:45 AM	51.0	46.1	02:20 PM - 02:25 PM	45.8	41.3	05:00 PM - 05:05 PM	50.8	47.1
11:45 AM - 11:50 AM	48.0	43.3	02:25 PM - 02:30 PM	47.3	42.2	05:05 PM - 05:10 PM	49.9	46.4
11:50 AM - 11:55 AM	45.8	42.1	02:30 PM - 02:35 PM	48.5	42.1	05:10 PM - 05:15 PM	51.1	47.0
11:55 AM - 12:00 PM	46.1	42.8	02:35 PM - 02:40 PM	49.4	44.2	05:15 PM - 05:20 PM	55.9	46.7
12:00 PM - 12:05 PM	48.8	42.2	02:40 PM - 02:45 PM	49.1	44.0	05:20 PM - 05:25 PM	49.6	45.0
12:05 PM - 12:10 PM	52.2	42.8	02:45 PM - 02:50 PM	50.2	45.2	05:25 PM - 05:30 PM	49.9	46.2
12:10 PM - 12:15 PM	47.9	42.4	02:50 PM - 02:55 PM	49.9	44.0	05:30 PM - 05:35 PM	49.4	45.3
12:15 PM - 12:20 PM	48.0	41.9	02:55 PM - 03:00 PM	47.9	44.2	05:35 PM - 05:40 PM	49.5	44.6
12:20 PM - 12:25 PM	52.3	42.9	03:00 PM - 03:05 PM	49.8	44.9	05:40 PM - 05:45 PM	50.5	45.9
12:25 PM - 12:30 PM	48.4	43.2	03:05 PM - 03:10 PM	49.0	44.6	05:45 PM - 05:50 PM	50.7	46.1
12:30 PM - 12:35 PM	46.9	44.0	03:10 PM - 03:15 PM	52.2	43.6	05:50 PM - 05:55 PM	50.1	46.4
12:35 PM - 12:40 PM	47.7	44.0	03:15 PM - 03:20 PM	51.1	44.4	05:55 PM - 06:00 PM	48.7	46.0
12:40 PM - 12:45 PM	48.2	41.9	03:20 PM - 03:25 PM	52.6	47.4	06:00 PM - 06:05 PM	48.9	46.2
12:45 PM - 12:50 PM	49.7	43.0	03:25 PM - 03:30 PM	53.4	46.9	06:05 PM - 06:10 PM	49.7	45.9
12:50 PM - 12:55 PM	48.3	41.7	03:30 PM - 03:35 PM	53.8	46.0	06:10 PM - 06:15 PM	48.2	46.2
12:55 PM - 01:00 PM	46.4	41.5	03:35 PM - 03:40 PM	50.7	46.0	06:15 PM - 06:20 PM	51.2	48.1
01:00 PM - 01:05 PM	46.7	41.9	03:40 PM - 03:45 PM	54.2	43.9	06:20 PM - 06:25 PM	49.0	46.2
01:05 PM - 01:10 PM	49.4	43.8	03:45 PM - 03:50 PM	50.0	43.5	06:25 PM - 06:30 PM	50.1	46.4
01:10 PM - 01:15 PM	48.5	42.0	03:50 PM - 03:55 PM	49.8	45.2	06:30 PM - 06:35 PM	48.6	45.3
01:15 PM - 01:20 PM	48.2	41.9	03:55 PM - 04:00 PM	51.6	46.8	06:35 PM - 06:40 PM	51.2	47.2
01:20 PM - 01:25 PM	46.9	40.5	04:00 PM - 04:05 PM	51.9	46.2	06:40 PM - 06:45 PM	49.8	46.7
01:25 PM - 01:30 PM	47.0	41.3	04:05 PM - 04:10 PM	49.8	46.1	06:45 PM - 06:50 PM	50.0	46.9
01:30 PM - 01:35 PM	48.3	41.0	04:10 PM - 04:15 PM	49.9	46.5	06:50 PM - 06:55 PM	52.7	47.0
01:35 PM - 01:40 PM	49.1	41.3	04:15 PM - 04:20 PM	50.6	45.3	06:55 PM - 07:00 PM	50.4	46.7

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251103-1

P/O :

Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517448-1
Parameter Noise Level (Leq 5 min)
Location กรุงเทพมหานคร-ด่านพระยาสถ (GPS 47P 0735578, 1402792)
Measurement Date Feb 25 - Feb 26, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

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Feb 25, 2025	Leq	L90	Feb 25 - Feb 26, 2025	Leq	L90	Feb 26, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	49.3	46.8	09:40 PM - 09:45 PM	47.7	45.0	12:20 AM - 12:25 AM	50.9	43.0
07:05 PM - 07:10 PM	49.4	46.3	09:45 PM - 09:50 PM	49.2	44.2	12:25 AM - 12:30 AM	47.6	43.8
07:10 PM - 07:15 PM	48.1	45.8	09:50 PM - 09:55 PM	49.1	44.4	12:30 AM - 12:35 AM	47.4	44.6
07:15 PM - 07:20 PM	52.5	45.5	09:55 PM - 10:00 PM	46.3	44.0	12:35 AM - 12:40 AM	49.9	43.4
07:20 PM - 07:25 PM	49.2	46.2	10:00 PM - 10:05 PM	47.2	44.1	12:40 AM - 12:45 AM	47.5	42.6
07:25 PM - 07:30 PM	50.6	46.2	10:05 PM - 10:10 PM	46.0	44.0	12:45 AM - 12:50 AM	44.2	42.4
07:30 PM - 07:35 PM	48.4	45.9	10:10 PM - 10:15 PM	47.8	45.2	12:50 AM - 12:55 AM	46.6	41.7
07:35 PM - 07:40 PM	47.7	45.3	10:15 PM - 10:20 PM	49.2	46.2	12:55 AM - 01:00 AM	45.2	42.1
07:40 PM - 07:45 PM	50.4	45.7	10:20 PM - 10:25 PM	47.4	44.2	01:00 AM - 01:05 AM	44.2	41.3
07:45 PM - 07:50 PM	50.9	46.0	10:25 PM - 10:30 PM	49.5	45.2	01:05 AM - 01:10 AM	42.0	40.7
07:50 PM - 07:55 PM	48.7	45.9	10:30 PM - 10:35 PM	48.5	44.4	01:10 AM - 01:15 AM	43.0	41.1
07:55 PM - 08:00 PM	48.7	46.0	10:35 PM - 10:40 PM	49.6	45.6	01:15 AM - 01:20 AM	43.0	41.2
08:00 PM - 08:05 PM	49.1	45.6	10:40 PM - 10:45 PM	48.3	44.9	01:20 AM - 01:25 AM	45.0	41.3
08:05 PM - 08:10 PM	50.5	45.7	10:45 PM - 10:50 PM	47.8	44.5	01:25 AM - 01:30 AM	43.9	40.7
08:10 PM - 08:15 PM	48.0	45.0	10:50 PM - 10:55 PM	47.9	44.2	01:30 AM - 01:35 AM	43.8	40.6
08:15 PM - 08:20 PM	47.2	44.8	10:55 PM - 11:00 PM	49.7	44.9	01:35 AM - 01:40 AM	44.8	40.9
08:20 PM - 08:25 PM	47.2	44.5	11:00 PM - 11:05 PM	46.0	43.1	01:40 AM - 01:45 AM	43.5	40.1
08:25 PM - 08:30 PM	48.5	45.3	11:05 PM - 11:10 PM	45.0	43.3	01:45 AM - 01:50 AM	43.1	39.9
08:30 PM - 08:35 PM	49.4	44.8	11:10 PM - 11:15 PM	46.2	43.1	01:50 AM - 01:55 AM	45.0	40.3
08:35 PM - 08:40 PM	47.4	44.5	11:15 PM - 11:20 PM	46.7	43.3	01:55 AM - 02:00 AM	47.9	40.3
08:40 PM - 08:45 PM	53.9	45.4	11:20 PM - 11:25 PM	44.4	42.9	02:00 AM - 02:05 AM	49.8	39.3
08:45 PM - 08:50 PM	48.8	45.4	11:25 PM - 11:30 PM	45.2	43.5	02:05 AM - 02:10 AM	47.4	39.9
08:50 PM - 08:55 PM	47.8	44.5	11:30 PM - 11:35 PM	46.4	43.6	02:10 AM - 02:15 AM	48.6	40.1
08:55 PM - 09:00 PM	49.5	45.7	11:35 PM - 11:40 PM	47.4	44.1	02:15 AM - 02:20 AM	43.4	39.5
09:00 PM - 09:05 PM	47.3	45.2	11:40 PM - 11:45 PM	47.1	44.6	02:20 AM - 02:25 AM	42.8	40.0
09:05 PM - 09:10 PM	46.7	44.2	11:45 PM - 11:50 PM	47.7	45.1	02:25 AM - 02:30 AM	42.1	39.7
09:10 PM - 09:15 PM	49.2	44.0	11:50 PM - 11:55 PM	50.6	44.1	02:30 AM - 02:35 AM	41.2	39.5
09:15 PM - 09:20 PM	48.1	45.5	11:55 PM - 12:00 AM	46.9	44.1	02:35 AM - 02:40 AM	42.3	39.7
09:20 PM - 09:25 PM	48.5	44.4	12:00 AM - 12:05 AM	45.6	43.5	02:40 AM - 02:45 AM	42.0	39.8
09:25 PM - 09:30 PM	47.1	44.1	12:05 AM - 12:10 AM	48.5	44.7	02:45 AM - 02:50 AM	42.7	40.3
09:30 PM - 09:35 PM	48.6	45.9	12:10 AM - 12:15 AM	48.0	44.3	02:50 AM - 02:55 AM	41.7	39.2
09:35 PM - 09:40 PM	48.9	45.3	12:15 AM - 12:20 AM	45.3	43.3	02:55 AM - 03:00 AM	42.1	40.0

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251103-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 3 of 3

Sample Number : 2517448-1
Parameter : Noise Level (Leq 5 min)
Location : อนุบาลตากวน-ถาวรประดู่ (GPS 47P 0735578, 1402792)
Measurement Date : Feb 25 - Feb 26, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 00900074

Feb 26, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 26, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 26, 2025 Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	42.8	40.1	05:40 AM - 05:45 AM	50.2	44.4	08:20 AM - 08:25 AM	50.9	45.7
03:05 AM - 03:10 AM	42.9	40.8	05:45 AM - 05:50 AM	52.8	46.9	08:25 AM - 08:30 AM	50.0	45.1
03:10 AM - 03:15 AM	46.6	39.8	05:50 AM - 05:55 AM	51.2	46.4	08:30 AM - 08:35 AM	49.8	45.5
03:15 AM - 03:20 AM	40.8	39.5	05:55 AM - 06:00 AM	52.1	48.4	08:35 AM - 08:40 AM	48.3	43.5
03:20 AM - 03:25 AM	44.0	39.8	06:00 AM - 06:05 AM	52.8	48.3	08:40 AM - 08:45 AM	49.8	44.0
03:25 AM - 03:30 AM	44.0	39.5	06:05 AM - 06:10 AM	51.8	47.7	08:45 AM - 08:50 AM	52.3	43.7
03:30 AM - 03:35 AM	47.7	39.4	06:10 AM - 06:15 AM	53.6	48.1	08:50 AM - 08:55 AM	50.5	44.4
03:35 AM - 03:40 AM	45.2	39.8	06:15 AM - 06:20 AM	53.7	48.0	08:55 AM - 09:00 AM	47.3	41.8
03:40 AM - 03:45 AM	42.4	39.3	06:20 AM - 06:25 AM	52.0	48.1	09:00 AM - 09:05 AM	47.1	42.0
03:45 AM - 03:50 AM	41.2	38.9	06:25 AM - 06:30 AM	51.5	47.2	09:05 AM - 09:10 AM	49.3	43.5
03:50 AM - 03:55 AM	43.7	39.7	06:30 AM - 06:35 AM	52.9	48.4	09:10 AM - 09:15 AM	49.0	43.8
03:55 AM - 04:00 AM	46.6	40.2	06:35 AM - 06:40 AM	51.2	47.7	09:15 AM - 09:20 AM	49.2	45.0
04:00 AM - 04:05 AM	43.2	40.1	06:40 AM - 06:45 AM	52.3	48.6	09:20 AM - 09:25 AM	47.3	43.7
04:05 AM - 04:10 AM	47.5	40.2	06:45 AM - 06:50 AM	53.2	48.2	09:25 AM - 09:30 AM	49.5	44.2
04:10 AM - 04:15 AM	45.5	39.4	06:50 AM - 06:55 AM	52.4	48.8	09:30 AM - 09:35 AM	48.1	44.4
04:15 AM - 04:20 AM	42.6	39.9	06:55 AM - 07:00 AM	51.9	48.8	09:35 AM - 09:40 AM	48.8	42.8
04:20 AM - 04:25 AM	44.4	40.5	07:00 AM - 07:05 AM	52.5	49.4	09:40 AM - 09:45 AM	48.4	43.5
04:25 AM - 04:30 AM	44.4	40.6	07:05 AM - 07:10 AM	51.2	47.9	09:45 AM - 09:50 AM	48.1	41.5
04:30 AM - 04:35 AM	43.0	40.2	07:10 AM - 07:15 AM	51.3	47.7	09:50 AM - 09:55 AM	48.8	41.7
04:35 AM - 04:40 AM	42.6	40.4	07:15 AM - 07:20 AM	53.1	48.4	09:55 AM - 10:00 AM	46.3	42.5
04:40 AM - 04:45 AM	47.5	41.2	07:20 AM - 07:25 AM	60.2	48.9	10:00 AM - 10:05 AM	49.0	44.2
04:45 AM - 04:50 AM	46.7	42.3	07:25 AM - 07:30 AM	54.5	48.6	10:05 AM - 10:10 AM	45.5	41.6
04:50 AM - 04:55 AM	48.3	42.2	07:30 AM - 07:35 AM	51.2	47.5	10:10 AM - 10:15 AM	47.8	41.7
04:55 AM - 05:00 AM	46.1	43.1	07:35 AM - 07:40 AM	50.3	46.8	10:15 AM - 10:20 AM	49.3	41.8
05:00 AM - 05:05 AM	47.7	43.0	07:40 AM - 07:45 AM	49.9	45.5	10:20 AM - 10:25 AM	51.4	43.0
05:05 AM - 05:10 AM	50.5	42.6	07:45 AM - 07:50 AM	51.2	46.7	10:25 AM - 10:30 AM	46.3	42.5
05:10 AM - 05:15 AM	50.4	43.1	07:50 AM - 07:55 AM	50.9	46.7	10:30 AM - 10:35 AM	48.4	43.2
05:15 AM - 05:20 AM	49.4	43.5	07:55 AM - 08:00 AM	60.7	47.3	10:35 AM - 10:40 AM	48.2	43.4
05:20 AM - 05:25 AM	52.4	44.4	08:00 AM - 08:05 AM	56.3	46.1	10:40 AM - 10:45 AM	49.2	43.6
05:25 AM - 05:30 AM	47.6	42.9	08:05 AM - 08:10 AM	51.3	46.4	10:45 AM - 10:50 AM	47.2	43.0
05:30 AM - 05:35 AM	48.6	43.6	08:10 AM - 08:15 AM	50.0	45.9	10:50 AM - 10:55 AM	47.5	41.4
05:35 AM - 05:40 AM	50.9	44.2	08:15 AM - 08:20 AM	50.7	45.6	10:55 AM - 11:00 AM	44.4	40.4

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Approved by

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Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251104-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number : 2517448-2
Parameter : Noise Level (Leq 5 min)
Location : อนุบาลตากวน-ถาวรประดู่ (GPS 47P 0735578, 1402792)
Measurement Date : Feb 26 - Feb 27, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 00900074

Feb 26, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 26, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 26, 2025 Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	46.3	40.9	01:40 PM - 01:45 PM	46.7	42.2	04:20 PM - 04:25 PM	49.4	46.3
11:05 AM - 11:10 AM	49.2	43.0	01:45 PM - 01:50 PM	46.3	42.1	04:25 PM - 04:30 PM	50.2	44.8
11:10 AM - 11:15 AM	48.8	43.4	01:50 PM - 01:55 PM	47.0	41.9	04:30 PM - 04:35 PM	48.5	44.1
11:15 AM - 11:20 AM	49.3	43.2	01:55 PM - 02:00 PM	47.8	43.4	04:35 PM - 04:40 PM	50.8	45.9
11:20 AM - 11:25 AM	48.8	42.8	02:00 PM - 02:05 PM	49.4	44.4	04:40 PM - 04:45 PM	51.5	46.4
11:25 AM - 11:30 AM	45.7	42.4	02:05 PM - 02:10 PM	47.9	44.5	04:45 PM - 04:50 PM	52.0	47.3
11:30 AM - 11:35 AM	48.2	41.4	02:10 PM - 02:15 PM	47.7	43.2	04:50 PM - 04:55 PM	52.8	47.5
11:35 AM - 11:40 AM	47.0	40.9	02:15 PM - 02:20 PM	47.8	43.5	04:55 PM - 05:00 PM	51.5	47.1
11:40 AM - 11:45 AM	49.1	40.9	02:20 PM - 02:25 PM	47.6	43.0	05:00 PM - 05:05 PM	50.7	45.7
11:45 AM - 11:50 AM	48.6	42.5	02:25 PM - 02:30 PM	48.0	43.9	05:05 PM - 05:10 PM	50.1	46.7
11:50 AM - 11:55 AM	50.3	44.1	02:30 PM - 02:35 PM	49.1	44.1	05:10 PM - 05:15 PM	49.7	45.8
11:55 AM - 12:00 PM	49.0	43.9	02:35 PM - 02:40 PM	53.3	44.4	05:15 PM - 05:20 PM	49.6	45.9
12:00 PM - 12:05 PM	54.3	44.4	02:40 PM - 02:45 PM	48.6	43.4	05:20 PM - 05:25 PM	49.2	45.9
12:05 PM - 12:10 PM	47.1	41.6	02:45 PM - 02:50 PM	48.0	43.9	05:25 PM - 05:30 PM	48.7	45.5
12:10 PM - 12:15 PM	50.1	43.7	02:50 PM - 02:55 PM	50.6	43.9	05:30 PM - 05:35 PM	48.6	45.5
12:15 PM - 12:20 PM	46.9	42.0	02:55 PM - 03:00 PM	48.9	43.3	05:35 PM - 05:40 PM	48.8	45.9
12:20 PM - 12:25 PM	48.7	43.3	03:00 PM - 03:05 PM	50.3	44.2	05:40 PM - 05:45 PM	49.5	46.2
12:25 PM - 12:30 PM	47.6	43.3	03:05 PM - 03:10 PM	52.4	43.8	05:45 PM - 05:50 PM	49.4	45.8
12:30 PM - 12:35 PM	47.6	43.6	03:10 PM - 03:15 PM	50.9	44.3	05:50 PM - 05:55 PM	48.9	45.7
12:35 PM - 12:40 PM	49.2	43.8	03:15 PM - 03:20 PM	53.4	44.1	05:55 PM - 06:00 PM	48.7	45.8
12:40 PM - 12:45 PM	48.6	43.5	03:20 PM - 03:25 PM	49.8	44.2	06:00 PM - 06:05 PM	50.1	45.7
12:45 PM - 12:50 PM	47.4	43.6	03:25 PM - 03:30 PM	48.6	44.1	06:05 PM - 06:10 PM	54.3	46.7
12:50 PM - 12:55 PM	48.3	42.7	03:30 PM - 03:35 PM	47.7	43.5	06:10 PM - 06:15 PM	53.4	47.5
12:55 PM - 01:00 PM	51.0	42.8	03:35 PM - 03:40 PM	47.0	43.1	06:15 PM - 06:20 PM	53.2	47.4
01:00 PM - 01:05 PM	51.8	42.6	03:40 PM - 03:45 PM	50.0	43.9	06:20 PM - 06:25 PM	51.7	47.5
01:05 PM - 01:10 PM	46.7	42.6	03:45 PM - 03:50 PM	46.5	43.0	06:25 PM - 06:30 PM	52.4	48.3
01:10 PM - 01:15 PM	48.1	43.5	03:50 PM - 03:55 PM	49.7	45.9	06:30 PM - 06:35 PM	53.1	47.5
01:15 PM - 01:20 PM	46.7	43.7	03:55 PM - 04:00 PM	49.4	46.6	06:35 PM - 06:40 PM	50.9	45.4
01:20 PM - 01:25 PM	48.1	43.2	04:00 PM - 04:05 PM	49.7	46.1	06:40 PM - 06:45 PM	48.8	45.3
01:25 PM - 01:30 PM	47.2	43.5	04:05 PM - 04:10 PM	50.5	46.4	06:45 PM - 06:50 PM	51.7	46.4
01:30 PM - 01:35 PM	50.3	42.8	04:10 PM - 04:15 PM	51.1	46.8	06:50 PM - 06:55 PM	51.7	46.1
01:35 PM - 01:40 PM	47.8	42.6	04:15 PM - 04:20 PM	52.0	46.3	06:55 PM - 07:00 PM	50.8	47.4

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251104-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517448-2
Parameter Noise Level (Leq 5 min)
Location ฐานตรวจวัด-ด้านโรงรถ (GPS 47P 0735578, 1402792)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Page 2 of 3

Feb 26, 2025			Feb 26 - Feb 27, 2025			Feb 27, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	52.5	46.3	09:40 PM - 09:45 PM	51.6	47.5	12:20 AM - 12:25 AM	47.6	46.0
07:05 PM - 07:10 PM	48.0	45.2	09:45 PM - 09:50 PM	49.6	47.0	12:25 AM - 12:30 AM	47.9	46.3
07:10 PM - 07:15 PM	47.8	44.9	09:50 PM - 09:55 PM	49.7	46.7	12:30 AM - 12:35 AM	48.2	46.4
07:15 PM - 07:20 PM	52.4	45.3	09:55 PM - 10:00 PM	49.9	46.3	12:35 AM - 12:40 AM	46.5	45.2
07:20 PM - 07:25 PM	49.9	45.3	10:00 PM - 10:05 PM	46.8	44.7	12:40 AM - 12:45 AM	50.7	44.4
07:25 PM - 07:30 PM	50.8	44.9	10:05 PM - 10:10 PM	49.7	45.6	12:45 AM - 12:50 AM	44.8	42.6
07:30 PM - 07:35 PM	50.9	45.6	10:10 PM - 10:15 PM	49.0	47.0	12:50 AM - 12:55 AM	44.9	42.9
07:35 PM - 07:40 PM	49.0	44.3	10:15 PM - 10:20 PM	50.7	46.0	12:55 AM - 01:00 AM	45.1	42.7
07:40 PM - 07:45 PM	47.0	44.4	10:20 PM - 10:25 PM	48.0	45.8	01:00 AM - 01:05 AM	46.7	43.3
07:45 PM - 07:50 PM	48.7	44.8	10:25 PM - 10:30 PM	47.4	44.2	01:05 AM - 01:10 AM	47.2	43.6
07:50 PM - 07:55 PM	50.2	45.9	10:30 PM - 10:35 PM	48.6	45.5	01:10 AM - 01:15 AM	46.5	41.7
07:55 PM - 08:00 PM	48.9	45.5	10:35 PM - 10:40 PM	51.3	46.4	01:15 AM - 01:20 AM	44.2	41.2
08:00 PM - 08:05 PM	50.1	44.6	10:40 PM - 10:45 PM	49.4	46.6	01:20 AM - 01:25 AM	43.9	42.3
08:05 PM - 08:10 PM	47.0	43.8	10:45 PM - 10:50 PM	48.7	46.9	01:25 AM - 01:30 AM	44.9	43.9
08:10 PM - 08:15 PM	49.4	44.6	10:50 PM - 10:55 PM	51.2	47.1	01:30 AM - 01:35 AM	45.9	44.5
08:15 PM - 08:20 PM	47.9	44.5	10:55 PM - 11:00 PM	50.8	46.4	01:35 AM - 01:40 AM	45.9	44.7
08:20 PM - 08:25 PM	51.2	45.3	11:00 PM - 11:05 PM	46.8	44.2	01:40 AM - 01:45 AM	46.5	44.0
08:25 PM - 08:30 PM	47.9	44.6	11:05 PM - 11:10 PM	47.5	44.4	01:45 AM - 01:50 AM	44.3	43.0
08:30 PM - 08:35 PM	46.8	43.5	11:10 PM - 11:15 PM	46.9	44.9	01:50 AM - 01:55 AM	44.0	42.5
08:35 PM - 08:40 PM	47.1	43.6	11:15 PM - 11:20 PM	47.2	45.0	01:55 AM - 02:00 AM	43.5	42.5
08:40 PM - 08:45 PM	47.0	43.7	11:20 PM - 11:25 PM	47.9	45.8	02:00 AM - 02:05 AM	45.3	44.0
08:45 PM - 08:50 PM	48.1	43.5	11:25 PM - 11:30 PM	49.5	45.8	02:05 AM - 02:10 AM	46.5	44.5
08:50 PM - 08:55 PM	47.6	44.1	11:30 PM - 11:35 PM	48.0	45.6	02:10 AM - 02:15 AM	45.7	44.5
08:55 PM - 09:00 PM	46.2	43.3	11:35 PM - 11:40 PM	49.4	45.6	02:15 AM - 02:20 AM	45.8	44.7
09:00 PM - 09:05 PM	49.0	43.6	11:40 PM - 11:45 PM	47.6	45.9	02:20 AM - 02:25 AM	47.1	45.7
09:05 PM - 09:10 PM	50.0	43.9	11:45 PM - 11:50 PM	48.1	46.0	02:25 AM - 02:30 AM	46.4	45.0
09:10 PM - 09:15 PM	49.9	44.7	11:50 PM - 11:55 PM	49.9	46.3	02:30 AM - 02:35 AM	44.2	41.4
09:15 PM - 09:20 PM	54.5	46.0	11:55 PM - 12:00 AM	48.3	45.9	02:35 AM - 02:40 AM	42.3	40.5
09:20 PM - 09:25 PM	51.9	45.5	12:00 AM - 12:05 AM	52.0	47.5	02:40 AM - 02:45 AM	45.2	41.0
09:25 PM - 09:30 PM	50.1	46.2	12:05 AM - 12:10 AM	49.8	47.1	02:45 AM - 02:50 AM	43.8	40.9
09:30 PM - 09:35 PM	48.4	45.8	12:10 AM - 12:15 AM	48.2	46.1	02:50 AM - 02:55 AM	43.0	41.7
09:35 PM - 09:40 PM	51.6	46.7	12:15 AM - 12:20 AM	49.0	46.6	02:55 AM - 03:00 AM	47.0	41.5

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251104-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517448-2
Parameter Noise Level (Leq 5 min)
Location ฐานตรวจวัด-ด้านโรงรถ (GPS 47P 0735578, 1402792)
Measurement Date Feb 26 - Feb 27, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Page 3 of 3

Feb 27, 2025			Feb 27, 2025			Feb 27, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	44.4	41.7	05:40 AM - 05:45 AM	49.1	45.3	08:20 AM - 08:25 AM	50.4	45.4
03:05 AM - 03:10 AM	43.9	41.3	05:45 AM - 05:50 AM	49.1	45.1	08:25 AM - 08:30 AM	48.6	44.8
03:10 AM - 03:15 AM	43.8	41.0	05:50 AM - 05:55 AM	51.9	45.2	08:30 AM - 08:35 AM	49.0	43.9
03:15 AM - 03:20 AM	49.0	41.5	05:55 AM - 06:00 AM	50.5	46.1	08:35 AM - 08:40 AM	52.3	43.5
03:20 AM - 03:25 AM	43.3	41.4	06:00 AM - 06:05 AM	50.2	46.0	08:40 AM - 08:45 AM	51.7	43.3
03:25 AM - 03:30 AM	45.1	42.4	06:05 AM - 06:10 AM	48.8	44.9	08:45 AM - 08:50 AM	52.5	42.8
03:30 AM - 03:35 AM	43.6	42.1	06:10 AM - 06:15 AM	49.9	45.0	08:50 AM - 08:55 AM	49.9	43.8
03:35 AM - 03:40 AM	46.4	41.6	06:15 AM - 06:20 AM	52.0	43.8	08:55 AM - 09:00 AM	50.9	44.5
03:40 AM - 03:45 AM	47.7	41.4	06:20 AM - 06:25 AM	47.1	43.6	09:00 AM - 09:05 AM	51.3	47.3
03:45 AM - 03:50 AM	43.1	39.9	06:25 AM - 06:30 AM	48.4	43.6	09:05 AM - 09:10 AM	50.0	42.9
03:50 AM - 03:55 AM	42.5	40.4	06:30 AM - 06:35 AM	48.3	43.6	09:10 AM - 09:15 AM	56.6	43.7
03:55 AM - 04:00 AM	45.7	40.5	06:35 AM - 06:40 AM	49.0	43.7	09:15 AM - 09:20 AM	56.5	44.0
04:00 AM - 04:05 AM	47.2	40.9	06:40 AM - 06:45 AM	53.2	43.3	09:20 AM - 09:25 AM	50.9	42.9
04:05 AM - 04:10 AM	47.4	41.4	06:45 AM - 06:50 AM	47.1	43.8	09:25 AM - 09:30 AM	51.5	43.8
04:10 AM - 04:15 AM	53.0	48.0	06:50 AM - 06:55 AM	47.8	43.5	09:30 AM - 09:35 AM	50.4	43.7
04:15 AM - 04:20 AM	52.6	44.7	06:55 AM - 07:00 AM	49.2	43.9	09:35 AM - 09:40 AM	51.4	45.1
04:20 AM - 04:25 AM	52.2	44.9	07:00 AM - 07:05 AM	52.7	45.1	09:40 AM - 09:45 AM	52.8	43.6
04:25 AM - 04:30 AM	52.1	43.9	07:05 AM - 07:10 AM	53.3	43.8	09:45 AM - 09:50 AM	48.9	42.8
04:30 AM - 04:35 AM	50.9	43.1	07:10 AM - 07:15 AM	49.8	43.7	09:50 AM - 09:55 AM	51.2	43.1
04:35 AM - 04:40 AM	49.6	43.3	07:15 AM - 07:20 AM	48.1	43.4	09:55 AM - 10:00 AM	45.2	41.5
04:40 AM - 04:45 AM	51.6	44.6	07:20 AM - 07:25 AM	53.8	45.1	10:00 AM - 10:05 AM	49.3	42.4
04:45 AM - 04:50 AM	47.3	44.0	07:25 AM - 07:30 AM	49.7	45.3	10:05 AM - 10:10 AM	47.2	41.9
04:50 AM - 04:55 AM	48.0	43.4	07:30 AM - 07:35 AM	52.1	46.9	10:10 AM - 10:15 AM	55.2	48.4
04:55 AM - 05:00 AM	48.6	43.7	07:35 AM - 07:40 AM	48.4	44.0	10:15 AM - 10:20 AM	53.6	45.2
05:00 AM - 05:05 AM	48.0	44.2	07:40 AM - 07:45 AM	52.4	44.6	10:20 AM - 10:25 AM	55.3	43.1
05:05 AM - 05:10 AM	46.6	43.4	07:45 AM - 07:50 AM	52.8	43.8	10:25 AM - 10:30 AM	47.5	43.3
05:10 AM - 05:15 AM	47.7	43.6	07:50 AM - 07:55 AM	49.5	43.2	10:30 AM - 10:35 AM	50.8	42.6
05:15 AM - 05:20 AM	49.9	43.9	07:55 AM - 08:00 AM	49.7	44.9	10:35 AM - 10:40 AM	47.5	41.9
05:20 AM - 05:25 AM	48.0	44.8	08:00 AM - 08:05 AM	48.8	43.0	10:40 AM - 10:45 AM	47.5	42.5
05:25 AM - 05:30 AM	49.7	44.1	08:05 AM - 08:10 AM	47.9	43.4	10:45 AM - 10:50 AM	46.6	42.1
05:30 AM - 05:35 AM	50.6	45.3	08:10 AM - 08:15 AM	52.3	45.4	10:50 AM - 10:55 AM	51.5	43.0
05:35 AM - 05:40 AM	49.0	43.3	08:15 AM - 08:20 AM	49.4	43.8	10:55 AM - 11:00 AM	46.2	42.8

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported :Mar 08, 2025

Report Number :3251105-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Sample Number	2517448-3
Parameter	Noise Level (Leq 5 min)
Location	ชุมชนตากวน-อำเภอประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date	Feb 27 - Feb 28, 2025
Measurement by	Satcha Phetsawaeng
Sound Level meter	Serial No. 00900074

Page 1 of 3

Feb 27, 2025			Feb 27, 2025			Feb 27, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	47.0	42.1	01:40 PM - 01:45 PM	52.8	46.0	04:20 PM - 04:25 PM	47.4	44.7
11:05 AM - 11:10 AM	49.9	42.9	01:45 PM - 01:50 PM	51.1	44.5	04:25 PM - 04:30 PM	49.1	45.4
11:10 AM - 11:15 AM	51.9	44.3	01:50 PM - 01:55 PM	48.3	43.0	04:30 PM - 04:35 PM	50.9	45.8
11:15 AM - 11:20 AM	48.4	42.5	01:55 PM - 02:00 PM	54.4	44.8	04:35 PM - 04:40 PM	50.5	44.9
11:20 AM - 11:25 AM	48.5	43.8	02:00 PM - 02:05 PM	51.2	44.8	04:40 PM - 04:45 PM	56.0	45.8
11:25 AM - 11:30 AM	46.1	41.4	02:05 PM - 02:10 PM	53.0	43.6	04:45 PM - 04:50 PM	50.6	44.9
11:30 AM - 11:35 AM	47.5	40.7	02:10 PM - 02:15 PM	53.2	44.4	04:50 PM - 04:55 PM	48.1	44.9
11:35 AM - 11:40 AM	46.0	41.6	02:15 PM - 02:20 PM	52.9	44.0	04:55 PM - 05:00 PM	47.3	44.7
11:40 AM - 11:45 AM	48.1	41.7	02:20 PM - 02:25 PM	51.1	44.5	05:00 PM - 05:05 PM	47.2	45.1
11:45 AM - 11:50 AM	49.8	41.6	02:25 PM - 02:30 PM	52.3	44.1	05:05 PM - 05:10 PM	51.2	45.4
11:50 AM - 11:55 AM	51.2	41.9	02:30 PM - 02:35 PM	51.3	44.5	05:10 PM - 05:15 PM	49.2	45.7
11:55 AM - 12:00 PM	50.0	42.5	02:35 PM - 02:40 PM	53.4	43.8	05:15 PM - 05:20 PM	48.4	45.5
12:00 PM - 12:05 PM	51.8	43.3	02:40 PM - 02:45 PM	52.8	44.9	05:20 PM - 05:25 PM	55.7	46.0
12:05 PM - 12:10 PM	50.7	43.3	02:45 PM - 02:50 PM	52.8	44.7	05:25 PM - 05:30 PM	51.1	45.9
12:10 PM - 12:15 PM	47.7	42.2	02:50 PM - 02:55 PM	54.0	43.9	05:30 PM - 05:35 PM	49.8	44.9
12:15 PM - 12:20 PM	48.0	44.3	02:55 PM - 03:00 PM	54.8	45.6	05:35 PM - 05:40 PM	48.5	45.1
12:20 PM - 12:25 PM	54.6	41.8	03:00 PM - 03:05 PM	46.1	43.2	05:40 PM - 05:45 PM	47.6	44.6
12:25 PM - 12:30 PM	53.3	41.3	03:05 PM - 03:10 PM	51.9	44.6	05:45 PM - 05:50 PM	50.1	45.4
12:30 PM - 12:35 PM	56.7	43.7	03:10 PM - 03:15 PM	50.0	44.2	05:50 PM - 05:55 PM	48.4	45.4
12:35 PM - 12:40 PM	50.2	42.4	03:15 PM - 03:20 PM	53.5	43.9	05:55 PM - 06:00 PM	47.8	45.3
12:40 PM - 12:45 PM	53.2	42.0	03:20 PM - 03:25 PM	47.5	43.3	06:00 PM - 06:05 PM	48.5	45.2
12:45 PM - 12:50 PM	51.8	42.5	03:25 PM - 03:30 PM	48.8	43.9	06:05 PM - 06:10 PM	47.8	45.2
12:50 PM - 12:55 PM	51.9	44.3	03:30 PM - 03:35 PM	55.9	44.9	06:10 PM - 06:15 PM	56.5	45.1
12:55 PM - 01:00 PM	52.2	42.9	03:35 PM - 03:40 PM	52.7	44.2	06:15 PM - 06:20 PM	50.4	46.1
01:00 PM - 01:05 PM	50.7	43.5	03:40 PM - 03:45 PM	51.6	45.0	06:20 PM - 06:25 PM	54.6	46.1
01:05 PM - 01:10 PM	49.7	42.9	03:45 PM - 03:50 PM	51.0	45.2	06:25 PM - 06:30 PM	48.5	45.6
01:10 PM - 01:15 PM	55.2	45.4	03:50 PM - 03:55 PM	49.5	44.7	06:30 PM - 06:35 PM	48.9	45.8
01:15 PM - 01:20 PM	53.3	44.2	03:55 PM - 04:00 PM	56.4	45.1	06:35 PM - 06:40 PM	49.3	46.2
01:20 PM - 01:25 PM	53.3	43.4	04:00 PM - 04:05 PM	51.9	45.2	06:40 PM - 06:45 PM	46.8	45.1
01:25 PM - 01:30 PM	53.6	44.9	04:05 PM - 04:10 PM	50.9	45.6	06:45 PM - 06:50 PM	46.7	44.9
01:30 PM - 01:35 PM	58.4	45.4	04:10 PM - 04:15 PM	50.2	45.2	06:50 PM - 06:55 PM	48.0	45.1
01:35 PM - 01:40 PM	51.6	46.9	04:15 PM - 04:20 PM	47.8	45.1	06:55 PM - 07:00 PM	46.6	44.4

Approved by

Sarayuth Jittranont
Assistant General Manager

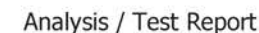
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Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported :Mar 08, 2025

Report Number :3251105-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Sample Number	2517448-3
Parameter	Noise Level (Leq 5 min)
Location	ชุมชนตากกาน-ฉะวามระอุ (GPS 47P 0735578, 1402792)
Measurement Date	Feb 27 - Feb 28, 2025
Measurement by	Satcha Phetsawaeng
Sound Level meter	Serial No. 009000074

Page 2 of 3

Feb 27, 2025			Feb 27 - Feb 28, 2025			Feb 28, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	47.3	44.4	09:40 PM - 09:45 PM	43.7	41.8	12:20 AM - 12:25 AM	46.6	41.6
07:05 PM - 07:10 PM	47.5	44.9	09:45 PM - 09:50 PM	44.3	42.9	12:25 AM - 12:30 AM	43.5	41.4
07:10 PM - 07:15 PM	46.5	44.3	09:50 PM - 09:55 PM	43.6	42.3	12:30 AM - 12:35 AM	43.4	41.5
07:15 PM - 07:20 PM	53.7	44.3	09:55 PM - 10:00 PM	43.7	42.5	12:35 AM - 12:40 AM	44.1	42.6
07:20 PM - 07:25 PM	49.8	44.3	10:00 PM - 10:05 PM	42.9	41.9	12:40 AM - 12:45 AM	45.7	42.1
07:25 PM - 07:30 PM	45.8	43.3	10:05 PM - 10:10 PM	42.9	41.8	12:45 AM - 12:50 AM	44.2	42.3
07:30 PM - 07:35 PM	45.6	43.2	10:10 PM - 10:15 PM	41.5	40.4	12:50 AM - 12:55 AM	44.3	42.7
07:35 PM - 07:40 PM	47.8	44.3	10:15 PM - 10:20 PM	42.9	40.6	12:55 AM - 01:00 AM	50.6	43.5
07:40 PM - 07:45 PM	49.1	45.2	10:20 PM - 10:25 PM	42.0	40.6	01:00 AM - 01:05 AM	44.0	41.7
07:45 PM - 07:50 PM	48.3	44.0	10:25 PM - 10:30 PM	40.7	41.6	01:05 AM - 01:10 AM	46.9	42.6
07:50 PM - 07:55 PM	44.5	43.7	10:30 PM - 10:35 PM	41.4	40.3	01:10 AM - 01:15 AM	46.1	42.6
07:55 PM - 08:00 PM	45.1	43.8	10:35 PM - 10:40 PM	41.2	40.0	01:15 AM - 01:20 AM	45.9	42.1
08:00 PM - 08:05 PM	45.9	44.1	10:40 PM - 10:45 PM	40.8	39.6	01:20 AM - 01:25 AM	44.1	42.1
08:05 PM - 08:10 PM	44.9	43.9	10:45 PM - 10:50 PM	43.0	40.9	01:25 AM - 01:30 AM	44.7	41.7
08:10 PM - 08:15 PM	45.5	43.8	10:50 PM - 10:55 PM	44.9	40.4	01:30 AM - 01:35 AM	44.2	41.8
08:15 PM - 08:20 PM	47.2	44.3	10:55 PM - 11:00 PM	42.9	41.3	01:35 AM - 01:40 AM	44.9	41.9
08:20 PM - 08:25 PM	44.6	43.7	11:00 PM - 11:05 PM	43.3	42.0	01:40 AM - 01:45 AM	43.9	41.9
08:25 PM - 08:30 PM	44.8	43.5	11:05 PM - 11:10 PM	43.1	41.5	01:45 AM - 01:50 AM	44.1	42.1
08:30 PM - 08:35 PM	44.9	43.2	11:10 PM - 11:15 PM	43.1	40.9	01:50 AM - 01:55 AM	49.0	42.7
08:35 PM - 08:40 PM	46.1	43.9	11:15 PM - 11:20 PM	42.9	40.9	01:55 AM - 02:00 AM	45.0	42.3
08:40 PM - 08:45 PM	47.7	43.8	11:20 PM - 11:25 PM	42.9	40.6	02:00 AM - 02:05 AM	43.3	42.9
08:45 PM - 08:50 PM	44.3	42.8	11:25 PM - 11:30 PM	43.2	40.9	02:05 AM - 02:10 AM	46.0	43.2
08:50 PM - 08:55 PM	44.1	42.6	11:30 PM - 11:35 PM	43.3	41.1	02:10 AM - 02:15 AM	46.7	43.6
08:55 PM - 09:00 PM	43.3	42.4	11:35 PM - 11:40 PM	44.0	41.3	02:15 AM - 02:20 AM	46.6	44.0
09:00 PM - 09:05 PM	44.7	43.0	11:40 PM - 11:45 PM	42.6	41.0	02:20 AM - 02:25 AM	48.5	43.8
09:05 PM - 09:10 PM	45.5	43.0	11:45 PM - 11:50 PM	43.0	40.1	02:25 AM - 02:30 AM	47.8	43.3
09:10 PM - 09:15 PM	43.8	42.8	11:50 PM - 11:55 PM	42.5	40.3	02:30 AM - 02:35 AM	48.1	43.9
09:15 PM - 09:20 PM	43.3	42.1	11:55 PM - 12:00 AM	43.1	41.6	02:35 AM - 02:40 AM	49.8	44.6
09:20 PM - 09:25 PM	45.5	42.9	12:00 AM - 12:05 AM	45.0	42.3	02:40 AM - 02:45 AM	50.4	43.2
09:25 PM - 09:30 PM	43.3	42.1	12:05 AM - 12:10 AM	44.6	42.8	02:45 AM - 02:50 AM	51.2	43.5
09:30 PM - 09:35 PM	42.7	41.8	12:10 AM - 12:15 AM	43.7	42.4	02:50 AM - 02:55 AM	48.2	42.8
09:35 PM - 09:40 PM	42.9	41.8	12:15 AM - 12:20 AM	44.0	41.8	02:55 AM - 03:00 AM	48.9	43.3

Approved by

Sarayuth Jittranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251105-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number : 2517448-3
Parameter : Noise Level (Leq 5 min)
Location : กรุงเทพมหานคร-ฉะเชิงเทรา (GPS 47P 0735578, 1402792)
Measurement Date : Feb 27 - Feb 28, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 00900074

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Feb 28, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 28, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 28, 2025 Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	47.9	43.3	05:40 AM - 05:45 AM	47.5	45.9	08:20 AM - 08:25 AM	50.9	45.4
03:05 AM - 03:10 AM	51.9	44.0	05:45 AM - 05:50 AM	48.9	44.4	08:25 AM - 08:30 AM	54.0	45.2
03:10 AM - 03:15 AM	51.0	45.6	05:50 AM - 05:55 AM	44.2	42.3	08:30 AM - 08:35 AM	53.2	45.4
03:15 AM - 03:20 AM	49.3	43.8	05:55 AM - 06:00 AM	46.3	42.2	08:35 AM - 08:40 AM	50.8	43.0
03:20 AM - 03:25 AM	52.1	44.6	06:00 AM - 06:05 AM	47.6	42.5	08:40 AM - 08:45 AM	50.8	43.9
03:25 AM - 03:30 AM	48.3	44.0	06:05 AM - 06:10 AM	48.3	43.5	08:45 AM - 08:50 AM	52.5	43.6
03:30 AM - 03:35 AM	49.7	45.0	06:10 AM - 06:15 AM	50.1	43.3	08:50 AM - 08:55 AM	52.9	43.8
03:35 AM - 03:40 AM	49.8	44.6	06:15 AM - 06:20 AM	47.0	43.9	08:55 AM - 09:00 AM	48.8	42.0
03:40 AM - 03:45 AM	54.5	44.6	06:20 AM - 06:25 AM	50.7	45.1	09:00 AM - 09:05 AM	48.8	42.0
03:45 AM - 03:50 AM	55.8	43.9	06:25 AM - 06:30 AM	54.9	43.8	09:05 AM - 09:10 AM	50.4	42.6
03:50 AM - 03:55 AM	51.7	44.8	06:30 AM - 06:35 AM	54.7	44.5	09:10 AM - 09:15 AM	49.0	42.8
03:55 AM - 04:00 AM	50.9	44.5	06:35 AM - 06:40 AM	51.5	44.6	09:15 AM - 09:20 AM	49.7	44.2
04:00 AM - 04:05 AM	53.9	45.9	06:40 AM - 06:45 AM	50.0	44.7	09:20 AM - 09:25 AM	51.9	44.5
04:05 AM - 04:10 AM	51.3	45.3	06:45 AM - 06:50 AM	49.0	43.9	09:25 AM - 09:30 AM	48.3	42.2
04:10 AM - 04:15 AM	47.5	46.5	06:50 AM - 06:55 AM	52.9	44.8	09:30 AM - 09:35 AM	50.2	42.2
04:15 AM - 04:20 AM	47.2	46.4	06:55 AM - 07:00 AM	54.7	47.1	09:35 AM - 09:40 AM	51.3	43.2
04:20 AM - 04:25 AM	46.6	43.9	07:00 AM - 07:05 AM	55.7	47.1	09:40 AM - 09:45 AM	51.4	43.6
04:25 AM - 04:30 AM	47.3	44.2	07:05 AM - 07:10 AM	52.2	46.2	09:45 AM - 09:50 AM	50.8	42.4
04:30 AM - 04:35 AM	44.0	41.7	07:10 AM - 07:15 AM	56.7	46.4	09:50 AM - 09:55 AM	49.5	43.7
04:35 AM - 04:40 AM	46.4	44.2	07:15 AM - 07:20 AM	51.7	46.2	09:55 AM - 10:00 AM	52.4	45.4
04:40 AM - 04:45 AM	45.6	44.5	07:20 AM - 07:25 AM	54.8	47.4	10:00 AM - 10:05 AM	51.2	43.3
04:45 AM - 04:50 AM	44.8	43.4	07:25 AM - 07:30 AM	52.5	46.5	10:05 AM - 10:10 AM	50.7	43.0
04:50 AM - 04:55 AM	44.8	43.6	07:30 AM - 07:35 AM	53.3	44.4	10:10 AM - 10:15 AM	51.6	44.6
04:55 AM - 05:00 AM	47.7	44.5	07:35 AM - 07:40 AM	53.6	47.5	10:15 AM - 10:20 AM	50.5	42.8
05:00 AM - 05:05 AM	47.6	44.9	07:40 AM - 07:45 AM	51.3	45.0	10:20 AM - 10:25 AM	50.0	43.9
05:05 AM - 05:10 AM	50.4	49.5	07:45 AM - 07:50 AM	53.1	46.9	10:25 AM - 10:30 AM	50.4	43.4
05:10 AM - 05:15 AM	50.7	49.7	07:50 AM - 07:55 AM	53.4	45.8	10:30 AM - 10:35 AM	49.9	43.7
05:15 AM - 05:20 AM	49.8	44.7	07:55 AM - 08:00 AM	55.5	45.8	10:35 AM - 10:40 AM	51.5	43.0
05:20 AM - 05:25 AM	49.8	48.8	08:00 AM - 08:05 AM	58.6	46.6	10:40 AM - 10:45 AM	49.7	42.3
05:25 AM - 05:30 AM	48.6	48.0	08:05 AM - 08:10 AM	51.6	45.9	10:45 AM - 10:50 AM	53.3	42.7
05:30 AM - 05:35 AM	49.3	48.3	08:10 AM - 08:15 AM	52.3	46.2	10:50 AM - 10:55 AM	50.7	40.4
05:35 AM - 05:40 AM	49.6	46.8	08:15 AM - 08:20 AM	53.1	46.6	10:55 AM - 11:00 AM	49.5	39.5

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Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251106-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number : 2517448-4
Parameter : Noise Level (Leq 5 min)
Location : กรุงเทพมหานคร-ฉะเชิงเทรา (GPS 47P 0735578, 1402792)
Measurement Date : Feb 28 - Mar 01, 2025
Measurement by : Satcha Phetsawaeng
Sound Level meter : Serial No. 00900074

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Feb 28, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 28, 2025 Time	Leq dB(A)	L90 dB(A)	Feb 28, 2025 Time	Leq dB(A)	L90 dB(A)
11:00 AM - 11:05 AM	50.1	41.6	01:40 PM - 01:45 PM	48.9	45.4	04:20 PM - 04:25 PM	52.4	47.3
11:05 AM - 11:10 AM	51.7	45.0	01:45 PM - 01:50 PM	49.6	45.3	04:25 PM - 04:30 PM	50.8	46.8
11:10 AM - 11:15 AM	51.2	43.2	01:50 PM - 01:55 PM	50.1	46.0	04:30 PM - 04:35 PM	51.3	47.2
11:15 AM - 11:20 AM	51.3	43.3	01:55 PM - 02:00 PM	49.6	45.3	04:35 PM - 04:40 PM	51.6	46.8
11:20 AM - 11:25 AM	51.5	44.4	02:00 PM - 02:05 PM	48.2	46.0	04:40 PM - 04:45 PM	48.6	45.5
11:25 AM - 11:30 AM	51.0	44.7	02:05 PM - 02:10 PM	48.6	44.5	04:45 PM - 04:50 PM	51.7	46.7
11:30 AM - 11:35 AM	51.9	45.4	02:10 PM - 02:15 PM	48.1	45.9	04:50 PM - 04:55 PM	52.3	47.5
11:35 AM - 11:40 AM	50.2	44.2	02:15 PM - 02:20 PM	49.8	45.2	04:55 PM - 05:00 PM	51.4	47.1
11:40 AM - 11:45 AM	50.4	42.8	02:20 PM - 02:25 PM	51.6	46.7	05:00 PM - 05:05 PM	53.0	48.3
11:45 AM - 11:50 AM	51.2	42.9	02:25 PM - 02:30 PM	48.4	45.4	05:05 PM - 05:10 PM	50.3	45.7
11:50 AM - 11:55 AM	51.6	41.3	02:30 PM - 02:35 PM	47.4	44.6	05:10 PM - 05:15 PM	51.2	46.7
11:55 AM - 12:00 PM	47.5	41.5	02:35 PM - 02:40 PM	49.5	45.3	05:15 PM - 05:20 PM	50.4	45.9
12:00 PM - 12:05 PM	53.1	43.3	02:40 PM - 02:45 PM	48.6	44.1	05:20 PM - 05:25 PM	49.3	45.6
12:05 PM - 12:10 PM	51.1	44.4	02:45 PM - 02:50 PM	52.0	45.7	05:25 PM - 05:30 PM	49.9	45.0
12:10 PM - 12:15 PM	50.2	40.9	02:50 PM - 02:55 PM	50.5	46.3	05:30 PM - 05:35 PM	49.7	44.2
12:15 PM - 12:20 PM	49.9	42.9	02:55 PM - 03:00 PM	48.6	45.6	05:35 PM - 05:40 PM	48.7	44.0
12:20 PM - 12:25 PM	56.4	42.9	03:00 PM - 03:05 PM	49.0	45.3	05:40 PM - 05:45 PM	48.9	44.2
12:25 PM - 12:30 PM	51.4	43.8	03:05 PM - 03:10 PM	50.2	46.1	05:45 PM - 05:50 PM	50.2	45.4
12:30 PM - 12:35 PM	48.4	43.0	03:10 PM - 03:15 PM	50.0	45.7	05:50 PM - 05:55 PM	50.8	45.5
12:35 PM - 12:40 PM	48.8	40.9	03:15 PM - 03:20 PM	51.6	46.1	05:55 PM - 06:00 PM	52.7	46.4
12:40 PM - 12:45 PM	50.0	43.9	03:20 PM - 03:25 PM	49.9	46.2	06:00 PM - 06:05 PM	51.8	46.4
12:45 PM - 12:50 PM	52.9	44.9	03:25 PM - 03:30 PM	50.1	45.8	06:05 PM - 06:10 PM	47.9	44.2
12:50 PM - 12:55 PM	50.5	43.3	03:30 PM - 03:35 PM	49.4	46.9	06:10 PM - 06:15 PM	50.5	45.2
12:55 PM - 01:00 PM	57.5	43.9	03:35 PM - 03:40 PM	50.7	46.7	06:15 PM - 06:20 PM	49.2	45.5
01:00 PM - 01:05 PM	48.9	41.8	03:40 PM - 03:45 PM	54.6	47.5	06:20 PM - 06:25 PM	48.0	44.9
01:05 PM - 01:10 PM	50.0	43.0	03:45 PM - 03:50 PM	51.2	46.8	06:25 PM - 06:30 PM	49.3	45.1
01:10 PM - 01:15 PM	48.8	44.7	03:50 PM - 03:55 PM	51.0	46.5	06:30 PM - 06:35 PM	49.6	46.8
01:15 PM - 01:20 PM	48.6	45.2	03:55 PM - 04:00 PM	50.8	46.6	06:35 PM - 06:40 PM	47.7	45.0
01:20 PM - 01:25 PM	49.3	45.1	04:00 PM - 04:05 PM	50.9	47.6	06:40 PM - 06:45 PM	49.9	44.8
01:25 PM - 01:30 PM	47.9	45.4	04:05 PM - 04:10 PM	52.8	47.7	06:45 PM - 06:50 PM	50.8	46.2
01:30 PM - 01:35 PM	49.5	44.2	04:10 PM - 04:15 PM	51.1	47.9	06:50 PM - 06:55 PM	50.8	46.5
01:35 PM - 01:40 PM	47.3	44.7	04:15 PM - 04:20 PM	52.3	48.4	06:55 PM - 07:00 PM	49.0	45.9

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Sarayuth Jitranont
Assistant General Manager

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Client : Siam Polyethylene Co., Ltd.

8. Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported :Mar 08, 2025

Report Number :3251106-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Sample Number	2517448-4
Parameter	Noise Level (Leq 5 min)
Location	หมู่บ้านจุกกวน-จุกพรหมอยู่ (GPS 47P 0735578, 1402792)
Measurement Date	Feb 28 - Mar 01, 2025
Measurement by	Satcha Phetsawaeng
Sound Level meter	Serial No. 00900074

Page 2 of 3

Feb 28, 2025			Feb 28 - Mar 01, 2025			Mar 01, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
07:00 PM - 07:05 PM	49.8	45.5	09:40 PM - 09:45 PM	45.9	42.5	12:20 AM - 12:25 AM	48.0	45.4
07:05 PM - 07:10 PM	51.1	45.3	09:45 PM - 09:50 PM	46.4	42.6	12:25 AM - 12:30 AM	47.9	45.4
07:10 PM - 07:15 PM	47.1	44.5	09:50 PM - 09:55 PM	48.3	43.3	12:30 AM - 12:35 AM	51.1	45.9
07:15 PM - 07:20 PM	47.9	44.0	09:55 PM - 10:00 PM	48.5	43.9	12:35 AM - 12:40 AM	48.1	45.7
07:20 PM - 07:25 PM	48.9	45.0	10:00 PM - 10:05 PM	50.6	45.4	12:40 AM - 12:45 AM	49.7	45.7
07:25 PM - 07:30 PM	48.3	44.2	10:05 PM - 10:10 PM	47.5	44.7	12:45 AM - 12:50 AM	47.4	44.9
07:30 PM - 07:35 PM	50.3	46.4	10:10 PM - 10:15 PM	49.2	45.5	12:50 AM - 12:55 AM	49.7	44.5
07:35 PM - 07:40 PM	48.4	44.0	10:15 PM - 10:20 PM	46.2	44.1	12:55 AM - 01:00 AM	47.8	43.6
07:40 PM - 07:45 PM	53.9	44.2	10:20 PM - 10:25 PM	47.0	45.1	01:00 AM - 01:05 AM	45.2	43.3
07:45 PM - 07:50 PM	48.9	43.9	10:25 PM - 10:30 PM	48.3	45.0	01:05 AM - 01:10 AM	45.6	42.8
07:50 PM - 07:55 PM	48.3	45.1	10:30 PM - 10:35 PM	56.1	46.0	01:10 AM - 01:15 AM	44.3	42.0
07:55 PM - 08:00 PM	48.4	44.5	10:35 PM - 10:40 PM	49.5	44.9	01:15 AM - 01:20 AM	44.5	41.3
08:00 PM - 08:05 PM	50.1	45.3	10:40 PM - 10:45 PM	49.6	44.5	01:20 AM - 01:25 AM	49.0	42.3
08:05 PM - 08:10 PM	46.6	43.7	10:45 PM - 10:50 PM	47.5	43.9	01:25 AM - 01:30 AM	45.4	42.2
08:10 PM - 08:15 PM	48.7	43.7	10:50 PM - 10:55 PM	50.3	43.8	01:30 AM - 01:35 AM	45.1	42.6
08:15 PM - 08:20 PM	47.6	43.5	10:55 PM - 11:00 PM	47.7	45.1	01:35 AM - 01:40 AM	47.3	43.0
08:20 PM - 08:25 PM	49.7	44.4	11:00 PM - 11:05 PM	48.8	45.9	01:40 AM - 01:45 AM	42.8	41.6
08:25 PM - 08:30 PM	50.4	44.4	11:05 PM - 11:10 PM	48.7	46.3	01:45 AM - 01:50 AM	45.1	41.7
08:30 PM - 08:35 PM	50.0	45.1	11:10 PM - 11:15 PM	46.9	44.8	01:50 AM - 01:55 AM	49.4	41.6
08:35 PM - 08:40 PM	50.0	46.3	11:15 PM - 11:20 PM	47.0	43.8	01:55 AM - 02:00 AM	59.0	43.2
08:40 PM - 08:45 PM	49.8	44.9	11:20 PM - 11:25 PM	53.5	45.9	02:00 AM - 02:05 AM	54.2	42.7
08:45 PM - 08:50 PM	48.0	44.4	11:25 PM - 11:30 PM	56.4	45.6	02:05 AM - 02:10 AM	45.6	42.2
08:50 PM - 08:55 PM	48.2	42.6	11:30 PM - 11:35 PM	47.7	46.2	02:10 AM - 02:15 AM	44.4	42.0
08:55 PM - 09:00 PM	48.8	42.3	11:35 PM - 11:40 PM	48.4	46.1	02:15 AM - 02:20 AM	44.3	41.6
09:00 PM - 09:05 PM	48.6	42.1	11:40 PM - 11:45 PM	50.9	45.0	02:20 AM - 02:25 AM	45.0	41.4
09:05 PM - 09:10 PM	47.0	42.1	11:45 PM - 11:50 PM	47.6	45.0	02:25 AM - 02:30 AM	52.9	41.9
09:10 PM - 09:15 PM	44.4	41.5	11:50 PM - 11:55 PM	47.9	45.7	02:30 AM - 02:35 AM	43.9	41.5
09:15 PM - 09:20 PM	49.3	42.8	11:55 PM - 12:00 AM	48.1	45.9	02:35 AM - 02:40 AM	44.4	42.0
09:20 PM - 09:25 PM	50.4	43.8	12:00 AM - 12:05 AM	47.3	45.9	02:40 AM - 02:45 AM	45.3	42.8
09:25 PM - 09:30 PM	48.7	43.1	12:05 AM - 12:10 AM	47.7	44.4	02:45 AM - 02:50 AM	43.9	42.1
09:30 PM - 09:35 PM	46.6	42.6	12:10 AM - 12:15 AM	50.0	44.8	02:50 AM - 02:55 AM	44.7	42.6
09:35 PM - 09:40 PM	46.6	41.5	12:15 AM - 12:20 AM	46.8	43.8	02:55 AM - 03:00 AM	47.0	42.5

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[Signature]

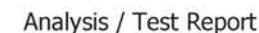
Sarayuth Jittranont
Assistant General Manager

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Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received :Mar 04, 2025

Date Reported :Mar 08, 2025

Report Number :3251106-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Sample Number	2517448-4
Parameter	Noise Level (Leq 5 min)
Location	ชุมชนตากวน-ลำปำรถไฟ (GPS 47P 0735578, 1402792)
Measurement Date	Feb 28 - Mar 01, 2025
Measurement by	Satcha Phetsawaeng
Sound Level meter	Serial No. 009000074

Page 3 of 3

Mar 01, 2025			Mar 01, 2025			Mar 01, 2025		
Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)	Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	45.0	42.6	05:40 AM - 05:45 AM	56.3	45.3	08:20 AM - 08:25 AM	48.4	44.6
03:05 AM - 03:10 AM	45.4	42.3	05:45 AM - 05:50 AM	56.8	46.9	08:25 AM - 08:30 AM	48.3	44.1
03:10 AM - 03:15 AM	44.6	41.4	05:50 AM - 05:55 AM	58.1	48.1	08:30 AM - 08:35 AM	50.4	43.7
03:15 AM - 03:20 AM	53.1	42.8	05:55 AM - 06:00 AM	56.7	47.7	08:35 AM - 08:40 AM	49.3	44.0
03:20 AM - 03:25 AM	59.1	43.0	06:00 AM - 06:05 AM	60.4	46.7	08:40 AM - 08:45 AM	47.1	43.8
03:25 AM - 03:30 AM	48.7	42.3	06:05 AM - 06:10 AM	58.9	47.1	08:45 AM - 08:50 AM	49.5	44.4
03:30 AM - 03:35 AM	48.9	41.9	06:10 AM - 06:15 AM	53.9	47.7	08:50 AM - 08:55 AM	48.2	44.2
03:35 AM - 03:40 AM	60.7	41.4	06:15 AM - 06:20 AM	60.1	46.2	08:55 AM - 09:00 AM	48.5	45.1
03:40 AM - 03:45 AM	52.6	41.4	06:20 AM - 06:25 AM	58.1	46.6	09:00 AM - 09:05 AM	48.3	44.3
03:45 AM - 03:50 AM	44.7	41.9	06:25 AM - 06:30 AM	53.6	47.1	09:05 AM - 09:10 AM	51.6	44.6
03:50 AM - 03:55 AM	60.5	43.1	06:30 AM - 06:35 AM	52.8	46.9	09:10 AM - 09:15 AM	51.7	44.6
03:55 AM - 04:00 AM	57.6	42.2	06:35 AM - 06:40 AM	53.3	45.5	09:15 AM - 09:20 AM	47.7	44.5
04:00 AM - 04:05 AM	59.1	42.8	06:40 AM - 06:45 AM	59.2	46.1	09:20 AM - 09:25 AM	49.7	44.4
04:05 AM - 04:10 AM	58.7	42.8	06:45 AM - 06:50 AM	57.0	47.1	09:25 AM - 09:30 AM	49.6	44.6
04:10 AM - 04:15 AM	59.1	43.0	06:50 AM - 06:55 AM	57.5	46.9	09:30 AM - 09:35 AM	51.5	44.1
04:15 AM - 04:20 AM	58.5	43.7	06:55 AM - 07:00 AM	58.3	46.7	09:35 AM - 09:40 AM	47.8	43.4
04:20 AM - 04:25 AM	60.7	43.1	07:00 AM - 07:05 AM	58.3	46.9	09:40 AM - 09:45 AM	47.0	43.3
04:25 AM - 04:30 AM	60.1	43.9	07:05 AM - 07:10 AM	59.3	46.6	09:45 AM - 09:50 AM	48.4	43.0
04:30 AM - 04:35 AM	57.9	43.4	07:10 AM - 07:15 AM	60.2	46.9	09:50 AM - 09:55 AM	49.8	43.2
04:35 AM - 04:40 AM	58.0	43.3	07:15 AM - 07:20 AM	55.0	46.6	09:55 AM - 10:00 AM	46.9	43.3
04:40 AM - 04:45 AM	59.4	44.6	07:20 AM - 07:25 AM	59.8	45.5	10:00 AM - 10:05 AM	46.8	43.3
04:45 AM - 04:50 AM	59.6	44.2	07:25 AM - 07:30 AM	56.9	45.7	10:05 AM - 10:10 AM	47.8	42.8
04:50 AM - 04:55 AM	56.2	43.6	07:30 AM - 07:35 AM	57.0	46.2	10:10 AM - 10:15 AM	47.9	43.2
04:55 AM - 05:00 AM	57.9	45.4	07:35 AM - 07:40 AM	50.1	45.3	10:15 AM - 10:20 AM	51.1	44.6
05:00 AM - 05:05 AM	59.4	45.1	07:40 AM - 07:45 AM	49.9	44.6	10:20 AM - 10:25 AM	49.5	43.5
05:05 AM - 05:10 AM	58.3	44.4	07:45 AM - 07:50 AM	49.3	44.5	10:25 AM - 10:30 AM	48.0	43.8
05:10 AM - 05:15 AM	59.2	44.9	07:50 AM - 07:55 AM	52.3	44.7	10:30 AM - 10:35 AM	48.2	43.3
05:15 AM - 05:20 AM	58.3	45.1	07:55 AM - 08:00 AM	50.2	44.1	10:35 AM - 10:40 AM	47.8	42.3
05:20 AM - 05:25 AM	59.9	45.8	08:00 AM - 08:05 AM	50.0	45.2	10:40 AM - 10:45 AM	49.4	43.6
05:25 AM - 05:30 AM	59.4	45.6	08:05 AM - 08:10 AM	51.4	45.6	10:45 AM - 10:50 AM	48.8	43.6
05:30 AM - 05:35 AM	58.4	45.3	08:10 AM - 08:15 AM	47.6	44.6	10:50 AM - 10:55 AM	48.7	43.8
05:35 AM - 05:40 AM	57.9	45.0	08:15 AM - 08:20 AM	48.2	44.2	10:55 AM - 11:00 AM	48.0	43.1

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Sarayuth Jittranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251107-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517448-5
Parameter Noise Level (Leq 5 min)
Location กรุงเทพมหานคร-ด่านพระยาสถ (GPS 47P 0735578, 1402792)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90	Mar 01, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	51.5	44.0	01:40 PM - 01:45 PM	49.7	44.8	04:20 PM - 04:25 PM	50.5	46.0
11:05 AM - 11:10 AM	51.9	44.7	01:45 PM - 01:50 PM	49.0	44.6	04:25 PM - 04:30 PM	50.5	46.9
11:10 AM - 11:15 AM	47.4	43.2	01:50 PM - 01:55 PM	49.0	44.9	04:30 PM - 04:35 PM	50.5	46.7
11:15 AM - 11:20 AM	47.9	44.5	01:55 PM - 02:00 PM	49.2	43.8	04:35 PM - 04:40 PM	50.6	46.1
11:20 AM - 11:25 AM	47.7	42.8	02:00 PM - 02:05 PM	49.9	45.2	04:40 PM - 04:45 PM	50.1	46.1
11:25 AM - 11:30 AM	49.6	43.5	02:05 PM - 02:10 PM	49.1	44.6	04:45 PM - 04:50 PM	53.3	47.9
11:30 AM - 11:35 AM	49.9	43.8	02:10 PM - 02:15 PM	48.2	44.6	04:50 PM - 04:55 PM	51.5	48.0
11:35 AM - 11:40 AM	48.6	44.1	02:15 PM - 02:20 PM	48.3	44.4	04:55 PM - 05:00 PM	52.7	47.8
11:40 AM - 11:45 AM	49.9	44.7	02:20 PM - 02:25 PM	49.8	45.9	05:00 PM - 05:05 PM	56.4	46.8
11:45 AM - 11:50 AM	48.7	43.5	02:25 PM - 02:30 PM	49.5	44.8	05:05 PM - 05:10 PM	51.8	47.1
11:50 AM - 11:55 AM	47.9	44.0	02:30 PM - 02:35 PM	55.3	45.7	05:10 PM - 05:15 PM	50.9	46.7
11:55 AM - 12:00 PM	48.3	43.7	02:35 PM - 02:40 PM	49.5	45.3	05:15 PM - 05:20 PM	52.0	47.0
12:00 PM - 12:05 PM	48.1	43.5	02:40 PM - 02:45 PM	49.5	44.7	05:20 PM - 05:25 PM	50.2	46.9
12:05 PM - 12:10 PM	48.0	43.9	02:45 PM - 02:50 PM	48.9	44.9	05:25 PM - 05:30 PM	52.6	47.8
12:10 PM - 12:15 PM	49.0	44.1	02:50 PM - 02:55 PM	47.2	44.2	05:30 PM - 05:35 PM	51.8	47.8
12:15 PM - 12:20 PM	49.0	43.8	02:55 PM - 03:00 PM	48.5	43.7	05:35 PM - 05:40 PM	51.8	46.9
12:20 PM - 12:25 PM	50.7	44.2	03:00 PM - 03:05 PM	47.1	43.2	05:40 PM - 05:45 PM	51.6	46.7
12:25 PM - 12:30 PM	49.7	43.9	03:05 PM - 03:10 PM	49.2	43.0	05:45 PM - 05:50 PM	50.7	48.0
12:30 PM - 12:35 PM	46.7	43.2	03:10 PM - 03:15 PM	52.6	44.3	05:50 PM - 05:55 PM	51.9	47.4
12:35 PM - 12:40 PM	48.8	44.7	03:15 PM - 03:20 PM	52.3	44.8	05:55 PM - 06:00 PM	50.7	48.1
12:40 PM - 12:45 PM	50.2	44.8	03:20 PM - 03:25 PM	50.2	45.0	06:00 PM - 06:05 PM	52.3	47.4
12:45 PM - 12:50 PM	49.9	45.3	03:25 PM - 03:30 PM	53.4	45.1	06:05 PM - 06:10 PM	51.7	47.6
12:50 PM - 12:55 PM	54.8	47.6	03:30 PM - 03:35 PM	49.4	45.5	06:10 PM - 06:15 PM	52.2	48.1
12:55 PM - 01:00 PM	50.4	47.6	03:35 PM - 03:40 PM	50.8	45.4	06:15 PM - 06:20 PM	52.1	48.7
01:00 PM - 01:05 PM	49.1	47.1	03:40 PM - 03:45 PM	49.2	45.1	06:20 PM - 06:25 PM	51.8	48.6
01:05 PM - 01:10 PM	49.4	44.7	03:45 PM - 03:50 PM	51.5	45.3	06:25 PM - 06:30 PM	51.3	48.0
01:10 PM - 01:15 PM	47.5	43.9	03:50 PM - 03:55 PM	50.5	46.0	06:30 PM - 06:35 PM	50.4	47.5
01:15 PM - 01:20 PM	49.1	43.4	03:55 PM - 04:00 PM	50.1	46.1	06:35 PM - 06:40 PM	50.3	46.8
01:20 PM - 01:25 PM	50.7	44.3	04:00 PM - 04:05 PM	50.7	46.4	06:40 PM - 06:45 PM	51.5	47.4
01:25 PM - 01:30 PM	48.4	43.3	04:05 PM - 04:10 PM	50.9	47.8	06:45 PM - 06:50 PM	51.2	47.2
01:30 PM - 01:35 PM	47.9	45.2	04:10 PM - 04:15 PM	52.7	47.5	06:50 PM - 06:55 PM	48.7	45.9
01:35 PM - 01:40 PM	46.9	43.8	04:15 PM - 04:20 PM	51.0	47.0	06:55 PM - 07:00 PM	48.2	46.1

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251107-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 2 of 3

Sample Number 2517448-5
Parameter Noise Level (Leq 5 min)
Location กรุงเทพมหานคร-ด่านพระยาสถ (GPS 47P 0735578, 1402792)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 01, 2025	Leq	L90	Mar 01 - Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	49.8	46.9	09:40 PM - 09:45 PM	49.8	46.6	12:20 AM - 12:25 AM	46.9	43.3
07:05 PM - 07:10 PM	49.5	46.3	09:45 PM - 09:50 PM	47.9	44.9	12:25 AM - 12:30 AM	47.1	43.6
07:10 PM - 07:15 PM	48.8	46.4	09:50 PM - 09:55 PM	50.2	45.2	12:30 AM - 12:35 AM	46.0	43.1
07:15 PM - 07:20 PM	50.6	45.6	09:55 PM - 10:00 PM	49.2	46.1	12:35 AM - 12:40 AM	49.1	42.7
07:20 PM - 07:25 PM	50.6	46.6	10:00 PM - 10:05 PM	49.3	45.4	12:40 AM - 12:45 AM	45.5	42.7
07:25 PM - 07:30 PM	50.1	46.3	10:05 PM - 10:10 PM	50.8	44.3	12:45 AM - 12:50 AM	48.8	42.8
07:30 PM - 07:35 PM	49.8	46.1	10:10 PM - 10:15 PM	51.7	44.9	12:50 AM - 12:55 AM	47.4	43.5
07:35 PM - 07:40 PM	50.4	46.4	10:15 PM - 10:20 PM	47.2	44.5	12:55 AM - 01:00 AM	48.6	43.1
07:40 PM - 07:45 PM	48.4	45.2	10:20 PM - 10:25 PM	52.0	44.1	01:00 AM - 01:05 AM	43.8	41.9
07:45 PM - 07:50 PM	48.3	45.2	10:25 PM - 10:30 PM	53.4	44.8	01:05 AM - 01:10 AM	45.3	43.0
07:50 PM - 07:55 PM	52.2	47.0	10:30 PM - 10:35 PM	48.3	44.3	01:10 AM - 01:15 AM	44.9	42.9
07:55 PM - 08:00 PM	52.5	46.3	10:35 PM - 10:40 PM	46.7	44.3	01:15 AM - 01:20 AM	45.4	43.0
08:00 PM - 08:05 PM	51.6	46.2	10:40 PM - 10:45 PM	48.2	45.2	01:20 AM - 01:25 AM	47.7	42.7
08:05 PM - 08:10 PM	47.5	45.0	10:45 PM - 10:50 PM	49.9	45.1	01:25 AM - 01:30 AM	44.9	42.7
08:10 PM - 08:15 PM	49.9	46.0	10:50 PM - 10:55 PM	53.8	46.2	01:30 AM - 01:35 AM	47.6	42.0
08:15 PM - 08:20 PM	49.2	45.1	10:55 PM - 11:00 PM	46.7	44.4	01:35 AM - 01:40 AM	45.4	42.7
08:20 PM - 08:25 PM	52.4	45.3	11:00 PM - 11:05 PM	47.7	45.0	01:40 AM - 01:45 AM	49.2	42.6
08:25 PM - 08:30 PM	48.9	45.1	11:05 PM - 11:10 PM	48.9	44.4	01:45 AM - 01:50 AM	51.0	42.4
08:30 PM - 08:35 PM	50.7	45.3	11:10 PM - 11:15 PM	49.6	45.6	01:50 AM - 01:55 AM	45.0	42.0
08:35 PM - 08:40 PM	48.5	44.9	11:15 PM - 11:20 PM	47.4	44.7	01:55 AM - 02:00 AM	47.0	42.5
08:40 PM - 08:45 PM	48.7	45.9	11:20 PM - 11:25 PM	49.2	44.2	02:00 AM - 02:05 AM	46.5	42.7
08:45 PM - 08:50 PM	50.7	45.6	11:25 PM - 11:30 PM	52.6	45.0	02:05 AM - 02:10 AM	46.2	42.8
08:50 PM - 08:55 PM	49.5	46.3	11:30 PM - 11:35 PM	49.9	46.0	02:10 AM - 02:15 AM	43.7	42.5
08:55 PM - 09:00 PM	50.3	45.4	11:35 PM - 11:40 PM	48.5	44.1	02:15 AM - 02:20 AM	44.1	42.3
09:00 PM - 09:05 PM	49.5	45.7	11:40 PM - 11:45 PM	48.1	44.7	02:20 AM - 02:25 AM	44.6	41.3
09:05 PM - 09:10 PM	50.6	45.4	11:45 PM - 11:50 PM	49.6	46.1	02:25 AM - 02:30 AM	44.5	42.7
09:10 PM - 09:15 PM	47.9	43.7	11:50 PM - 11:55 PM	48.5	44.8	02:30 AM - 02:35 AM	48.8	42.6
09:15 PM - 09:20 PM	51.0	44.4	11:55 PM - 12:00 AM	47.8	45.6	02:35 AM - 02:40 AM	43.3	41.7
09:20 PM - 09:25 PM	48.3	44.8	12:00 AM - 12:05 AM	51.0	47.0	02:40 AM - 02:45 AM	46.0	42.3
09:25 PM - 09:30 PM	49.7	46.6	12:05 AM - 12:10 AM	49.3	46.2	02:45 AM - 02:50 AM	45.9	42.6
09:30 PM - 09:35 PM	49.0	46.0	12:10 AM - 12:15 AM	47.3	44.0	02:50 AM - 02:55 AM	47.1	42.1
09:35 PM - 09:40 PM	48.8	46.4	12:15 AM - 12:20 AM	46.7	44.0	02:55 AM - 03:00 AM	46.1	43.2

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Approved by

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Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251107-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 3 of 3

Sample Number 2517448-5
Parameter Noise Level (Leq 5 min)
Location ฐานตรวจวัด-ด้านโรงรถ (GPS 47P 0735578, 1402792)
Measurement Date Mar 01 - Mar 02, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
03:00 AM - 03:05 AM	45.6	42.1	05:40 AM - 05:45 AM	49.4	45.2	08:20 AM - 08:25 AM	51.8	44.6
03:05 AM - 03:10 AM	43.3	40.5	05:45 AM - 05:50 AM	51.9	46.7	08:25 AM - 08:30 AM	49.4	43.3
03:10 AM - 03:15 AM	43.4	42.1	05:50 AM - 05:55 AM	53.7	49.0	08:30 AM - 08:35 AM	49.3	44.5
03:15 AM - 03:20 AM	43.4	41.9	05:55 AM - 06:00 AM	52.0	48.8	08:35 AM - 08:40 AM	49.3	43.9
03:20 AM - 03:25 AM	44.4	42.3	06:00 AM - 06:05 AM	51.6	47.2	08:40 AM - 08:45 AM	48.9	44.6
03:25 AM - 03:30 AM	42.8	40.9	06:05 AM - 06:10 AM	52.5	47.6	08:45 AM - 08:50 AM	48.4	44.4
03:30 AM - 03:35 AM	45.9	41.9	06:10 AM - 06:15 AM	54.9	47.6	08:50 AM - 08:55 AM	49.0	44.5
03:35 AM - 03:40 AM	45.5	42.7	06:15 AM - 06:20 AM	50.0	46.7	08:55 AM - 09:00 AM	49.9	46.8
03:40 AM - 03:45 AM	44.2	42.5	06:20 AM - 06:25 AM	51.8	47.2	09:00 AM - 09:05 AM	49.8	46.4
03:45 AM - 03:50 AM	51.0	42.8	06:25 AM - 06:30 AM	52.6	46.9	09:05 AM - 09:10 AM	49.5	46.1
03:50 AM - 03:55 AM	47.5	41.8	06:30 AM - 06:35 AM	52.0	47.4	09:10 AM - 09:15 AM	49.5	44.5
03:55 AM - 04:00 AM	44.8	42.3	06:35 AM - 06:40 AM	53.4	46.9	09:15 AM - 09:20 AM	51.6	45.2
04:00 AM - 04:05 AM	45.7	42.4	06:40 AM - 06:45 AM	53.1	48.9	09:20 AM - 09:25 AM	49.1	44.3
04:05 AM - 04:10 AM	43.8	41.4	06:45 AM - 06:50 AM	57.4	48.6	09:25 AM - 09:30 AM	48.8	43.9
04:10 AM - 04:15 AM	45.4	42.1	06:50 AM - 06:55 AM	54.5	49.7	09:30 AM - 09:35 AM	47.5	44.3
04:15 AM - 04:20 AM	46.1	42.0	06:55 AM - 07:00 AM	52.8	47.5	09:35 AM - 09:40 AM	48.0	44.2
04:20 AM - 04:25 AM	48.1	42.7	07:00 AM - 07:05 AM	51.0	45.9	09:40 AM - 09:45 AM	49.8	44.5
04:25 AM - 04:30 AM	46.8	42.8	07:05 AM - 07:10 AM	52.3	46.8	09:45 AM - 09:50 AM	48.6	44.1
04:30 AM - 04:35 AM	48.9	43.6	07:10 AM - 07:15 AM	51.6	45.4	09:50 AM - 09:55 AM	47.6	43.6
04:35 AM - 04:40 AM	47.5	43.3	07:15 AM - 07:20 AM	51.8	46.6	09:55 AM - 10:00 AM	50.1	45.2
04:40 AM - 04:45 AM	48.9	43.2	07:20 AM - 07:25 AM	51.2	46.1	10:00 AM - 10:05 AM	49.0	44.9
04:45 AM - 04:50 AM	47.5	43.4	07:25 AM - 07:30 AM	52.3	45.8	10:05 AM - 10:10 AM	51.1	43.2
04:50 AM - 04:55 AM	46.4	43.6	07:30 AM - 07:35 AM	48.8	44.0	10:10 AM - 10:15 AM	47.9	44.0
04:55 AM - 05:00 AM	49.3	44.5	07:35 AM - 07:40 AM	48.1	43.7	10:15 AM - 10:20 AM	48.7	45.5
05:00 AM - 05:05 AM	48.5	44.1	07:40 AM - 07:45 AM	49.7	44.3	10:20 AM - 10:25 AM	50.4	44.6
05:05 AM - 05:10 AM	47.9	44.4	07:45 AM - 07:50 AM	50.4	44.9	10:25 AM - 10:30 AM	50.8	44.9
05:10 AM - 05:15 AM	50.4	45.1	07:50 AM - 07:55 AM	50.6	45.0	10:30 AM - 10:35 AM	51.3	45.3
05:15 AM - 05:20 AM	49.6	44.4	07:55 AM - 08:00 AM	52.8	44.9	10:35 AM - 10:40 AM	52.1	45.9
05:20 AM - 05:25 AM	48.2	44.1	08:00 AM - 08:05 AM	51.3	44.7	10:40 AM - 10:45 AM	49.2	45.2
05:25 AM - 05:30 AM	49.9	44.8	08:05 AM - 08:10 AM	49.0	45.0	10:45 AM - 10:50 AM	49.9	45.2
05:30 AM - 05:35 AM	48.7	44.5	08:10 AM - 08:15 AM	50.1	44.8	10:50 AM - 10:55 AM	49.8	45.1
05:35 AM - 05:40 AM	49.2	45.3	08:15 AM - 08:20 AM	49.7	43.2	10:55 AM - 11:00 AM	47.3	44.5

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251108-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517448-6
Parameter Noise Level (Leq 5 min)
Location ฐานตรวจวัด-ด้านโรงรถ (GPS 47P 0735578, 1402792)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90	Mar 02, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	47.7	44.6	01:40 PM - 01:45 PM	49.8	45.3	04:20 PM - 04:25 PM	50.6	46.3
11:05 AM - 11:10 AM	47.9	44.1	01:45 PM - 01:50 PM	50.0	45.6	04:25 PM - 04:30 PM	52.2	47.1
11:10 AM - 11:15 AM	50.3	45.2	01:50 PM - 01:55 PM	47.6	44.8	04:30 PM - 04:35 PM	51.6	46.9
11:15 AM - 11:20 AM	48.1	45.3	01:55 PM - 02:00 PM	51.2	45.2	04:35 PM - 04:40 PM	49.0	46.0
11:20 AM - 11:25 AM	49.7	44.0	02:00 PM - 02:05 PM	49.1	45.3	04:40 PM - 04:45 PM	56.5	47.7
11:25 AM - 11:30 AM	47.5	43.4	02:05 PM - 02:10 PM	50.7	45.5	04:45 PM - 04:50 PM	50.8	47.2
11:30 AM - 11:35 AM	47.2	43.5	02:10 PM - 02:15 PM	49.2	45.1	04:50 PM - 04:55 PM	50.3	47.0
11:35 AM - 11:40 AM	48.7	44.0	02:15 PM - 02:20 PM	49.5	45.7	04:55 PM - 05:00 PM	50.9	47.2
11:40 AM - 11:45 AM	51.1	43.8	02:20 PM - 02:25 PM	48.1	44.1	05:00 PM - 05:05 PM	50.2	46.7
11:45 AM - 11:50 AM	46.4	43.0	02:25 PM - 02:30 PM	49.2	45.2	05:05 PM - 05:10 PM	52.1	46.2
11:50 AM - 11:55 AM	47.0	43.4	02:30 PM - 02:35 PM	49.2	45.0	05:10 PM - 05:15 PM	50.7	46.5
11:55 AM - 12:00 PM	49.4	43.4	02:35 PM - 02:40 PM	49.5	45.7	05:15 PM - 05:20 PM	50.2	46.2
12:00 PM - 12:05 PM	46.5	42.8	02:40 PM - 02:45 PM	48.9	44.1	05:20 PM - 05:25 PM	50.2	46.9
12:05 PM - 12:10 PM	47.4	42.8	02:45 PM - 02:50 PM	48.9	45.4	05:25 PM - 05:30 PM	50.8	47.1
12:10 PM - 12:15 PM	48.0	43.6	02:50 PM - 02:55 PM	48.1	45.1	05:30 PM - 05:35 PM	51.7	47.3
12:15 PM - 12:20 PM	47.8	44.5	02:55 PM - 03:00 PM	49.3	45.4	05:35 PM - 05:40 PM	55.9	47.7
12:20 PM - 12:25 PM	47.4	43.3	03:00 PM - 03:05 PM	49.1	45.4	05:40 PM - 05:45 PM	57.8	47.9
12:25 PM - 12:30 PM	51.7	44.7	03:05 PM - 03:10 PM	47.7	44.7	05:45 PM - 05:50 PM	61.9	48.3
12:30 PM - 12:35 PM	48.3	43.4	03:10 PM - 03:15 PM	49.6	45.8	05:50 PM - 05:55 PM	51.5	47.5
12:35 PM - 12:40 PM	48.8	44.9	03:15 PM - 03:20 PM	48.5	44.8	05:55 PM - 06:00 PM	52.5	47.9
12:40 PM - 12:45 PM	50.3	44.2	03:20 PM - 03:25 PM	47.8	45.2	06:00 PM - 06:05 PM	50.9	47.5
12:45 PM - 12:50 PM	48.9	44.4	03:25 PM - 03:30 PM	50.1	46.2	06:05 PM - 06:10 PM	59.1	47.6
12:50 PM - 12:55 PM	48.9	44.5	03:30 PM - 03:35 PM	50.1	45.7	06:10 PM - 06:15 PM	53.0	46.6
12:55 PM - 01:00 PM	50.3	44.2	03:35 PM - 03:40 PM	51.3	45.6	06:15 PM - 06:20 PM	51.1	48.9
01:00 PM - 01:05 PM	49.8	44.7	03:40 PM - 03:45 PM	49.8	45.8	06:20 PM - 06:25 PM	50.6	48.4
01:05 PM - 01:10 PM	47.0	44.7	03:45 PM - 03:50 PM	49.6	46.2	06:25 PM - 06:30 PM	50.9	46.9
01:10 PM - 01:15 PM	46.2	44.0	03:50 PM - 03:55 PM	49.3	46.1	06:30 PM - 06:35 PM	50.4	46.9
01:15 PM - 01:20 PM	48.6	44.7	03:55 PM - 04:00 PM	50.4	46.4	06:35 PM - 06:40 PM	49.5	47.2
01:20 PM - 01:25 PM	47.2	43.7	04:00 PM - 04:05 PM	49.7	46.5	06:40 PM - 06:45 PM	50.3	46.9
01:25 PM - 01:30 PM	47.3	43.8	04:05 PM - 04:10 PM	49.3	46.4	06:45 PM - 06:50 PM	50.0	46.8
01:30 PM - 01:35 PM	51.4	44.8	04:10 PM - 04:15 PM	50.3	46.4	06:50 PM - 06:55 PM	49.4	46.6
01:35 PM - 01:40 PM	48.3	44.4	04:15 PM - 04:20 PM	50.6	47.1	06:55 PM - 07:00 PM	49.2	46.1

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received: Mar 04, 2025
Date Reported: Mar 08, 2025
Report Number: :3251108-1

P/O :

Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517448-6
Parameter Noise Level (Leq 5 min)
Location หนองปลาหมอ-ถาวรประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Page 2 of 3

Mar 02, 2025	Leq	L90	Mar 02 - Mar 03, 2025	Leq	L90	Mar 03, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	49.8	46.3	09:40 PM - 09:45 PM	49.3	43.4	12:20 AM - 12:25 AM	46.6	44.5
07:05 PM - 07:10 PM	49.7	45.8	09:45 PM - 09:50 PM	50.3	44.5	12:25 AM - 12:30 AM	46.4	43.7
07:10 PM - 07:15 PM	50.6	46.6	09:50 PM - 09:55 PM	48.3	44.6	12:30 AM - 12:35 AM	47.1	43.6
07:15 PM - 07:20 PM	48.8	45.7	09:55 PM - 10:00 PM	47.1	43.9	12:35 AM - 12:40 AM	45.9	43.5
07:20 PM - 07:25 PM	50.7	46.5	10:00 PM - 10:05 PM	46.2	43.3	12:40 AM - 12:45 AM	45.1	41.9
07:25 PM - 07:30 PM	49.8	46.5	10:05 PM - 10:10 PM	51.8	45.4	12:45 AM - 12:50 AM	47.9	43.3
07:30 PM - 07:35 PM	50.4	45.5	10:10 PM - 10:15 PM	48.8	43.7	12:50 AM - 12:55 AM	48.7	42.5
07:35 PM - 07:40 PM	50.2	46.4	10:15 PM - 10:20 PM	46.5	43.0	12:55 AM - 01:00 AM	45.2	42.4
07:40 PM - 07:45 PM	50.3	44.9	10:20 PM - 10:25 PM	50.8	45.4	01:00 AM - 01:05 AM	46.8	42.3
07:45 PM - 07:50 PM	50.5	45.8	10:25 PM - 10:30 PM	51.2	44.7	01:05 AM - 01:10 AM	44.4	41.9
07:50 PM - 07:55 PM	50.1	45.7	10:30 PM - 10:35 PM	46.3	43.3	01:10 AM - 01:15 AM	47.4	41.6
07:55 PM - 08:00 PM	50.1	45.2	10:35 PM - 10:40 PM	47.0	43.6	01:15 AM - 01:20 AM	48.1	42.9
08:00 PM - 08:05 PM	48.6	45.6	10:40 PM - 10:45 PM	47.8	44.0	01:20 AM - 01:25 AM	44.5	41.7
08:05 PM - 08:10 PM	47.8	45.6	10:45 PM - 10:50 PM	46.8	44.3	01:25 AM - 01:30 AM	43.3	41.7
08:10 PM - 08:15 PM	49.7	45.1	10:50 PM - 10:55 PM	49.9	45.7	01:30 AM - 01:35 AM	44.5	41.8
08:15 PM - 08:20 PM	49.0	45.2	10:55 PM - 11:00 PM	48.6	44.1	01:35 AM - 01:40 AM	44.2	41.5
08:20 PM - 08:25 PM	49.6	45.4	11:00 PM - 11:05 PM	47.1	43.4	01:40 AM - 01:45 AM	44.4	42.0
08:25 PM - 08:30 PM	49.7	46.3	11:05 PM - 11:10 PM	47.8	44.2	01:45 AM - 01:50 AM	43.4	41.8
08:30 PM - 08:35 PM	48.8	45.8	11:10 PM - 11:15 PM	45.1	43.0	01:50 AM - 01:55 AM	43.3	41.5
08:35 PM - 08:40 PM	56.8	46.8	11:15 PM - 11:20 PM	46.7	43.9	01:55 AM - 02:00 AM	44.7	42.1
08:40 PM - 08:45 PM	53.6	45.0	11:20 PM - 11:25 PM	48.7	42.9	02:00 AM - 02:05 AM	43.5	42.1
08:45 PM - 08:50 PM	50.1	45.7	11:25 PM - 11:30 PM	46.2	42.9	02:05 AM - 02:10 AM	44.4	42.1
08:50 PM - 08:55 PM	48.6	44.6	11:30 PM - 11:35 PM	45.8	43.3	02:10 AM - 02:15 AM	46.0	41.6
08:55 PM - 09:00 PM	49.2	44.7	11:35 PM - 11:40 PM	45.8	43.5	02:15 AM - 02:20 AM	44.4	41.4
09:00 PM - 09:05 PM	49.2	45.5	11:40 PM - 11:45 PM	44.9	42.7	02:20 AM - 02:25 AM	44.7	41.9
09:05 PM - 09:10 PM	49.0	44.8	11:45 PM - 11:50 PM	47.8	44.0	02:25 AM - 02:30 AM	43.8	41.6
09:10 PM - 09:15 PM	48.9	45.2	11:50 PM - 11:55 PM	46.3	42.4	02:30 AM - 02:35 AM	42.7	41.3
09:15 PM - 09:20 PM	49.7	46.9	11:55 PM - 12:00 AM	47.7	43.0	02:35 AM - 02:40 AM	48.4	41.4
09:20 PM - 09:25 PM	49.1	45.7	12:00 AM - 12:05 AM	46.6	43.2	02:40 AM - 02:45 AM	48.7	41.5
09:25 PM - 09:30 PM	50.0	45.6	12:05 AM - 12:10 AM	47.8	44.6	02:45 AM - 02:50 AM	47.6	42.1
09:30 PM - 09:35 PM	50.9	45.6	12:10 AM - 12:15 AM	47.1	44.0	02:50 AM - 02:55 AM	43.8	42.1
09:35 PM - 09:40 PM	49.8	46.0	12:15 AM - 12:20 AM	47.1	43.9	02:55 AM - 03:00 AM	43.4	41.3

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received: Mar 04, 2025
Date Reported: Mar 08, 2025
Report Number: :3251108-1

P/O :

Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Sample Number 2517448-6
Parameter Noise Level (Leq 5 min)
Location หนองปลาหมอ-ถาวรประจักษ์ (GPS 47P 0735578, 1402792)
Measurement Date Mar 02 - Mar 03, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

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Mar 03, 2025	Leq	L90	Mar 03, 2025	Leq	L90	Mar 03, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
03:00 AM - 03:05 AM	44.0	41.5	05:40 AM - 05:45 AM	52.7	45.9	08:20 AM - 08:25 AM	48.0	44.5
03:05 AM - 03:10 AM	47.9	42.5	05:45 AM - 05:50 AM	53.3	48.2	08:25 AM - 08:30 AM	49.9	44.8
03:10 AM - 03:15 AM	45.1	41.5	05:50 AM - 05:55 AM	54.1	49.9	08:30 AM - 08:35 AM	48.0	43.7
03:15 AM - 03:20 AM	42.8	41.1	05:55 AM - 06:00 AM	52.1	48.7	08:35 AM - 08:40 AM	50.0	45.4
03:20 AM - 03:25 AM	45.1	41.7	06:00 AM - 06:05 AM	53.8	47.8	08:40 AM - 08:45 AM	49.5	45.2
03:25 AM - 03:30 AM	43.3	41.2	06:05 AM - 06:10 AM	52.0	48.2	08:45 AM - 08:50 AM	49.2	45.2
03:30 AM - 03:35 AM	43.6	41.4	06:10 AM - 06:15 AM	53.2	48.2	08:50 AM - 08:55 AM	50.4	45.4
03:35 AM - 03:40 AM	43.6	41.7	06:15 AM - 06:20 AM	54.4	47.8	08:55 AM - 09:00 AM	48.8	44.6
03:40 AM - 03:45 AM	45.6	42.6	06:20 AM - 06:25 AM	57.7	47.9	09:00 AM - 09:05 AM	53.9	44.5
03:45 AM - 03:50 AM	44.3	42.4	06:25 AM - 06:30 AM	56.1	48.0	09:05 AM - 09:10 AM	54.2	45.3
03:50 AM - 03:55 AM	49.9	42.2	06:30 AM - 06:35 AM	53.7	47.8	09:10 AM - 09:15 AM	51.3	44.5
03:55 AM - 04:00 AM	48.8	42.3	06:35 AM - 06:40 AM	52.7	47.8	09:15 AM - 09:20 AM	48.5	45.4
04:00 AM - 04:05 AM	45.0	42.4	06:40 AM - 06:45 AM	51.4	47.7	09:20 AM - 09:25 AM	51.1	44.6
04:05 AM - 04:10 AM	43.7	42.1	06:45 AM - 06:50 AM	51.8	47.1	09:25 AM - 09:30 AM	47.9	44.1
04:10 AM - 04:15 AM	44.5	42.0	06:50 AM - 06:55 AM	57.9	49.0	09:30 AM - 09:35 AM	49.1	44.2
04:15 AM - 04:20 AM	47.0	42.9	06:55 AM - 07:00 AM	53.3	48.7	09:35 AM - 09:40 AM	48.7	44.3
04:20 AM - 04:25 AM	49.4	43.3	07:00 AM - 07:05 AM	57.3	48.5	09:40 AM - 09:45 AM	49.2	44.6
04:25 AM - 04:30 AM	45.6	42.8	07:05 AM - 07:10 AM	54.5	48.5	09:45 AM - 09:50 AM	48.3	44.7
04:30 AM - 04:35 AM	47.1	44.0	07:10 AM - 07:15 AM	51.3	47.4	09:50 AM - 09:55 AM	47.8	44.4
04:35 AM - 04:40 AM	45.6	42.2	07:15 AM - 07:20 AM	51.0	47.3	09:55 AM - 10:00 AM	47.4	43.8
04:40 AM - 04:45 AM	45.6	42.3	07:20 AM - 07:25 AM	51.8	47.2	10:00 AM - 10:05 AM	54.5	44.7
04:45 AM - 04:50 AM	45.7	43.6	07:25 AM - 07:30 AM	50.7	47.4	10:05 AM - 10:10 AM	50.8	45.0
04:50 AM - 04:55 AM	51.5	43.7	07:30 AM - 07:35 AM	51.2	46.1	10:10 AM - 10:15 AM	50.5	45.5
04:55 AM - 05:00 AM	50.9	44.4	07:35 AM - 07:40 AM	59.5	47.0	10:15 AM - 10:20 AM	49.4	44.4
05:00 AM - 05:05 AM	51.0	44.5	07:40 AM - 07:45 AM	56.3	46.2	10:20 AM - 10:25 AM	52.1	46.3
05:05 AM - 05:10 AM	50.3	44.5	07:45 AM - 07:50 AM	50.5	45.3	10:25 AM - 10:30 AM	47.7	44.9
05:10 AM - 05:15 AM	49.1	44.6	07:50 AM - 07:55 AM	52.0	45.9	10:30 AM - 10:35 AM	49.0	45.6
05:15 AM - 05:20 AM	51.8	44.6	07:55 AM - 08:00 AM	51.8	45.5	10:35 AM - 10:40 AM	48.3	44.7
05:20 AM - 05:25 AM	50.4	43.9	08:00 AM - 08:05 AM	51.3	46.1	10:40 AM - 10:45 AM	50.2	45.8
05:25 AM - 05:30 AM	51.4	44.6	08:05 AM - 08:10 AM	53.6	46.3	10:45 AM - 10:50 AM	49.6	46.3
05:30 AM - 05:35 AM	50.9	44.6	08:10 AM - 08:15 AM	53.1	46.6	10:50 AM - 10:55 AM	54.0	47.7
05:35 AM - 05:40 AM	51.8	45.5	08:15 AM - 08:20 AM	48.1	44.8	10:55 AM - 11:00 AM	60.8	53.4

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Approved by

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Assistant General Manager

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251109-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 1 of 3

Sample Number 2517448-7
Parameter Noise Level (Leq 5 min)
Location กรุงเทพมหานคร-ด่านพระตู่ (GPS 47P 0735578, 1402792)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 03, 2025	Leq	L90	Mar 03, 2025	Leq	L90	Mar 03, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
11:00 AM - 11:05 AM	53.2	49.4	01:40 PM - 01:45 PM	49.0	44.3	04:20 PM - 04:25 PM	52.0	46.9
11:05 AM - 11:10 AM	49.4	45.0	01:45 PM - 01:50 PM	49.4	44.0	04:25 PM - 04:30 PM	54.7	46.9
11:10 AM - 11:15 AM	46.0	42.7	01:50 PM - 01:55 PM	50.4	44.9	04:30 PM - 04:35 PM	50.4	45.6
11:15 AM - 11:20 AM	47.7	43.3	01:55 PM - 02:00 PM	48.2	44.2	04:35 PM - 04:40 PM	50.3	46.1
11:20 AM - 11:25 AM	48.9	44.0	02:00 PM - 02:05 PM	47.9	44.7	04:40 PM - 04:45 PM	49.7	46.6
11:25 AM - 11:30 AM	48.4	44.0	02:05 PM - 02:10 PM	47.4	44.2	04:45 PM - 04:50 PM	51.1	47.6
11:30 AM - 11:35 AM	48.3	43.8	02:10 PM - 02:15 PM	49.3	43.8	04:50 PM - 04:55 PM	51.8	48.2
11:35 AM - 11:40 AM	47.0	43.1	02:15 PM - 02:20 PM	52.6	45.0	04:55 PM - 05:00 PM	49.9	47.1
11:40 AM - 11:45 AM	49.6	44.7	02:20 PM - 02:25 PM	48.8	44.2	05:00 PM - 05:05 PM	51.6	47.8
11:45 AM - 11:50 AM	49.0	43.8	02:25 PM - 02:30 PM	46.8	44.0	05:05 PM - 05:10 PM	53.8	46.9
11:50 AM - 11:55 AM	51.2	44.4	02:30 PM - 02:35 PM	49.2	44.4	05:10 PM - 05:15 PM	49.8	46.5
11:55 AM - 12:00 PM	46.5	42.5	02:35 PM - 02:40 PM	52.0	45.2	05:15 PM - 05:20 PM	54.4	45.5
12:00 PM - 12:05 PM	49.8	45.7	02:40 PM - 02:45 PM	49.0	43.2	05:20 PM - 05:25 PM	50.3	46.7
12:05 PM - 12:10 PM	49.3	46.5	02:45 PM - 02:50 PM	48.7	44.0	05:25 PM - 05:30 PM	49.6	45.8
12:10 PM - 12:15 PM	46.6	42.9	02:50 PM - 02:55 PM	48.0	44.3	05:30 PM - 05:35 PM	50.8	46.3
12:15 PM - 12:20 PM	48.6	42.3	02:55 PM - 03:00 PM	48.6	43.6	05:35 PM - 05:40 PM	48.9	46.2
12:20 PM - 12:25 PM	47.3	42.9	03:00 PM - 03:05 PM	48.1	44.4	05:40 PM - 05:45 PM	49.0	46.1
12:25 PM - 12:30 PM	46.4	43.1	03:05 PM - 03:10 PM	50.5	45.2	05:45 PM - 05:50 PM	49.8	46.5
12:30 PM - 12:35 PM	49.2	43.3	03:10 PM - 03:15 PM	50.3	45.5	05:50 PM - 05:55 PM	51.3	47.0
12:35 PM - 12:40 PM	51.6	43.7	03:15 PM - 03:20 PM	48.8	44.8	05:55 PM - 06:00 PM	51.5	47.0
12:40 PM - 12:45 PM	50.3	43.8	03:20 PM - 03:25 PM	48.1	44.6	06:00 PM - 06:05 PM	50.3	47.1
12:45 PM - 12:50 PM	48.4	43.6	03:25 PM - 03:30 PM	48.4	44.1	06:05 PM - 06:10 PM	49.4	47.0
12:50 PM - 12:55 PM	50.0	43.2	03:30 PM - 03:35 PM	48.2	44.4	06:10 PM - 06:15 PM	50.6	47.2
12:55 PM - 01:00 PM	50.5	44.6	03:35 PM - 03:40 PM	48.5	44.1	06:15 PM - 06:20 PM	53.5	50.5
01:00 PM - 01:05 PM	47.8	43.4	03:40 PM - 03:45 PM	51.1	45.0	06:20 PM - 06:25 PM	53.3	49.1
01:05 PM - 01:10 PM	50.2	44.1	03:45 PM - 03:50 PM	49.8	44.4	06:25 PM - 06:30 PM	49.8	46.0
01:10 PM - 01:15 PM	49.2	44.0	03:50 PM - 03:55 PM	54.6	45.6	06:30 PM - 06:35 PM	50.5	47.3
01:15 PM - 01:20 PM	48.3	43.5	03:55 PM - 04:00 PM	50.0	48.1	06:35 PM - 06:40 PM	49.9	46.2
01:20 PM - 01:25 PM	46.6	43.7	04:00 PM - 04:05 PM	51.2	48.1	06:40 PM - 06:45 PM	51.8	47.3
01:25 PM - 01:30 PM	46.7	43.4	04:05 PM - 04:10 PM	51.7	47.8	06:45 PM - 06:50 PM	51.2	46.1
01:30 PM - 01:35 PM	49.0	44.8	04:10 PM - 04:15 PM	53.2	49.2	06:50 PM - 06:55 PM	48.8	46.3
01:35 PM - 01:40 PM	48.0	44.2	04:15 PM - 04:20 PM	50.3	46.2	06:55 PM - 07:00 PM	50.2	45.7

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448

Date Received : Mar 04, 2025

Date Reported : Mar 08, 2025

Report Number : 3251109-1

P/O :

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Page 2 of 3

Sample Number 2517448-7
Parameter Noise Level (Leq 5 min)
Location กรุงเทพมหานคร-ด่านพระตู่ (GPS 47P 0735578, 1402792)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 03, 2025	Leq	L90	Mar 03 - Mar 04, 2025	Leq	L90	Mar 04, 2025	Leq	L90
Time	dB(A)	dB(A)	Time	dB(A)	dB(A)	Time	dB(A)	dB(A)
07:00 PM - 07:05 PM	49.4	46.4	09:40 PM - 09:45 PM	49.3	43.8	12:20 AM - 12:25 AM	46.8	42.3
07:05 PM - 07:10 PM	48.8	45.2	09:45 PM - 09:50 PM	47.8	43.9	12:25 AM - 12:30 AM	49.0	43.8
07:10 PM - 07:15 PM	48.7	45.3	09:50 PM - 09:55 PM	47.6	44.7	12:30 AM - 12:35 AM	48.2	43.8
07:15 PM - 07:20 PM	49.2	44.4	09:55 PM - 10:00 PM	48.8	45.1	12:35 AM - 12:40 AM	46.1	43.3
07:20 PM - 07:25 PM	51.8	45.6	10:00 PM - 10:05 PM	46.7	43.9	12:40 AM - 12:45 AM	46.5	43.5
07:25 PM - 07:30 PM	48.2	44.9	10:05 PM - 10:10 PM	47.2	44.3	12:45 AM - 12:50 AM	47.7	42.2
07:30 PM - 07:35 PM	49.3	45.3	10:10 PM - 10:15 PM	46.9	43.8	12:50 AM - 12:55 AM	46.0	41.4
07:35 PM - 07:40 PM	48.5	44.5	10:15 PM - 10:20 PM	50.4	44.0	12:55 AM - 01:00 AM	45.3	41.1
07:40 PM - 07:45 PM	48.2	44.0	10:20 PM - 10:25 PM	46.9	43.3	01:00 AM - 01:05 AM	44.6	41.1
07:45 PM - 07:50 PM	49.5	44.8	10:25 PM - 10:30 PM	47.0	43.1	01:05 AM - 01:10 AM	43.8	40.6
07:50 PM - 07:55 PM	48.7	44.3	10:30 PM - 10:35 PM	47.8	43.2	01:10 AM - 01:15 AM	43.5	40.7
07:55 PM - 08:00 PM	52.6	45.2	10:35 PM - 10:40 PM	50.1	43.0	01:15 AM - 01:20 AM	43.3	40.2
08:00 PM - 08:05 PM	49.1	46.0	10:40 PM - 10:45 PM	46.9	42.6	01:20 AM - 01:25 AM	43.3	40.5
08:05 PM - 08:10 PM	48.9	45.8	10:45 PM - 10:50 PM	48.6	42.5	01:25 AM - 01:30 AM	42.8	40.1
08:10 PM - 08:15 PM	49.8	46.1	10:50 PM - 10:55 PM	45.1	42.3	01:30 AM - 01:35 AM	45.7	40.4
08:15 PM - 08:20 PM	51.0	45.0	10:55 PM - 11:00 PM	45.4	42.4	01:35 AM - 01:40 AM	43.2	39.9
08:20 PM - 08:25 PM	47.8	45.2	11:00 PM - 11:05 PM	50.2	43.5	01:40 AM - 01:45 AM	44.0	41.0
08:25 PM - 08:30 PM	49.9	46.5	11:05 PM - 11:10 PM	45.5	42.6	01:45 AM - 01:50 AM	42.7	40.7
08:30 PM - 08:35 PM	47.8	44.2	11:10 PM - 11:15 PM	44.3	41.8	01:50 AM - 01:55 AM	42.8	40.4
08:35 PM - 08:40 PM	50.6	43.7	11:15 PM - 11:20 PM	45.8	42.3	01:55 AM - 02:00 AM	43.4	41.2
08:40 PM - 08:45 PM	48.3	44.4	11:20 PM - 11:25 PM	46.4	42.8	02:00 AM - 02:05 AM	46.0	40.7
08:45 PM - 08:50 PM	47.1	43.6	11:25 PM - 11:30 PM	44.1	41.6	02:05 AM - 02:10 AM	43.1	40.4
08:50 PM - 08:55 PM	48.7	43.5	11:30 PM - 11:35 PM	46.2	42.7	02:10 AM - 02:15 AM	44.0	40.2
08:55 PM - 09:00 PM	47.4	42.9	11:35 PM - 11:40 PM	45.7	42.1	02:15 AM - 02:20 AM	42.0	39.9
09:00 PM - 09:05 PM	51.1	43.6	11:40 PM - 11:45 PM	46.0	42.9	02:20 AM - 02:25 AM	43.4	40.4
09:05 PM - 09:10 PM	49.0	44.8	11:45 PM - 11:50 PM	48.9	44.3	02:25 AM - 02:30 AM	46.1	39.8
09:10 PM - 09:15 PM	49.2	44.7	11:50 PM - 11:55 PM	52.6	43.6	02:30 AM - 02:35 AM	47.8	39.9
09:15 PM - 09:20 PM	46.1	43.9	11:55 PM - 12:00 AM	47.6	44.5	02:35 AM - 02:40 AM	43.0	40.0
09:20 PM - 09:25 PM	49.8	44.9	12:00 AM - 12:05 AM	50.8	44.9	02:40 AM - 02:45 AM	46.3	39.2
09:25 PM - 09:30 PM	48.6	44.0	12:05 AM - 12:10 AM	47.3	42.4	02:45 AM - 02:50 AM	42.8	39.6
09:30 PM - 09:35 PM	48.3	43.2	12:10 AM - 12:15 AM	45.7	43.1	02:50 AM - 02:55 AM	41.4	39.4
09:35 PM - 09:40 PM	44.5	42.5	12:15 AM - 12:20 AM	45.1	43.1	02:55 AM - 03:00 AM	49.4	39.1

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

Lot ID: 2517448
Date Received : Mar 04, 2025
Date Reported : Mar 08, 2025
Report Number : 3251109-1

P/O :
Project Name : Environmental Quality Monitoring
Project Location : Map Ta Phut_PE (SPE)

Page 3 of 3

Sample Number 2517448-7
Parameter Noise Level (Leq 5 min)
Location อุโมงค์อุตสาหกรรม-ถ้ำน้ำร้อน (GPS 47P 0735578, 1402792)
Measurement Date Mar 03 - Mar 04, 2025
Measurement by Satcha Phetsawaeng
Sound Level meter Serial No. 00900074

Mar 04, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 04, 2025 Time	Leq dB(A)	L90 dB(A)	Mar 04, 2025 Time	Leq dB(A)	L90 dB(A)
03:00 AM - 03:05 AM	42.6	39.6	05:40 AM - 05:45 AM	50.8	45.1	08:20 AM - 08:25 AM	47.6	44.1
03:05 AM - 03:10 AM	42.3	38.9	05:45 AM - 05:50 AM	53.9	49.7	08:25 AM - 08:30 AM	53.1	42.9
03:10 AM - 03:15 AM	51.9	39.8	05:50 AM - 05:55 AM	54.2	51.3	08:30 AM - 08:35 AM	48.2	43.8
03:15 AM - 03:20 AM	46.7	40.5	05:55 AM - 06:00 AM	53.3	48.2	08:35 AM - 08:40 AM	49.0	44.2
03:20 AM - 03:25 AM	42.7	39.1	06:00 AM - 06:05 AM	52.6	47.2	08:40 AM - 08:45 AM	50.5	44.5
03:25 AM - 03:30 AM	42.5	39.8	06:05 AM - 06:10 AM	53.9	47.8	08:45 AM - 08:50 AM	48.6	44.6
03:30 AM - 03:35 AM	45.9	40.3	06:10 AM - 06:15 AM	55.6	47.6	08:50 AM - 08:55 AM	48.7	43.5
03:35 AM - 03:40 AM	49.4	40.1	06:15 AM - 06:20 AM	53.6	47.4	08:55 AM - 09:00 AM	46.4	43.5
03:40 AM - 03:45 AM	44.2	40.8	06:20 AM - 06:25 AM	52.6	47.9	09:00 AM - 09:05 AM	48.4	44.0
03:45 AM - 03:50 AM	41.9	39.6	06:25 AM - 06:30 AM	53.8	46.9	09:05 AM - 09:10 AM	49.1	43.6
03:50 AM - 03:55 AM	43.9	40.3	06:30 AM - 06:35 AM	51.6	47.5	09:10 AM - 09:15 AM	46.5	42.5
03:55 AM - 04:00 AM	42.6	39.9	06:35 AM - 06:40 AM	54.0	47.8	09:15 AM - 09:20 AM	51.7	45.0
04:00 AM - 04:05 AM	42.9	40.5	06:40 AM - 06:45 AM	56.2	48.2	09:20 AM - 09:25 AM	49.9	43.4
04:05 AM - 04:10 AM	41.6	39.1	06:45 AM - 06:50 AM	51.7	46.4	09:25 AM - 09:30 AM	46.6	42.9
04:10 AM - 04:15 AM	50.6	42.1	06:50 AM - 06:55 AM	52.9	47.7	09:30 AM - 09:35 AM	50.7	43.6
04:15 AM - 04:20 AM	47.5	41.0	06:55 AM - 07:00 AM	51.5	47.8	09:35 AM - 09:40 AM	49.8	42.4
04:20 AM - 04:25 AM	44.4	41.6	07:00 AM - 07:05 AM	51.8	47.5	09:40 AM - 09:45 AM	52.2	43.4
04:25 AM - 04:30 AM	47.5	42.2	07:05 AM - 07:10 AM	51.9	47.5	09:45 AM - 09:50 AM	48.4	42.9
04:30 AM - 04:35 AM	45.3	42.5	07:10 AM - 07:15 AM	51.3	46.6	09:50 AM - 09:55 AM	47.8	42.1
04:35 AM - 04:40 AM	50.5	42.7	07:15 AM - 07:20 AM	51.5	47.2	09:55 AM - 10:00 AM	47.5	41.6
04:40 AM - 04:45 AM	48.0	42.9	07:20 AM - 07:25 AM	53.3	47.3	10:00 AM - 10:05 AM	47.9	42.2
04:45 AM - 04:50 AM	49.5	42.7	07:25 AM - 07:30 AM	53.1	48.0	10:05 AM - 10:10 AM	47.1	43.3
04:50 AM - 04:55 AM	47.2	42.8	07:30 AM - 07:35 AM	50.5	46.4	10:10 AM - 10:15 AM	49.1	43.5
04:55 AM - 05:00 AM	50.3	43.3	07:35 AM - 07:40 AM	56.7	46.4	10:15 AM - 10:20 AM	48.5	41.8
05:00 AM - 05:05 AM	49.5	43.1	07:40 AM - 07:45 AM	53.0	44.5	10:20 AM - 10:25 AM	48.3	42.8
05:05 AM - 05:10 AM	50.1	43.2	07:45 AM - 07:50 AM	51.6	45.6	10:25 AM - 10:30 AM	47.4	43.2
05:10 AM - 05:15 AM	48.7	42.5	07:50 AM - 07:55 AM	49.8	44.4	10:30 AM - 10:35 AM	47.0	43.2
05:15 AM - 05:20 AM	50.9	43.6	07:55 AM - 08:00 AM	50.7	45.7	10:35 AM - 10:40 AM	47.9	44.2
05:20 AM - 05:25 AM	50.5	43.5	08:00 AM - 08:05 AM	48.5	44.6	10:40 AM - 10:45 AM	51.1	46.4
05:25 AM - 05:30 AM	49.6	43.9	08:05 AM - 08:10 AM	53.6	46.6	10:45 AM - 10:50 AM	52.6	44.4
05:30 AM - 05:35 AM	50.2	43.9	08:10 AM - 08:15 AM	50.4	45.5	10:50 AM - 10:55 AM	52.9	44.3
05:35 AM - 05:40 AM	50.4	44.7	08:15 AM - 08:20 AM	48.7	44.5	10:55 AM - 11:00 AM	52.7	42.9

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ภาคผนวก ค-6

ระดับเสียงในสถานประกอบการ



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517421

Date Received : Feb 26, 2025

Date Reported : Mar 03, 2025

Report Number: 3247669-1

Page 1 of 1

Sample Number 2517421-1
Parameter Noise (Leq 8 hrs.)
Location Solvent Recovery Unit 1
Measurement Date Feb 26, 2025
Measurement by Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:52 AM - 01:52 AM	89.9	93.2	87.9
01:52 AM - 02:52 AM	89.3	91.9	88.0
02:52 AM - 03:52 AM	89.7	92.3	88.5
03:52 AM - 04:52 AM	89.1	91.6	88.0
04:52 AM - 05:52 AM	88.5	91.5	87.0
05:52 AM - 06:52 AM	87.4	91.0	85.4
06:52 AM - 07:52 AM	87.6	90.5	86.1
07:52 AM - 08:52 AM	87.2	92.3	85.1

Leq Average 8 hrs. (dB(A))

88.7

Lmax (dB(A))

93.2

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย

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Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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S:\Reports_Air Noise.rpt (4:44PM)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517421

Date Received : Feb 26, 2025

Date Reported : Mar 03, 2025

Report Number: 3247671-1

Page 1 of 1

Sample Number 2517421-2
Parameter Noise (Leq 8 hrs.)
Location Solvent Recovery Unit 2
Measurement Date Feb 26, 2025
Measurement by Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:55 AM - 01:55 AM	85.5	87.6	85.1
01:55 AM - 02:55 AM	87.0	89.4	86.1
02:55 AM - 03:55 AM	87.3	89.5	86.7
03:55 AM - 04:55 AM	87.4	89.2	86.9
04:55 AM - 05:55 AM	87.1	89.0	86.7
05:55 AM - 06:55 AM	87.0	88.9	86.2
06:55 AM - 07:55 AM	87.2	88.9	86.8
07:55 AM - 08:55 AM	87.2	93.8	86.8

Leq Average 8 hrs. (dB(A))

87.0

Lmax (dB(A))

93.8

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย

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Technical Management

Chontichak

Chonticha Subongkoch
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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540926

Date Received : May 29, 2025

Date Reported : Jun 05, 2025

Report Number: 3324655-1

Page 1 of 1

Sample Number 2540926-1
Parameter Noise (Leq 8 hrs.)
Location Solvent Recovery Unit 1
Measurement Date May 29, 2025
Measurement by Apichart Wilars

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:39 AM - 09:39 AM	88.2	92.2	86.9
09:39 AM - 10:39 AM	87.5	91.6	85.7
10:39 AM - 11:39 AM	85.0	89.8	83.7
11:39 AM - 12:39 PM	88.1	92.2	84.7
12:39 PM - 01:39 PM	87.7	99.6	83.7
01:39 PM - 02:39 PM	84.5	98.8	83.2
02:39 PM - 03:39 PM	85.8	92.0	83.7
03:39 PM - 04:39 PM	87.5	91.6	84.9

Leq Average 8 hrs. (dB(A))

87.0

Lmax (dB(A))

99.6

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย

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Technical Management

Chontichak

Chonticha Subongkoch
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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540926

Date Received : May 29, 2025

Date Reported : Jun 05, 2025

Report Number: 3324656-1

Page 1 of 1

Sample Number 2540926-2
Parameter Noise (Leq 8 hrs.)
Location Solvent Recovery Unit 2
Measurement Date May 29, 2025
Measurement by Apichart Wilars

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:47 AM - 09:47 AM	84.2	87.6	83.9
09:47 AM - 10:47 AM	83.7	87.2	83.3
10:47 AM - 11:47 AM	83.9	85.6	83.5
11:47 AM - 12:47 PM	83.7	85.9	83.3
12:47 PM - 01:47 PM	84.4	100.4	83.2
01:47 PM - 02:47 PM	84.3	98.5	83.3
02:47 PM - 03:47 PM	83.8	88.4	83.5
03:47 PM - 04:47 PM	83.9	86.3	83.0

Leq Average 8 hrs. (dB(A))

84.0

Lmax (dB(A))

100.4

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย

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Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

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ภาคผนวก ค-7

ระดับเสียงแยกความถี่ (Octave Bands)



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517424

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3248625-1

Page 1 of 1

Sample Number 2517424-1
Parameter Octave band
Location Solvent Recovery Unit 1
Measurement Date Feb 26, 2025
Measurement By Satcha Phetsawaeng

Time	Result (dB(A))											
	Leq	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
12:52 AM - 01:52 AM	89.9	22.4	47.1	54.2	66.7	68.7	89.0	78.2	79.0	71.9	63.3	55.5
01:52 AM - 02:52 AM	89.3	22.6	47.1	54.2	66.5	68.7	88.2	78.3	79.4	71.9	63.3	55.3
02:52 AM - 03:52 AM	89.7	22.7	47.0	54.3	66.6	68.6	88.7	78.5	79.4	71.9	63.3	55.1
03:52 AM - 04:52 AM	89.1	22.7	47.1	54.4	66.6	68.6	88.0	78.9	79.0	71.9	63.3	55.1
04:52 AM - 05:52 AM	88.5	22.7	46.9	54.3	66.6	68.6	87.0	79.3	79.2	73.4	63.6	55.3
05:52 AM - 06:52 AM	87.4	22.4	46.9	54.3	66.5	68.7	85.6	79.2	79.0	72.0	63.4	55.1
06:52 AM - 07:52 AM	87.6	22.4	46.7	54.3	66.5	68.7	85.9	79.0	78.8	71.9	63.4	55.0
07:52 AM - 08:52 AM	87.2	22.1	46.1	54.9	65.2	68.9	84.7	78.3	81.4	71.7	63.6	55.1
Average	88.7	22.5	46.9	54.4	66.4	68.7	87.4	78.7	79.5	72.1	63.4	55.2

Reference Method : ANSI Standard S1.6-1984

Technical Management

Orawan R.
Orawan Rakyong
Scientist (3)

Approved by

Supot S.
Supot Salamteh
Section Head

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2517424

Date Received : Feb 26, 2025

Date Reported : Mar 04, 2025

Report Number : 3248626-1

Page 1 of 1

Sample Number 2517424-2
Parameter Octave band
Location Solvent Recovery Unit 2
Measurement Date Feb 26, 2025
Measurement By Satcha Phetsawaeng

Time	Result (dB(A))											
	Leq	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
12:55 AM - 01:55 AM	85.5	26.2	43.2	53.0	63.3	68.6	81.5	78.5	80.1	74.8	66.0	51.3
01:55 AM - 02:55 AM	87.0	27.0	43.2	53.0	63.3	68.7	84.7	78.3	79.8	75.2	66.2	51.6
02:55 AM - 03:55 AM	87.3	27.2	43.2	53.0	63.3	68.8	85.0	78.4	79.9	75.5	66.1	51.5
03:55 AM - 04:55 AM	87.4	27.2	43.2	52.9	63.2	68.9	84.9	78.5	80.4	76.0	66.0	51.4
04:55 AM - 05:55 AM	87.1	26.7	43.2	53.0	63.3	69.0	84.4	78.6	80.6	76.1	66.3	51.5
05:55 AM - 06:55 AM	87.0	26.0	43.3	53.0	63.3	68.9	84.2	78.7	80.5	76.0	66.1	51.3
06:55 AM - 07:55 AM	87.2	26.2	43.2	53.0	63.2	69.0	84.3	78.7	80.9	76.4	66.0	51.3
07:55 AM - 08:55 AM	87.2	26.6	43.2	52.9	63.2	69.0	84.4	78.9	80.9	76.4	65.9	51.3
Average	87.0	26.7	43.2	53.0	63.3	68.9	84.3	78.6	80.4	75.8	66.1	51.4

Reference Method : ANSI Standard S1.6-1984

Technical Management

Orawan R.
Orawan Rakyong
Scientist (3)

Approved by

Supot S.
Supot Salamteh
Section Head

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540927

Date Received : May 30, 2025

Date Reported : Jun 07, 2025

Report Number : 3327249-1

Page 1 of 1

Sample Number 2540927-1
Parameter Noise (Octave band)
Location Solvent Recovery Unit 1
Measurement Date May 29, 2025
Measurement By Apichart Wilars

Time	Result (dB(A))											
	Leq	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
08:39 AM - 09:39 AM	88.2	22.2	46.2	54.2	64.2	69.2	86.4	80.4	79.2	70.7	60.3	49.9
09:39 AM - 10:39 AM	87.5	21.9	46.0	54.0	64.3	69.0	85.9	79.7	77.4	70.9	60.6	49.9
10:39 AM - 11:39 AM	85.0	22.1	45.9	54.0	64.2	68.9	82.2	78.9	77.2	70.8	60.6	49.7
11:39 AM - 12:39 PM	88.1	21.7	45.7	53.7	64.1	68.9	87.1	78.2	77.0	70.7	60.4	49.5
12:39 PM - 01:39 PM	87.7	22.1	45.8	53.7	64.2	68.9	86.1	80.1	78.0	71.3	60.5	49.5
01:39 PM - 02:39 PM	84.5	22.2	46.0	53.8	64.2	68.9	80.1	79.9	77.6	71.2	60.4	49.6
02:39 PM - 03:39 PM	85.8	22.3	46.0	54.0	64.6	68.8	83.3	79.1	77.9	70.7	59.9	49.5
03:39 PM - 04:39 PM	87.5	22.4	46.2	54.2	65.0	68.6	86.0	79.0	78.1	70.6	59.6	49.4
Average	87.0	22.1	46.0	54.0	64.4	68.9	85.2	79.5	77.9	70.9	60.3	49.6

Reference Method : ANSI Standard S1.6-1984

Technical Management

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O : 4516885247

Project Name : Environmental Quality Monitoring

Project Location : Map Ta Phut_PE (SPE)

Lot ID: 2540927

Date Received : May 30, 2025

Date Reported : Jun 07, 2025

Report Number : 3327250-1

Page 1 of 1

Sample Number 2540927-2
Parameter Noise (Octave band)
Location Solvent Recovery Unit 2
Measurement Date May 29, 2025
Measurement By Apichart Wilars

Time	Result (dB(A))											
	Leq	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
08:47 AM - 09:47 AM	84.2	27.4	45.6	53.8	64.5	70.1	76.9	79.3	79.9	72.8	61.8	46.6
09:47 AM - 10:47 AM	83.7	27.2	45.4	53.7	64.3	70.0	76.5	78.5	79.3	72.9	62.0	46.7
10:47 AM - 11:47 AM	83.9	26.0	45.3	53.5	64.2	69.8	76.6	78.4	79.8	73.1	62.0	47.0
11:47 AM - 12:47 PM	83.7	26.1	45.3	53.3	63.8	69.8	76.4	77.9	79.9	73.2	62.1	46.7
12:47 PM - 01:47 PM	84.4	27.1	45.2	53.3	63.9	69.9	76.7	79.4	80.4	73.4	62.4	46.9
01:47 PM - 02:47 PM	84.3	27.4	45.3	53.5	64.3	70.0	76.7	79.1	80.1	73.3	62.3	47.1
02:47 PM - 03:47 PM	83.8	28.0	45.3	53.6	64.3	70.2	76.5	78.6	79.6	72.9	62.1	47.2
03:47 PM - 04:47 PM	83.9	26.7	44.3	50.9	62.3	68.8	80.7	77.3	76.8	71.6	65.6	49.4
Average	84.0	27.0	45.2	53.3	64.0	69.8	77.4	78.6	79.6	72.9	62.7	47.3

Reference Method : ANSI Standard S1.6-1984

Technical Management

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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ภาคผนวก ค-8

ระดับเสียงสะสมที่ตัวบุคคล (Noise Dose)

แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงาน
เกี่ยวกับความเสี่ยง แสงสว่าง และเสียงภายในสถานประกอบการ
ตามข้อ ๑๕ แห่งกฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย
อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความเสี่ยง แสงสว่าง และเสียง พ.ศ. ๒๕๕๙

๑. ชื่อบุคคล (ขอสงวนสิทธิ์) คุณณัฏฐ์ ฉายินธร นายจ้าง/ผู้ใช้งานจากสถาน
๒. ชื่อสถานประกอบการ บริษัท สยามโพลีเอทิลีน จำกัด
เลขทะเบียนนิติบุคคล 0105538145319
ประเภทกิจการ ผลิตพลาสติกโพลีเอทิลีน
ที่อยู่เลขที่ 8/1 หมู่ ๖ ตำบล หนอง - ถนน โพธิ์ โคกสูง ตำบลหนอง
ตำบล หนอง อำเภอหนอง จังหวัด ระยอง รหัสไปรษณีย์ 21150
โทรศัพท์ 0-3867-3000 โทรสาร 0-3868-3091 โทรสารมือถือ -

๓. การดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงาน
☒ บุคคลที่ประเมินความเสี่ยงและวิเคราะห์สภาวะการทำงานเกี่ยวกับความเสี่ยง หรือบุคคลผู้ดำเนินการศึกษา
ไม่ทำการศึกษาวิเคราะห์ความเสี่ยงและวิเคราะห์สภาวะการทำงานเกี่ยวกับความเสี่ยงและวิเคราะห์สภาวะการทำงาน
หรือสถานประกอบการ เป็นผู้ดำเนินการเอง (แนบสำเนาเอกสารวิเคราะห์ความเสี่ยง และสำเนากฎหมาย
พริบหรือความถูกต้อง)

ชื่อ-นามสกุลผู้ดำเนินการ	ประเภท	เลขทะเบียน
๑) นายณัฏฐ์ ฉายินธร	เจ้าหน้าที่ความปลอดภัยในการทำงาน ระดับวิชาชีพ	05-221-2966-00506

รายการผลการตรวจวัดและวิเคราะห์สภาวะการทำงาน
☐ แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับความเสี่ยง (แบบ รศส. ๑)
☐ แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับแสงสว่าง (แบบ รศส. ๒)
☒ แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับเสียง (แบบ รศส. ๓)
☐ บุคคลที่ได้รับใบรับประเมินความเสี่ยง หรือบุคคลที่ได้รับใบอนุญาตตามกฎหมาย ๑๑
แต่ตรวจพบปัญหาความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๙
(แนบสำเนากฎหมายที่รับประเมินความเสี่ยงตามกฎหมาย ๑ หรือมาตรา ๑๑ พร้อมใบรับความเสี่ยง)

ชื่อ-นามสกุล บุคคลหรือนิติบุคคลผู้ดำเนินการ ตรวจวัดและวิเคราะห์สภาวะการทำงาน	เลขที่ใบรับประเมินความเสี่ยงหรือใบอนุญาต	ระยะเวลาที่ได้รับ การประเมินและใบรับอนุญาต ตั้งแต่ต้นเดือนปี ถึง ต้นเดือนปี
๑)		

หมายเหตุ: สามารถเพิ่มบุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเป็นลำดับในตาราง
รายการผลการตรวจวัดและวิเคราะห์สภาวะการทำงาน
☐ แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับความเสี่ยง (แบบ รศส. ๑)
☐ แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับแสงสว่าง (แบบ รศส. ๒)
☐ แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับเสียง (แบบ รศส. ๓)

ลงชื่อ ณัฏฐ์ ฉายินธร (นางสาว) ณัฏฐ์ ฉายินธร
บุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงาน
ลงชื่อ Darnluck C. (นาย) Darnluck C.
นายจ้าง/ผู้ใช้งานจากสถาน

General Business

แบบ รศส.๓

แบบรายงานผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับเสียง

๑. วัน เดือน ปี ที่ตรวจวัด 4 - 17 มีนาคม 2568
๒. เครื่องมือที่ใช้ในการตรวจวัด (กรณีที่ใช้เครื่องตรวจวัดมากกว่า ๑ เครื่อง ให้เพิ่มข้อมูลเป็นลำดับในตาราง)

ชนิดอุปกรณ์เครื่องตรวจวัด ระดับความดันเสียง (SLM/Noise Dosimeter)	ยี่ห้อ/รุ่น	หมายเลขเครื่อง (Serial Number)	มาตรฐานเครื่อง	วันเดือนปี (ปรับเทียบความถูกต้อง)	หมายเหตุ
a) Noise Dose Meter	QUEST / NP-DL	NLC100006	IEC 651 - 1979	21 มิถุนายน 2567	

๓. อุปกรณ์รับฟังความถูกต้องของเครื่องมือตรวจวัดระดับความดันเสียง

อุปกรณ์รับฟังความถูกต้อง	ยี่ห้อ/รุ่น	หมายเลขเครื่อง (Serial Number)	มาตรฐานเครื่อง	หมายเหตุ
a) Sound calibrator	QUEST/OC-10	QIC100060	ANSI S1.40-1994 and IEC 942:1988 Class 1	

๔. ผลการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับเสียงด้วยเครื่องตรวจวัดระดับความดันเสียง Sound Level Meter (SLM)

ลำดับ หรือ SEG*	บริเวณที่ทำการตรวจวัด*	ชื่อ-นามสกุลของผู้ออกจ้าง ในคณะ SEG	ระยะเวลาปฏิบัติงาน ของพนักงาน (ชั่วโมง/นาที)	พื้นที่ทำงาน*	ผลการตรวจวัดระดับความดันเสียง		ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง* (dBA)	ผลการประเมิน ๕ ระดับความเสี่ยง (ไม่เกินเกณฑ์)	ข้อเสนอแนะ และวิธีการปรับปรุงแก้ไข*
					ความดันเสียง (dBA)	ระยะเวลาการตรวจวัด (ชั่วโมง/นาที)			
-	-	-	-	-	-	-	-	-	-

- หมายเหตุ
- SEG หรือ Similar Exposure Group หมายถึง กลุ่มผู้ปฏิบัติงานซึ่งสัมผัสสภาวะการทำงานเกี่ยวกับระดับความดันเสียงเหมือนกัน คือ ลักษณะงานที่ทำ พื้นที่การทำงานเกี่ยวกับปัจจัยเสี่ยงเหมือนกัน
 - บริเวณที่ทำการตรวจวัด ให้จัดทำแผนที่พื้นที่ที่ดำเนินการตรวจวัดระดับความดันเสียงเป็นเอกสารแนบ
 - กรณีพนักงานสัมผัสเสียงดังในบริเวณตรวจวัดหลายจุดทำงาน (หลายสถานีงาน/พื้นที่ทำงาน) สามารถเพิ่มแผนที่พื้นที่ทำงานในตารางได้
 - ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง (dBA) ที่ผู้ปฏิบัติงานสัมผัสเกินกว่าค่าความดันเสียงที่สัมผัสในขณะสัมผัสได้ถูกประเมินโดยหน่วยงานความปลอดภัยส่วนบุคคล
 - ผลการประเมินใช้เกณฑ์มาตรฐานความปลอดภัยตามประกาศกระทรวงมหาดไทย เรื่อง มาตรฐานระดับเสียงที่ยอมรับได้ถูกจ้างได้รับหรือติดต่อขอระยะเวลาการทำงานในแต่ละวัน ลงวันที่ ๑๓ ธันวาคม พ.ศ. ๒๕๖๐ ข้อ ๓
 - กรณีผลการประเมินเกินค่ามาตรฐานให้ระบุข้อเสนอแนะและวิธีการปรับปรุงแก้ไข โดยสามารถจัดทำเป็นเอกสารแนบได้

ลงชื่อ ณัฏฐ์ ฉายินธร
(นางสาว) ณัฏฐ์ ฉายินธร
บุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงาน

ลงชื่อ Darnluck C.
(นาย) Darnluck C.
นายจ้าง/ผู้ใช้งานจากสถาน

General Business

๕ ผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับเสียงต่อเครื่องตรวจวัดระดับความดังเสียง (Noise Dosimeter)

ลำดับ ของ SEG	บริเวณที่ทำการตรวจวัด	ชื่อ-นามสกุลของลูกจ้าง ในภาค SEG	ระยะเวลาการปฏิบัติงาน ของพนักงาน (ชั่วโมง/นาฬิกา)	ผลการตรวจวัดระดับความดังเสียง		ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง (dBA)	ผลการประเมิน (ระบุว่าเป็นเกณฑ์/ ไม่เป็นเกณฑ์)	ข้อเสนอแนะ และวิธีการปรับปรุงแก้ไข
				ระยะเวลาการตรวจวัด (ชั่วโมง/นาฬิกา)	ปริมาณเสียงสะสม (D) เปอร์เซ็นต์ (%)			
๑	PE Operator-General 12 hour exposure at Train 1	นายอดิศักดิ์ อดิศักดิ์	720 นาที	654 นาที	36.2	80.8	ไม่เป็นเกณฑ์	
๒	PE Operator-General 12 hour exposure at Train 2		720 นาที	629 นาที	45.3	81.8	ไม่เป็นเกณฑ์	

- หมายเหตุ ๑) SEG หรือ Similar Exposure Group หมายถึง กลุ่มปฏิบัติงานซึ่งมีผลสภาวะการทำงานเกี่ยวกับระดับความดังเสียงเหมือนกัน คือ ลักษณะงานที่ทำ พื้นที่การทำงานเกี่ยวกับปัจจัยเสียงเหมือนกัน
- ๒) ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง (dBA) ที่ผู้ปฏิบัติงานสัมผัสก่อนการคำนวณระดับเสียงที่สัมผัสในขณะปฏิบัติงานโดยเครื่องวัดระดับความดังเสียง
- ๓) ผลการประเมินใช้เกณฑ์มาตรฐานความปลอดภัยตามประกาศกระทรวงมหาดไทย เรื่อง มาตรฐานระดับเสียงที่ยอมรับได้ของเครื่องวัดระดับความดังเสียง พ.ศ. ๒๕๖๐ ข้อ ๑ ทำงานในแต่ละวัน
- ๔) กรณีผลการประเมินเกินเกณฑ์มาตรฐานให้ระบุข้อเสนอแนะและวิธีการปรับปรุงแก้ไข โดยสามารถจัดทำเป็นเอกสารแนบได้

ลงชื่อ



(นางสาวปัทนิ จุฑาบุต)

บุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

ลงชื่อ



(นางสาวสุรณิการ์ณ ฌาณินทร)

นายจ้าง/ผู้รับจ้าง/กรรมการแทน

General Business

แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน
เกี่ยวกับความดังเสียง แสงสว่าง และเสียงภายในสถานประกอบการ
ตามข้อ ๕๕ แห่งกฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย
อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความดังเสียง แสงสว่าง และเสียง พ.ศ. ๒๕๕๙

๑. ชื่อบุคคล (นาย/นาง/นางสาว) คุณณิชาณัน ฌาณินทร นายจ้าง/ผู้รับจ้าง/กรรมการแทน
๒. ชื่อสถานประกอบการ บริษัท สยามฟู้ดส์ จำกัด
- เลขทะเบียนนิติบุคคล 0105538145319
- ประเภทกิจการ ผลิตอาหารสัตว์ฟู้ดส์
- ที่อยู่เลขที่ 8/1 หมู่ที่ ๑ ต. ทรายทอง อ. ทรายทอง จ. นนทบุรี
- ตำบล ทรายทอง อำเภอ ทรายทอง จังหวัด นนทบุรี รหัสไปรษณีย์ 11150
- โทรศัพท์ 0-3867-3000 โทรสาร 0-3868-3091 โทรสารมือถือ -

๓. การดำเนินการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

- ☒ บุคคลที่ขึ้นทะเบียนแจ้งความประสงค์ในกระทรวงมหาดไทยหรือบุคคลผู้สำเร็จการศึกษา
ไม่ต่ำกว่าปริญญาตรี สาขาวิชาอาชีวอนามัยหรือสาขาที่เกี่ยวข้องเป็นเจ้าพนักงานความปลอดภัยในการทำงาน
ของสถานประกอบการ เป็นผู้ดำเนินการ (แนบสำเนาเอกสารที่ขึ้นทะเบียน และสำเนาวุฒิการศึกษา
พร้อมรับรองความถูกต้อง)

ชื่อ-นามสกุลผู้ดำเนินการ ตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน	ประเภท ของเจ้าหน้าที่ความปลอดภัยในการทำงาน	เลขทะเบียน เจ้าหน้าที่ความปลอดภัยในการทำงาน
๑) นางสาวปัทนิ จุฑาบุต	เจ้าหน้าที่ความปลอดภัย ระดับวิชาชีพ	05-221-2566-000506

รายการผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

- ☐ แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับความดังเสียง (แบบ รสศ. ๑)
- ☐ แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับแสงสว่าง (แบบ รสศ. ๒)
- ☒ แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับเสียง (แบบ รสศ. ๓)

- ☐ บุคคลที่ได้รับขึ้นทะเบียนตามมาตรา ๕ หรือนิติบุคคลที่ได้รับใบอนุญาตตามมาตรา ๕๐
กระทรวงมหาดไทยมีความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๙
(แนบสำเนาเอกสารที่ขึ้นทะเบียนในใบอนุญาตตามมาตรา ๕ หรือมาตรา ๕๐ พร้อมรับรองความถูกต้อง)

ชื่อ-นามสกุล บุคคลหรือนิติบุคคลผู้ดำเนินการ ตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน	เลขที่ขึ้นทะเบียนเลขที่ใบอนุญาต	ระยะเวลาที่ได้รับ การขึ้นทะเบียนและได้รับใบอนุญาต ตั้งแต่บัดนี้ ถึง วันที่
๑)		

หมายเหตุ: สามารถเพิ่มบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเป็นลำดับในตาราง

รายการผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

- ☐ แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับความดังเสียง (แบบ รสศ. ๑)
- ☐ แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับแสงสว่าง (แบบ รสศ. ๒)
- ☐ แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับเสียง (แบบ รสศ. ๓)

ลงชื่อ



(นางสาวปัทนิ จุฑาบุต)

บุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

ลงชื่อ



(นางสาวสุรณิการ์ณ ฌาณินทร)

นายจ้าง/ผู้รับจ้าง/กรรมการแทน

General Business

แบบรายงานผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับเสียง

๑ วัน เดือน ปี ที่ตรวจวัด 16 และ 21 มิถุนายน 2568

๒ เครื่องมือที่ใช้ในการตรวจวัด (กรณีที่ใช้เครื่องตรวจวัดมากกว่า ๑ เครื่อง ให้เพิ่มข้อมูลเป็นลำดับในตาราง)

ชนิด/ประเภทเครื่องตรวจวัด ระดับความดังเสียง (SLM/Noise Dosimeter)	ยี่ห้อ/รุ่น	หมายเลขเครื่อง (Serial Number)	มาตรฐานเครื่อง	วัน/เดือน/ปี (ปรับเทียบความดังเสียง)	หมายเหตุ
a) Noise Dose Meter	QUEST / NP-DL	NLC100006	IEC 651 - 1979	9 มิถุนายน 2568	

๓ อุปกรณ์ที่ใช้ในการปรับเทียบความดังเสียงของเครื่องมือตรวจวัดระดับความดังเสียง

อุปกรณ์ปรับเทียบความดังเสียง	ยี่ห้อ/รุ่น	หมายเลขเครื่อง (Serial Number)	มาตรฐานเครื่อง	หมายเหตุ
a) Sound calibrator	QUEST/OC-10	QIC100060	ANSI S1.40-1984 and IEC 942:1988 Class 1	

๔ ผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับเสียงด้วยเครื่องตรวจวัดระดับความดังเสียง Sound Level Meter (SLM)

ลำดับ หรือ SEG*	บริเวณที่ทำการตรวจวัด*	ชื่อ-นามสกุลของลูกจ้าง ในเขต SEG	ระยะเวลาการปฏิบัติงาน จริงพนักงาน (ชั่วโมง/นาที)	พื้นที่ทำงาน*	ผลการตรวจวัดระดับความดังเสียง		ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง* (dB(A))	ผลการประเมิน ๘ (ระบุว่าเป็นเกณฑ์ ไม่เกินเกณฑ์)	ข้อเสนอแนะ และวิธีการปรับปรุงแก้ไข*
					ความดังเสียง (dB(A))	ระยะเวลาการตรวจวัด (ชั่วโมง/นาที)			
-	-	-	-	-	-	-	-	-	-

หมายเหตุ ๑) SEG หรือ Similar Exposure Group หมายถึง กลุ่มผู้ปฏิบัติงานซึ่งมีผลสัมฤทธิ์การทำงานเกี่ยวกับระดับความดังเสียงเหมือนกัน คือ ลักษณะงานที่ทำ พื้นที่การทำงานเกี่ยวกับปัจจัยเสียงเหมือนกัน

๒) บริเวณที่ทำการตรวจวัด ให้จัดทำแผนผังพื้นที่ที่ดำเนินการตรวจวัดระดับความดังเสียงเป็นเอกสารแนบ

๓) กรณีที่พนักงานมีผลเสียงดังในบริเวณตรวจวัดหลายจุดทำงาน (หลายสถานีงาน/พื้นที่ทำงาน) สามารถเพิ่มเติมพื้นที่ทำงานในตารางได้

๔) ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง (dB(A)) ที่ผู้ปฏิบัติงานสัมผัสก่อนการคำนวณระดับเสียงที่สัมผัสในคู่มือสามารถดูได้จากโปรแกรมคอมพิวเตอร์ความปลอดภัยส่วนบุคคล

๕) ผลการประเมินใช้เกณฑ์มาตรฐานความปลอดภัยตามประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง มาตรฐานระดับเสียงที่ยอมให้ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานในแต่ละวัน ลงวันที่ ๑๓ ธันวาคม พ.ศ. ๒๕๖๐ ข้อ ๓

๖) กรณีผลการประเมินเกินเกณฑ์มาตรฐานให้ระบุข้อเสนอแนะและวิธีการปรับปรุงแก้ไข โดยสามารถจัดทำเป็นเอกสารแนบได้

ลงชื่อ



(นางสาวปัทนิ จตุมาตย์)

บุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

ลงชื่อ

Darnluck C.

(นางสาวดุชนกสินธ์ ฉากินันต์)

นายจ้าง/ผู้มีอำนาจกระทำการแทน

General Business

๕ ผลการตรวจวัดและวิเคราะห์ผลการปฏิบัติงานเกี่ยวกับเสียงด้วยเครื่องตรวจวัดระดับความดังเสียง (Noise Dosimeter)

ลำดับ หรือ SEG*	บริเวณที่ทำการตรวจวัด	ชื่อ-นามสกุลของลูกจ้าง ในเขต SEG	ระยะเวลาการปฏิบัติงาน จริงพนักงาน (ชั่วโมง/นาที)	ผลการตรวจวัดระดับความดังเสียง		ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง* (dB(A))	ผลการประเมิน* (ระบุว่าเป็นเกณฑ์ ไม่เกินเกณฑ์)	ข้อเสนอแนะ และวิธีการปรับปรุงแก้ไข*
				ระยะเวลาการตรวจวัด (ชั่วโมง/นาที)	ปริมาณเสียงสะสม (D) เปอร์เซ็นต์ (%)			
๑	PE Operator-General 12 hour exposure at Train 1	รายชื่อและตำแหน่งเอกสารแนบ ๕	720 นาที	720 นาที	63.8	83.1	ไม่เกินเกณฑ์	
๒	PE Operator-General 12 hour exposure at Train 2		720 นาที	630 นาที	70.3	83.5	ไม่เกินเกณฑ์	

หมายเหตุ ๑) SEG หรือ Similar Exposure Group หมายถึง กลุ่มผู้ปฏิบัติงานซึ่งมีผลสัมฤทธิ์การทำงานเกี่ยวกับระดับความดังเสียงเหมือนกัน คือ ลักษณะงานที่ทำ พื้นที่การทำงานเกี่ยวกับปัจจัยเสียงเหมือนกัน

๒) ระดับเสียงเฉลี่ย TWA ๘ ชั่วโมง (dB(A)) ที่ผู้ปฏิบัติงานสัมผัสก่อนการคำนวณระดับเสียงที่สัมผัสในคู่มือสามารถดูได้จากโปรแกรมคอมพิวเตอร์ความปลอดภัยส่วนบุคคล

๓) ผลการประเมินใช้เกณฑ์มาตรฐานความปลอดภัยตามประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง มาตรฐานระดับเสียงที่ยอมให้ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานในแต่ละวัน ลงวันที่ ๑๓ ธันวาคม พ.ศ. ๒๕๖๐ ข้อ ๓ ทำงานในแต่ละวัน

๔) กรณีผลการประเมินเกินเกณฑ์มาตรฐานให้ระบุข้อเสนอแนะและวิธีการปรับปรุงแก้ไข โดยสามารถจัดทำเป็นเอกสารแนบได้

ลงชื่อ



(นางสาวปัทนิ จตุมาตย์)

บุคคลหรือนิติบุคคลผู้ดำเนินการตรวจวัดและวิเคราะห์ผลการปฏิบัติงาน

ลงชื่อ

Darnluck C.

(นางสาวดุชนกสินธ์ ฉากินันต์)

นายจ้าง/ผู้มีอำนาจกระทำการแทน

General Business

ภาคผนวก ค-9

คุณภาพน้ำทิ้ง



Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O :
Project Name : Water Testing
Project Location : Map Ta Phut_Latex (SSLC)

TESTING
No.0042

Lot ID: 24143530
Date Received : Jan 08, 2025
Date Reported : Jan 16, 2025
Report Number : 3200858-1

Page 1 of 2

Page 1 of 1

Sample Number	24143530-1						
Sampled Date	Jan 08, 2025 9:28 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Jan 08, 2025						
Condition of Sample	Contained in two glass vials, two amber glass bottles and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	24	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	24	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.0	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	476	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	3.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)
โทรเลขเลขที่ 7-323-9-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager
โทรเลขเลขที่ 7-323-9-0001

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O :
Project Name : Water Testing
Project Location : Map Ta Phut_Latex (SSLC)

TESTING
No.0042

Lot ID: 24143530
Date Received : Jan 08, 2025
Date Reported : Jan 16, 2025
Report Number : 3200858-1

Page 2 of 2

Sample Number	24143530-1						
Sampled Date	Jan 08, 2025 9:28 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Jan 08, 2025						
Condition of Sample	Contained in two glass vials, two amber glass bottles and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 24143530-1) is 7.8 mg/L

Sampling By : Surawit Narapong โทรเลขเลขที่ 7-323-9-0011 , Thanasoun Namakunna โทรเลขเลขที่ 7-204-9-0101

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)
โทรเลขเลขที่ 7-323-9-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager
โทรเลขเลขที่ 7-323-9-0001

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O :
Project Name : Water Testing
Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 24143530
Date Received : Jan 08, 2025
Date Reported : Jan 16, 2025
Report Number : 3200859-2

Page 1 of 1

Sample Number 24143530-1
Sampled Date Jan 08, 2025 9:28 AM
Sample Description Wastewater
Location Domestic Outlet
Date Analysis Commenced Jan 10, 2025
Condition of Sample Contained in two glass vials, two amber glass bottles and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Organic Carbon	mg/L	0.01	0.1	5.07	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Surawit Narapong , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Narin Saiseng
Supervisor

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) Co., Ltd. strongly recommends that this report is not reproduced except in full.

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733
Project Name : Water Testing
Project Location : Map Ta Phut_Latex (SSLC)



TESTING
No.0042
Lot ID: 255350
Date Received : Feb 05, 2025
Date Reported : Feb 14, 2025
Report Number : 3215348-1

Page 1 of 2

Sample Number 255350-1
Sampled Date Feb 05, 2025 9:35 AM
Sample Description Wastewater
Location Domestic Outlet
Date Analysis Commenced Feb 05, 2025
Condition of Sample Contained in two amber glass bottles, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	26	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	22	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.2	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	608	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Photchana S.
Scientist (4)
โทรศัพท์ 7-323-9-0028

Approved by

Dej Changchon
Senior Manager
โทรศัพท์ 7-323-9-0001

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING
No.0042

Lot ID: 255350

Date Received : Feb 05, 2025

Date Reported : Feb 14, 2025

Report Number : 3215348-1

Page 2 of 2

Sample Number	255350-1
Sampled Date	Feb 05, 2025 9:35 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	Feb 05, 2025
Condition of Sample	Contained in two amber glass bottles, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 255350-1) is 17.8 mg/L

Sampling By : Surawit Narapong ทะเบียนเลขที่ ร-323-ร-0011 , Thanassoun Namakunna ทะเบียนเลขที่ ร-204-ร-0101

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Photchanas.

Photchanas Seeda

Scientist (4)

ทะเบียนเลขที่ ร-323-ร-0028

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ร-323-ร-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 255350

Date Received : Feb 05, 2025

Date Reported : Feb 14, 2025

Report Number : 3215348-2

Page 1 of 1

Sample Number	255350-1
Sampled Date	Feb 05, 2025 9:35 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	Feb 07, 2025
Condition of Sample	Contained in two amber glass bottles, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Organic Carbon	mg/L	0.01	0.1	6.11	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 255350-1) is 17.8 mg/L

Sampling By : Surawit Narapong , Thanassoun Namakunna

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Siriluk P.

Siriluk Bunnak

Section Head

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TESTING
No.0042

Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 2517654

Date Received : Mar 05, 2025

Date Reported : Mar 13, 2025

Report Number : 3242561-1

Page 1 of 2

Sample Number	2517654-1						
Sampled Date	Mar 05, 2025 9:10 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Mar 05, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	13	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	13	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

โทรเลขเลขที่ 323-3-0028

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

โทรเลขเลขที่ 323-3-0001

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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TESTING
No.0042

Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 2517654

Date Received : Mar 05, 2025

Date Reported : Mar 13, 2025

Report Number : 3242561-1

Page 2 of 2

Sample Number	2517654-1						
Sampled Date	Mar 05, 2025 9:10 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Mar 05, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 2517654-1) is 17.3 mg/L

Sampling By : Surawit Narapong โทรเลขเลขที่ 323-3-0011, Pattarapol Sawangjaitam โทรเลขเลขที่ 323-3-0002

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

โทรเลขเลขที่ 323-3-0028

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

โทรเลขเลขที่ 323-3-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 2517654

Date Received : Mar 05, 2025

Date Reported : Mar 13, 2025

Report Number : 3242561-2

Page 1 of 1

Sample Number	2517654-1						
Sampled Date	Mar 05, 2025 9:10 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Mar 07, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Organic Carbon	mg/L	0.01	0.1	5.33	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Siriluk P.

Siriluk Bunnak
Section Head

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING

No.0042

Lot ID: 2527554

Date Received : Apr 02, 2025

Date Reported : Apr 10, 2025

Report Number : 3264590-1

Page 1 of 2

Sample Number	2527554-1						
Sampled Date	Apr 02, 2025 9:00 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Apr 02, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	3.5	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	37	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	15	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	12	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.7	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	396	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	5.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Photchana S.

Photchana Seeda

Scientist (4)

โทรศัพท์ 3-323-9-0028

Approved by

D. Chongchon

Dej Chongchon

Senior Manager

โทรศัพท์ 3-323-9-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING
No.0042

Lot ID: 2527554

Date Received : Apr 02, 2025

Date Reported : Apr 10, 2025

Report Number : 3264590-1

Page 2 of 2

Sample Number	2527554-1
Sampled Date	Apr 02, 2025 9:00 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	Apr 02, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Sansoen Khuiyoksui ทะเบียนเลขที่ ร-323-ร-0005 , Thanasoun Namakunna ทะเบียนเลขที่ ร-204-ร-0101

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchanas Seeda

Scientist (4)

ทะเบียนเลขที่ ร-323-ร-0028

Approved by

D. Chongchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ร-323-ร-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 2527554

Date Received : Apr 02, 2025

Date Reported : Apr 09, 2025

Report Number : 3264590-2

Page 1 of 1

Sample Number	2527554-1
Sampled Date	Apr 02, 2025 9:00 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	Apr 04, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Organic Carbon	mg/L	0.01	0.1	5.80	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Sansoen Khuiyoksui , Thanasoun Namakunna

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Suwimon C.

Suwimon Chairuangwut

Scientist (3)

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING

No.0042

Lot ID: 2537983

Date Received : May 07, 2025

Date Reported : May 16, 2025

Report Number : 3288484-1

Page 1 of 2

Sample Number	2537983-1
Sampled Date	May 07, 2025 9:25 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	May 07, 2025
Condition of Sample	Contained in two glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	19	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	16	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.3	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	492	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.9	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

หมายเลขโทรศัพท์ 323-3-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

หมายเลขโทรศัพท์ 323-3-0001

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING

No.0042

Lot ID: 2537983

Date Received : May 07, 2025

Date Reported : May 16, 2025

Report Number : 3288484-1

Page 2 of 2

Sample Number	2537983-1
Sampled Date	May 07, 2025 9:25 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	May 07, 2025
Condition of Sample	Contained in two glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 2537983-1) is 21.2 mg/L

Sampling By : Sansoen Khuiyoksui หมายเลขโทรศัพท์ 323-3-0005 , Pattarapol Sawangjaitam หมายเลขโทรศัพท์ 324-3-0002

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

หมายเลขโทรศัพท์ 323-3-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

หมายเลขโทรศัพท์ 323-3-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 2537983

Date Received : May 07, 2025

Date Reported : May 16, 2025

Report Number : 3288484-2

Page 1 of 1

Sample Number	2537983-1						
Sampled Date	May 07, 2025 9:25 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	May 09, 2025						
Condition of Sample	Contained in two glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Organic Carbon	mg/L	0.01	0.1	5.20	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 2537983-1) is 21.2 mg/L

Sampling By : Sansoen Khuiyoksui , Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection

- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Suwimon C.

Suwimon Chairuangwut
Scientist (3)

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING

No.0042

Lot ID: 2549574

Date Received : Jun 04, 2025

Date Reported : Jun 12, 2025

Report Number : 3316021-1

Page 1 of 2

Sample Number	2549574-1						
Sampled Date	Jun 04, 2025 9:35 AM						
Sample Description	Wastewater						
Location	Domestic Outlet						
Date Analysis Commenced	Jun 04, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	24	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	24	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.7	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	480	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Photchana S.

Photchana Seeda

Scientist (4)

โทร: 09-00000000 0-323-0-0028

Approved by

D. Chongchon

Dej Chongchon

Senior Manager

โทร: 09-00000000 0-323-0-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)



TESTING

No.0042

Lot ID: 2549574

Date Received : Jun 04, 2025

Date Reported : Jun 12, 2025

Report Number : 3316021-1

Page 2 of 2

Sample Number	2549574-1
Sampled Date	Jun 04, 2025 9:35 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	Jun 04, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 2549574-1) is 17.1 mg/L

Sampling By : Surawit Narapong ทะเบียนเลขที่ ร-323-ร-0011, Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-ร-0002

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchanas Seeda

Scientist (4)

ทะเบียนเลขที่ ร-323-ร-0028

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ร-323-ร-0001

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Analysis / Test Report

Client : Siam Synthetic Latex Co., Ltd.

8, Map Ta Phut Industrial Estate, I-4 Road, Map ta phut, Muang, Rayong Thailand 21150

P/O : 4516885733

Project Name : Water Testing

Project Location : Map Ta Phut_Latex (SSLC)

Lot ID: 2549574

Date Received : Jun 04, 2025

Date Reported : Jun 12, 2025

Report Number : 3316021-2

Page 1 of 1

Sample Number	2549574-1
Sampled Date	Jun 04, 2025 9:35 AM
Sample Description	Wastewater
Location	Domestic Outlet
Date Analysis Commenced	Jun 07, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Organic Carbon	mg/L	0.01	0.1	5.44	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Note : Raw data of COD value (Refer to Lot ID 2549574-1) is 17.1 mg/L

Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :

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Approved by

Suwimon C.

Suwimon Chairuangwut

Scientist (3)

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING

No.0042

Lot ID: 24143506

Date Received : Jan 08, 2025

Date Reported : Jul 01, 2025

Report Number : 3200815-1 C1

Page 1 of 2

Sample Number	24143506-1
Sampled Date	Jan 08, 2025 10:20 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Jan 08, 2025
Condition of Sample	Contained in six glass vials, two amber glass bottles and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	39	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	10	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	9	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	960	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ 7-323-ก-0028

Approved by

D. Chuan.

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 7-323-ก-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING

No.0042

Lot ID: 24143506

Date Received : Jan 08, 2025

Date Reported : Jul 01, 2025

Report Number : 3200815-1 C1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampled By : Surawit Narapong ทะเบียนเลขที่ 7-323-ก-0011 , Thanasoun Namakunna ทะเบียนเลขที่ 7-204-ก-0101

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ 7-323-ก-0028

Approved by

D. Chuan.

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 7-323-ก-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING

No.0009

Lot ID: 24143506

Date Received : Jan 08, 2025

Date Reported : Jul 01, 2025

Report Number : 3200815-3 C1

Page 1 of 1

Sample Number	24143506-1
Sampled Date	Jan 08, 2025 10:20 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Jan 09, 2025
Condition of Sample	Contained in six glass vials, two amber glass bottles and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Benzene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Water Testing							
Total Organic Carbon *	mg/L	0.01	0.1	14.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Surawit Narapong , Thanasoun Namakunna

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Siriluk P.

Siriluk Bunnak
Section Head

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING

No.0042

Lot ID: 255340

Date Received : Feb 05, 2025

Date Reported : Jul 01, 2025

Report Number : 3215338-1 C1

Page 1 of 2

Sample Number	255340-1
Sampled Date	Feb 05, 2025 10:20 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Feb 05, 2025
Condition of Sample	Contained in four glass vials, two amber glass bottles and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	32	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	21	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	20	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	28.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	468	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0042

Lot ID: 255340

Date Received : Feb 05, 2025

Date Reported : Jul 01, 2025

Report Number : 3215338-1 C1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Surawit Narapong ทะเบียนเลขที่ ๖-323-๖-0011 , Thanassoun Namakunna ทะเบียนเลขที่ ๖-204-๖-0101

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchanas Seeda

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0009

Lot ID: 255340

Date Received : Feb 05, 2025

Date Reported : Jul 01, 2025

Report Number : 3215338-3 C1

Page 1 of 1

Sample Number	255340-1
Sampled Date	Feb 05, 2025 10:20 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Feb 06, 2025
Condition of Sample	Contained in four glass vials, two amber glass bottles and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Benzene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Styrene	ug/L	1.5	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Water Testing							
Total Organic Carbon *	mg/L	0.01	0.1	10.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Surawit Narapong , Thanassoun Namakunna

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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6506-102/ EMAIL

Approved by

Siriluk P.

Siriluk Bunnak

Section Head



Analysis / Test Report

TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)

Lot ID: 2517634

Date Received : Mar 05, 2025

Date Reported : Jul 01, 2025

Report Number : 3242540-1 C1

Page 1 of 2

Sample Number	2517634-1
Sampled Date	Mar 05, 2025 10:10 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Mar 05, 2025
Condition of Sample	Contained in two glass vials, three amber glass bottles and eight plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	34	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	16	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	13	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	924	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Chuan.

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

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Analysis / Test Report

TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)

Lot ID: 2517634

Date Received : Mar 05, 2025

Date Reported : Jul 01, 2025

Report Number : 3242540-1 C1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampled By : Surawit Narapong ทะเบียนเลขที่ ๖-323-๖-0011 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Chuan.

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0009

Lot ID: 2517634
Date Received : Mar 05, 2025
Date Reported : Jul 01, 2025
Report Number : 3242540-3 C1

Page 1 of 1

Sample Number	2517634-1
Sampled Date	Mar 05, 2025 10:10 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Mar 06, 2025
Condition of Sample	Contained in two glass vials, three amber glass bottles and eight plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Benzene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Water Testing							
Total Organic Carbon *	mg/L	0.01	0.1	17.4	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :

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Approved by

Savitree N.

Savitree Noisangiam
Manager

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6506-102/ EMAIL



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0042

Lot ID: 2527552
Date Received : Apr 02, 2025
Date Reported : Jul 01, 2025
Report Number : 3264587-1 C1

Page 1 of 2

Sample Number	2527552-1
Sampled Date	Apr 02, 2025 9:47 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Apr 02, 2025
Condition of Sample	Contained in six glass vials, two amber glass bottles and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	53	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	9	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	8	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.3	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	944	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0042

Lot ID: 2527552

Date Received : Apr 02, 2025

Date Reported : Jul 01, 2025

Report Number : 3264587-1 C1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Sansoen Khuiyoksui ทะเบียนเลขที่ ๖-323-๖-0005 , Thanasoun Namakunna ทะเบียนเลขที่ ๖-204-๖-0101

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchanas Seeda

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0009

Lot ID: 2527552

Date Received : Apr 02, 2025

Date Reported : Jul 01, 2025

Report Number : 3264587-3 C1

Page 1 of 1

Sample Number 2527552-1
Sampled Date Apr 02, 2025 9:47 AM
Sample Description Wastewater
Location Outfall
Date Analysis Commenced Apr 03, 2025
Condition of Sample Contained in six glass vials, two amber glass bottles and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Benzene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Water Testing							
Total Organic Carbon *	mg/L	0.01	0.1	17.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Sansoen Khuiyoksui , Thanasoun Namakunna

Remark :

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Analysis / Test Report

TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)

Lot ID: 2537977

Date Received : May 07, 2025

Date Reported : Jul 01, 2025

Report Number : 3288477-1 C1

Page 1 of 2

Sample Number	2537977-1
Sampled Date	May 07, 2025 10:28 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	May 07, 2025
Condition of Sample	Contained in six glass vials, two amber glass bottles and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	27	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	8	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	7	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	580	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Chuan.

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

TESTING
No.0042

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)

Lot ID: 2537977

Date Received : May 07, 2025

Date Reported : Jul 01, 2025

Report Number : 3288477-1 C1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampled By : Sansoen Khuiyoksui ทะเบียนเลขที่ ๖-323-๖-0005 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

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D. Chuan.

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0009

Lot ID: 2537977
Date Received : May 07, 2025
Date Reported : Jul 01, 2025
Report Number : 3288477-3 C1

Page 1 of 1

Sample Number	2537977-1
Sampled Date	May 07, 2025 10:28 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	May 08, 2025
Condition of Sample	Contained in six glass vials, two amber glass bottles and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Benzene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Water Testing							
Total Organic Carbon *	mg/L	0.01	0.1	10.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Sansoen Khuiyoksui , Pattarapol Sawangjaitam

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Savitree N.

Savitree Noisangiam
Manager

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6506-102/ EMAIL



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0042

Lot ID: 2549570
Date Received : Jun 04, 2025
Date Reported : Jul 01, 2025
Report Number : 3316007-1 C1

Page 1 of 2

Sample Number	2549570-1
Sampled Date	Jun 04, 2025 10:26 AM
Sample Description	Wastewater
Location	Outfall
Date Analysis Commenced	Jun 04, 2025
Condition of Sample	Contained in six glass vials, two amber glass bottles and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	43	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	12	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	10	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.1	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	804	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Photchanas.

Photchanas Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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6506-102/ EMAIL



Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0042

Lot ID: 2549570

Date Received : Jun 04, 2025

Date Reported : Jul 01, 2025

Report Number : 3316007-1 C1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Surawit Narapong ทะเบียนเลขที่ ๖-323-๖-0011 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas.

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

D. Changchon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : Siam Polyethylene Co., Ltd.
8, Map Ta Phut Industrial Estate, I-4 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location: Map Ta Phut_PE (SPE)



TESTING
No.0009

Lot ID: 2549570

Date Received : Jun 04, 2025

Date Reported : Jul 01, 2025

Report Number : 3316007-3 C1

Page 1 of 1

Sample Number : 2549570-1
Sampled Date : Jun 04, 2025 10:26 AM
Sample Description : Wastewater
Location : Outfall
Date Analysis Commenced : Jun 05, 2025
Condition of Sample : Contained in six glass vials, two amber glass bottles and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Volatile Organics Compounds							
Benzene	ug/L	1.5	5	Not Detected	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Styrene	ug/L	1.5	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Water Testing							
Total Organic Carbon *	mg/L	0.01	0.1	16.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampled By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection
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- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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ภาคผนวก ง

ใบรับรองการสอบเทียบเครื่องมือ



Sample Name	Parameter	Equipment Name	ID No.	Calibrated Date	Next Cal	Freq. Calibrated (Months)
10000	Outlet of Airflow	Dry Gas	HW_000020	20-G04-20	03-Apr-21	6
10000	Outlet of Airflow	Dry Gas	HW_000021	10-Jan-21	10-Jul-21	6
10000	Outlet of Airflow	Wet Flow	HW_000072	10-Nov-21	17-Jul-22	6
10000	Outlet of Airflow	Wet Flow	HW_000093	10-Jan-21	10-Jul-21	6
10000	Outlet of Airflow	Purge Air Analyzer	HW_000111	10-Jul-21	10-Jul-21	12
10000	Outlet of Airflow	Fluxum Gas	HW_000120	03-Jul-21	03-Jul-21	12
10000	Outlet of Airflow	SPICAL_FLOMASTER	HW_000181	10-Jul-21	10-Jul-21	12
10000	New Methane Hydrocarbon	Wet Flow	HW_000182	10-Jan-21	10-Jul-21	6
10000	New Methane Hydrocarbon	Wet Flow	HW_000183	10-Jan-21	10-Jul-21	6
10000	New Methane Hydrocarbon	Wet Flow	HW_000187	10-Jan-21	10-Jul-21	6
10000	New Methane Hydrocarbon	Purge Air Analyzer	HW_000203	10-Jan-21	10-Jul-21	12
10000	New Methane Hydrocarbon	Purge Air Analyzer	HW_000240	7-Nov-20	7-Nov-20	12
10000	New Methane Hydrocarbon	Purge Air Analyzer	HW_000245	03-Feb-20	03-Feb-20	12
10000	New Methane Hydrocarbon	Purge Air Analyzer	HW_000271	10-Jul-21	10-Jul-21	12
10000	New Methane Hydrocarbon	Dry Gas	HW_000293	10-Jul-21	10-Jul-21	6
10000	New Methane Hydrocarbon	Dry Gas	HW_000301	10-Jul-21	10-Jul-21	6
10000	New Methane Hydrocarbon	SPICAL_FLOMASTER	HW_000310	10-Jul-21	10-Jul-21	12
10000	New Methane Hydrocarbon	SPICAL_FLOMASTER	HW_000314	20-May-21	03-May-22	12
10000	New Methane Hydrocarbon	Gas Sampling Pump	HW_000315	7-Jan-21	7-Jan-21	6
10000	New Methane Hydrocarbon	Total Hydrocarbon Analyzer	HW_000316	03-Mar-21	03-Mar-21	12
10000	Total Hydrocarbon	Wet Flow	HW_000318	10-Jan-21	10-Jul-21	6
10000	Total Hydrocarbon	Wet Flow	HW_000342	10-Jan-21	10-Jul-21	6
10000	Total Hydrocarbon	Wet Flow	HW_000371	10-Jan-21	10-Jul-21	6
10000	Total Hydrocarbon	Wet Flow	HW_000394	10-Jan-21	10-Jul-21	6
10000	Total Hydrocarbon	Purge Air Analyzer	HW_000400	10-Jul-21	10-Jul-21	12
10000	Total Hydrocarbon	Purge Air Analyzer	HW_000401	10-Feb-21	10-Feb-21	12
10000	Total Hydrocarbon	Purge Air Analyzer	HW_000471	10-Jul-21	10-Jul-21	12
10000	Total Hydrocarbon	Purge Air Analyzer	HW_000481	10-Jul-21	10-Jul-21	12
10000	Total Hydrocarbon	Purge Air Analyzer	HW_000501	10-Jul-21	10-Jul-21	12
10000	Total Hydrocarbon	SPICAL_FLOMASTER	HW_000510	10-Jul-21	10-Jul-21	12
10000	Total Hydrocarbon	SPICAL_FLOMASTER	HW_000518	13-Feb-20	13-Feb-20	12
10000	Total Hydrocarbon	SPICAL_FLOMASTER	HW_000614	21-May-20	03-May-21	12
10000	Total Hydrocarbon	Gas Sampling Pump	HW_000615	7-Jan-21	7-Jan-21	6
10000	Total Hydrocarbon	Total Hydrocarbon Analyzer	HW_000616	03-Mar-21	03-Mar-21	12
Ammonia	Ammonia Dissolve	N2, Ammonia	HW_000617	03-Jan-21	03-Jul-21	6
Ammonia	Ammonia Dissolve	N2, Ammonia	HW_000618	03-Jan-21	03-Jul-21	6
Ammonia	Ammonia Dissolve	N2, Ammonia	HW_000619	03-Jan-21	03-Jul-21	6
Ammonia	Ammonia Dissolve	N2, Ammonia	HW_000620	03-Jan-21	03-Jul-21	6

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stefan@stefan.io

Sample Name	Parameter	Equipment Name	ID No.	Calibrated Date	Next Cal	Freq. Calib'n (Months)
Amesbury	Wind Speed / Wind Direction	Wind Speed / Wind Direction	WLS729359	15 Aug-26	13 Feb-04	18
Amesbury	Wind Speed / Wind Direction	Wind Speed / Wind Direction	WLS729360	15 Aug-26	18 Feb-04	18
Amesbury	Wind Speed / Wind Direction	Wind Speed / Wind Direction	WLS729347	15 Aug-26	18 Feb-04	18
Worcester	CH2ONE	CHICAL FLOWMETER	WLS729358	17 Jan-22	26 Jan-26	12
Worcester	CH2ONE	CHICAL FLOWMETER	WLS729354	9 Sep-21	9 Sep-25	12
Worcester	CH2ONE	CHICAL FLOWMETER	WLS729357	9 Sep-21	9 Sep-25	12
Worcester	CH2ONE	Wm Sampling Pump	WLS729353	16 Jan-23	14 Aug-25	3
Worcester	CH2ONE	Wm Sampling Pump	WLS729352	16 Jan-23	14 Aug-25	3
Worcester	CH2ONE	Wm Sampling Pump	WLS729356	21 Feb-23	23 May-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729355	21 Feb-23	23 May-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729351	21 Feb-23	13 May-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729349	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729348	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729346	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729347	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729345	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729344	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729343	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729342	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729341	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729340	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729339	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729338	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729337	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729336	7 Apr-23	7 Jul-25	2
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Worcester	CH2ONE	Wm Sampling Pump	WLS729333	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729332	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729331	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729330	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729329	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729328	7 Apr-23	7 Jul-25	2
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Worcester	CH2ONE	Wm Sampling Pump	WLS729202	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729201	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729200	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729199	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729198	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729197	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729196	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729195	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729194	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729193	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729192	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729191	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729190	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729189	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729188	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729187	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729186	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729185	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729184	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729183	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729182	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729181	7 Apr-23	7 Jul-25	2
Worcester	CH2ONE	Wm Sampling Pump	WLS729180	7 Apr-2		

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Sample Name	Parameter	Equipment Name	ID No.	Calibrated Date	Next Cal	Freq. Calibrated (Months)
Water	Offline Resid	Ground Water Meter	HW-000101	23-Jan-23	23-Mar-24	12
Water	Offline Resid	Ground Water Meter	HW-000202	23-Jan-23	23-Mar-24	12
Recovery Unit	Flow (L/min)	Flowmeter	HW-000303	14-Jun-23	14-Jul-24	12
Recovery Unit	Water Discharged (Solid %/D)	Electronic Balance	HW-000404	14-Jun-23	14-Dec-23	6
Recovery Unit	Water Discharged (Solid %/D)	Hot Air Oven	HW-000505	23-Feb-24	23-Sep-24	7
Recovery Unit	2,4-D Levels	Inductron Spectroph	HW-000606	29-Feb-23	29-Sep-23	7
Recovery Unit	2,4-D Levels	Hot Air Oven	HW-000713	14-Mar-23	14-Mar-26	3
Recovery Unit	2,4-D Levels	Press Ball	HW-000814	23-Mar-23	23-Sep-23	6
Recovery Unit	Water Suspended Solids	Electronic Balance	HW-000909	23-Feb-24	23-Feb-24	12
Recovery Unit	Water Suspended Solids	Hot Air Oven	HW-001010	23-Mar-23	23-Sep-23	6
Recovery Unit	NO ₃	NO ₃ reader with Sonex	HW-001101	23-Feb-24	23-Feb-24	12
Recovery Unit	NO ₃	Flowmeter	HW-001216	1-Nov-23	1-Mar-24	4
Recovery Unit	NO ₃	Flowmeter	HW-001302	23-Oct-24	23-Oct-25	12
Recovery Unit	CO ₂	Gas chromatograph	HW-001407	18-Mar-24	17-Sep-24	6
Recovery Unit	Water Colloidal Nitrogen	Quick Spectrophotom	HW-001508	14-Mar-24	14-Sep-24	6
Recovery Unit	Water Colloidal Nitrogen	Amphip	HW-001611	14-Jun-23	14-Jun-23	12
Recovery Unit	Surfactant	Amphip	HW-001712	30-Aug-23	30-Aug-24	12



Calibration of Date: 10 Oct 24
Next Calibration Date: 10 Apr 26

: Basement in Pressure (mm Hg)

Relative Humidity (%)

Temperature (°C) = _____

Dry Gas Meter Data

Calibration sheet No.: C-101024-BHOC_F50525

Dry Gas Meter No.: B90K, F50525

Consolidated Serial No.: 20151402

Model No.: XC-608-V

Reference Dry Gas Mass Correction				Dry Gas Mass				Dry Gas Mass Correction	
V ₁ (L)		T ₁ (°C)		V ₂ (L)		T ₂ (°C)		Av. T _g (°C)	Factor (1/c)
Flow	Time	Flow	Time	Flow	Time	Flow	Time		
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9980
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9979
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9978
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9977
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9976
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9975
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9974
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9973
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9972
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9971
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9970
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9969
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9968
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9967
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9966
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9965
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9964
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9963
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9962
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9961
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9960
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9959
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9958
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9957
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9956
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9955
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9954
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9953
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9952
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9951
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9950
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9949
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9948
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9947
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9946
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9945
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9944
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9943
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9942
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9941
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9940
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9939
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9938
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9937
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9936
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9935
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9934
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9933
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9932
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9931
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9930
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9929
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9928
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9927
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9926
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9925
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9924
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9923
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9922
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9921
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9920
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9919
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9918
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9917
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9916
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9915
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9914
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9913
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9912
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9911
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9910
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9909
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9908
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9907
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9906
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9905
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9904
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9903
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9902
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9901
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9900
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9899
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9898
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9897
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9896
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9895
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9894
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9893
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9892
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9891
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9890
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9889
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9888
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9887
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9886
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9885
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9884
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9883
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9882
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9881
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9880
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9879
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9878
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9877
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9876
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9875
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9874
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9873
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9872
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9871
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9870
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9869
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9868
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9867
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9866
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9865
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9864
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9863
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9862
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9861
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0	31.0	0.9860
30.00	0.00	30.00	30.0	31.20	0.00	31.20	31.0		

$$Y = \text{Ratio of reading of reference dry gas meter to dry gas meter; bias was for individual} \leq 0.02 \text{ from average}$$

Calligraphy by *Jill Johnson*

Assigned to: Nathan Laguarda

(Mr. J. M. Jones's answer.)

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Source: *Journal of the American Statistical Association*, 1997, 92, 1037-1046.



Calibration Date: 10/24		Ambient Temperature (°C): 31.2	
Calibration sheet No: C-191024-B0K_V150525		Relative Humidity (%): 56.61	
Digital Temperature ID: B0K_V150525		Reference Temperature ID: R10_V150681	
Serial No.: 01011003		Serial No.: 201005014918	
Model: JC-K09-V		Heat Calibrator Digicon-CC-VT-M35 18 Apr 2025	

Location	Reference Temperature °C	Digital Temperature °C	Error °C	MPE	Pass / Fail
Stack	25	25	0	±0.3	Pass
	25	25	0	±0.3	Pass
	50	50	0	±0.3	Pass
	100	101	1	±0.3	Pass
	150	151	1	±0.3	Pass
	200	202	2	±0.3	Pass
Probe	250	252	2	±0.3	Pass
	300	302	2	±0.3	Pass
	500	502	2	±0.3	Pass
	100	101	1	±0.3	Pass
	125	125	0	±0.3	Pass
	140	142	2	±0.3	Pass
Oven	150	-	-	±0.3	-
	120	-	-	±0.3	-
	140	-	-	±0.3	-
Fitter	100	102	2	±0.3	Pass
	120	122	2	±0.3	Pass
	140	142	2	±0.3	Pass
Exit	0	0	0	±0.3	Pass
	10	10	0	±0.3	Pass
	20	21	1	±0.3	Pass
Meter	0	0	0	±0.3	Pass
	25	26	1	±0.3	Pass
	50	50	0	±0.3	Pass
AUX	0	0	0	±0.3	Pass
	25	26	0	±0.3	Pass
	50	50	0	±0.3	Pass

MPE: (Maximum permissible error of measurement) $\frac{\text{Maximum value} - \text{Minimum value}}{\text{Number of measurements}}$

Continued on page 100

(1) My attitude is wrong.

Approved by:

J. Am. Math. Soc. 1996, 9(1): 1–27

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glenfield@ed.ac.uk



DRY GAS METER CALIBRATION TEST REPORT

Calibration Date: 10-Jan-25
Next Calibration Date: 10-Jul-25
Barometric Pressure (mmHg): 760.2
Relative Humidity (%): 37.9
Temperature (°C): 28.1
Dry Gas Meter Data
Calibration sheet No.: G-100125-BKK_FS0563
Dry Gas Meter ID: BKK_FS0563
Serial No.: 1606011
Model No.: XC-62-CV
Reference Dry Gas Meter ID: BKK_FS1102
Serial No.: A000240
Correction Factor (%): -1.0000
Next Calibration Date: 25-Feb-26

Reference Dry Gas Meter Calibration				Dry Gas Meter				Dry Gas Meter	
W (L/min)				Wm (L/min)				Correction	
Time	Initial	Final	T (°C)	Time	Initial	Final	T (°C)	Factor	Factor (%)
30:00	0.00	30.00	28.0	29:50	0.00	29.90	30.0	30.0	1.0002
30:00	0.00	30.00	28.0	29:40	0.00	29.80	30.0	30.0	1.0004
60:00	0.00	60.00	28.0	59:50	0.00	59.90	30.0	30.0	0.9993
60:00	0.00	60.00	28.0	59:40	0.00	59.80	30.0	30.0	0.9995
90:00	0.00	90.00	28.0	89:50	0.00	89.90	30.0	30.0	0.9996
90:00	0.00	90.00	28.0	89:40	0.00	89.80	30.0	30.0	0.9996
90:00	0.00	90.00	28.0	89:30	0.00	89.70	30.0	30.0	0.9996
90:00	0.00	90.00	28.0	89:20	0.00	89.60	30.0	30.0	0.9996
								Avg	0.9996

Y = Rate of flow of reference dry gas meter to dry gas meter; deviation for individual; Z = 0.00 from average.

Calibrated by:
Approved by:
M. Warawat Pulpa
RYG Field Services Scientist (3)
M. Nathapong Jengwarewong
RYG Field Services Specialist (1)

FORM NO.: F-16-124 REVISION NO.: 1 ISSUE DATE: 20/12/23



DIGITAL TEMPERATURE CALIBRATION DATA SHEET

Calibration Date: 10-Jan-25		Ambient Temperature (°C): 28.1			
Calibration sheet No: G-100125-BKK_FS0563		Relative Humidity (%): 37.9			
Digital Temperature ID: BKK_FS0563		Reference Temperature ID: RYG_FS0601			
Serial No: 1606011		Serial No: 201900014910			
Model: XC-62-CV		Model: Digicon-CV-VI-M8			
Next Calibration:		13-May-25			
Location	Reference Temperature (°C)	Digital Temperature (°C)	Error (°C)	MPE (%)	Pass / Fail
Stack	0	0	0	±0.5	Pass
	25	25	0	±0.5	Pass
	50	50	0	±0.5	Pass
	100	100	0	±0.5	Pass
	150	150	0	±0.5	Pass
	200	199	-1	±0.5	Pass
	250	250	0	±0.5	Pass
	300	299	-1	±0.5	Pass
	350	349	-1	±0.5	Pass
	400	399	-1	±0.5	Pass
Probe	100	100	0	±0.5	Pass
	120	119	-1	±0.5	Pass
	140	139	-1	±0.5	Pass
	160	159	-1	±0.5	Pass
Oven	100	100	0	±0.5	Pass
	120	120	0	±0.5	Pass
	140	140	0	±0.5	Pass
	160	160	0	±0.5	Pass
Bath	0	0	0	±0.5	Pass
	10	10	0	±0.5	Pass
Meter	0	0	0	±0.5	Pass
	25	25	0	±0.5	Pass
Aux	0	0	0	±0.5	Pass
	25	25	0	±0.5	Pass
	0	0	0	±0.5	Pass
	25	25	0	±0.5	Pass

MPE: (Maximum permissible error of measurement) in accordance with ISO 9001:2015

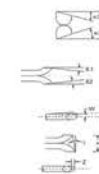
Calibrated by:
Approved by:
M. Warawat Pulpa
RYG Field Services Scientist (3)
M. Nathapong Jengwarewong
RYG Field Services Specialist (1)

FORM NO.: F-16-124 REVISION NO.: 1 ISSUE DATE: 20/12/23



Type S Pitot Tube Calibration

Date Calibration: 10-Jan-25
Pitot ID: BKK_FS0473
Pitot SN: -
Due Date: 10-Jul-25
Inclinometer ID: BKK_FS1131
Vernier ID: RYG_FS0539



Parameter	Value	Allowable Range	Check
α1	2.5	-10° ≤ α1 < +10°	OK
α2	1.4	-10° ≤ α2 < +10°	OK
β1	-0.8	-5° ≤ β1 < +5°	OK
β2	-0.4	-5° ≤ β2 < +5°	OK
γ	0.3	-	-
θ	0.2	-	-
Z = A tan γ	0.005	Z ≤ 0.125"	OK
W = A tan θ	0.003	W ≤ 0.031"	OK
Dt	0.310	0.188" to 0.375"	OK
A/2Dt	1.484	1.05 ≤ PA/Dt ≤ 1.5	OK
A	0.92	2.1Dt ≤ A ≤ 3Dt	OK

Certify that pitot tube/probe meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube certification fact of 0.84. See 40 CFR Pt. 60, App. A, EPA Method 2.

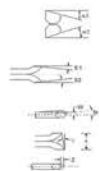
Calibrated by:
Approved by:
M. Warawat Pulpa
RYG Field Services Scientist (3)
M. Nathapong Jengwarewong
RYG Field Services Specialist (1)

FORM NO.: F-16-124 REVISION NO.: 1 ISSUE DATE: 20/12/23



Type S Pitot Tube Calibration

Date Calibration: 10-Jan-25
Pitot ID: BKK_FS0561
Pitot SN: -
Due Date: 10-Jul-25
Inclinometer ID: BKK_FS1131
Vernier ID: RYG_FS0539



Parameter	Value	Allowable Range	Check
α1	-2.4	-10° ≤ α1 < +10°	OK
α2	-1.2	-10° ≤ α2 < +10°	OK
β1	-2.0	-5° ≤ β1 < +5°	OK
β2	1.3	-5° ≤ β2 < +5°	OK
γ	0.3	-	-
θ	0.2	-	-
Z = A tan γ	0.005	Z ≤ 0.125"	OK
W = A tan θ	0.003	W ≤ 0.031"	OK
Dt	0.310	0.188" to 0.375"	OK
A/2Dt	1.468	1.05 ≤ PA/Dt ≤ 1.5	OK
A	0.91	2.1Dt ≤ A ≤ 3Dt	OK

Certify that pitot tube/probe meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube certification fact of 0.84. See 40 CFR Pt. 60, App. A, EPA Method 2.

Calibrated by:
Approved by:
M. Warawat Pulpa
RYG Field Services Scientist (3)
M. Nathapong Jengwarewong
RYG Field Services Specialist (1)

FORM NO.: F-16-124 REVISION NO.: 1 ISSUE DATE: 20/12/23



Calibration certificate Kalibrier-Zertifikat

5753561

Object	Control Unit 050	Measuring Block 350
Manufacturer	TESTO SE & Co. KGaA	TESTO SE & Co. KGaA
Type description	0632 3511	0632 3510
Serial no.	84554897	84740488
Serial no.	---	---
Inventory no.	---	---
Test equipment no.	---	---
Equipment no.	15062405	15061504
Transport no.	---	---
Location	---	---
Standard	---	---
Customer	ALS Laboratory Group (Thailand) Co., Ltd.	104 Phatthanaikan 40, Phatthanaikan Rd., Khwaeng Phatthanaikan, Thai Suban Luang, Th Bangkok 10250 Thailand
Customer ID no.	1031994	---
Order no.	12498724 / 9620-0095	---
Order no.	---	---
Date of calibration	16.07.2024	---
Date of the recommended re-calibration	16.07.2025	---
Conformity statement	Pass	---
Conformity statement	---	---

The expanded uncertainty of measurement was calculated according to EN 45001:2015 with a coverage probability of about 95% and contains the uncertainty of the reference, the uncertainty of the method and the uncertainty of the test specimen. The conformity statement is made according to the test result tolerance limit "0".
The expanded measurement uncertainty was calculated according to EN 45001:2015 with a coverage probability of about 95% and contains the uncertainty of the reference, the uncertainty of the method and the uncertainty of the test specimen. The conformity statement is made according to the test result tolerance limit "0".
The calibration certificate may only be reprinted after it has been signed with the permission of the issuing laboratory. Calibration certificate without signature and seal are not valid.
Dieses Kalibrierzertifikat darf nur nachdrücklich wiedergedruckt werden. Nachdruck ohne Genehmigung des ausstellenden Kalibrierlaboratoriums ist nicht zulässig.
Dieses Kalibrierzertifikat ist nur nachdrücklich wiedergedruckt werden. Nachdruck ohne Genehmigung des ausstellenden Kalibrierlaboratoriums ist nicht zulässig.

Seal Stamp:
Superior Calibration Institute:
Technician (Signature):
Martin Förlinger
Samuel Garcia Zúñiga



Calibration certificate Kalibrier-Zertifikat

5753561

Measuring equipment Messenstratagem											
1. Reference	Identification		Traceability		Test cell		Certificate no.		Exp. no.		
1. Reference	1. Identification		1. Traceability		1. Test cell		1. Certificate no.		1. Exp. no.		
2. Test gas medium 1	2. Test gas medium 1		2. Test gas medium 1		2. Test gas medium 1		2. Test gas medium 1		2. Test gas medium 1		
3. Test gas medium 2	3. Test gas medium 2		3. Test gas medium 2		3. Test gas medium 2		3. Test gas medium 2		3. Test gas medium 2		
4. Test gas medium 3	4. Test gas medium 3		4. Test gas medium 3		4. Test gas medium 3		4. Test gas medium 3		4. Test gas medium 3		
5. Test gas medium 4	5. Test gas medium 4		5. Test gas medium 4		5. Test gas medium 4		5. Test gas medium 4		5. Test gas medium 4		
6. Test gas medium 5	6. Test gas medium 5		6. Test gas medium 5		6. Test gas medium 5		6. Test gas medium 5		6. Test gas medium 5		
7. Test gas medium 6	7. Test gas medium 6		7. Test gas medium 6		7. Test gas medium 6		7. Test gas medium 6		7. Test gas medium 6		
8. Test gas medium 7	8. Test gas medium 7		8. Test gas medium 7		8. Test gas medium 7		8. Test gas medium 7		8. Test gas medium 7		
9. Test gas medium 8	9. Test gas medium 8		9. Test gas medium 8		9. Test gas medium 8		9. Test gas medium 8		9. Test gas medium 8		
10. Test gas medium 9	10. Test gas medium 9		10. Test gas medium 9		10. Test gas medium 9		10. Test gas medium 9		10. Test gas medium 9		
11. Test gas medium 10	11. Test gas medium 10		11. Test gas medium 10		11. Test gas medium 10		11. Test gas medium 10		11. Test gas medium 10		
12. Test gas medium 11	12. Test gas medium 11		12. Test gas medium 11		12. Test gas medium 11		12. Test gas medium 11		12. Test gas medium 11		
13. Test gas medium 12	13. Test gas medium 12		13. Test gas medium 12		13. Test gas medium 12		13. Test gas medium 12		13. Test gas medium 12		
14. Test gas medium 13	14. Test gas medium 13		14. Test gas medium 13		14. Test gas medium 13		14. Test gas medium 13		14. Test gas medium 13		
15. Test gas medium 14	15. Test gas medium 14		15. Test gas medium 14		15. Test gas medium 14		15. Test gas medium 14		15. Test gas medium 14		
16. Test gas medium 15	16. Test gas medium 15		16. Test gas medium 15		16. Test gas medium 15		16. Test gas medium 15		16. Test gas medium 15		
17. Test gas medium 16	17. Test gas medium 16		17. Test gas medium 16		17. Test gas medium 16		17. Test gas medium 16		17. Test gas medium 16		
18. Test gas medium 17	18. Test gas medium 17		18. Test gas medium 17		18. Test gas medium 17		18. Test gas medium 17		18. Test gas medium 17		
19. Test gas medium 18	19. Test gas medium 18		19. Test gas medium 18		19. Test gas medium 18		19. Test gas medium 18		19. Test gas medium 18		
20. Test gas medium 19	20. Test gas medium 19		20. Test gas medium 19		20. Test gas medium 19		20. Test gas medium 19		20. Test gas medium 19		
21. Test gas medium 20	21. Test gas medium 20		21. Test gas medium 20		21. Test gas medium 20		21. Test gas medium 20		21. Test gas medium 20		
22. Test gas medium 21	22. Test gas medium 21		22. Test gas medium 21		22. Test gas medium 21		22. Test gas medium 21		22. Test gas medium 21		
23. Test gas medium 22	23. Test gas medium 22		23. Test gas medium 22		23. Test gas medium 22		23. Test gas medium 22		23. Test gas medium 22		
24. Test gas medium 23	24. Test gas medium 23		24. Test gas medium 23		24. Test gas medium 23		24. Test gas medium 23		24. Test gas medium 23		
25. Test gas medium 24	25. Test gas medium 24		25. Test gas medium 24		25. Test gas medium 24		25. Test gas medium 24		25. Test gas medium 24		
26. Test gas medium 25	26. Test gas medium 25		26. Test gas medium 25		26. Test gas medium 25		26. Test gas medium 25		26. Test gas medium 25		
27. Test gas medium 26	27. Test gas medium 26		27. Test gas medium 26		27. Test gas medium 26		27. Test gas medium 26		27. Test gas medium 26		
28. Test gas medium 27	28. Test gas medium 27		28. Test gas medium 27		28. Test gas medium 27		28. Test gas medium 27		28. Test gas medium 27		
29. Test gas medium 28	29. Test gas medium 28		29. Test gas medium 28		29. Test gas medium 28		29. Test gas medium 28		29. Test gas medium 28		
30. Test gas medium 29	30. Test gas medium 29		30. Test gas medium 29		30. Test gas medium 29		30. Test gas medium 29		30. Test gas medium 29		
31. Test gas medium 30	31. Test gas medium 30		31. Test gas medium 30		31. Test gas medium 30		31. Test gas medium 30		31. Test gas medium 30		
32. Test gas medium 31	32. Test gas medium 31		32. Test gas medium 31		32. Test gas medium 31		32. Test gas medium 31		32. Test gas medium 31		

ใบตรวจสอบสภาพเครื่องวัดสิ่งแวดล้อม

เลขที่ใบงาน: WO-0064379

หมายเลขเครื่อง: 1627845

ชุดเครื่องมือ: SPECTROPHOTOMETER		รุ่น DR6000	หมายเลขเครื่อง: 1627845		
ตรวจโดย (ปี)		รายการตรวจเช็ค	ตรวจโดย (ปี)		หมายเหตุ
19 Mar 2025			19 Mar 2025		
ปกติ	ไม่ปกติ		ปกติ	ไม่ปกติ	
General					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. ความสมบูรณ์ของเครื่อง	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. ความสะอาด (จอแสดงผลภายใน/ภายนอกเครื่อง)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. สวิตช์ On - (เปิดเครื่อง) (On-Off Switch)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. ปุ่มกด (Keypad)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. หน้าจอ (Display, Screen Contrast)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Spectrophotometer					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. แบตเตอรี่สำรอง (Battery Backup) >= 2.5 VDC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. ควบคุมการแผ่รังสี (Wavelength Control)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. ความยาวคลื่น (Wavelength Check)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	*
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. เวลาการวัด (UV < 3,000 hour)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13.5 Hours
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. เวลาการวัด (Visible < 5,000 hour)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	893.0 Hours
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. เซลล์แสงอาทิตย์ (Caroused Module)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
pH Meter and Conductivity Meter					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. ปลั๊กโทรน (Electrode and Connection Cable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. เซลล์การละลายอิเล็กโทรด (Level KCl)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. ฝาปิดป้องกันอิเล็กโทรด (Dust Protection Hood)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. ขาตั้งปลั๊กโทรน (Stand)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Turbidimeter					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. การวางตำแหน่ง (No Sample)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. เซลล์การละลายอิเล็กโทรด (>= 2.5 โวลต์ 3.0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Automatic titrator					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. สวิตช์ Piston Burettes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. Function Rinsing and Dosing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. ระบบการจ่ายน้ำอัตโนมัติ (รวมท่อจ่ายน้ำ)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

ปริมาณน้ำ: 656.1mm = 656.1mm

* 486.0mm = 485.7mm

Mr. Preecha Phooasai
Service Engineer

DKSH Technology Center
833 Moo 10, Bangna-Prachinburi Road, Bangna, Bangkok 10700
Phone: +66 208 10000 Fax: +66 208 10001 Email: dksh@dksh.co.th Website: www.dksh.com

Delivering Growth - In Asia and Beyond.

CAL-PH-R21-02 20 Jul 2022



Type S Pitot Tube Calibration

Date Calibration 10-Jan-25 Due Date 10-Jul-25
Pitot ID BKK_FS0560 Inclinator ID BKK_FS1131
Pitot SN - Vernier ID RYG_FS0539

Parameter	Value	Allowable Range	Check
α1	0.6	-10° < α1 < +10°	OK
α2	1.4	-10° < α2 < +10°	OK
β1	-2.3	-5° < β1 < +5°	OK
β2	-0.5	-5° < β2 < +5°	OK
γ	-1.1	-	-
θ	1.3	-	-
Z = A tan γ	-0.017	Z < 0.125°	OK
W = A tan θ	0.020	W < 0.031°	OK
Dt	0.311	0.188° to 0.375°	OK
A/2Dt	1.415	1.05 ≤ PA/Dt ≤ 1.5	OK
A	0.88	2.1Dt ≤ A ≤ 3Dt	OK

Certify that pitot tube/porbe meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube certification fact of 0.84. See 40 CFR Pt. 60, App. A, EPA Method 2.

Calibrated by: [Signature]
(Mr. Warawat Pulpa)
RYG Field Services Scientist (I)

Approved By: [Signature]
(Mr. Nattapol Jengwongwong)
RYG Field Services Specialist (I)

FORM NO. F-60-124 REVISION NO. 8 ISSUE DATE 25/12/23



Type S Pitot Tube Calibration

Date Calibration 10-Jan-25 Due Date 10-Jul-25
Pitot ID BKK_FS0472 Inclinator ID BKK_FS1131
Pitot SN - Vernier ID RYG_FS0539

Parameter	Value	Allowable Range	Check
α1	-5.1	-10° < α1 < +10°	OK
α2	6.7	-10° < α2 < +10°	OK
β1	2.0	-5° < β1 < +5°	OK
β2	-4.2	-5° < β2 < +5°	OK
γ	3.7	-	-
θ	0.2	-	-
Z = A tan γ	0.058	Z < 0.125°	OK
W = A tan θ	0.003	W < 0.031°	OK
Dt	0.30	0.188° to 0.375°	OK
A/2Dt	1.50	1.05 ≤ PA/Dt ≤ 1.5	OK
A	0.9	2.1Dt ≤ A ≤ 3Dt	OK

Certify that pitot tube/porbe meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube certification fact of 0.84. See 40 CFR Pt. 60, App. A, EPA Method 2.

Calibrated by: [Signature]
(Mr. Warawat Pulpa)
RYG Field Services Scientist (I)

Approved By: [Signature]
(Mr. Nattapol Jengwongwong)
RYG Field Services Specialist (I)

FORM NO. F-60-124 REVISION NO. 9 ISSUE DATE 25/12/23

Certificate No.: G 670781
Date of issue : 07-Nov-24

Instrument description : 1. Gas Analyser
Instrument model : 1. Testo 340
Instrument serial no. : 1. 63119028
Control unit serial no. : 1. -
3D no. or control no. : 1. RYG_FS0565
Manufacturer : 1. Testo SE & Co. KGaA
Probe description : 1. -
Probe model : 1. -
Probe serial no. : 1. -
Customer name : 1. A&L LABORATORY GROUP (THAILAND) CO., LTD.
Customer address : 1. 104 Phuthonkarn 40, Phuthonkarn Road, Phrasing Phuthonkarn, Khut Suan Luang, Bangkok, 10250 Thailand

Total pages of certificate : 1. 3 Pages
Receiving no. : 1. 1-24422
Receiving date : 1. 05-Nov-24
Parameter of calibration : 1. Gas Calibration (Oxygen 2.50, 9.984, 21.02 %vol, Carbon Monoxide 80.18, 302, 1007 ppm, Nitric Oxide 30.0, 151.5, 322.5 ppm, Sulphur Dioxide 30.36, 100.8, 600.8 ppm)
Condition of UUC : 1. Used
Ambient condition : 1. All of the Measurement were carried out the stabilized laboratory:
Temperature : 23.45 °C
Humidity : 55.4 ± 15 %RH
Calibration place : 1. 171/21 Soi Ngamwongwan 47 Yae 48, Tongpracheng, Lake, Bangkok 10210 THAILAND
Calibration procedure no. : 1. This instrument was calibrated by comparison with Standard gas mixture according to calibration Work Instruction no. WO-CL-29-C

REVIEW BY: [Signature]
APPROVED BY: [Signature]
SIXTY CAL DATE: 7-Nov-25

The calibration certificate expanded uncertainty of measurement is stated in the standard uncertainty of measurement. Multiplied by coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. This certificate is applied only to item under test Environmental condition. This Calibration Certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates without signature and seal are not valid and The results relate only to the items tested/calibrated. This calibration certificate documents are traceable to national standards, which realize measurement according to the International System of Units (SI).

Date of calibration : 1. 07-Nov-24

[Signature]
Mr. Kanchai Khanduang
Calibration Technician

[Signature]
Mrs. Nongkiet Wongtong
Technical Manager

Certificate No.: G 670781

Standard	Certificate No.	Vendor	Due date
Oxygen (O2) 2.50 % vol	2412/23	Under	27-Aug-27
Oxygen (O2) 9.984 % vol	CG-6113-24	Nent	01-Aug-29
Oxygen (O2) 21.02 % vol	CG-6041-22	Nent	19-Feb-27
Carbon monoxide (CO) 80.18 ppm	CG-6003-24	Nent	19-Jan-29
Carbon monoxide (CO) 302 ppm	1915/23	Under	19-Jan-25
Carbon monoxide (CO) 1007 ppm	1876/24	Under	17-Jan-26
Nitric Oxide (NO) 30.0 ppm	CG-6068-24	Nent	09-Jan-26
Nitric Oxide (NO) 151.5 ppm	0161/23	Under	22-Jan-25
Nitric Oxide (NO) 322.5 ppm	1974/23	Under	17-Jul-25
Sulphur Dioxide (SO2) 30.36 ppm	2009/23	Under	17-Jul-25
Sulphur Dioxide (SO2) 100.8 ppm	3507/22	Under	09-Nov-24
Sulphur Dioxide (SO2) 600.8 ppm	2003/23	Under	17-Jul-25

Measured room conditions
Temperature : 21.8 °C Humidity : 59.7 %RH Pressure : 1010.1 mbar
Calibration conditions
Gas Temperature : 23 °C Flow rate : 600 ml/min Gas pressure : 1012.4 mbar

Parameter of Standard	Standard Values	Mean of UUC	Error	Uncertainty (k)
O2 (%vol)	2.50	2.47	-0.03	0.15
O2 (%vol)	9.984	9.92	-0.064	0.20
O2 (%vol)	21.02	21.11	0.09	0.30
CO (ppm)	80.18	77	-3.18	3.6
CO (ppm)	302	295	-7	6.0
CO (ppm)	1007	986	-21	12
NO (ppm)	30.0	27	-3.0	8.0
NO (ppm)	151.5	147	-4.5	8.0
NO (ppm)	322.5	311	-11.5	12
SO2 (ppm)	30.36	31	-0.64	6.0
SO2 (ppm)	100.8	102	1.2	6.0
SO2 (ppm)	600.8	603	2.2	13

Certificate No.: G 670781

Parameter of Standard	Standard Values	Mean of UUC	Error	Uncertainty (k)
O2 (%vol)	2.50	2.47	-0.03	0.15
O2 (%vol)	9.984	9.92	-0.064	0.20
O2 (%vol)	21.02	21.11	0.09	0.30
CO (ppm)	80.18	77	-3.18	3.6
CO (ppm)	302	295	-7	6.0
CO (ppm)	1007	986	-21	12
NO (ppm)	30.0	27	-3.0	8.0
NO (ppm)	151.5	147	-4.5	8.0
NO (ppm)	322.5	311	-11.5	12
SO2 (ppm)	30.36	31	-0.64	6.0
SO2 (ppm)	100.8	102	1.2	6.0
SO2 (ppm)	600.8	603	2.2	13

Remark : 1 cmol/mol = 1 %vol, 1 ppmol/mol = 1 ppm.

End of Report



Air Sampling Pump Calibration Report

Page 1 of 1
Calibration No. : C-070125-RYG_P0011

Air Sampling Pump Detail			
Calibration Date	7 Jan 2025	Next cal.	7 Apr 2025
Air Sampling Pump ID	RYG_F50513	Barometric (mmHg)	751
Serial No.	20201110093	Temperature (°C)	25.0

Reference Standard Low Flow Meter			
Brand	Metalabs	ID	RYG_F50208
Model	Defender S10-H	Serial No.	130027
Due Date	13-Aug-25		

Reference Standard High Flow Meter			
Brand	Metalabs	ID	BKK_F50614
Model	Defender S10-H	Serial No.	151114
Due Date	21-May-25		

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation			
	1	2	3			Pass/Fail			
20	20.1	20.2	19.9	20.1	21	19	Passed		
50	50.3	50.3	50.2	50.3	52.5	47.5	Passed		
100	100.1	99.8	100.0	100.0	105	95	Passed		
200	199.4	200.0	199.7	199.7	210	190	Passed		
500	505.8	495.0	507.1	501.3	515	485	Passed		
1000	997.1	994.1	991.2	994.1	1010	990	Passed		
2000	2003.0	2005.4	2001.7	2003.4	2020	1980	Passed		
2500	2514.9	2503.7	2510.1	2512.6	2530	2450	Passed		

Note : Reference Specifications ± 3% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Buratt Approved by : Wichan Choonhan
(Mr. Chanon Boonchuen) (Mr. Wichan Choonhan)
Enviro Field Services Scientist (1) Enviro Field Services Manager

FORM NO. : F-06-115 REVISION NO. : 1 ISSUE DATE: 10/04/24

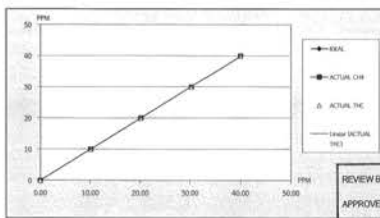


TEST REPORT

CUSTOMER NAME	ALS Laboratory Group (Thailand) Co., Ltd. (บริษัท แอลเอส ลैบอราทอรี กรุ๊ป จำกัด)		
EQUIPMENT NAME	THC Analyzer		
MANUFACTURER	HORIBA	MODEL	APHA-370
STANDARD GAS CONCENTRATION (PPM) (CH4)	506.1 PPM	CYLINDER NO	CC734373
CYLINDER PRESSURE (psig)	1,660 PSI	CERTIFIED DATE	12/05/2020
CERTIFIED BY :	ARGAS	EXPIRED DATE	12/05/2028

TEST RESULTS

TEST RESULTS							
POINT NO	IDEAL	ACTUAL CH4	ERROR CH4	MINOR CH4	ACTUAL THC	ERROR THC	MINOR THC
ZERO	0.00	0.00	0.00	-	0.00	0.00	-
1	10.00	10.05	0.05	0.50	10.05	0.05	0.50
2	20.00	20.10	0.10	0.50	20.12	0.12	0.60
3	30.00	30.29	0.29	0.91	30.27	0.27	0.90
4	40.00	40.01	0.01	0.02	40.02	0.02	0.05
AVERAGE (%)			0.50			0.51	



Calibrated by : ARGAS DATE : 6/3/68
Checked by : ARGAS DATE : 6/3/68
NAC
REVIEWED BY : ARGAS
APPROVED BY : ARGAS
NEXT CAL DATE : 6/3/2024

สำหรับข้อมูลการสอบเทียบ : บริษัท แอลเอส ลैบอราทอรี กรุ๊ป จำกัด 02-668-0812 # 1514, E-Mail : Engineering@alsgroup.com
หรือ 0214-1514705-36 หรือโทรเลข 7,711 หรือโทรสาร 02-668-0812-13 โทรสาร 02-668-0808

373130-750-101/722-40-44



CHECK LIST

CUSTOMER NAME	ALS Laboratory Group (Thailand) Co., Ltd. (บริษัท แอลเอส ลैบอราทอรี กรุ๊ป จำกัด)		
EQUIPMENT NAME	THC Analyzer		
MANUFACTURER	HORIBA	MODEL	APHA-370
SERIAL NO.	U40307H0		
TEST VALUES			
NO.	THC Analyzer (APHA - 370)	UNIT	BEFORE AFTER
1	Signal (CH4)	ppm	35.50 35.40
2	Signal (THC)	ppm	36.40 30.10
3	Detector	Temp °C, Standard Value : Ambient temp (25°C±3°C)	40.30 40.80
4	Ambient	Pressure kPa, Standard Value : (Ambient/101.3kPa-101.3kPa)	69.50 69.50
5	Ambient	MPa current atmospheric pressure	100.65 100.50
6	Purifier	°C, Standard Value : 395 °C to 430 °C	419.90 419.80
7	Make	MPa, Normal value : 6 MPa to 35 MPa	9.70 9.70
8	NIR-IC	°C, Standard Value : 230 °C to 260 °C	244.00 244.10
9	DC 24 V	V, Standard Value : 24 V to 26 V	23.90 23.90
10	DC 5 V	V, Standard Value : 5 V to 5.5 V	5.00 5.00
11	Bypass (Optional)	L/min, Normal value : 0.9 L/min to 0.3 L/min	- -
12	Over Flow (Optional)	L/min, Standard Value : 0.8 L/min or More	- -
13	CH4 Sampling Reading	PPM	2.08 2.07
14	THC Sampling Reading	PPM	0.06 0.75
15	THC Sampling Reading	PPM	2.14 2.82
16	Zero Gas CH4/THC	PPM	0.00/0.02 0.00/0.00
17	Span Gas	PPM	39.66/39.70 40.01/40.02
18	Span Gas	20 PPS	20 20

Remark : Reference : EX-017-56, Ambient HC Monitor APHA-370 Operation Manual Page 81

Remark : Ambient temperature : 25°C to 40°C

การตรวจสอบ

Service Maintenance

การสอบเทียบ

การสอบเทียบ : ทำ Calibration Zero/Span, Multiport

ผลการสอบเทียบ

ผลการสอบเทียบ : ผลการสอบเทียบ : 6/3/68

ผลการสอบเทียบ : ผลการสอบเทียบ : 6/3/68

Calibrated by : ARGAS DATE : 6/3/68
Checked by : ARGAS DATE : 6/3/68
NAC
REVIEWED BY : ARGAS
APPROVED BY : ARGAS
NEXT CAL DATE : 6/3/2024

สำหรับข้อมูลการสอบเทียบ : บริษัท แอลเอส ลैบอราทอรี กรุ๊ป จำกัด 02-668-0812 # 1514, E-Mail : Engineering@alsgroup.com
หรือ 0214-1514705-36 หรือโทรเลข 7,711 หรือโทรสาร 02-668-0812-13 โทรสาร 02-668-0808

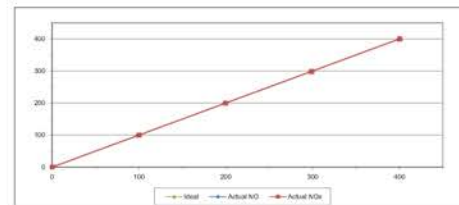
373130-750-101/722-40-44



MULTIPOINT CALIBRATION REPORT

Calibration Date	4-Jan-25	Equipment Name	NOx Analyzer
Manufacturer	HORIBA	Model	APNA-370
Serial No.	T27EYRL	Equipment ID	RYG_F50457
Calibrator Manufacturer	Teledyne API	Model	700
Serial No.	947		
Std. Gas Concentration (PPM)	55.88	Cylinder No.	GN0027222
Cylinder Pressure (psi)	1800	Certified By	Argas Inc.
Certified Date	9-Feb-22	Expired Date	9-Feb-30

CALIBRATION RESULTS							
Point	Ideal	Actual NO	Error NO	%Error NO	Actual NOx	Error NOx	%Error NOx
ZERO	0.00	0.10	0.10	0.10	0.10	0.10	0.10
1	100.00	99.30	-1.70	-1.70	100.30	0.30	0.30
2	200.00	198.40	-1.60	-0.80	199.80	-0.20	-0.10
3	300.00	297.70	-2.30	-0.77	298.50	-1.50	-0.50
4	400.00	398.60	-1.40	-0.35	400.50	0.50	0.13
AVERAGE (%)				-0.70			-0.01



Calibrated By : ARGAS
(Mr. Jirawat Sakam)
Field Environmental Scientist (3)

Approved By : ARGAS
(Mr. Jirawat Sakam)
Assistant General Manager

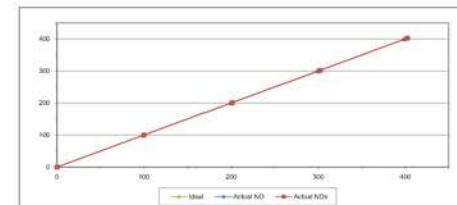
ALS Laboratory Group
FORM NO. : F-06-056 REVISION NO. : ISSUE DATE: 02/04/22



MULTIPOINT CALIBRATION REPORT

Calibration Date	4-Jan-25	Equipment Name	NOx Analyzer
Manufacturer	HORIBA	Model	APNA-370
Serial No.	T85HWM41	Equipment ID	RYG_F50461
Calibrator Manufacturer	Teledyne API	Model	700
Serial No.	947		
Std. Gas Concentration (PPM)	55.88	Cylinder No.	GN0027222
Cylinder Pressure (psi)	1800	Certified By	Argas Inc.
Certified Date	9-Feb-22	Expired Date	9-Feb-30

CALIBRATION RESULTS							
Point	Ideal	Actual NO	Error NO	%Error NO	Actual NOx	Error NOx	%Error NOx
ZERO	0.00	0.10	0.10	0.10	0.10	0.10	0.10
1	100.00	98.70	-1.30	-1.30	100.10	0.10	0.10
2	200.00	201.00	1.00	0.50	201.00	1.00	0.50
3	300.00	298.70	-1.30	-0.43	302.10	2.10	0.70
4	400.00	398.40	-1.60	-0.40	402.60	2.60	0.65
AVERAGE (%)				-0.31			0.41



Calibrated By : ARGAS
(Mr. Jirawat Sakam)
Field Environmental Scientist (3)

Approved By : ARGAS
(Mr. Jirawat Sakam)
Assistant General Manager

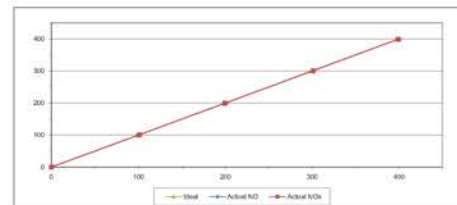
ALS Laboratory Group
FORM NO. : F-06-056 REVISION NO. : ISSUE DATE: 02/04/22



MULTIPOINT CALIBRATION REPORT

Calibration Date	4-Jan-25	Equipment Name	NOx Analyzer
Manufacturer	HORIBA	Model	APNA-370
Serial No.	NVDR3YH	Equipment ID	RYG_F50459
Calibrator Manufacturer	Teledyne API	Model	700
Serial No.	947		
Std. Gas Concentration (PPM)	55.88	Cylinder No.	GN0027222
Cylinder Pressure (psi)	1800	Certified By	Argas Inc.
Certified Date	9-Feb-22	Expired Date	9-Feb-30

CALIBRATION RESULTS							
Point	Ideal	Actual NO	Error NO	%Error NO	Actual NOx	Error NOx	%Error NOx
ZERO	0.00	0.05	0.05	0.05	0.10	0.10	0.10
1	100.00	99.30	-0.70	-0.70	101.20	1.20	1.20
2	200.00	198.70	-1.30	-0.65	199.70	-0.30	-0.15
3	300.00	301.10	1.10	0.37	301.20	1.20	0.40
4	400.00	400.30	0.30	0.08	398.80	-1.20	-0.30
AVERAGE (%)				-0.13			0.28



Calibrated By : ARGAS
(Mr. Jirawat Sakam)
Field Environmental Scientist (3)

Approved By : ARGAS
(Mr. Jirawat Sakam)
Assistant General Manager

ALS Laboratory Group
FORM NO. : F-06-056 REVISION NO. : ISSUE DATE: 02/04/22

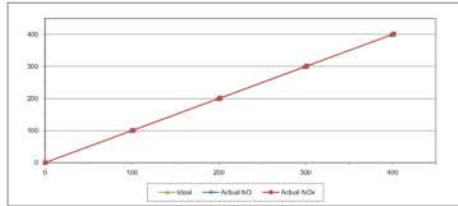


MULTIPOINT CALIBRATION REPORT

Calibration Date: 4-Jan-25
Manufacturer: HORIBA
Serial No.: UBADEAGK
Calibrator Manufacturer: Teledyne API
Serial No.: 947
Std. Gas Concentration (PPM): 55.88
Cylinder Pressure (psi): 1800
Certified Date: 9-Feb-22

Equipment Name: NOx Analyzer
Model: APNA-370
Equipment ID: RYG_F80551
Model: 700
Cylinder No.: GN0027222
Certified By: Algas Inc.
Expired Date: 9-Feb-30

Point	CALIBRATION RESULTS						
	Ideal	Actual NO	Error NO	%Error NO	Actual NOx	Error NOx	%Error NOx
ZERO	0.00	0.10	0.10	0.10	0.10	0.10	0.10
1	100.00	99.00	-1.00	-1.00	101.30	1.30	1.30
2	200.00	198.70	-1.30	-0.65	201.30	1.30	0.65
3	300.00	298.40	-1.60	-0.53	301.20	1.20	0.40
4	400.00	398.50	-1.50	-0.38	401.30	1.30	0.33
AVERAGE (%)				-0.49			0.58



Calibrated By

(Mr. Jirawut Sakun)
Field Environmental Scientist (3)

Approved By

(Mr. Sarayuth Jitranont)
Assistant General Manager

ALS Laboratory Group
FORM NO. F-16-056 REVISION NO. 1 ISSUE DATE: 02/04/12

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Agilent CrossLab Compliance Services

Certificate of System Qualification

GC-QQ - GCMS-QQ

System ID: RYG_EN0136
Organization Name: ALS Laboratory Group (Thailand) Co.Ltd.
Organization Location: 51610, Moo 5, Tambol Mae Nam Khu, Phuk Oeng, Rayong, 21140, Thailand
Date: January 5, 2024 10:53:24 AM
EQP Name: AgilentRecommended, AgilentRecommended
EQP Revision: GC.02.54, GCMS.02.54
Overall Qualification Status: Pass

REVIEW BY: Chotichai
APPROVED BY: [Signature]
NEXT CAL. DATE: 08/2025

CDS Legon Verification - GC

Legon: chotichai.Murksee

Overall CDS Legon Verification - GC Test Status

Pass

System Inspection and Basic Safety and Operation

Name: 7890

Setpoint Status: Pass

Overall System Inspection and Basic Safety and Operation Test Status

Pass

Inlet Pressure Accuracy

Name: 7890

Front: SSL

Setpoint Status: Pass

Actual: 25.0

Inlet Pressure: 25.0 psi

Accuracy: 0.0

Agilent Recommended: <= 1.2

Date: January 5, 2024 10:53:24 AM
System ID: RYG_EN0136

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Agilent CrossLab Compliance Services

Overall Inlet Pressure Accuracy Test Status

Pass

GC Oven Temperature Accuracy

Name: 7890

Setpoint Status: Pass

Zone: Oven

Setpoint/Actual

Temperature: 230.0

Accuracy: -1.0

Agilent Recommended: <= 1.0

% setpoint in K

% setpoint in K

Setpoint Status: Pass

Zone: Oven

Setpoint/Actual

Temperature: 100.0

Accuracy: 0.8

Agilent Recommended: <= 1.0

% setpoint in K

% setpoint in K

Overall GC Oven Temperature Accuracy Test Status

Pass

GC Oven Temperature Stability

Name: 7890

Setpoint Status: Pass

Setpoint/Average

Temperature: 100.0

Stability: 0.1

Agilent Recommended: <= 0.5

Overall GC Oven Temperature Stability Test Status

Pass

Date: January 5, 2024 10:53:24 AM
System ID: RYG_EN0136

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Agilent CrossLab Compliance Services

Instrument Details

Purpose

This section describes the as found system configuration.

Details

System

System ID

Manufacturer

Name

Flow Data Input

Temperature Data Input

Tested Combination1

Injection Technique

Inlet

Detector

UTM Included?

Sampler 1

Manufacturer

Type

Usage

Syringe Volume (uL)

Mainframe 1

Manufacturer

Name

Model Number

Serial Number

Firmware Revision

Component ID/Asset No.

Open Type

Date: January 5, 2024 10:53:24 AM
System ID: RYG_EN0136

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User Name: admin@_pumpgroup

Report Generated by Testimony: ASDY000010

System ID: RY10_000136

Print Date: January 5, 2024 10:53:24 AM

ALS_001_RY10_000136 Transaction log

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
January 5, 2024 8:53:05 AM	End	Qualification	Session	DD
January 5, 2024 9:36:36 AM	Start	Reporting	Session	None
January 5, 2024 9:37:48 AM	End	Reporting	Session	None
January 5, 2024 9:37:48 AM	Start	Qualification	Session	DD
January 5, 2024 9:37:48 AM	Start	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	None
January 5, 2024 9:38:18 AM	Auto	Data	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Data File Path: D:\Q000000000_P10.D
January 5, 2024 9:40:02 AM	End	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Run Count: 1
January 5, 2024 9:40:30 AM	Start	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	None
January 5, 2024 9:40:14 AM	Auto	Data	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Data File Path: D:\Q000000000_P10.D
January 5, 2024 10:00:19 AM	End	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Run Count: 1

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Date: January 5, 2024 10:53:24 AM
System ID: RY10_000136

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User Name: admin@_pumpgroup

Report Generated by: Testimony: ASDY000010

System ID: RY10_000136

Print Date: January 5, 2024 10:53:24 AM

ALS_001_RY10_000136

Transaction log

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
January 5, 2024 10:00:01 AM	Auto	Test/Qualification	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Qualification Test for Run Count: 1
January 5, 2024 10:00:01 AM	Start	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	None
January 5, 2024 10:13:48 AM	Auto	Data	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Data File Path: D:\Q000000000_P10.D
January 5, 2024 10:17:58 AM	End	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Run Count: 2
January 5, 2024 10:22:04 AM	Auto	Test/Qualification	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Qualification Test for Run Count: 2
January 5, 2024 10:22:04 AM	Start	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	None
January 5, 2024 10:22:15 AM	Auto	Data	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Data File Path: D:\Q000000000_P10.D
January 5, 2024 10:26:37 AM	End	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Run Count: 3

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Date: January 5, 2024 10:53:24 AM
System ID: RY10_000136

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User Name: admin@_pumpgroup

Report Generated by: Testimony: ASDY000010

System ID: RY10_000136

Print Date: January 5, 2024 10:53:24 AM

ALS_001_RY10_000136 Transaction log

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
January 5, 2024 10:26:37 AM	Auto	Test/Qualification	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Qualification Test for Run Count: 3
January 5, 2024 10:26:37 AM	Start	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	None
January 5, 2024 10:40:05 AM	Auto	Data	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Data File Path: D:\Q000000000_P10.D
January 5, 2024 10:40:34 AM	End	Execution	Signal to Noise (S1 - Liquid Injection, Front BSL, S2 - Source: S1 - Detector using Flammant 2 - L1 - 1200	Run Count: 4
January 5, 2024 10:40:41 AM	End	Qualification	Session	DD
January 5, 2024 10:40:41 AM	Start	Reporting	Session	None
January 5, 2024 10:40:57 AM	Auto	Reporting	Session	Report Generated: Confirmed
January 5, 2024 10:41:07 AM	Auto	Reporting	Session	Report Generated: Report
January 5, 2024 10:51:29 AM	Auto	Reporting	Session	Report Generated: Confirmed
January 5, 2024 10:52:00 AM	Auto	Reporting	Session	Report Generated: Report

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Date: January 5, 2024 10:53:24 AM
System ID: RY10_000136

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INNOVATIVE INSTRUMENT CALIBRATION LAB
INNOVATIVE INSTRUMENT CO., LTD. HEAD OFFICE
7100 MOJO IL, 3RD FLOOR, 111 TAMBON BANG KARD
AMPHUW BANG KARD DISTRICT, PHRACHIN BURI PROVINCE 30000 THAILAND
TEL: 0866-2166-0001 FAX: 0866-2166-7540

Certificate of Calibration

Certificate No: 25-AFM-023

Customer: ALS Laboratory Group Thailand Co., Ltd.
Request No: Req-2023-0169Address: 104 Moo Phatthanasak 40, Phatthanasak Road, Suan Luang,
Bangkok 10250

Unit Under Calibration Details

Measurement Item: Air Flow Meter
Manufacturer: Moxa Labs
Model: 200-510C
Serial Number: 130027
ID: RY10_FK0008

Agency: ICS of Roading

Sensor Model: -

Sensor Serial Number: -

Instrument Status: Good

Location of Calibration: LAB 4 AIR VELOCITY METER

Calibration Environment and Details

Temperature: 23 °C ± 1 °C
Humidity: 55% RH ± 20% RH
Barometric Pressure: 1013 hPa ± 10 hPa
Received Date: 21 January 2025
Calibration Due: 27 January 2025
Calibration Procedure: In-house method CP-AFM-01 by Comparison technique with Standard Primary Flow CalibratorREVIEW BY: [Signature]
APPROVED BY: [Signature]
NEXT CAL DATE: 26/01/26

Reference Standard	Model	Serial Number	Traceable	Due Calibration
Air Flow Meter	GI-2000 3 Low flow	16501010006	Scandynav	8 August 2025
Air Flow Meter	GI-2000 3 Standard flow	19001011003	Scandynav	7 August 2025
Temperature meter	OT 11	08900007	Qinetiqa	1 March 2025
Pressure meter	CP2400	4100800161002	TPA	21 October 2025

Traceability: The Certificate is traceable to SI Unit through Scandynav A2LA Accreditation No. 2940.01
Note: The reported uncertainty is based on standard uncertainty multiplied by the Coverage Factor k = 2, providing a level of confidence approximately 95 %Calibration By: [Signature]
Mr. Nopphadol - Engineer
Service Calibration Engineer
Approved By: [Signature]
Mr. Paitin Mahasarak
Calibration Engineer Supervisor
Issue Date: 27 January 2025INNOVATIVE INSTRUMENT CALIBRATION LAB
INNOVATIVE INSTRUMENT CO., LTD. HEAD OFFICE
7100 MOJO IL, 3RD FLOOR, 111 TAMBON BANG KARD
AMPHUW BANG KARD DISTRICT, PHRACHIN BURI PROVINCE 30000 THAILAND
TEL: 0866-2166-0001 FAX: 0866-2166-7540

Certificate No: 25-AFM-023

Request No: Req-2023-0169

Result of Calibration - Without Adjustment

Temperature (°C)	Pressure (kPa)	STD (cc/min)	CUC (cc/min)	Error (cc/min)	Uncertainty (cc/min)	MPE (cc/min)	Result
22.30	100.00	20	19.54	-0.1	1.3	0.2	Pass
22.30	100.00	50	49.732	-0.3	3.3	0.5	Pass
22.60	100.00	100	100.77	-0.2	2.8	1.0	Pass
22.70	100.00	131	130.23	-0.6	4.2	1.3	Pass
22.70	100.00	201	200.39	-0.6	5.6	2.0	Pass
22.70	100.00	301	300.69	-0.3	8.4	3.0	Pass
22.80	100.00	400	402.96	3.0	11	4.0	Pass
23.10	100.00	500	504.62	4.6	7.2	5.0	Pass

Note: STD - Standard UUC - User Under Calibration
- UUC Reference Condition: At atmospheric pressure and room temperature condition
- Flow Rate was corrected for non-standard operating conditions by using equation:

$$Q_{\text{meas}} = Q_{\text{ref}} \times \frac{P_{\text{ref}}}{P_{\text{ref}}} \times \frac{T_{\text{meas}}}{T_{\text{ref}}}$$

where: Q - Flow Rate; P - Absolute Pressure; T - Absolute Temperature
Meas - Measurement Condition; ref - Standard Condition* Indicates not successful
MPE - Maximum Permissible Error (Specified in Manufacturer's Specifications)
N/A - Not Applicable, Customer does not require a statement of conformity.INNOVATIVE INSTRUMENT CALIBRATION LAB
INNOVATIVE INSTRUMENT CO., LTD. HEAD OFFICE
7100 MOJO IL, 3RD FLOOR, 111 TAMBON BANG KARD
AMPHUW BANG KARD DISTRICT, PHRACHIN BURI PROVINCE 30000 THAILAND
TEL: 0866-2166-0001 FAX: 0866-2166-7540

Certificate No: 25-AFM-023

Request No: Req-2023-0169

Decision Rule for Statement of Conformity

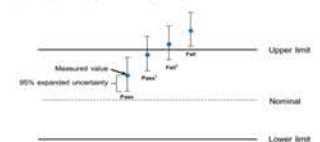
The statistical decision rule, provided for the statement of conformity in each calibration result, will be applied using G-NC-009-2019 Guidelines on the Reporting of Conformity with Uncertainty following P₉₅ and P_{99.99}.

Pass - The measurement result plus the expanded uncertainty with a 95% coverage probability was within the limit.

Pass+ - The measurement result was within the limit. However, a portion of the expanded uncertainty of measurement at 95% exceeds the limit.

Fail - The measurement result was out of the limit. However, a portion of the expanded uncertainty of measurement at 95% is within the limit.

Fail+ - The measurement result after the expanded uncertainty with a 95% coverage probability was outside the limit.



End of Certificate



Air Sampling Pump Calibration Report

Page 1 of 1
Calibration No. : C-060125-RYG_P50283

Air Sampling Pump Detail							
Calibration Date	6 Jan 2025		Next cal.	6 Apr 2025			
Air Sampling Pump ID	RYG_P50283		Barometric (mmHg)	755.9			
Serial No.	20150410008		Temperature (°C)	25.9			
Reference Standard Low Flow Meter							
Brand	MesaLabs		ID	RYG_P50208			
Model	Defender S10-L		Serial No.	130027			
Due Date	13-Aug-25						
Reference Standard High Flow Meter							
Brand	MesaLabs		ID	BXX_P50614			
Model	Defender S10-M		Serial No.	151114			
Due Date	21-May-25						
Calibration Data							
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	
	1	2	3				
20	20.7	19.7	19.2	19.9	21	19	Passed
50	48.9	48.8	49.0	48.9	52.5	47.5	Passed
100	101.2	101.6	101.0	101.3	105	95	Passed
200	200.1	200.0	200.3	200.1	210	190	Passed
500	511.2	510.4	504.0	508.5	515	485	Passed
1000	998.8	1008.7	995.8	1001.1	1010	990	Passed
2000	2000.8	1997.8	2005.4	2001.3	2020	1980	Passed
2500	2527.9	2531.7	2516.9	2525.5	2550	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Wichan Choonharat
(Mr. Nattawat Sarin)
Enviro Field Services Scientist (1)

Approved By : Wichan Choonharat
(Mr. Wichan Choonharat)
Enviro Field Services Manager

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Air Sampling Pump Calibration Report

Page 1 of 1
Calibration No. : C-060125-RYG_P50366

Air Sampling Pump Detail							
Calibration Date	6 Jan 2025		Next cal.	6 Apr 2025			
Air Sampling Pump ID	RYG_P50366		Barometric (mmHg)	755.9			
Serial No.	20180610059		Temperature (°C)	25.9			
Reference Standard Low Flow Meter							
Brand	MesaLabs		ID	RYG_P50208			
Model	Defender S10-L		Serial No.	130027			
Due Date	13-Aug-25						
Reference Standard High Flow Meter							
Brand	MesaLabs		ID	BXX_P50614			
Model	Defender S10-M		Serial No.	151114			
Due Date	21-May-25						
Calibration Data							
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	
	1	2	3				
20	19.9	20.0	20.0	20.0	21	19	Passed
50	49.9	49.8	50.1	49.9	52.5	47.5	Passed
100	101.2	101.0	100.9	101.0	105	95	Passed
200	200.6	200.3	200.2	200.4	210	190	Passed
500	489.7	493.1	493.1	492.0	515	485	Passed
1000	996.0	993.4	991.8	993.7	1010	990	Passed
2000	2006.4	1994.2	1991.9	1997.5	2020	1980	Passed
2500	2501.7	2501.5	2509.7	2504.3	2550	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Wichan Choonharat
(Mr. Nattawat Sarin)
Enviro Field Services Scientist (1)

Approved By : Wichan Choonharat
(Mr. Wichan Choonharat)
Enviro Field Services Manager

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Air Sampling Pump Calibration Report

Page 1 of 1
Calibration No. : C-060125-RYG_P50205

Air Sampling Pump Detail							
Calibration Date	6 Jan 2025		Next cal.	6 Apr 2025			
Air Sampling Pump ID	RYG_P50202		Barometric (mmHg)	755.9			
Serial No.	20180610055		Temperature (°C)	25.9			
Reference Standard Low Flow Meter							
Brand	MesaLabs		ID	RYG_P50208			
Model	Defender S10-L		Serial No.	130027			
Due Date	13-Aug-25						
Reference Standard High Flow Meter							
Brand	MesaLabs		ID	BXX_P50614			
Model	Defender S10-M		Serial No.	151114			
Due Date	21-May-25						
Calibration Data							
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	
	1	2	3				
20	21.6	21.0	20.4	21.0	21	19	Passed
50	51.1	51.4	51.2	51.2	52.5	47.5	Passed
100	100.5	100.1	99.8	100.1	105	95	Passed
200	201.4	201.8	201.5	201.6	210	190	Passed
500	501.3	506.3	496.0	501.2	515	485	Passed
1000	996.4	1001.9	996.8	998.4	1010	990	Passed
2000	2000.0	2007.9	2002.8	2004.6	2020	1980	Passed
2500	2518.0	2522.8	2515.6	2518.8	2550	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Wichan Choonharat
(Mr. Nattawat Sarin)
Enviro Field Services Scientist (1)

Approved By : Wichan Choonharat
(Mr. Wichan Choonharat)
Enviro Field Services Manager

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Air Sampling Pump Calibration Report

Page 1 of 1
Calibration No. : C-070125-RYG_P50149

Air Sampling Pump Detail							
Calibration Date	3 Jan 2025		Next cal.	3 Apr 2025			
Air Sampling Pump ID	RYG_P50149		Barometric (mmHg)	755.3			
Serial No.	20150810068		Temperature (°C)	25.6			
Reference Standard Low Flow Meter							
Brand	MesaLabs		ID	RYG_P50208			
Model	Defender S10-L		Serial No.	130027			
Due Date	13-Aug-25						
Reference Standard High Flow Meter							
Brand	MesaLabs		ID	BXX_P50614			
Model	Defender S10-M		Serial No.	151114			
Due Date	21-May-25						
Calibration Data							
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	
	1	2	3				
20	19.6	20.0	19.8	19.8	21	19	Passed
50	50.2	50.1	49.8	50.0	52.5	47.5	Passed
100	99.2	98.7	99.0	99.0	105	95	Passed
200	200.7	200.3	199.8	200.3	210	190	Passed
500	500.1	503.3	502.4	502.6	515	485	Passed
1000	1005.0	999.8	1000.7	1001.8	1010	990	Passed
2000	2000.1	2000.6	2001.0	2000.4	2020	1980	Passed
2500	2501.5	2500.0	2495.1	2498.9	2550	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattawan Vorngyoo
(Mr. Nattawan Vorngyoo)
Enviro Field Services Scientist (1)

Approved By : Wichan Choonharat
(Mr. Wichan Choonharat)
Enviro Field Services Manager

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Air Sampling Pump Calibration Report

Page 1 of 1
Calibration No. : C-070125-RYG_P50156

Air Sampling Pump Detail							
Calibration Date	7 Jan 2025		Next cal.	7 Apr 2025			
Air Sampling Pump ID	RYG_P50156		Barometric (mmHg)	751			
Serial No.	20150910028		Temperature (°C)	25.0			
Reference Standard Low Flow Meter							
Brand	MesaLabs		ID	RYG_P50208			
Model	Defender S10-L		Serial No.	130027			
Due Date	13-Aug-25						
Reference Standard High Flow Meter							
Brand	MesaLabs		ID	BXX_P50614			
Model	Defender S10-M		Serial No.	151114			
Due Date	21-May-25						
Calibration Data							
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	
	1	2	3				
20	20.2	20.7	19.8	20.2	21	19	Passed
50	51.5	52.5	51.9	52.0	52.5	47.5	Passed
100	101.3	101.2	101.1	101.2	105	95	Passed
200	202.7	202.2	202.0	202.3	210	190	Passed
500	511.0	510.2	512.9	511.4	515	485	Passed
1000	996.1	993.5	1002.5	997.4	1010	990	Passed
2000	2001.3	2006.0	2004.6	2004.0	2020	1980	Passed
2500	2515.9	2518.0	2505.3	2513.1	2550	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattawan Vorngyoo
(Mr. Nattawan Vorngyoo)
Enviro Field Services Scientist (1)

Approved By : Wichan Choonharat
(Mr. Wichan Choonharat)
Enviro Field Services Manager

FORM NO.: F 06-115 REVISION NO.: 1 ISSUE DATE: 10/04/24



Air Sampling Pump Calibration Report

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Calibration No. : C-070125-RYG_P50159

Air Sampling Pump Detail							
Calibration Date	7 Jan 2025		Next cal.	7 Apr 2025			
Air Sampling Pump ID	RYG_P50159		Barometric (mmHg)	751			
Serial No.	20150910031		Temperature (°C)	25.0			
Reference Standard Low Flow Meter							
Brand	MesaLabs		ID	RYG_P50208			
Model	Defender S10-L		Serial No.	130027			
Due Date	13-Aug-25						
Reference Standard High Flow Meter							
Brand	MesaLabs		ID	BXX_P50614			
Model	Defender S10-M		Serial No.	151114			
Due Date	21-May-25						
Calibration Data							
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	
	1	2	3				
20	20.0	20.4	20.5	20.3	21	19	Passed
50	49.5	50.9	48.4	49.6	52.5	47.5	Passed
100	99.8	99.6	99.8	99.7	105	95	Passed
200	199.2	199.4	199.8	199.5	210	190	Passed
500	507.3	510.4	509.1	508.9	515	485	Passed
1000	991.3	990.8	996.5	992.9	1010	990	Passed
2000	2004.9	1993.5	2017.9	2005.4	2020	1980	Passed
2500	2505.1	2515.9	2509.7	2510.2	2550	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattawan Vorngyoo
(Mr. Nattawan Vorngyoo)
Enviro Field Services Scientist (1)

Approved By : Wichan Choonharat
(Mr. Wichan Choonharat)
Enviro Field Services Manager

FORM NO.: F 06-115 REVISION NO.: 1 ISSUE DATE: 10/04/24



Air Sampling Pump Calibration Report

Calibration No. : C-020125-RYG_F50208

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Air Sampling Pump Detail			
Calibration Date	2 Jan 2025	Next cal.	2 Apr 2025
Air Sampling Pump ID	RYG_F50207	Barometric (mmHg)	755.5
Serial No.	20241110175	Temperature (°C)	25.6

Reference Standard Low Flow Meter			
Brand	MesaLabs	ID	RYG_F50208
Model	Defender 510-L	Serial No.	130027
Due Date	13-Aug-25		

Reference Standard High Flow Meter			
Brand	MesaLabs	ID	BKK_F50614
Model	Defender 510-H	Serial No.	151114
Due Date	21-May-25		

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	Pass/ Fail		
	1	2	3						
20	20.2	20.2	19.7	20.0	21	19	Passed		
50	50.3	50.3	50.3	50.3	52.5	47.5	Passed		
100	101.9	102.1	101.8	101.9	105	95	Passed		
200	200.5	200.9	201.1	200.8	210	190	Passed		
500	499.6	498.8	498.4	498.9	515	485	Passed		
1000	1002.1	999.5	1002.7	1001.4	1010	990	Passed		
2000	1998.9	1997.8	1997.5	1998.1	2020	1980	Passed		
2500	2500.5	2502.6	2498.1	2500.4	2550	2450	Passed		

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattakan V. Approved by : Nichan Choonharat
(Mr. Nattakan Vongyoo) (Mr. Nichan Choonharat)
Enviro Field Services Scientist (1) Enviro Field Services Manager

FORM NO.: F 06-115 REVISION NO.: 1 ISSUE DATE: 10/04/24



Air Sampling Pump Calibration Report

Calibration No. : C-020125-RYG_F50208

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Air Sampling Pump Detail			
Calibration Date	2 Jan 2025	Next cal.	2 Apr 2025
Air Sampling Pump ID	RYG_F50204	Barometric (mmHg)	755.5
Serial No.	20241110172	Temperature (°C)	25.6

Reference Standard Low Flow Meter			
Brand	MesaLabs	ID	RYG_F50208
Model	Defender 510-L	Serial No.	130027
Due Date	13-Aug-25		

Reference Standard High Flow Meter			
Brand	MesaLabs	ID	BKK_F50614
Model	Defender 510-H	Serial No.	151114
Due Date	21-May-25		

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	Pass/ Fail		
	1	2	3						
20	19.3	19.3	19.5	19.4	21	19	Passed		
50	50.2	50.2	50.1	50.2	52.5	47.5	Passed		
100	101.0	100.7	101.2	100.9	105	95	Passed		
200	199.9	200.1	200.8	200.3	210	190	Passed		
500	499.5	499.1	500.0	500.2	515	485	Passed		
1000	1001.0	1001.0	999.4	1000.5	1010	990	Passed		
2000	2003.0	1999.9	1999.0	2000.6	2020	1980	Passed		
2500	2498.4	2497.7	2498.9	2498.3	2550	2450	Passed		

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattakan V. Approved by : Nichan Choonharat
(Mr. Nattakan Vongyoo) (Mr. Nichan Choonharat)
Enviro Field Services Scientist (1) Enviro Field Services Manager

FORM NO.: F 06-115 REVISION NO.: 1 ISSUE DATE: 10/04/24



Air Sampling Pump Calibration Report

Calibration No. : C-020125-RYG_F50208

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Air Sampling Pump Detail			
Calibration Date	2 Jan 2025	Next cal.	2 Apr 2025
Air Sampling Pump ID	RYG_F50203	Barometric (mmHg)	755.5
Serial No.	20241110181	Temperature (°C)	25.6

Reference Standard Low Flow Meter			
Brand	MesaLabs	ID	RYG_F50208
Model	Defender 510-L	Serial No.	130027
Due Date	13-Aug-25		

Reference Standard High Flow Meter			
Brand	MesaLabs	ID	BKK_F50614
Model	Defender 510-H	Serial No.	151114
Due Date	21-May-25		

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	Pass/ Fail		
	1	2	3						
20	20.0	20.2	20.2	20.1	21	19	Passed		
50	49.5	49.5	49.6	49.5	52.5	47.5	Passed		
100	100.8	100.9	100.5	100.7	105	95	Passed		
200	199.9	199.8	199.7	199.8	210	190	Passed		
500	500.3	500.7	503.5	502.8	515	485	Passed		
1000	999.8	992.4	998.2	996.8	1010	990	Passed		
2000	2000.3	1995.2	1996.0	1997.2	2020	1980	Passed		
2500	2498.7	2496.5	2497.7	2497.6	2550	2450	Passed		

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattakan V. Approved by : Nichan Choonharat
(Mr. Nattakan Vongyoo) (Mr. Nichan Choonharat)
Enviro Field Services Scientist (1) Enviro Field Services Manager

FORM NO.: F 06-115 REVISION NO.: 1 ISSUE DATE: 10/04/24

ALS Laboratory Group (Thailand) Co., Ltd.
114 Phatthana Road, Phatthana Road,
Phatthana Road, Sukhumvit Road, 10110
Tel: 02-261-2000 Fax: 02-261-2001



Certificate of Calibration

Certificate No. : C-2022X-RYG_F50100

Air Sampling Pump Detail			
Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50100
Brand	Gill	Serial No.	20150210167
Model type	Gold Pump	Calibration Date	28-Feb-25
		Next calibration date	28-May-25

Reference Standard Low Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	BKK_F50619
Brand	MesaLabs	Serial No.	130026
Model type	Defender 510-L	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Reference Standard High Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	BKK_F50614
Brand	MesaLabs	Serial No.	151114
Model type	Defender 510-H	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	NIST acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)		
	1	2	3						
Low Flow									
20	19.4	20.3	20.1	19.9	5%	19 - 21	Passed		
50	49.9	50.4	51.8	50.6	5%	48 - 53	Passed		
100	99.8	100.3	100.8	100.2	5%	95 - 105	Passed		
200	200.2	200.6	200.3	200.4	5%	190 - 210	Passed		
High Flow									
500	500.4	502.3	499.4	500.7	3%	485 - 515	Passed		
1000	996.2	999.7	999.4	998.4	3%	970 - 1030	Passed		
2000	2007.8	2004.1	2001.7	2004.5	3%	1940 - 2060	Passed		
2500	2515.2	2515.7	2524.3	2518.4	3%	2425 - 2575	Passed		

END OF REPORT

Calibrated by : Nattakan V. Approved by : Sgt S
(Mr. Nattakan Vongyoo) (Mr. Supot Salenthan)
Field Services Field Services Section Head

Issue Date: 28-Feb-25



Air Sampling Pump Calibration Report

Calibration No. : C-070125-RYG_F50006

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Air Sampling Pump Detail			
Calibration Date	7 Jan 2025	Next cal.	7 Apr 2025
Air Sampling Pump ID	RYG_F50006	Barometric (mmHg)	751
Serial No.	20150210165	Temperature (°C)	25.0

Reference Standard Low Flow Meter			
Brand	MesaLabs	ID	RYG_F50208
Model	Defender 510-L	Serial No.	130027
Due Date	13-Aug-25		

Reference Standard High Flow Meter			
Brand	MesaLabs	ID	BKK_F50614
Model	Defender 510-H	Serial No.	151114
Due Date	21-May-25		

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	Pass/ Fail		
	1	2	3						
20	20.6	20.7	20.7	20.7	21	19	Passed		
50	50.1	49.8	49.8	49.9	52.5	47.5	Passed		
100	100.9	101.5	101.0	101.1	105	95	Passed		
200	201.6	200.8	199.9	200.8	210	190	Passed		
500	505.9	505.9	509.4	507.4	515	485	Passed		
1000	997.7	1008.2	1009.5	1005.1	1010	990	Passed		
2000	2016.1	2010.5	2009.5	2012.0	2020	1980	Passed		
2500	2523.1	2520.6	2515.5	2522.1	2550	2450	Passed		

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattakan V. Approved by : Nichan Choonharat
(Mr. Nattakan Vongyoo) (Mr. Nichan Choonharat)
Enviro Field Services Scientist (1) Enviro Field Services Manager

FORM NO.: F 06-115 REVISION NO.: 1 ISSUE DATE: 10/04/24



Air Sampling Pump Calibration Report

Calibration No. : C-020125-RYG_F50203

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Air Sampling Pump Detail			
Calibration Date	3 Jan 2025	Next cal.	3 Apr 2025
Air Sampling Pump ID	RYG_F50215	Barometric (mmHg)	755.3
Serial No.	20201110092	Temperature (°C)	25.6

Reference Standard Low Flow Meter			
Brand	MesaLabs	ID	RYG_F50208
Model	Defender 510-L	Serial No.	130027
Due Date	13-Aug-25		

Reference Standard High Flow Meter			
Brand	MesaLabs	ID	BKK_F50614
Model	Defender 510-H	Serial No.	151114
Due Date	21-May-25		

Calibration Data									
Air Sampling Pump setting (cc/min)	Reference Standard Flow Reading (cc/min)			Avg. (cc/min)	Acceptable (cc/min)	Evaluation	Pass/ Fail		
	1	2	3						
20	19.4	19.5	19.5	19.5	21	19	Passed		
50	49.6	50.6	50.9	50.4	52.5	47.5	Passed		
100	99.3	98.7	99.3	99.1	105	95	Passed		
200	200.7	200.9	200.8	200.8	210	190	Passed		
500	500.2	500.2	503.6	501.0	515	485	Passed		
1000	1005.3	1001.1	1001.8	1002.7	1010	990	Passed		
2000	1997.9	1999.4	2000.1	1999.1	2020	1980	Passed		
2500	2501.9	2492.8	2497.0	2497.2	2550	2450	Passed		

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Nattakan V. Approved by : Nichan Choonharat
(Mr. Nattakan Vongyoo) (Mr. Nichan Choonharat)
Enviro Field Services Scientist (1) Enviro Field Services



Certificate of Calibration

Certificate No. C-030428-RYG_F50215

Air Sampling Pump Detail

Equipment name: Personal Air Sampling Pump
Brand: Gasek
Model/Type: Gasek P305
Equipment ID: RYG_F50215
Serial No: 201020101056
Calibration Date: 02-Apr-25
Next calibration date: 02-Jul-25

Reference Standard Low Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-L
Equipment ID: RYG_F50208
Serial No: 130527
Calibration Date: 27-Jan-25
Due Date: 26-Jan-25

Reference Standard High Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-M
Equipment ID: BOK_F50214
Serial No: 151114
Calibration Date: 9-Sep-24
Due Date: 9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	19.6	20.4	19.8	19.9	5%	19 - 21	Passed
50	50.5	50.8	50.4	50.6	5%	48 - 53	Passed
100	100.7	100.2	101.2	100.7	5%	95 - 105	Passed
200	203.9	204.1	202.9	203.6	5%	190 - 210	Passed
High Flow							
500	508.1	510.8	506.1	508.3	3%	485 - 515	Passed
1000	999.2	1003.5	1010.7	1004.1	3%	970 - 1030	Passed
2000	2013.2	2007.6	2009.8	2010.2	3%	1940 - 2060	Passed
2500	2496.1	2499.9	2501.1	2498.9	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchapon Thamsak)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 03-Apr-25



Certificate of Calibration

Certificate No. C-030428-RYG_F50210

Air Sampling Pump Detail

Equipment name: Personal Air Sampling Pump
Brand: Gasek
Model/Type: Gasek P305
Equipment ID: RYG_F50210
Serial No: 201020101050
Calibration Date: 02-Apr-25
Next calibration date: 02-Jul-25

Reference Standard Low Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-L
Equipment ID: RYG_F50208
Serial No: 130527
Calibration Date: 27-Jan-25
Due Date: 26-Jan-25

Reference Standard High Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-M
Equipment ID: BOK_F50214
Serial No: 151114
Calibration Date: 9-Sep-24
Due Date: 9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	19.6	20.1	19.7	19.8	5%	19 - 21	Passed
50	51.5	51.3	52.0	51.6	5%	48 - 53	Passed
100	100.1	100.9	100.4	100.5	5%	95 - 105	Passed
200	200.3	201.9	200.7	200.9	5%	190 - 210	Passed
High Flow							
500	503.6	514.3	513.5	510.5	3%	485 - 515	Passed
1000	992.1	992.4	994.1	992.9	3%	970 - 1030	Passed
2000	2009.0	1998.7	1997.1	2001.6	3%	1940 - 2060	Passed
2500	2506.5	2501.0	2497.3	2501.5	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchapon Thamsak)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 03-Apr-25



Certificate of Calibration

Certificate No. C-030428-RYG_F50217

Air Sampling Pump Detail

Equipment name: Personal Air Sampling Pump
Brand: Gasek
Model/Type: Gasek P305
Equipment ID: RYG_F50217
Serial No: 201020101056
Calibration Date: 06-Apr-25
Next calibration date: 06-Jul-25

Reference Standard Low Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-L
Equipment ID: RYG_F50208
Serial No: 130527
Calibration Date: 27-Jan-25
Due Date: 26-Jan-25

Reference Standard High Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-M
Equipment ID: BOK_F50214
Serial No: 151114
Calibration Date: 9-Sep-24
Due Date: 9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	20.4	19.9	19.7	20.0	5%	19 - 21	Passed
50	51.7	51.2	50.5	51.1	5%	48 - 53	Passed
100	102.9	101.8	101.6	102.1	5%	95 - 105	Passed
200	199.8	200.2	200.8	200.3	5%	190 - 210	Passed
High Flow							
500	488.2	497.2	489.4	493.3	3%	485 - 515	Passed
1000	999.1	1000.3	999.8	999.7	3%	970 - 1030	Passed
2000	1997.4	1992.1	1997.9	1995.5	3%	1940 - 2060	Passed
2500	2496.8	2494.8	2492.7	2494.8	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchapon Thamsak)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 06-Apr-25



Certificate of Calibration

Certificate No. C-070428-RYG_F50105

Air Sampling Pump Detail

Equipment name: Personal Air Sampling Pump
Brand: Gasek
Model/Type: Gasek P305
Equipment ID: RYG_F50105
Serial No: 201020101079
Calibration Date: 07-Apr-25
Next calibration date: 07-Jul-25

Reference Standard Low Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-L
Equipment ID: RYG_F50208
Serial No: 130527
Calibration Date: 27-Jan-25
Due Date: 26-Jan-25

Reference Standard High Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-M
Equipment ID: BOK_F50214
Serial No: 151114
Calibration Date: 9-Sep-24
Due Date: 9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	19.7	19.7	19.9	19.8	5%	19 - 21	Passed
50	48.8	49.0	49.9	49.6	5%	48 - 53	Passed
100	101.4	101.0	101.0	101.1	5%	95 - 105	Passed
200	201.9	201.1	201.2	201.4	5%	190 - 210	Passed
High Flow							
500	503.9	500.7	502.7	502.4	3%	485 - 515	Passed
1000	1007.9	1005.7	1006.0	1006.5	3%	970 - 1030	Passed
2000	2008.6	2003.2	2004.7	2005.6	3%	1940 - 2060	Passed
2500	2503.5	2504.1	2502.4	2503.3	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchapon Thamsak)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 07-Apr-25



Certificate of Calibration

Certificate No. C-080428-RYG_F50207

Air Sampling Pump Detail

Equipment name: Personal Air Sampling Pump
Brand: Gasek
Model/Type: Gasek P305
Equipment ID: RYG_F50207
Serial No: 201020101074
Calibration Date: 06-Apr-25
Next calibration date: 06-Jul-25

Reference Standard Low Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-L
Equipment ID: RYG_F50208
Serial No: 130527
Calibration Date: 27-Jan-25
Due Date: 26-Jan-25

Reference Standard High Flow Meter

Equipment name: Air Flow Meter
Brand: Messer
Model/Type: Defender 510-M
Equipment ID: BOK_F50214
Serial No: 151114
Calibration Date: 9-Sep-24
Due Date: 9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	20.7	20.1	20.4	20.4	5%	19 - 21	Passed
50	50.6	51.7	50.9	51.1	5%	48 - 53	Passed
100	101.4	101.3	101.0	101.2	5%	95 - 105	Passed
200	200.4	200.8	200.7	200.6	5%	190 - 210	Passed
High Flow							
500	501.6	496.2	498.3	495.5	3%	485 - 515	Passed
1000	995.2	1002.1	994.5	997.4	3%	970 - 1030	Passed
2000	1992.5	2019.8	1993.6	2001.9	3%	1940 - 2060	Passed
2500	2497.4	2491.2	2494.4	2494.4	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchapon Thamsak)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 06-Apr-25

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Agilent CrossLab Compliance Services

Certificate of System Qualification

GC-00

System ID: CN1461066
Organization Name: ALS Laboratory Group (Thailand) Co., Ltd.
Organization Location: 104 Soi 40 Phatthanaburi Rd./Nongwong Buri Lung, Khut Buri Lung, Bangkok 10250

Date: April 21, 2023 3:26:38 PM
EQP Name: Agilent/Recommended
EQP Revision: GC-02.52
Overall Qualification Status: Pass

CDS Legon Verification - GC

Legon: Sangsathai Tanak

Overall CDS Legon Verification - GC Test Status

Pass

System Inspection and Basic Safety and Operation

Name: 7890

Setup Status: Pass

Overall System Inspection and Basic Safety and Operation Test Status

Pass

Initial Pressure Decay

Name: 7890

Front: 50.0

Setup Status: Pass

Pressure: 25.5 psi

Pressure Change: -0.1 psi

Agilent Recommended: <= -2.0 and <= 0.5

Date: April 21, 2023 3:26:38 PM
System ID: CN1461066

Overall Inlet Pressure Decay Test Status

Pass

Inlet Pressure Accuracy

Name: 7890 Front SSL

Setpoint Status:

Setpoint Actual
Pass

Inlet Pressure: 25.0 psi 25.2 psi

Accuracy: 0.2 psi

Agilent Recommended: $\leq \pm 1.2$ psi

Overall Inlet Pressure Accuracy Test Status

Pass

Inlet Pressure Decay

Name: 7890 Back SSL

Setpoint Status:

Pressure: 25.0 psi

Pressure Change: 0.0 psi 0.0 minutes

Agilent Recommended: $\leq \pm 0.0$ psi $\leq \pm 0.5$ minutes

Overall Inlet Pressure Decay Test Status

Pass

Inlet Pressure Accuracy

Name: 7890 Back SSL

Date: April 21, 2023 3:28:38 PM

System ID: CN11461098

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Setpoint Status:

Pass

Inlet Pressure Accuracy

Name: 7890 Front FID

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 28.9 mL/min

Accuracy: 1.1 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 28.9 mL/min

Accuracy: 1.1 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 28.9 mL/min

Accuracy: 1.1 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 28.9 mL/min

Accuracy: 1.1 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Date: April 21, 2023 3:28:38 PM

System ID: CN11461098

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Overall Detector Flow Accuracy Test Status

Pass

Detector Flow Accuracy

Name: 7890 Back FID

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 30.7 mL/min

Accuracy: 0.7 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 30.7 mL/min

Accuracy: 0.7 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status:

Flow Type: Fuel

Setpoint: 30.0 mL/min Measured Flow: 30.7 mL/min

Accuracy: 0.7 mL/min

Agilent Recommended: $\leq \pm 10.0$ % setpoint (3.0 mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Overall Detector Flow Accuracy Test Status

Pass

GC Oven Temperature Accuracy

Name: 7890

Date: April 21, 2023 3:28:38 PM

System ID: CN11461098

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Setpoint Status:

Pass

Zone:

Oven

Setpoint/Actual

Temperature: 230.0 230.6 °C

Accuracy: 0.6 °C

Agilent Recommended: $\leq \pm 1.0$ % setpoint in K (3.0 °C)Agilent Recommended: $\leq \pm 1.0$ % setpoint in K (3.0 °C)

Setpoint Status:

Pass

Zone:

Oven

Setpoint/Actual

Temperature: 100.0 100.9 °C

Accuracy: 0.9 °C

Agilent Recommended: $\leq \pm 1.0$ % setpoint in K (3.7 °C)Agilent Recommended: $\leq \pm 1.0$ % setpoint in K (3.7 °C)

Overall GC Oven Temperature Accuracy Test Status

Pass

GC Oven Temperature Stability

Name: 7890

Setpoint Status:

Pass

Setpoint/Average

Temperature: 100.0 100.833 °C

Stability: 0.1 °C

Agilent Recommended: $\leq \pm 0.5$ °C

Overall GC Oven Temperature Stability Test Status

Pass

Scouting Run

Tested Combination1 Front SSL / Front FID

Name: Injection Tower 7893A

Date: April 21, 2023 3:30:18 PM

System ID: CN11461098

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Setpoint Status:

Completed

Injection Volume on Column:

1.0 µL

Overall Scouting Run Status

Completed

Noise and Drift

Tested Combination1 Front SSL / Front FID

Name: 7890

Setpoint Status:

Pass

Base Signal: 22.7 pA

ASTM Noise

pA

Drift

pA/hr

Agilent Recommended: $\leq \pm 0.10$ pA $\leq \pm 2.50$ pA/hr

Status: Pass Pass

Overall Noise and Drift Test Status

Pass

Injection Precision

Tested Combination1 Front SSL / Front FID

Name: 7893A

Setpoint Status:

Pass

Injection Volume on Column:

1.0 µL

Area RSD:

0.32 %

Agilent Recommended: $\leq \pm 3.00$ %

Retention Time RSD:

0.07 %

Agilent Recommended: $\leq \pm 1.00$ %

Overall Injection Precision Test Status

Pass

Signal to Noise

Signal to Noise

Date: April 21, 2023 3:30:18 PM

System ID: CN11461098

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Tested Combination1 Front SSL / Front FID

Injection Tower

Name: 7890

Setpoint Status:

Pass

Signal to Noise:

721759

Agilent Recommended: $\leq \pm 300000$

Overall Signal to Noise Test Status

Pass

Scouting Run

Tested Combination2 Back SSL / Back FID

Injection Tower

Name: 7893A

Setpoint Status:

Completed

Injection Volume on Column:

1.0 µL

Overall Scouting Run Status

Completed

Noise and Drift

Tested Combination2 Back SSL / Back FID

Name: 7890

Setpoint Status:

Pass

Base Signal: 22.9 pA

ASTM Noise

pA

Drift

pA/hr

Agilent Recommended: $\leq \pm 0.10$ pA $\leq \pm 2.50$ pA/hr

Status: Pass Pass

Date: April 21, 2023 3:30:18 PM

System ID: CN11461098

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Overall Noise and Drift Test Status

Pass

Injection Precision

Tested Combination?

BackSSL / BackFID

Name

7890A

Setpoint Status

Pass

Injection Volume (on Column)

1.0µL

Area RSD

1.28%

Retention Time RSD

0.83%

Agilent Recommended

3.00min1.00min

Overall Injection Precision Test Status

Pass

Signal to Noise

Tested Combination?

BackSSL / BackFID

Name

7890

Setpoint Status

Pass

Signal to Noise

2040360

Agilent Recommended

100000

Overall Signal to Noise Test Status

Pass

Date: April 21, 2023 3:26:38 PMSystem ID: CN11481086Page 8 / 23

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Instrument Details

Purpose

This section describes the as found system configuration.

Details

System

System ID

CN11481086

Manufacturer

Agilent Technologies

Name

7890

Flow Data Input

Manual Data

Temperature Data Input

Manual Data or Other Data Logging

Tested Combination1

Injection Technique

Injection Tower

Sampler Identifier

Sampler 2

Inlet

Front

Detector

Front

LTM Included?

No

Tested Combination2

Injection Technique

Injection Tower

Sampler Identifier

Sampler 3

Inlet

Back

Detector

Back

LTM Included?

No

Sampler 1

Manufacturer

Agilent Technologies

Type

Tow

Name

7890A

Model Number

G4514A

Serial Number

CN15360030

Firmware Revision

A.11.01

Vial Heater

Not Installed

Date: April 21, 2023 3:26:38 PMSystem ID: CN11481086Page 9 / 23

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Sampler 2

Manufacturer

Agilent Technologies

Type

Injection Tower

Name

7890A

Model Number

G4513A

Serial Number

CN16290128

Firmware Revision

A.10.09

Usage

Sample Injection

Location

Front

Syringe Volume (µL)

10

Sampler 3

Manufacturer

Agilent Technologies

Type

Injection Tower

Name

7890A

Model Number

G4513A

Serial Number

CN10340103

Firmware Revision

A.10.09

Usage

Sample Injection

Location

Back

Syringe Volume (µL)

10

Manifester 1

Manufacturer

Agilent Technologies

Name

7890

Model Number

C2443A

Serial Number

CN11481088

Firmware Revision

Version 4.27

Oven Type

Standard

Date: April 21, 2023 3:26:38 PMSystem ID: CN11481086Page 10 / 23

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Inlet 1

Manufacturer

Agilent Technologies

Name

7890

Type

SSL

Location

Front

Carrier Gas

Helium

Control Type

Electronic Pressure Control (EPC)

Purged Inlet

Yes

Inlet 2

Manufacturer

Agilent Technologies

Name

7890

Type

SSL

Location

Back

Carrier Gas

Helium

Control Type

Electronic Pressure Control (EPC)

Purged Inlet

Yes

Detector 1

Manufacturer

Agilent Technologies

Name

7890

Type

FID

Adapter

Capillary

Control Type

Electronic Pressure Control (EPC)

Location

Front

Makeup Gas

Nitrogen

Detector 2

Manufacturer

Agilent Technologies

Name

7890

Type

FID

Adapter

Capillary

Control Type

Electronic Pressure Control (EPC)

Location

Back

Makeup Gas

Nitrogen

Date: April 21, 2023 3:26:38 PMSystem ID: CN11481086Page 11 / 23

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Electronic Signature

Purpose

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Saenguthai Tarak

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April 21, 2023

Reason for Signature

Executed protocol and published this original version of document

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Date: April 21, 2023 3:26:38 PMSystem ID: CN11481086Page 12 / 23

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User Name: nongphat@nom
Hardware: LAPTOP-G4503QWY
System ID: CN11481088
Print Date: April 21, 2023 3:26:40 PM

GC_A_MNA_INLET_AJA Transaction Log

Time	Transaction Status	Activity Performed	Type of Transaction	Additional Information
April 21, 2023 11:21:08 AM	Run	Sequence Created	Sequence	None
April 21, 2023 11:21:08 AM	Start	Configuration	Sequence	None
April 21, 2023 11:21:08 AM	Auto	Initiate	Sequence	User is responsible and does not require an unlock code
April 21, 2023 11:23:04 AM	Auto	Exit code	Sequence	EPC details for online software (24) File path: PhosorPhosorOutConfigure method:24(10) 01 web EPC File Name: 24(10) 01 web EPC Name: AgilentPhosorOutConfigure not transfer (24 03 03)
April 21, 2023 11:23:08 AM	End	Configuration	Sequence	None
April 21, 2023 11:23:14 AM	Start	Qualitative	Sequence	CO2
April 21, 2023 11:23:14 AM	Start	Execution	CO2 Logic Verification - GC - Qualitative test	None
April 21, 2023 11:23:14 AM	End	Execution	CO2 Logic Verification - GC - Qualitative test	Run Count: 1
April 21, 2023 11:23:14 AM	Start	Execution	System Inspection and Basic Safety and Operator - 7890 - Qualitative Test - No supports associated	None
April 21, 2023 11:23:14 AM	End	Execution	System Inspection and Basic Safety and Operator - 7890 - Qualitative Test - No supports associated	Run Count: 1
April 21, 2023 11:23:37 AM	Start	Execution	Inlet Pressure Display - Front (SL) - Pressure Controlled (SL) - 0.03 psi (-) to 0.03 psi (-) - 0.03 psi	None

Date: April 21, 2023 3:26:38 PMSystem ID: CN11481086Page 13 / 23

User Name: xiangqin@al.com
Hostname: LAPTOP-Q289Q28Y
System ID: CN11481088
Print Date: April 21, 2023 3:26:48 PM

GC_6_BNK_END027_ALS Transaction log:

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
April 21, 2023 11:38:05 AM	Auto	Signal to Valve - Injection Tuner: Front SSI, Back FID - Detector: FID - L1 == 30000	Injection	None
April 21, 2023 11:38:05 AM	Start	Execution	Signal to Valve - Injection Tuner: Front SSI, Back FID - Detector: FID - L1 == 30000	Run Count: 1
April 21, 2023 11:38:05 AM	Start	Execution	GC Sampling Run - Injection Tuner: Back SSI, Back FID - Part of System Preparation - No Inks assembled	None
April 21, 2023 11:38:36 AM	Auto	Data New Path: Tuner: Back SSI, Back FID - C:\Users\Public\Documents\GC_6 _JMS_2023-04-20\GC_6 _JMS_2023-04-20 16-00-0000_Press.D\FID1A. d	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	None
April 21, 2023 11:37:50 AM	Start	Execution	GC Sampling Run - Injection Tuner: Back SSI, Back FID - Part of System Preparation - No Inks assembled	Run Count: 1
April 21, 2023 11:37:50 AM	Start	Execution	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	None

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Date: April 21, 2023 3:26:38 PM
System ID: CN11481088

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User Name: xiangqin@al.com
Hostname: LAPTOP-Q289Q28Y
System ID: CN11481088
Print Date: April 21, 2023 3:26:48 PM

GC_6_BNK_END027_ALS Transaction log:

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
April 21, 2023 11:42:02 AM	Auto	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	Injection	None
April 21, 2023 11:42:02 AM	Start	Execution	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	Run Count: 1
April 21, 2023 11:42:03 AM	Start	Execution	Qualification	SSD
April 21, 2023 11:42:03 AM	Start	Execution	Reporting	None
April 21, 2023 12:01:47 PM	Auto	AutoClosed	System	None
April 21, 2023 3:16:07 PM	Auto	AutoRestarted	System	None
April 21, 2023 3:16:10 PM	Auto	ReadyToRestarted	System	None
April 21, 2023 3:16:10 PM	Start	Qualification	System	SSD
April 21, 2023 3:16:10 PM	Auto	AutoRestarted	System	None
April 21, 2023 3:16:10 PM	Auto	ReadyToRestarted	System	None
April 21, 2023 3:17:07 PM	Start	Qualification	System	SSD
April 21, 2023 3:20:46 PM	Auto	Reporting	System	Report Generated: Certificate

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Date: April 21, 2023 3:26:38 PM
System ID: CN11481088

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User Name: xiangqin@al.com
Hostname: LAPTOP-Q289Q28Y
System ID: CN11481088
Print Date: April 21, 2023 3:26:48 PM

GC_6_BNK_END027_ALS Transaction log:

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
April 21, 2023 11:40:17 AM	Auto	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	Injection	None
April 21, 2023 11:40:17 AM	Start	Execution	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	Run Count: 1
April 21, 2023 11:40:17 AM	Start	Execution	Injection Preparation - Injection Tuner: Back SSI, Back FID - GC - L1 (Inlet) == 2.00% L1 (Rel. Time) == 1.00%	None
April 21, 2023 11:40:17 AM	Start	Execution	Injection Preparation - Injection Tuner: Back SSI, Back FID - GC - L1 (Inlet) == 2.00% L1 (Rel. Time) == 1.00%	None
April 21, 2023 11:40:17 AM	Auto	Data New Path: Tuner: Back SSI, Back FID - C:\Users\Public\Documents\GC_6 _JMS_2023-04-20\GC_6 _JMS_2023-04-20 16-00-0000_Press.D\FID1A. d	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	None
April 21, 2023 11:40:17 AM	Auto	Execution	Injection Preparation - Injection Tuner: Back SSI, Back FID - GC - L1 (Inlet) == 2.00% L1 (Rel. Time) == 1.00%	None

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Date: April 21, 2023 3:26:38 PM
System ID: CN11481088

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BKK_END028

Certificate of System Qualification

GC-00

System ID: GC-6_CN11481088
Organization Name: ALS Laboratory Group (Thailand) Co., Ltd.
Organization Location: 104 Soi 40 Phatthanasiri Rd Khwaeng Suan Luang, Khut Suan Luang, Bangkok 10250
Date: October 22, 2024 9:27:05 AM
EOP Name: AgilentRecommended
EOP Revision: GC D2.53
Overall Qualification Status: Pass

CDS Logon Verification - GC

Logon: Successful

Overall CDS Logon Verification - GC Test Status

Pass

System Inspection and Basic Safety and Operation

Name: 7890

Setpoint Status: Pass

Overall System Inspection and Basic Safety and Operation Test Status

Pass

Inlet Pressure Decay

Name: 7890

Front SSI

Setpoint Status: Pass

Pressure: 25.0 psi

Pressure Change: 0.0 psi / 5 minutes

Agilent Recommended: >= -2.0 and <= 0.5

Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CN11481088

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User Name: xiangqin@al.com
Hostname: LAPTOP-Q289Q28Y
System ID: CN11481088
Print Date: April 21, 2023 3:26:48 PM

GC_6_BNK_END027_ALS Transaction log:

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
April 21, 2023 11:40:17 AM	Auto	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	Injection	None
April 21, 2023 11:40:17 AM	Start	Execution	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	Run Count: 1
April 21, 2023 11:40:17 AM	Start	Execution	Injection Preparation - Injection Tuner: Back SSI, Back FID - GC - L1 (Inlet) == 2.00% L1 (Rel. Time) == 1.00%	None
April 21, 2023 11:40:17 AM	Start	Execution	Injection Preparation - Injection Tuner: Back SSI, Back FID - GC - L1 (Inlet) == 2.00% L1 (Rel. Time) == 1.00%	None
April 21, 2023 11:40:17 AM	Auto	Data New Path: Tuner: Back SSI, Back FID - C:\Users\Public\Documents\GC_6 _JMS_2023-04-20\GC_6 _JMS_2023-04-20 16-00-0000_Press.D\FID1A. d	Signal to Valve - Injection Tuner: Back SSI, Back FID - Detector: FID - L1 == 30000	None
April 21, 2023 11:40:17 AM	Auto	Execution	Injection Preparation - Injection Tuner: Back SSI, Back FID - GC - L1 (Inlet) == 2.00% L1 (Rel. Time) == 1.00%	None

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Date: April 21, 2023 3:26:38 PM
System ID: CN11481088

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Overall Inlet Pressure Decay Test Status

Pass

Inlet Pressure Accuracy

Name: 7890

Front SSI

Setpoint Status: Pass

Inlet Pressure: 25.0 psi

Accuracy: 0.1 psi

Agilent Recommended: >= -2.0 and <= 0.5

Overall Inlet Pressure Accuracy Test Status

Pass

Inlet Pressure Decay

Name: 7890

Back SSI

Setpoint Status: Pass

Pressure: 25.0 psi

Pressure Change: 0.0 psi / 5 minutes

Agilent Recommended: >= -2.0 and <= 0.5

Overall Inlet Pressure Decay Test Status

Pass

Inlet Pressure Accuracy

Name: 7890

Back SSI

Setpoint Status: Pass

Pressure: 25.0 psi

Pressure Change: 0.0 psi / 5 minutes

Agilent Recommended: >= -2.0 and <= 0.5

Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CN11481088

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Setpoint Status: **Pass**

Setpoint: **25.0** psi Actual: **25.08** psi

Inlet Pressure: **25.0** psi Accuracy: **0.1** psi

Agilent Recommended: **±1.2**

Overall Inlet Pressure Accuracy Test Status: **Pass**

Detector Flow Accuracy

Name: **7890** Front FID

Setpoint Status: **Pass**

Flow Type: **Fuel**

Setpoint: **30.0** mL/min Measured Flow: **30.8** mL/min

Accuracy: **1.2** mL/min

Agilent Recommended: **±10.0** % setpoint (**3.0** mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status: **Pass**

Flow Type: **Outdoor**

Setpoint: **400.0** mL/min Measured Flow: **392** mL/min

Accuracy: **8.0** mL/min

Agilent Recommended: **±10.0** % setpoint (**40.0** mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status: **Pass**

Flow Type: **Makeup**

Setpoint: **25.0** mL/min Measured Flow: **25.4** mL/min

Accuracy: **0.4** mL/min

Agilent Recommended: **±10.0** % setpoint (**2.5** mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Date: **October 22, 2024 9:27:55 AM**

System ID: **QC-6_C011481068**

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Overall Detector Flow Accuracy Test Status: **Pass**

Detector Flow Accuracy

Name: **7890** Back FID

Setpoint Status: **Pass**

Flow Type: **Fuel**

Setpoint: **30.0** mL/min Measured Flow: **30.8** mL/min

Accuracy: **0.8** mL/min

Agilent Recommended: **±10.0** % setpoint (**3.0** mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status: **Pass**

Flow Type: **Outdoor**

Setpoint: **400.0** mL/min Measured Flow: **393** mL/min

Accuracy: **7.0** mL/min

Agilent Recommended: **±10.0** % setpoint (**40.0** mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Setpoint Status: **Pass**

Flow Type: **Makeup**

Setpoint: **25.0** mL/min Measured Flow: **25.2** mL/min

Accuracy: **0.2** mL/min

Agilent Recommended: **±10.0** % setpoint (**2.5** mL/min)

Limit is percentage of setpoint or 0.5 mL/min, whichever is largest.

Overall Detector Flow Accuracy Test Status: **Pass**

GC Oven Temperature Accuracy

Name: **7890**

Date: **October 22, 2024 9:27:55 AM**

System ID: **QC-6_C011481068**

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Setpoint Status: **Pass**

Zone: **Oven**

Setpoint/Actual: **230.0** °C

Temperature: **230.3** °C

Accuracy: **0.3** °C

Agilent Recommended: **±1.0** % setpoint in K (**±0.6** °C)

±1.0 % setpoint in K (**±0.6** °C)

Setpoint Status: **Pass**

Zone: **Oven**

Setpoint/Actual: **100.0** °C

Temperature: **100.0** °C

Accuracy: **0.0** °C

Agilent Recommended: **±1.0** % setpoint in K (**±0.3** °C)

±1.0 % setpoint in K (**±0.3** °C)

Overall GC Oven Temperature Accuracy Test Status: **Pass**

GC Oven Temperature Stability

Name: **7890**

Setpoint Status: **Pass**

Setpoint/Average: **100.0** °C

Temperature: **100.0187** °C

Stability: **0.1** °C

Agilent Recommended: **±0.5**

Overall GC Oven Temperature Stability Test Status: **Pass**

Scouting Run

Tested Combination1: **Front** SSL / **Front** FID

Injection Tower: **7693A**

Name: **7693A**

Date: **October 22, 2024 9:27:55 AM**

System ID: **QC-6_C011481068**

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Setpoint Status: **Completed**

Injection Volume on Column: **1.0** µL

Overall Scouting Run Status: **Completed**

Noise and Drift

Tested Combination1: **Front** SSL / **Front** FID

Name: **7890**

Setpoint Status: **Pass**

Base Signal: **14.05** pA

ASTM Noise: **0.25** pA

Drift: **0.53** pA/hr

Agilent Recommended: **±0.10** pA

Status: **Pass**

Overall Noise and Drift Test Status: **Pass**

Injection Precision

Tested Combination1: **Front** SSL / **Front** FID

Name: **7693A**

Setpoint Status: **Pass**

Injection Volume on Column: **1.0** µL

Area RSD: **0.30** %

Retention Time RSD: **0.93** %

Agilent Recommended: **±3.00** %

Overall Injection Precision Test Status: **Pass**

Signal to Noise

Date: **October 22, 2024 9:27:55 AM**

System ID: **QC-6_C011481068**

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Tested Combination1: **Front** SSL / **Front** FID

Injection Tower: **7890**

Name: **7890**

Setpoint Status: **Pass**

Signal to Noise: **11076020**

Agilent Recommended: **±30000**

Overall Signal to Noise Test Status: **Pass**

Scouting Run

Tested Combination2: **Back** SSL / **Back** FID

Injection Tower: **7693A**

Name: **7693A**

Setpoint Status: **Completed**

Injection Volume on Column: **1.0** µL

Overall Scouting Run Status: **Completed**

Noise and Drift

Tested Combination2: **Back** SSL / **Back** FID

Name: **7890**

Setpoint Status: **Pass**

Base Signal: **13.79** pA

ASTM Noise: **0.25** pA

Drift: **0.01** pA/hr

Agilent Recommended: **±0.10** pA

Status: **Pass**

Date: **October 22, 2024 9:27:55 AM**

System ID: **QC-6_C011481068**

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Overall Noise and Drift Test Status: **Pass**

Injection Precision

Tested Combination2: **Back** SSL / **Back** FID

Injection Tower: **7693A**

Name: **7693A**

Setpoint Status: **Pass**

Injection Volume on Column: **1.0** µL

Area RSD: **1.06** %

Retention Time RSD: **0.93** %

Agilent Recommended: **±3.00** %

Overall Injection Precision Test Status: **Pass**

Signal to Noise

Tested Combination2: **Back** SSL / **Back** FID

Injection Tower: **7890**

Name: **7890**

Setpoint Status: **Pass**

Signal to Noise: **11771221**

Agilent Recommended: **±30000**

Overall Signal to Noise Test Status: **Pass**

Date: **October 22, 2024 9:27:55 AM**

System ID: **QC-6_C011481068**

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Instrument Details

Purpose
This section describes the as found system configuration.

Details	
System	
System ID	GC-6_CH11481088
Manufacturer	Agilent Technologies
Name	7890
Flow Data Input	Manual Data
Temperature Data Input	Manual Data or Other Data Logging
Tested Combination1	
Injection Technique	Injection Tower
Sampler Identifier	Sampler 1
Inlet	Front
Detector	Front
LTM Included?	No
Tested Combination2	
Injection Technique	Injection Tower
Sampler Identifier	Sampler 2
Inlet	Back
Detector	Back
LTM Included?	No
Sampler 1	
Manufacturer	Agilent Technologies
Type	Injection Tower
Name	7890A
Model Number	G4513A
Serial Number	CHCN10348103
Firmware Revision	A.11.06
Usage	Sample Injection
Location	Front
Syringe Volume (µL)	10

Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CH11481088

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Sampler 2	
Manufacturer	Agilent Technologies
Type	Injection Tower
Name	7890A
Model Number	G4513A
Serial Number	CH14280108
Firmware Revision	A.11.06
Usage	Sample Injection
Location	Back
Syringe Volume (µL)	10
Sampler 3	
Manufacturer	Agilent Technologies
Type	Tray
Name	7890A
Model Number	G4514A
Serial Number	CH15380030
Firmware Revision	A.11.03
Not Installed	Not installed
Maintenance 1	
Manufacturer	Agilent Technologies
Name	7890
Model Number	G3445A
Serial Number	CH11481088
Firmware Revision	A.C1.16
Oven Type	Standard

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System ID: GC-6_CH11481088

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Inlet 1	
Manufacturer	Agilent Technologies
Name	7890
Type	SSL
Location	Front
Carrier Gas	Helium
Control Type	Electronic Pressure Control (EPC)
Purged Inlet	Yes
Inlet 2	
Manufacturer	Agilent Technologies
Name	7890
Type	SSL
Location	Back
Carrier Gas	Helium
Control Type	Electronic Pressure Control (EPC)
Purged Inlet	Yes
Detector 1	
Manufacturer	Agilent Technologies
Name	7890
Type	FID
Adapter	Capillary
Control Type	Electronic Pressure Control (EPC)
Location	Front
Makeup Gas	Nitrogen
Detector 2	
Manufacturer	Agilent Technologies
Name	7890
Type	FID
Adapter	Capillary
Control Type	Electronic Pressure Control (EPC)
Location	Back
Makeup Gas	Nitrogen

Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CH11481088

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Electronic Signature

Purpose
This signature page was created and published because the ACE sign-off action was executed, which is valid for the entire document, including attachments. The ACE sign-off is an electronic signature that requires two distinct identification components: unique username and personal password. The Agilent representative who has delivered this service understands the meaning and legal status of an electronic signature. As a trained official operator, the Agilent representative has a unique password and login to access ACE and electronically sign this document. Other e-signatures can be applied to this document using a Document Content Management or other suitable method defined in your data access and control procedures.)

Details
Full Name of Signer: Saengulha Terak
Logged On User Name: saengulha.terak@non.agilent.com
Signature Creation Date: October 22, 2024
Reason for Signature: Executed protocol and published this original version of document

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Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CH11481088

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User Name: saengulha.terak			System ID: GC-6_CH11481088	
Report Generated by Instrument: LAPTGP-G33400001			Print Date: October 22, 2024 9:27:05 AM	
DATA_AIA_GC-6_CH11481088_02040E Transaction Log				
Time	Transaction Date	Activity Performed	Type of Transaction	Optional Information
October 21, 2024 3:16:36 PM	2024-10-21 16:36	Auto	Session Created	Session
October 21, 2024 3:16:37 PM	2024-10-21 16:37	Start	Configuration	Session
October 21, 2024 3:16:37 PM	2024-10-21 16:37	Auto	EndSession	Warning
October 21, 2024 3:20:46 PM	2024-10-21 3:20:46	Auto	Input Loaded	EEP data for primary hardware (GC-6) file path: PhysicalPath\GC6\Conf\gc6\input\230425.033.mgd EEP file Name: GC-6-033.mgd, EEPROM Name: gc6mrg

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Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CH11481088

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User Name: saengulha.terak			System ID: GC-6_CH11481088	
Report Generated by Instrument: LAPTGP-G33400001			Print Date: October 22, 2024 9:27:05 AM	
DATA_AIA_GC-6_CH11481088_02040E Transaction Log				
Time	Transaction Date	Activity Performed	Type of Transaction	Optional Information
October 21, 2024 3:24:01 PM	2024-10-21 3:24:01	Start	Execution	Inlet Pressure Decay - Front - Name: SS1 - Pressure Controlled Inlet - 0.250 psi (-) to 0.0 psi and <= 0.5 psi
October 21, 2024 3:25:09 PM	2024-10-21 3:25:09	End	Execution	Inlet Pressure Decay - Front - Run Count: 1
October 21, 2024 3:25:09 PM	2024-10-21 3:25:09	Start	Execution	Inlet Pressure Actuation - Front - Name: SS1 - Pressure Controlled Inlet - 0.250 psi (-) to 0.0 psi and <= 0.5 psi
October 21, 2024 3:25:32 PM	2024-10-21 3:25:32	End	Execution	Inlet Pressure Actuation - Front - Run Count: 1
October 21, 2024 3:25:32 PM	2024-10-21 3:25:32	Start	Execution	Inlet Pressure Controlled Inlet - 0.250 psi (-) to 0.0 psi and <= 0.5 psi
October 21, 2024 3:25:32 PM	2024-10-21 3:25:32	Start	Execution	Inlet Pressure Decay - Back - Name: SS1 - Pressure Controlled Inlet - 0.250 psi (-) to 0.0 psi and <= 0.5 psi
October 21, 2024 3:26:01 PM	2024-10-21 3:26:01	End	Execution	Inlet Pressure Decay - Back - Run Count: 1
October 21, 2024 3:26:01 PM	2024-10-21 3:26:01	Start	Execution	Inlet Pressure Actuation - Back - Name: SS1 - Pressure Controlled Inlet - 0.250 psi (-) to 0.0 psi and <= 0.5 psi
October 21, 2024 3:26:10 PM	2024-10-21 3:26:10	End	Execution	Inlet Pressure Actuation - Back - Run Count: 1
October 21, 2024 3:26:10 PM	2024-10-21 3:26:10	Start	Execution	Detector Flow Recovery - Front - Name: P20 - Flow - Front - 10.00 mL/min - 1, <= 10.0% response

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Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CH11481088

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Time	Transaction Type	Activity Performed	Type of Transaction	Optional Information
October 21, 2014 9:30:39 AM	Auto	Date	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Manual Data Entry
October 21, 2014 9:35:03 AM	End PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1
October 21, 2014 9:38:04 AM	Start PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Manual Data Entry
October 21, 2014 9:37:10 AM	Auto	Date	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Manual Data Entry
October 21, 2014 9:37:13 AM	End PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1
October 21, 2014 9:38:11 AM	Start PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1
October 21, 2014 9:38:11 AM	End PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1
October 21, 2014 9:39:07 AM	Auto	Date	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Manual Data Entry
October 21, 2014 9:39:08 AM	End PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1
October 21, 2014 9:38:06 AM	Start PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1
October 21, 2014 9:39:07 AM	Auto	Date	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Manual Data Entry
October 21, 2014 9:39:07 AM	End PM	Execution	Debitor File Accuracy - Form FD - Type - Deduct - 0 ALARM - L = 0.0% support	Run Count: 1

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Date: October 22, 2024 9:27:09 AM
System ID: GC-6, CN11461066

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User Name: yamaguchi@nsl				System ID: GC_04, GC14-008	
Report Generated by: Microsoft: LAPPON-0220420W				Print Date: October 22, 2016 9:37:36 AM	
REQN_AIS_GC_04_GC1401008_DOWN Transaction Log					
Time	Transmitted Data	Activity Performed	Type of Transaction	Optional Information	
October 21, 2016 9:30:04	Start	Execution	Initialize Flow Accuracy - Start	None	
Pkt			FID - Type: Global - 0.4083		
			inJitter = 1.0	= 10.0% sequent	
October 21, 2016 9:30:07	Auth	FID	Calculate Flow Accuracy - Start	Manual Data Entry	
Pkt			FID - Type: Global - 0.4083		
			inJitter = 1.0	= 10.0% sequent	
October 21, 2016 9:30:09	End	Execution	Initialize Flow Accuracy - Back	Flat Count: 1	
Pkt			FID - Type: Accuracy - 0.4083		
			inJitter = 1.0	= 10.0% sequent	
October 21, 2016 9:30:11	End	Execution	Initialize Flow Accuracy - Back	None	
Pkt			FID - Type: Manual - 0.353		
			inJitter = 1.0	= 10.0% sequent	
October 21, 2016 9:30:14	Auth	Start	Initialize Flow Accuracy - Back	Manual Data Entry	
Pkt			FID - Type: Manual - 0.353		
			inJitter = 1.0	= 10.0% sequent	
October 21, 2016 9:30:17	End	Execution	Initialize Flow Accuracy - Back	Flat Count: 1	
Pkt			FID - Type: Manual - 0.353		
			inJitter = 1.0	= 10.0% sequent	
October 21, 2016 9:30:20	Start	Execution	QC Chen Temperature	None	
Pkt			Accuracy - 1000 - Temperature		
			Chen = 0.200°C - 1.0	= 1.0	
Pkt			AND = 1.0	= 1.0 sequent	
			AND = 1.0	= 1.0 sequent	
October 21, 2016 9:31:05	End	Start	Manual Data Entry		
Pkt			Accuracy - 1000 - Temperature		
			Chen = 0.200°C - 1.0	= 1.0	
Pkt			AND = 1.0	= 1.0 sequent	
			AND = 1.0	= 1.0 sequent	
October 21, 2016 9:31:07	End	Execution	QC Chen Temperature	Flat Count: 1	
Pkt			Accuracy - 1000 - Temperature		
			Chen = 0.200°C - 1.0	= 1.0	
Pkt			AND = 1.0	= 1.0 sequent	
			AND = 1.0	= 1.0 sequent	

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Date: October 22, 2024 9:27:05 AM
System ID: GC-6_CN11481006

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Time	Transaction Type	Activity	Type of Transaction	Optional Information
October 21, 2024 9:31:59 PM	Start	Execution	GC Over Temperature Anomaly : 1800 - Temperature Alert : 0.180°C/L, Δ = +2.0 AEO = 1.0, Δ = 0.0, Δ = 0.0	None
October 21, 2024 9:36:37 PM	Alert	Data	GC Over Temperature Anomaly : 1800 - Temperature Alert : 0.180°C/L, Δ = +2.0 AEO = 1.0, Δ = 0.0, Δ = 0.0	Manual Data Entry
October 21, 2024 9:34:38 PM	End	Execution	GC Over Temperature Anomaly : 1800 - Temperature Alert : 0.180°C/L, Δ = +2.0 AEO = 1.0, Δ = 0.0, Δ = 0.0	Run Count : 1
October 21, 2024 9:34:42 PM	Start	Execution	GC Over Temperature Anomaly : 1800 - Temperature Alert : 0.180°C/L, Δ = +2.0 AEO = 1.0, Δ = 0.0, Δ = 0.0	None
October 21, 2024 9:38:08 PM	Alert	Data	GC Over Temperature Anomaly : 1800 - Temperature Alert : 0.180°C/L, Δ = +2.0 AEO = 1.0, Δ = 0.0, Δ = 0.0	Manual Data Entry
October 21, 2024 9:38:07 PM	End	Execution	GC Over Temperature Anomaly : 1800 - Temperature Alert : 0.180°C/L, Δ = +2.0 AEO = 1.0, Δ = 0.0, Δ = 0.0	Run Count : 1
October 21, 2024 9:39:35 PM	Start	Execution	GC Sampling Error - High Tower From 80L, Front PDS - Port of System Preparation - Flow not maintained	None
October 21, 2024 9:40:12 PM	Alert/Cancelled	Execution	GC Sampling Error - High Tower From 80L, Front PDS - Port of System Preparation - Flow not maintained	None
October 22, 2024 9:39:59 AM	Alert	Execution/Cancelled	Execution	None
October 23, 2024 9:48:02 AM	Start	Qualification	Execution	CO

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Date: October 22, 2024 9:27:05 AM
System ID: DC-6_CNT1401066

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User Name: xiangsheng@us.ibm.com

System ID: GC-4, CPY10000000

Report Generated by Name: LAFYTC-CG230000

Print Date: October 23, 2024 9:27:05 AM

Report: ALA_04_0014610000_000W Transaction log

Time	Description	Activity Performed	Type of Transaction	Optional Information
October 23, 2024 8:00:00	Start	Execution	GC Binding Run - Injection	None
Aut			Trans: From SBL, From FID -	
			Part of System Preparation - No links associated	
October 23, 2024 8:00:46	Auto	Data	GC Binding Run - Injection	Data Set Path
Aut			Trans: From SBL, From FID -	
			GC/Dataflow/Injection_001010.D	
			Part of System Preparation - No FID/Ln	
			Links associated	
October 23, 2024 8:07:29	End	Execution	GC Binding Run - Injection	Run Count: 1
Aut			Trans: From SBL, From FID -	
			Part of System Preparation - No links associated	
October 23, 2024 8:07:39	Start	Execution	None and Data - From FID -	None
			Injection: FID - 1, Injected =	
			1.00 pH - 1, [CDS] = 0.30	
			pH/Ln	
October 23, 2024 8:08:03	Auto	Data	None and Data - From FID -	Data Set Path
Aut			Injection: FID - 1, Injected =	
			1.00 pH - 1, [CDS] = 0.30	
			pH/Ln	
			GC/Dataflow/Injection_001010.D	
			pH/Ln	
October 23, 2024 8:08:37	End	Execution	None and Data - From FID -	Run Count: 1
Aut			Injection: FID - 1, Injected =	
			1.00 pH - 1, [CDS] = 0.30	
			pH/Ln	
October 23, 2024 8:08:46	Start	Execution	Injection Preload - Injection	None
Aut			Trans: From SBL, From FID -	
			GC - 1, Injected = 0.00% - 1	
			After: Trans = 1.00%	
October 23, 2024 8:09:06	Auto	Data	Calibration	Calibration was in a de-verification state for the last phase to start run
Aut				

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Date: October 23, 2024 9:27:05 AM
System ID: GC-8_CN11481056

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Time	Transmission Rate	Activity	Type of Interaction	Optional Information
October 22, 2024 8:14:43	Auto	Idle	Injection Pressure - Injection Towar, Front B&L, Front F&D OC - L (Ave) = 3.07% (Std. Temp.) = 1.82%	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 8:17:43	Auto	Idle	Injection Pressure - Injection Towar, Front B&L, Front F&D OC - L (Ave) = 3.07% (Std. Temp.) = 1.82%	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 8:21:43	Auto	Idle	Injection Pressure - Injection Towar, Front B&L, Front F&D OC - L (Ave) = 3.07% (Std. Temp.) = 1.82%	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 8:31:43	Auto	Idle	Injection Pressure - Injection Towar, Front B&L, Front F&D OC - L (Ave) = 3.07% (Std. Temp.) = 1.82%	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 8:41:43	Auto	Idle	Injection Pressure - Injection Towar, Front B&L, Front F&D OC - L (Ave) = 3.07% (Std. Temp.) = 1.82%	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 8:51:43	Auto	Idle	Injection Pressure - Injection Towar, Front B&L, Front F&D OC - L (Ave) = 3.07% (Std. Temp.) = 1.82%	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 9:01:16	Idle	Exhaustive	Signal to Fueler - Injection Towar, Front B&L, Front F&D - Selector FID - L = 30000	Run Count - 4 Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h
October 22, 2024 9:04:34	Auto	Idle	Signal to Fueler - Injection Towar, Front B&L, Front F&D - Selector FID - L = 30000	Data Bus Path G:\Shared\root\root_P0010 DFO\A\A.h

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Date: October 22, 2024 9:27:05 AM
System ID: OC-8_CW1461066

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User Name: anonymous@larc.com Report Generated by: Hudson LARFTR-CQ200309F			Report ID: GC4-14-044618 Print Date: October 22, 2015 9:07 AM	
JSR_AIR_GC4-14-044618_QDRR Transaction log				
Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
October 22, 2015 0:02:30 AM	End	Execution	Signal to House - Injection Trans: Back RFL, Back FID - Detector FID - 1 = 300000	Run Count : 1
AS				
October 22, 2015 0:02:30 AM	Start	Execution	GC Scouting Run - Injection Trans: Back RFL, Back FID - Part of System Preparation - No data associated	None
AS				
October 22, 2015 0:03:31 AM	Auto	Data	GC Scouting Run - Injection Trans: Back RFL, Back FID - Part of System Preparation - No data associated	Data File Path : C:\ChemStation\GC4-14-044618\023030.D
AS				
October 22, 2015 0:04:03 AM	End	Execution	GC Scouting Run - Injection Trans: Back RFL, Back FID - Part of System Preparation - No data associated	Run Count : 1
AS				
October 22, 2015 0:04:03 AM	Start	Execution	House and DRI - Back FID - Detector FID - 1 (House) = 4.16 min, 1.0 (DRI) = 1.50 pH/min	None
AS				
October 22, 2015 0:08:30 AM	Auto	Data	House and DRI - Back FID - Detector FID - 1 (House) = 4.16 min, 1.0 (DRI) = 1.50 pH/min	Data File Path : C:\ChemStation\GC4-14-044618\030830.D
AS				
October 22, 2015 0:09:13 AM	End	Execution	House and DRI - Back FID - Detector FID - 1 (House) = 4.16 min, 1.0 (DRI) = 1.50 pH/min	Run Count : 1
AS				
October 22, 2015 0:09:30 AM	Start	Execution	Injection Preparation - Injection Trans: Back RFL, Back FID - GC - 1 (House) = 3.00 min, 1 (Det. Trans) = 0.00 min	None
AS				

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Date: October 22, 2024 9:27:05 AM
System ID: GC-8_CNN1461088

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Remark:
 Calibration results only valid for the tested circumstances and environmental conditions during which calibration took place.
 Velocity of standard
 Velocity of Unit under Calibration



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IN WRITING FROM THE LABORATORY

Remarks
Collection results only count for the stated circumstances and environmental conditions during which collection took place
Validity of Standard
Validity of TML Index Collection



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Accredited calibration laboratory
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ACC-101-TS 17025
CALIBRATION 0367

Pressure measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT ITEM
MANUFACTURER
MODEL/TYPE
SERIAL NUMBER
ID NUMBER
CONDITION AS RECEIVED
CUSTOMER

Wind direction sensor
Honeywell
Sensor: WY-027
Data logger: 130-WY-200A-D
Sensor: WY-027
Data logger: 130-WY-200A-D
ID Number: 130-WY-200A-D
Condition as received: 130-WY-200A-D
Customer: A12 Laboratory group (Thailand) Co., Ltd.
104 Phatthanaburi Rd., Phatthanaburi Rd.,
Bangkok 10110 (Thailand)

RECEIVED DATE
MEASUREMENT DATE
ISSUE DATE

10 Jun 2024
10 Jun 2024
10 Jun 2024

ENVIRONMENTAL CONDITIONS
Ambient conditions in the laboratory are as follows:
Temperature: 23.0 ± 0.5 °C
Relative Humidity: 55.0 ± 5.0 %RH
Atmospheric Pressure: 1013.0 ± 0.5 hPa

PLACE OF CALIBRATION
104 Phatthanaburi Rd. (Thailand) Co., Ltd.

CALIBRATION CONDITION
Wind speed (crosswind) and
Wind direction (yaw) and
Direction of rotating axis
Uncertainty of test object: 0.143 %

Preconditioning
Measurement Condition: 24 hours at typical conditions,
Temperature (during measurement) are 23.0 °C, 23.0 ± 0.5 °C and 23.0 ± 0.5 °C.

TABULATION OF RESULTS:
The table on next page give the measured values.

Calibrated by:
1. Mr. Jirantee Thakulrat
2. Mr. Jirantee Thakulrat

Approved signature:
Mr. Pongthorn Boonchuan
Calibration Department Manager

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Pressure measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT RESULTS
The wind direction sensor was calibrated against standard rotary encoder by comparison method. During calibration, the measurement was carried out at 45° increments in clockwise and counter-clockwise direction after offset adjustment has been made. The flow speed of wind tunnel facility is 10 m/s. The results of calibration and associated measurement uncertainties are reported in the table below.

Flow speed m/s	0° Degree (°)	45° Degree (°)	90° Degree (°)	135° Degree (°)	180° Degree (°)
0.000	0	0	0	0	0
45.000	45	45	45	45	45
90.000	90	90	90	90	90
135.000	135	135	135	135	135
180.000	180	180	180	180	180
225.000	225	225	225	225	225
270.000	270	270	270	270	270
315.000	315	315	315	315	315

Notes:
* Calibration results are only valid for the stated environmental conditions during which calibration took place.
* Direction of standard.
* Direction of test object calibration.

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Pressure measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT ITEM
MANUFACTURER
MODEL/TYPE
SERIAL NUMBER
ID NUMBER
CONDITION AS RECEIVED
CUSTOMER

Digital barometer
Honeywell
Sensor: 130-WY-200A-D
Data logger: 130-WY-200A-D
Sensor: 130-WY-200A-D
Data logger: 130-WY-200A-D
ID Number: 130-WY-200A-D
Condition as received: 130-WY-200A-D
Customer: A12 Laboratory group (Thailand) Co., Ltd.
104 Phatthanaburi Rd., Phatthanaburi Rd.,
Bangkok 10110 (Thailand)

RECEIVED DATE
MEASUREMENT DATE
ISSUE DATE

10 Jun 2024
10 Jun 2024
10 Jun 2024

ENVIRONMENTAL CONDITIONS
Ambient conditions in the laboratory are as follows:
Temperature: 23.0 ± 0.5 °C
Relative Humidity: 55.0 ± 5.0 %RH
Atmospheric Pressure: 1013.0 ± 0.5 hPa

PLACE OF CALIBRATION
104 Phatthanaburi Rd. (Thailand) Co., Ltd.

CALIBRATION CONDITION
Wind speed (crosswind) and
Wind direction (yaw) and
Direction of rotating axis
Uncertainty of test object: 0.143 %

Preconditioning
Measurement Condition: 24 hours at typical conditions,
Temperature (during measurement) are 23.0 °C, 23.0 ± 0.5 °C and 23.0 ± 0.5 °C.

TABULATION OF RESULTS:
The table on next page give the measured values.

Calibrated by:
1. Mr. Jirantee Thakulrat
2. Mr. Jirantee Thakulrat

Approved signature:
Mr. Pongthorn Boonchuan
Calibration Department Manager

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Pressure measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT RESULTS
[X] Without adjustment [X] With adjustment
CALIBRATION IN THE RANGE OF 1500 mbar to 1070 mbar
The results of calibration and associated measurement uncertainties are reported in the table below.

STD (mbar)	USC* (mbar)	Error (mbar)	Uncertainty (1σ) (mbar)
1050.11	1050.9	1.8	0.37
1070.08	1071.3	1.2	0.37
1090.09	1091.0	0.9	0.37
1110.08	1110.4	0.4	0.37
1130.05	1130.8	-0.2	0.37
1150.08	1150.1	0.0	0.37

Notes: USC* Unit Under Calibration
* To convert the result to report unit to Pa should be multiply by 100.

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Pressure measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT RESULTS
The temperature calibration was made by 1% in linear calibration against the 100.000 °C according to comparison method with standard digital temperature indicator and standard temperature probe. The temperature probe was used as the reference probe.

Temperature (°C)	Standard Reading (°C)	USC Reading (°C)	Error (°C)	Uncertainty (1σ) (°C)
100	100.000	100.000	0.0	0.009
101	101.000	101.000	0.0	0.009
102	102.000	102.000	0.0	0.009
103	103.000	103.000	0.0	0.009
104	104.000	104.000	0.0	0.009

Notes: USC* Unit Under Calibration
* To convert the result to report unit to Pa should be multiply by 100.

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Pressure measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT RESULTS
The temperature calibration was made by 1% in linear calibration against the 100.000 °C according to comparison method with standard digital temperature indicator and standard temperature probe. The temperature probe was used as the reference probe.

Temperature (°C)	Standard Reading (°C)	USC Reading (°C)	Error (°C)	Uncertainty (1σ) (°C)
100	100.000	100.000	0.0	0.009
101	101.000	101.000	0.0	0.009
102	102.000	102.000	0.0	0.009
103	103.000	103.000	0.0	0.009
104	104.000	104.000	0.0	0.009

Notes: USC* Unit Under Calibration
* To convert the result to report unit to Pa should be multiply by 100.

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Accredited calibration laboratory
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Tel: +662-010-0000
Fax: +662-010-0000
Email: info@jiranatee.com
www.jiranatee.com

Wind direction sensor
Model: WSD-01
Serial Number: WSD-01-001
Condition: AS-RECEIVED
Customer: A/S Laboratory group (Thailand) Co., Ltd.
100 Phatthanaburi Rd., Phatthanaburi Rd., Phraeung San Luang, Bangkok 10250 Thailand

Calibration procedure:
The wind direction sensor was calibrated against standard rotary encoder by comparison method. During calibration, the measurement was carried out at 45° intervals in clockwise and counter-clockwise directions after offset adjustment has been made. The flow speed of wind tunnel (speed 1.5 m/s) is kept constant while the sensor is rotated around its vertical axis. The results of calibration and associated measurement uncertainties are reported in the table below.

Uncertainty:
The certificate provides a statement of the measurement uncertainty. The measurement uncertainty is based on the standard uncertainty multiplied by a coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty has been determined in accordance with the GUM Evaluation of measurement data - Guide to the expression of uncertainty in measurement.

Environmental conditions:
Ambient conditions in the laboratory are as follows:
Temperature: 23.0 ± 0.5 °C
Relative humidity: 55.0 ± 5.0 %RH
Atmospheric pressure: 1013.0 ± 0.5 hPa

PLACES OF CALIBRATION:
(Calibrated wind tunnel of Jiranatee Associates Co., Ltd.)

CALIBRATION CONDITION:
(Wind tunnel cross-section area) 300 m²
(Wind direction horizontal) 120 m²
(Diameter of rotating part) 0.343 m
(Background level of noise) 0.1

Preconditioning:
Measurement Condition: 10 min in ambient conditions
100 cycles before measurement are 10.1 ± 0.1, 10.1 ± 0.1 and 10.1 ± 0.1 hPa.

TABULATION OF RESULTS:
The table on next page gives the measured values.

Calibrated by:
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai

Approved signature:
Mr. Niranat Thirakulchai
Calibration Department Manager

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Email: info@jiranatee.com
www.jiranatee.com

Relative humidity with data logger
Model: RH-01
Serial Number: RH-01-001
Condition: AS-RECEIVED
Customer: A/S Laboratory group (Thailand) Co., Ltd.
100 Phatthanaburi Rd., Phatthanaburi Rd., Phraeung San Luang, Bangkok 10250 Thailand

Calibration procedure:
The relative humidity with data logger was calibrated against standard rotary encoder by comparison method. During calibration, the measurement was carried out at 45° intervals in clockwise and counter-clockwise directions after offset adjustment has been made. The flow speed of wind tunnel (speed 1.5 m/s) is kept constant while the sensor is rotated around its vertical axis. The results of calibration and associated measurement uncertainties are reported in the table below.

Uncertainty:
The certificate provides a statement of the measurement uncertainty. The measurement uncertainty is based on the standard uncertainty multiplied by a coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty has been determined in accordance with the GUM Evaluation of measurement data - Guide to the expression of uncertainty in measurement.

Environmental conditions:
Ambient conditions in the laboratory are as follows:
Temperature: 23.0 ± 0.5 °C
Relative humidity: 55.0 ± 5.0 %RH

PLACES OF CALIBRATION:
(Calibrated wind tunnel of Jiranatee Associates Co., Ltd.)

CALIBRATION CONDITION:
(Wind tunnel cross-section area) 300 m²
(Wind direction horizontal) 120 m²
(Diameter of rotating part) 0.343 m
(Background level of noise) 0.1

Preconditioning:
Measurement Condition: 10 min in ambient conditions
100 cycles before measurement are 10.1 ± 0.1, 10.1 ± 0.1 and 10.1 ± 0.1 hPa.

TABULATION OF RESULTS:
The table on next page gives the measured values.

Calibrated by:
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai

Approved signature:
Mr. Niranat Thirakulchai
Calibration Department Manager

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www.jiranatee.com

Temperature measurement laboratory
Calibration services department

Calibration procedure:
The temperature measurement laboratory was calibrated against standard rotary encoder by comparison method. During calibration, the measurement was carried out at 45° intervals in clockwise and counter-clockwise directions after offset adjustment has been made. The flow speed of wind tunnel (speed 1.5 m/s) is kept constant while the sensor is rotated around its vertical axis. The results of calibration and associated measurement uncertainties are reported in the table below.

Uncertainty:
The certificate provides a statement of the measurement uncertainty. The measurement uncertainty is based on the standard uncertainty multiplied by a coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty has been determined in accordance with the GUM Evaluation of measurement data - Guide to the expression of uncertainty in measurement.

Environmental conditions:
Ambient conditions in the laboratory are as follows:
Temperature: 23.0 ± 0.5 °C
Relative humidity: 55.0 ± 5.0 %RH

PLACES OF CALIBRATION:
(Calibrated wind tunnel of Jiranatee Associates Co., Ltd.)

CALIBRATION CONDITION:
(Wind tunnel cross-section area) 300 m²
(Wind direction horizontal) 120 m²
(Diameter of rotating part) 0.343 m
(Background level of noise) 0.1

Preconditioning:
Measurement Condition: 10 min in ambient conditions
100 cycles before measurement are 10.1 ± 0.1, 10.1 ± 0.1 and 10.1 ± 0.1 hPa.

TABULATION OF RESULTS:
The table on next page gives the measured values.

Calibrated by:
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai

Approved signature:
Mr. Niranat Thirakulchai
Calibration Department Manager

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Continuation of Certificate of Calibration Number: COT-001-07

Page 2 of 2 Pages

Result of Calibration: ☒ Without Adjustment ☐ With Adjustment

Calibration Range: 10 °C to 40 °C

Function:
Table 1: This equipment was connected with temperature sensor Model: HMN25 1/16" T1210001.
Dimensions: Diameter 12 mm, Length 80 mm.

Immersion Depth (mm)	Standard Reading (°C)	USC Reading (°C)	Error (°C)	Uncertainty (°C)
80	20.04	20.6	-0.6	0.005
80	25.04	24.6	-0.4	0.005
80	30.04	29.7	-0.3	0.005
80	35.04	34.5	-0.5	0.005
80	40.04	39.5	-0.5	0.005

USC: Units Under Calibration

End of Certificate of Calibration

Calibrated by:
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai

Approved signature:
Mr. Niranat Thirakulchai
Calibration Department Manager

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ACC-170-17025
CALIBRATION 0367

100 Phatthanaburi Rd., Phatthanaburi Rd., Phraeung San Luang, Bangkok 10250 Thailand
Tel: +662-010-0000
Fax: +662-010-0000
Email: info@jiranatee.com
www.jiranatee.com

Relative humidity and Air Temperature measurement laboratory
Calibration services department

Calibration procedure:
The relative humidity and air temperature measurement laboratory was calibrated against standard rotary encoder by comparison method. During calibration, the measurement was carried out at 45° intervals in clockwise and counter-clockwise directions after offset adjustment has been made. The flow speed of wind tunnel (speed 1.5 m/s) is kept constant while the sensor is rotated around its vertical axis. The results of calibration and associated measurement uncertainties are reported in the table below.

Uncertainty:
The certificate provides a statement of the measurement uncertainty. The measurement uncertainty is based on the standard uncertainty multiplied by a coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty has been determined in accordance with the GUM Evaluation of measurement data - Guide to the expression of uncertainty in measurement.

Environmental conditions:
Ambient conditions in the laboratory are as follows:
Temperature: 23.0 ± 0.5 °C
Relative humidity: 55.0 ± 5.0 %RH

PLACES OF CALIBRATION:
(Calibrated wind tunnel of Jiranatee Associates Co., Ltd.)

CALIBRATION CONDITION:
(Wind tunnel cross-section area) 300 m²
(Wind direction horizontal) 120 m²
(Diameter of rotating part) 0.343 m
(Background level of noise) 0.1

Preconditioning:
Measurement Condition: 10 min in ambient conditions
100 cycles before measurement are 10.1 ± 0.1, 10.1 ± 0.1 and 10.1 ± 0.1 hPa.

TABULATION OF RESULTS:
The table on next page gives the measured values.

Calibrated by:
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai

Approved signature:
Mr. Niranat Thirakulchai
Calibration Department Manager

THIS CERTIFICATE REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL UNLESS PERMISSION FOR REPRODUCTION HAS BEEN OBTAINED IN WRITING FROM THE LABORATORY

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JIRANATEE ASSOCIATES CO., LTD.

Continuation of Certificate of Calibration Number: COT-001-07

Page 2 of 2 Pages

Measurement Results:
The results of calibration and associated measurement uncertainties are reported in the table below.

Result of Calibration: ☒ Without Adjustment ☐ With Adjustment

Calibration Range: 10 °C to 40 °C

Table 1: The results of calibration of relative humidity at 35 °C are reported in table below.

Air Temperature (°C)	Standard Reading (°C)	USC Reading (°C)	Error (°C)	Uncertainty (°C)
20.0	19.4	17.9	-1.5	0.005
25.0	24.4	22.9	-1.5	0.005
30.0	29.4	27.9	-1.5	0.005
35.0	34.4	32.9	-1.5	0.005

USC: Units Under Calibration

End of Certificate of Calibration

Calibrated by:
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai
Mr. Niranat Thirakulchai

Approved signature:
Mr. Niranat Thirakulchai
Calibration Department Manager

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CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT ITEM
MANUFACTURER
MODEL/TYPE
SERIAL NUMBER
SI NUMBER
CONDITION AS RECEIVED
CUSTOMER

RECEIVED DATE
MEASUREMENT DATE
ISSUE DATE

ENVIRONMENTAL CONDITIONS
Ambient condition in the laboratory is as follows:
Temperature
Relative Humidity
Atmospheric Pressure

PLACE OF CALIBRATION

CALIBRATION CONDITIONS

Preconditioning
Measurement Condition

TABULATION OF RESULTS

Calibrated by:
Checked by:
Jiranatee Associates Co., Ltd.

Notes:
* Results from section area of the wind tunnel
* Possible error section area of the wind tunnel include mounting plate
* Diameter of mounting plate
* Area: 1 m²

THIS CERTIFICATE OF CALIBRATION MAY NOT BE REPRODUCED EXCEPT IN FULL UNLESS PERMISSION FOR REPRODUCTION HAS BEEN OBTAINED IN WRITING FROM THE LABORATORY

REVIEW BY
APPROVED BY
NEXT CAL DATE

Page 2 of 2 Pages

MEASUREMENT RESULTS

The Cup anemometer, Unit Under Calibration (UUC) was exercised at 10 m/s for 5 minutes prior to calibration being performed. The standard air velocity 0.1 m/s to 1 m/s was calculated by a standard air velocity transducer which was installed 10 m away from wind tunnel nozzle and installed 40 m away from top of the test section and the standard air velocity 1 m/s to 10 m/s was calculated by a pitot tube with pressure differential pressure meter which was installed 10 m away from wind tunnel nozzle and installed 40 m away from top of the test section. UUC was exercised on a round vertical tube of the same pipe as center of test section. The calibration was carried out under both strong and light air velocity in the range of 1 m/s to 10 m/s at calibration meeting of 1 m/s. The results of calibration and associated measurement uncertainties are reported in the table below.

UUC m/s	Temp. wind tunnel °C	Temp. room °C	UUC m/s	Error m/s	U-95% m/s
1.012	23.26	23.20	0.8	-0.2	0.31
2.037	23.24	23.20	1.0	-0.3	0.34
3.015	23.28	23.20	3.0	-0.1	0.31
4.094	23.30	23.20	4.0	-0.2	0.31
5.166	23.32	23.20	5.0	0.0	0.31
6.240	23.29	23.20	6.0	0.0	0.31
7.315	23.24	23.20	7.0	0.0	0.31
8.390	23.28	23.20	8.0	0.0	0.31
9.465	23.20	23.20	9.0	0.0	0.31
10.540	23.20	23.20	10.0	0.0	0.31
11.615	23.20	23.20	11.0	0.0	0.31
12.690	23.20	23.20	12.0	0.0	0.31
13.765	23.20	23.20	13.0	0.0	0.31
14.840	23.20	23.20	14.0	0.0	0.31
15.915	23.20	23.20	15.0	0.0	0.31

Remarks:
Calibration results only valid for the stated circumstances and environmental conditions during which calibration took place.
* Results of standard
* Results of test under Calibration

PHOTO OF CALIBRATION SET UP



Calibration set-up of the Cup anemometer calibration in the wind tunnel of Jiranatee Associates Co., Ltd. The Cup anemometer shown may differ from the calibrated one. Remarks: The properties of the set up is not true to scale due to fringing pressure.



Page 1 of 2 Pages

MEASUREMENT RESULTS

The wind direction sensor was calibrated against standard rotary encoder by comparison method. During calibration, the measurement was carried out at 45° intervals in clockwise and counter-clockwise direction after offset adjustment has been made. The flow speed of wind tunnel (JUNE 1, 2025) was kept constant while the sensor is rotated prior to vertical axis. The results of calibration and associated measurement uncertainties are reported in the table below.

As speed m/s	Flow Degree (°)	Flow Degree (°)	Error Degree (°)	U-95% Degree (°)
0.000	0	0	0.00	0.00
45.000	45	45	-0.00	0.00
90.000	90	90	-0.00	0.00
135.000	135	135	-0.00	0.00
180.000	180	180	-0.00	0.00
225.000	225	225	-0.00	0.00
270.000	270	270	-0.00	0.00
315.000	315	315	-0.00	0.00

Remarks:
* Calibration results only valid for the stated circumstances and environmental conditions during which calibration took place.
* Direction of sensor
* Direction of test under Calibration

REVIEW BY
APPROVED BY
NEXT CAL DATE

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT RESULTS

The Cup anemometer, Unit Under Calibration (UUC) was exercised at 10 m/s for 5 minutes prior to calibration being performed. The standard air velocity 0.1 m/s to 1 m/s was calculated by a standard air velocity transducer which was installed 10 m away from wind tunnel nozzle and installed 40 m away from top of the test section and the standard air velocity 1 m/s to 10 m/s was calculated by a pitot tube with pressure differential pressure meter which was installed 10 m away from wind tunnel nozzle and installed 40 m away from top of the test section. UUC was exercised on a round vertical tube of the same pipe as center of test section. The calibration was carried out under both strong and light air velocity in the range of 1 m/s to 10 m/s at calibration meeting of 1 m/s. The results of calibration and associated measurement uncertainties are reported in the table below.

RECEIVED DATE
MEASUREMENT DATE
ISSUE DATE

ENVIRONMENTAL CONDITIONS
Ambient condition in the laboratory is as follows:
Temperature
Relative Humidity
Atmospheric Pressure

PLACE OF CALIBRATION

CALIBRATION CONDITIONS

Preconditioning
Measurement Condition

TABULATION OF RESULTS

Calibrated by:
Checked by:
Jiranatee Associates Co., Ltd.

Notes:
* Results from section area of the wind tunnel
* Possible error section area of the wind tunnel include mounting plate
* Diameter of mounting plate
* Area: 1 m²

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REVIEW BY
APPROVED BY
NEXT CAL DATE

CERTIFICATE OF CALIBRATION

Page 1 of 2 Pages

MEASUREMENT ITEM
MANUFACTURER
MODEL/TYPE
SERIAL NUMBER
SI NUMBER
CONDITION AS RECEIVED
CUSTOMER

RECEIVED DATE
MEASUREMENT DATE
ISSUE DATE

ENVIRONMENTAL CONDITIONS
Ambient condition in the laboratory is as follows:
Temperature
Relative Humidity
Atmospheric Pressure

PLACE OF CALIBRATION

CALIBRATION CONDITIONS

Preconditioning
Measurement Condition

TABULATION OF RESULTS

Calibrated by:
Checked by:
Jiranatee Associates Co., Ltd.

Notes:
* Results from section area of the wind tunnel
* Possible error section area of the wind tunnel include mounting plate
* Diameter of mounting plate
* Area: 1 m²

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REVIEW BY
APPROVED BY
NEXT CAL DATE

ENVIRONMENTAL CONDITIONS
Ambient condition in the laboratory is as follows:
Temperature
Relative Humidity
Atmospheric Pressure

PLACE OF CALIBRATION

CALIBRATION CONDITIONS

Preconditioning
Measurement Condition

TABULATION OF RESULTS

Calibrated by:
Checked by:
Jiranatee Associates Co., Ltd.

Notes:
* Results from section area of the wind tunnel
* Possible error section area of the wind tunnel include mounting plate
* Diameter of mounting plate
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REVIEW BY
APPROVED BY
NEXT CAL DATE

ENVIRONMENTAL CONDITIONS
Ambient condition in the laboratory is as follows:
Temperature
Relative Humidity
Atmospheric Pressure

PLACE OF CALIBRATION

CALIBRATION CONDITIONS

Preconditioning
Measurement Condition

TABULATION OF RESULTS

Calibrated by:
Checked by:
Jiranatee Associates Co., Ltd.

Notes:
* Results from section area of the wind tunnel
* Possible error section area of the wind tunnel include mounting plate
* Diameter of mounting plate
* Area: 1 m²

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Calibration set-up of the Wind direction sensor calibration in the wind tunnel of Jiranatee Associates Co., Ltd. The Cup anemometer shown may differ from the calibrated one. Remarks: The properties of the set up is not true to scale due to fringing pressure.



J NAC
JIRANATEE ASSOCIATES CO., LTD.

Accredited calibration laboratory
ISO/IEC 17025:2017
NAC-T04-T05-T025
CALIBRATION 0367

Temperature measurement laboratory
Calibration services department

CERTIFICATE OF CALIBRATION

Certificate No. : CDT-158-67 Page 1 of 2 Pages

MEASUREMENT ITEM
MANUFACTURER : HANNA
MODEL/TYPE : HI 9142
SERIAL NUMBER : 1310-W5-250A-D
ID NUMBER : 1310-W5-250A-D
CONDITION AS RECEIVED : Used item
CUSTOMER : ACS Laboratory group (Thailand) Co., Ltd.
104 Phrakhanon Rd, Phrakhanon Rd, Khwaeng San Luang, Khwaeng San Luang, Bangkok 10250 Thailand.

RECEIVED DATE
18 Aug 2024

MEASUREMENT DATE
21 Aug 2024

ISSUE DATE
21 Aug 2024

ENVIRONMENTAL CONDITIONS:
Ambient conditions in the laboratory are as follows:
Temperature : (23.0 ± 0.5) °C
Relative humidity : (55.0 ± 5.0) %RH

NOTES: The certificate is valid only to the item calibrated on date and place of calibration.

TABULATION OF RESULTS:
The table on next page gives the measured values.

Calibrated by :
[Signature]
[Signature]
[Signature]

Approved signature :
[Signature]
Mr. Parin Boonchuan
Calibration Department Manager

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J NAC
JIRANATEE ASSOCIATES CO., LTD.

Accredited calibration laboratory
ISO/IEC 17025:2017
NAC-T04-T05-T025
CALIBRATION 0367

CERTIFICATE OF CALIBRATION

Certificate No. : CDT-158-67 Page 2 of 2 Pages

MEASUREMENT ITEM
MANUFACTURER : HANNA
MODEL/TYPE : HI 9142
SERIAL NUMBER : 1310-W5-250A-D
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104 Phrakhanon Rd, Phrakhanon Rd, Khwaeng San Luang, Khwaeng San Luang, Bangkok 10250 Thailand.

RECEIVED DATE
18 Aug 2024

MEASUREMENT DATE
21 Aug 2024

ISSUE DATE
21 Aug 2024

ENVIRONMENTAL CONDITIONS:
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Temperature : (23.0 ± 0.5) °C
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The table on next page gives the measured values.

Calibrated by :
[Signature]
[Signature]
[Signature]

Approved signature :
[Signature]
Mr. Parin Boonchuan
Calibration Department Manager

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Accredited calibration laboratory
ISO/IEC 17025:2017
NAC-T04-T05-T025
CALIBRATION 0367

CERTIFICATE OF CALIBRATION

Certificate No. : CDT-158-67 Page 2 of 2 Pages

MEASUREMENT RESULTS:
The results of calibration and associated measurement uncertainties are reported in the table below.

Result of Calibration: ☒ Without Adjustment ☐ With Adjustment

Table 1: The results of calibration of relative humidity at 50 °C are reported in table below.

At Temperature (°C)	Standard Reading (pH)	USC Reading (pH)	Error (pH)	Uncertainty (pH)
23.02	19.81	17.6	-1.8	0.3
25.09	19.72	18.0	-0.7	0.3
27.07	19.74	18.1	-0.6	0.3

USC: Unit Under Calibration

NOTES: The certificate is valid only to the item calibrated on date and place of calibration.

Calibrated by :
[Signature]
[Signature]
[Signature]

Approved signature :
[Signature]
Mr. Parin Boonchuan
Calibration Department Manager

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NAC-T04-T05-T025
CALIBRATION 0367

CERTIFICATE OF CALIBRATION

Certificate No. : CDT-158-67 Page 2 of 2 Pages

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27.07	19.74	18.1	-0.6	0.3

USC: Unit Under Calibration

NOTES: The certificate is valid only to the item calibrated on date and place of calibration.

Calibrated by :
[Signature]
[Signature]
[Signature]

Approved signature :
[Signature]
Mr. Parin Boonchuan
Calibration Department Manager

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Accredited calibration laboratory
ISO/IEC 17025:2017
NAC-T04-T05-T025
CALIBRATION 0367

CERTIFICATE OF CALIBRATION

Certificate No. : CDT-158-67 Page 2 of 2 Pages

MEASUREMENT RESULTS:
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USC: Unit Under Calibration


NOTES: The certificate is valid only to the item calibrated on date and place of calibration.

Calibrated by :
[Signature]
[Signature]
[Signature]

Approved signature :
[Signature]
Mr. Parin Boonchuan
Calibration Department Manager

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Page 1 of 1
Calibration No. : C-140125-BKX_F50032



Air Sampling Pump Calibration Report

Air Sampling Pump Detail

Calibration Date	14 Jan 2025	Next cal.	14 Apr 2025
Air Sampling Pump ID	BKX_F50032	Barometric (mmHg)	757
Serial No.	2015091000H	Temperature (°C)	25.0

Reference Standard Low Flow Meter

Brand	MesaLabs	ID	BKX_F50019
Model	Defender 510-L	Serial No.	130026
Due Date	9-Sep-25		

Reference Standard High Flow Meter

Brand	MesaLabs	ID	BKX_F50014
Model	Defender 510-M	Serial No.	151114
Due Date	9-Sep-25		

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
20	19.2	19.8	19.6	19.5	21	19	Passed
50	50.3	50.5	50.9	50.6	52.5	47.5	Passed
100	98.2	99.3	100.7	99.4	105	95	Passed
200	198.4	200.6	199.3	199.4	210	190	Passed
500	502.1	498.8	495.5	498.8	515	485	Passed
1000	998.1	994.4	997.5	996.7	1010	990	Passed
2000	2004.8	1998.2	1996.9	1999.9	2020	1980	Passed
2500	2498.8	2495.8	2494.2	2496.3	2530	2450	Passed

Note : Reference Specifications ± 5% of set flow or ± 3% cc/min whichever is higher

Calibrated by : Phuwich

(Mr. Phuwich Promsant)
Enviro Field Services

Approved by : Wichan Choonharat

(Mr. Wichan Choonharat)
Enviro Field Services Manager

FORM NO. : F-06-115 REVISION NO. : 1 ISSUE DATE: 10/04/24

Page 1 of 1
Calibration No. : C-210225-BKX_F50038



Certificate of Calibration

Air Sampling Pump Detail

Equipment name	Personal Air Sampling Pump	Equipment ID	BKX_F50038
Brand	Calson	Serial No.	2015091000H
Model/Type	Calson Plus	Calibration Date	21-Feb-25
		Next calibration date	21-May-25

Reference Standard Low Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50019
Brand	MesaLabs	Serial No.	130026
Model/Type	Defender 510-L	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Reference Standard High Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50014
Brand	MesaLabs	Serial No.	151114
Model/Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
20	20.7	21.0	20.4	20.7	5%	19 - 21	Passed
50	50.883	52.4	52.1	51.7	5%	48 - 53	Passed
100	100.01	100.3	100.2	100.2	5%	95 - 105	Passed
200	198.09	197.7	198.0	197.9	5%	190 - 210	Passed
500	495.9	494.1	493.1	494.3	3%	485 - 515	Passed
1000	997.07	995.8	1000.0	997.6	3%	970 - 1030	Passed
2000	1997.5	2000.9	1993.4	1998.9	3%	1940 - 2060	Passed
2500	2499.4	2500.3	2499.7	2500.1	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By : Phuwich

(Mr. Phuwich Promsant)
Field Services


Approved By : Wichan P.

(Mr. Wichan Promsak)
Field Services Supervisor

Issue date: 21-Feb-25

Page 1 of 1 HSB-135 Rev.2 Issue date 27/01/25

Page 1 of 1
Calibration No. : C-210225-BKX_F50038



Certificate of Calibration

Air Sampling Pump Detail

Equipment name	Personal Air Sampling Pump	Equipment ID	BKX_F50038
Brand	Calson	Serial No.	2015091000H
Model/Type	Calson Plus	Calibration Date	21-Feb-25
		Next calibration date	21-May-25

Reference Standard Low Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50019
Brand	MesaLabs	Serial No.	130026
Model/Type	Defender 510-L	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Reference Standard High Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50014
Brand	MesaLabs	Serial No.	151114
Model/Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
20	20.8	20.9	20.4	20.7	5%	19 - 21	Passed
50	49.506	49.9	49.6	49.7	5%	48 - 53	Passed
100	99.279	99.3	99.3	99.3	5%	95 - 105	Passed
200	206.64	206.4	206.4	206.5	5%	190 - 210	Passed
500	502.86	502.5	502.7	502.7	3%	485 - 515	Passed
1000	999.53	999.9	999.5	999.6	3%	970 - 1030	Passed
2000	2000.2	2000.7	2000.1	2000.0	3%	1940 - 2060	Passed
2500	2503.6	2503.1	2503.1	2503.0	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By : Phuwich

(Mr. Phuwich Promsant)
Field Services


Approved By : Wichan P.

(Mr. Wichan Promsak)
Field Services Supervisor

Issue date: 21-Feb-25

Page 1 of 1 HSB-135 Rev.2 Issue date 27/01/25

Page 1 of 1
Calibration No. : C-210225-BKX_F50038



Certificate of Calibration

Air Sampling Pump Detail

Equipment name	Personal Air Sampling Pump	Equipment ID	BKX_F50038
Brand	Calson	Serial No.	2015091000H
Model/Type	Calson Plus	Calibration Date	21-Feb-25
		Next calibration date	21-May-25

Reference Standard Low Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50019
Brand	MesaLabs	Serial No.	130026
Model/Type	Defender 510-L	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Reference Standard High Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50014
Brand	MesaLabs	Serial No.	151114
Model/Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
20	20.5	21.0	20.6	20.7	5%	19 - 21	Passed
50	50.215	50.2	50.2	50.2	5%	48 - 53	Passed
100	99.806	99.6	99.6	99.7	5%	95 - 105	Passed
200	201.7	201.5	201.6	201.6	5%	190 - 210	Passed
500	505.3	509.0	504.8	506.4	3%	485 - 515	Passed
1000	998.01	996.5	1000.3	998.3	3%	970 - 1030	Passed
2000	2004.1	2009.3	2009.0	2008.8	3%	1940 - 2060	Passed
2500	2497.2	2499.9	2497.8	2498.2	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By : Phuwich

(Mr. Phuwich Promsant)
Field Services

Approved By : Wichan P.

(Mr. Wichan Promsak)
Field Services Supervisor

Issue date: 21-Feb-25

Page 1 of 1 HSB-135 Rev.2 Issue date 27/01/25

Page 1 of 1
Calibration No. : C-070425-RYG_F50041



Certificate of Calibration

Air Sampling Pump Detail

Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50041
Brand	Calson	Serial No.	2015091000H
Model/Type	Calson Plus	Calibration Date	07-Apr-25
		Next calibration date	07-Jul-25

Reference Standard Low Flow Meter

Equipment name	Air Flow Meter	Equipment ID	RYG_F50008
Brand	MesaLabs	Serial No.	130026
Model/Type	Defender 510-L	Calibration Date	27-Jan-25
		Due Date	26-Jan-26

Reference Standard High Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50014
Brand	MesaLabs	Serial No.	151114
Model/Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
20	19.2	19.5	19.2	19.3	5%	19 - 21	Passed
50	49.8	51.9	50.4	50.7	5%	48 - 53	Passed
100	99.9	100.4	100.2	100.2	5%	95 - 105	Passed
200	198.8	202.2	201.4	200.8	5%	190 - 210	Passed
500	493.8	496.7	495.4	495.0	3%	485 - 515	Passed
1000	1000.4	1013.5	999.9	1007.3	3%	970 - 1030	Passed
2000	2006.0	2019.9	2012.6	2012.6	3%	1940 - 2060	Passed
2500	2494.4	2492.7	2493.7	2493.6	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By : Wichan P.

(Mr. Wichan Promsak)
RYG Field Services Scientist(1)


Approved By : S.P.S.

(Mr. Supot Sattasith)
RYG Field Services Section Head

Issue date: 07-Apr-25

Page 1 of 1 HSB-135 Rev.2 Issue date 27/01/25

Page 1 of 1
Calibration No. : C-070425-RYG_F50040



Certificate of Calibration

Air Sampling Pump Detail

Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50040
Brand	Calson	Serial No.	2015091000H
Model/Type	Calson Plus	Calibration Date	07-Apr-25
		Next calibration date	07-Jul-25

Reference Standard Low Flow Meter

Equipment name	Air Flow Meter	Equipment ID	RYG_F50008
Brand	MesaLabs	Serial No.	130026
Model/Type	Defender 510-L	Calibration Date	27-Jan-25
		Due Date	26-Jan-26

Reference Standard High Flow Meter

Equipment name	Air Flow Meter	Equipment ID	BKX_F50014
Brand	MesaLabs	Serial No.	151114
Model/Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
20	20.0	20.2	20.3	20.2	5%	19 - 21	Passed
50	49.5	50.6	50.1	50.1	5%	48 - 53	Passed
100	100.9	101.9	101.4	101.4	5%	95 - 105	Passed
200	201.6	203.1	202.1	202.3	5%	190 - 210	Passed
500	494.8	495.5	495.1	495.1	3%	485 - 515	Passed
1000	1004.4	1001.9	1005.2	1003.8	3%	970 - 1030	Passed
2000	2007.8	2002.0	2005.6	2005.1	3%	1940 - 2060	Passed
2500	2503.0	2501.3	2503.7	2502.7	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By : Wichan P.

(Mr. Wichan Promsak)
RYG Field Services Scientist(1)

Approved By : S.P.S.

(Mr. Supot Sattasith)
RYG Field Services Section Head

Issue date: 07-Apr-25

Page 1 of 1 HSB-135 Rev.2 Issue date 27/01/25



Certificate of Calibration

Certificate No. C-070426-RYG_F50140

Air Sampling Pump Detail			
Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50140
Brand	Sierra	Serial No.	20100919020
Model Type	Sierra Plus	Calibration Date	07-Apr-25
		Next calibration date	07-Jul-25

Reference Standard Low Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	RYG_F50208
Brand	Messersch	Serial No.	130027
Model Type	Defender 510-L	Calibration Date	27-Jan-25
		Due Date	26-Jan-26

Reference Standard High Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	BKS_F50614
Brand	Messersch	Serial No.	151114
Model Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	20.2	20.4	20.4	20.3	5%	19 - 21	Passed
50	50.1	51.2	50.9	50.7	5%	48 - 53	Passed
100	99.3	99.6	99.4	99.4	5%	95 - 105	Passed
200	199.8	200.6	200.3	200.2	5%	190 - 210	Passed
High Flow							
500	510.0	511.7	513.7	512.5	3%	485 - 515	Passed
1000	1009.2	1009.8	1012.5	1009.2	3%	970 - 1030	Passed
2000	2015.9	2017.3	1994.6	2009.3	3%	1940 - 2060	Passed
2500	2496.2	2494.2	2504.6	2498.3	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Wathann Pongsaumai)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 07-Apr-25



Certificate of Calibration

Certificate No. C-070426-RYG_F50141

Air Sampling Pump Detail			
Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50141
Brand	Sierra	Serial No.	20100919020
Model Type	Sierra Plus	Calibration Date	07-Apr-25
		Next calibration date	07-Jul-25

Reference Standard Low Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	RYG_F50208
Brand	Messersch	Serial No.	130027
Model Type	Defender 510-L	Calibration Date	27-Jan-25
		Due Date	26-Jan-26

Reference Standard High Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	BKS_F50614
Brand	Messersch	Serial No.	151114
Model Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	20.9	20.1	20.2	20.4	5%	19 - 21	Passed
50	49.9	50.2	51.2	50.4	5%	48 - 53	Passed
100	100.8	100.7	100.9	100.8	5%	95 - 105	Passed
200	204.1	204.8	204.7	204.5	5%	190 - 210	Passed
High Flow							
500	504.1	506.6	510.1	506.6	3%	485 - 515	Passed
1000	1012.1	1008.2	1012.4	1010.9	3%	970 - 1030	Passed
2000	1990.2	1995.2	1994.6	1993.4	3%	1940 - 2060	Passed
2500	2486.4	2500.2	2494.4	2493.7	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchaporn Thamsiang)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 07-Apr-25



Certificate of Calibration

Certificate No. C-070426-RYG_F50150

Air Sampling Pump Detail			
Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50150
Brand	Sierra	Serial No.	20100919020
Model Type	Sierra Plus	Calibration Date	07-Apr-25
		Next calibration date	07-Jul-25

Reference Standard Low Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	RYG_F50208
Brand	Messersch	Serial No.	130027
Model Type	Defender 510-L	Calibration Date	27-Jan-25
		Due Date	26-Jan-26

Reference Standard High Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	BKS_F50614
Brand	Messersch	Serial No.	151114
Model Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	20.5	20.4	20.6	20.5	5%	19 - 21	Passed
50	50.2	50.4	50.3	50.3	5%	48 - 53	Passed
100	99.6	99.7	99.5	99.6	5%	95 - 105	Passed
200	202.8	203.8	202.9	203.5	5%	190 - 210	Passed
High Flow							
500	505.9	506.8	506.6	506.1	3%	485 - 515	Passed
1000	1016.6	1013.6	1012.6	1014.3	3%	970 - 1030	Passed
2000	2004.1	2003.5	2004.3	2004.0	3%	1940 - 2060	Passed
2500	2492.0	2484.7	2490.4	2492.4	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Natchaporn Thamsiang)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 07-Apr-25



Certificate of Calibration

Certificate No. C-060425-RYG_F50140

Air Sampling Pump Detail			
Equipment name	Personal Air Sampling Pump	Equipment ID	RYG_F50140
Brand	Sierra	Serial No.	20100919020
Model Type	Sierra Plus	Calibration Date	06-Apr-25
		Next calibration date	06-Jul-25

Reference Standard Low Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	RYG_F50208
Brand	Messersch	Serial No.	130027
Model Type	Defender 510-L	Calibration Date	27-Jan-25
		Due Date	26-Jan-26

Reference Standard High Flow Meter			
Equipment name	Air Flow Meter	Equipment ID	BKS_F50614
Brand	Messersch	Serial No.	151114
Model Type	Defender 510-M	Calibration Date	9-Sep-24
		Due Date	9-Sep-25

Calibration Data

Air Sampling Pump setting (cc/min)	Reference Std. Flow Reading (cc/min)			Avg. (cc/min)	%Error acceptance	Acceptable range (cc/min)	Evaluation (Pass/Fail)
	1	2	3				
Low Flow							
20	20.0	20.3	20.4	20.4	5%	19 - 21	Passed
50	51.8	51.3	52.0	51.7	5%	48 - 53	Passed
100	101.8	101.6	101.7	101.7	5%	95 - 105	Passed
200	200.7	200.6	201.0	200.6	5%	190 - 210	Passed
High Flow							
500	511.3	513.5	507.9	510.9	3%	485 - 515	Passed
1000	1006.6	1009.1	1000.0	1002.1	3%	970 - 1030	Passed
2000	1996.6	1995.8	2002.4	1998.2	3%	1940 - 2060	Passed
2500	2492.0	2490.7	2493.8	2492.2	3%	2425 - 2575	Passed

END OF REPORT

Calibrated By:
(Mr. Wathann Pongsaumai)
RYG Field Services Scientist (1)

Approved By:
(Mr. Supot Salamin)
RYG Field Services Section Head

Issue date: 06-Apr-25



Certificate of Calibration

Customer

Name: ALS Laboratory Group Thailand Co., Ltd.
Address: 104 Soa Phatthanaburi Rd., Phatthanaburi, Samut Prakan 10150
Bangkok 10250

Certificate No.: 25-ACT-010
Request No.: Req-2025-0091

Unit Under Calibration Details

Measurement item: Acoustic Calibrator
Manufacturer: RISON
Model: NC-74
Serial Number: 14178121
ID: RYG_F50213

Class: 1
Range: 94 dB / 1000 Hz
Frequency Unit: Used



Calibration Environment and Details

Temperature: (23 ± 2 °C)
Humidity: (50 ± 20 %RH)
Barometric Pressure: (1013 ± 0.0 kPa)
Received Date: 15 January 2025
Calibration Date: 16 January 2025
Location of Calibration: LAB / Acoustic
Calibration Procedure: In-house method CP-ACT-02 based on IEC 60942:2017 Electroacoustics - Sound calibrators

Reference Standard	Model	Serial Number	Traceable	Due Calibration
Sound Calibrator	SV 35A	54079	EEL	12 Jan 2025
TBD Multimeter	2015	1047565	NIMT	16 January 2025

Traceability

This certificate provides traceability of measurement to recognized national standard, and to the calibration of the International System of Units (SI).

Note

The reported uncertainty is based on standard uncertainty multiplied by the Coverage Factor k=2, providing a level of confidence approximately 95 %.

Calibrated By:
Mr. Natchaporn Thamsiang
Service Calibration Engineer

Approved By:
Mr. Puch Mahavorn
Calibration Engineer Supervisor

Issue Date: 16 January 2025



Certificate No. 25-ACT-010

Request No. Req-2025-0091

Sound pressure level

Calibration Results - Without Adjustment

Calibration Range (dB)	Without Adjustment (dB)		Adjustment (dB)		Uncertainty (± dB)	Acceptance limit Class 1 (± dB)	Result
	Measured	Deviated value	Measured	Deviated			
94 dB / 1000 Hz	94.11	0.11	-	-	0.13	0.25	Pass

Frequency of Sound pressure level

Calibration Range (Hz)	Without Adjustment		Adjustment		Uncertainty (± %)	Acceptance limit Class 1 (± %)	Result
	Measured (Hz)	Deviated	Measured (Hz)	Deviated			
94 dB / 1000 Hz	1000.00	0.00	-	-	0.01	0.50	Pass

Total Harmonic Distortion plus Noise of Sound pressure level (THD+N %)

Certificate No. : 25-ACI-010
Request No. : Req-2025-0091

Decision Rule for Statements of Conformity

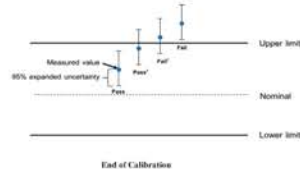
The standard decision rule developed for the statements of conformity to each calibration result will be applied using ISO/IEC 17025:2019 Guidelines on the Reporting of Conformity with Requirements as following Fig. and measures:

Pass = The measurement result after the expanded uncertainty with a 95% coverage probability was within the limit.

Pass? = The measurement result was within the limit. However, a portion of the expanded uncertainty of measurement at 95% exceeds the limit.

Fail = The measurement result was out of the limit. However, a portion of the expanded uncertainty of measurement at 95% is within the limit.

Fail? = The measurement result after the expanded uncertainty with a 95% coverage probability was outside the limit.



End of Calibration

This result is valid only for the item or items. The certificate shall not be reproduced except in full, without written approval of the Issuing Institute (S.A. Ltd.)
Tel: +66 2433 8338 Fax: +66 2433 8338 Email: info@iiclab.com

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

401-403/1000 Road, Bangkum, Bangkok, 10700 Thailand
Tel : +66 2433 8338 Email : calibration@sithiporn.com

Cert. No. : ACL24419
Job No. : YC8AC0851
Page : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No. : 00623388 / 198635 / 26416
ID No. : RYQ_TSO613

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTANAKAN 40, PHATTANAKAN ROAD,
KHUANG PHATTANAKAN, KHUANG SUAN LUANG,
BANGKOK, 10250 THAILAND.

Location :
Ambient Temperature : (23.0 ± 3.0) °C
Pressure : (101.3 ± 1.3) kPa
Relative Humidity : (50.0 ± 20.0) %

Received Date : 12 DECEMBER 2024
Calibration Date : 23 - 24 DECEMBER 2024
Date of Issue : 26 DECEMBER 2024

REVIEW BY : 
APPROVED BY : 
NEXT CAL DATE: 23/12/25.....

Calibrated by : Nuthakorn Pitsupisarn

Approved by : 
(Thanakul Petchu)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the lead of Calibration Laboratory.

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

401-403/1000 Road, Bangkum, Bangkok, 10700 Thailand
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Cert. No. : ACL24419
Job No. : YC8AC0851
Page : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long-term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

T. Petchu

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

401-403/1000 Road, Bangkum, Bangkok, 10700 Thailand
Tel : +66 2433 8338 Email : calibration@sithiporn.com

Cert. No. : ACL24419
Job No. : YC8AC0851
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
14.2

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A-weight	13.6
C-weight	19.1
Flat	24.6

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 94 dB

Frequency (Hz)	Flat	C-weight	A-weight	Acceptance Limits
125	0.5	0.6	0.6	±1.5
1000	0.1	0.1	0.2	±1.0
8000	0.8	0.8	0.8	±5.0

T. Petchu

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

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Cert. No. : ACL24419
Job No. : YC8AC0851
Page : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC 61672-1 (2013) Standard for sound level meter (SLM). The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Acoustic chamber and Reference Standard Instruments.

For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	34461A	MY53220104	EEI_BP_210267	13-FEB-25
Digital Multimeter	34461A	MY53220076	EEI_BP_200267	13-FEB-25
Digital Multimeter	34461A	MY60024273	EEI_BP_220267	13-FEB-25
Programmable Attenuator	MAT-1070	62100114	FP-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate in shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

T. Petchu

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

401-403/1000 Road, Bangkum, Bangkok, 10700 Thailand
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Cert. No. : ACL24419
Job No. : YC8AC0851
Page : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	0.0	±2.0
125	0.0	0.1	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.1	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.2
C-weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	94.0	0.0	±0.1
Log	94.0	94.0	0.0	±0.1

6. Long-term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.3

T. Petchu

SITHIPORN ASSOCIATES CO., LTD.
CALIBRATION LABORATORY

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Cert. No. : ACL24419
Job No. : VCBAC0651
Pages : 6 of 8

7. Level linearity on the reference level range:

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±1.1
136.0	136.0	0.0	±1.1
135.0	135.0	0.0	±1.1
134.0	134.0	0.0	±1.1
133.0	133.0	0.0	±1.1
132.0	132.0	0.0	±1.1
131.0	131.0	0.0	±1.1
129.0	129.0	0.0	±1.1
124.0	124.0	0.0	±1.1
119.0	119.0	0.0	±1.1
114.0	114.0	0.0	±1.1
109.0	109.0	0.0	±1.1
104.0	104.0	0.0	±1.1
99.0	99.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
39.0	39.0	0.0	±1.1
34.0	34.0	0.0	±1.1
30.0	30.0	0.0	±1.1
25.0	25.0	-0.1	±1.1
20.0	20.0	0.0	±1.1
15.0	15.0	-0.1	±1.1
10.0	10.0	-0.1	±1.1

T. Petch.

SITHIPORN ASSOCIATES CO., LTD.
CALIBRATION LABORATORY

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Tel: +66 2433 8338 Email: calibration@sithiporn.com



Cert. No. : ACL24419
Job No. : VCBAC0651
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	79.0	78.9	-0.1	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, T _b (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
SEL	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

T. Petch.

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CALIBRATION LABORATORY

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Cert. No. : ACL24419
Job No. : VCBAC0651
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Leq _{eq} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.1	0.1	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle	-0.1	±1.5
89.6	89.5		

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor k = 2 or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

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Cert. No. : ACL25118
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42 / Microphone UC-52 / Preamplifier NH-54
Serial No.: 0090074 / 158467 / 01736
ID No.: KYU_F30493

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTANAKAN 40, PHATTANAKAN ROAD,
KHWAENG PHATTANAKAN, KHET SUAN LUANG,
BANGKOK, 10250 THAILAND.

Location : -
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (50.0 ± 20) %

Received Date : 14 JANUARY 2025
Calibration Date : 27-29 JANUARY 2025
Date of Issue : 30 JANUARY 2025

REVIEW BY: *S.P.S.*
APPROVED BY: *T.P.*
NEXT CAL DATE: 29/01/2026

Calibrated by : Nattakorn Pitsakorn

Approved by : *T. Petch.*
(Thanakul Petchum)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

T. Petch.



SITHIPORN ASSOCIATES
CALIBRATION LABORATORY

Cert. No. : ACL25118
Job No. : VCBAC0664
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.

For tests results of each item were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY53202742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	IEL-BP-2140587	13-FEB-25
Digital Multimeter	33461A	MY53220076	IEL-BP-2040267	15-FEB-25
Digital Multimeter	34461A	MY60034273	IEL-BP-2202067	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0009-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	34350495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate in shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).

T. Petch.



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CALIBRATION LABORATORY

Cert. No. : ACL25118
Job No. : VCBAC0664
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long-term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.35
12. High level stability	0.1	0.1

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Cert. No. : ACL25118
Job No. : VCSAC0064
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
14.6

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting (dB)	Weighting (dB)
A-weight	12.0
C-weight	17.7
Flat	23.2

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.1	0.1	0.1	± 1.5
1000	0.0	0.0	0.0	± 1.0
10000	0.3	0.3	0.3	± 5.0

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Cert. No. : ACL25118
Job No. : VCSAC0064
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4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	0.0	-0.1	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	-0.1	±1.5
500	0.0	0.0	-0.1	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.0	0.0	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.2
C-weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	94.0	0.0	±0.1
Log	94.0	94.0	0.0	±0.1

6. Long-term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.3

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Job No. : VCSAC0064
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8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.1	0.1	±1.1

9. Time burst response

Time Weighting	Time burst duration, T _b (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5; -5.0
	2	8	117.0	116.9	-0.1	1.0; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	0.25	1	108.0	108.0	0.0	1.5; -5.0
	2	8	108.0	108.0	0.0	±1.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5; -5.0
	2	8	108.0	108.0	0.0	1.0; -2.5
	200	800	128.0	128.0	0.0	±1.0

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Job No. : VCSAC0064
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10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Lepeak (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %.

End of Calibration Certificate

T. Petch

Cert. No. : ACL25118
Job No. : VCSAC0064
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7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±1.1
136.0	136.0	0.0	±1.1
135.0	135.1	0.1	±1.1
134.0	134.1	0.1	±1.1
133.0	133.0	0.0	±1.1
132.0	132.0	0.0	±1.1
131.0	131.0	0.0	±1.1
129.0	129.0	0.0	±1.1
124.0	124.0	0.0	±1.1
119.0	119.1	0.1	±1.1
114.0	114.1	0.1	±1.1
109.0	109.0	0.0	±1.1
104.0	104.1	0.1	±1.1
99.0	99.1	0.1	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
39.0	39.0	0.0	±1.1
34.0	34.0	0.0	±1.1
30.0	30.0	0.0	±1.1
29.0	29.1	0.1	±1.1
28.0	28.1	0.1	±1.1
27.0	27.1	0.1	±1.1
26.0	26.2	0.2	±1.1
25.0	25.2	0.2	±1.1

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8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.1	0.1	±1.1

9. Time burst response

Time Weighting	Time burst duration, T _b (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5; -5.0
	2	8	117.0	116.9	-0.1	1.0; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	0.25	1	108.0	108.0	0.0	1.5; -5.0
	2	8	108.0	108.0	0.0	±1.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5; -5.0
	2	8	108.0	108.0	0.0	1.0; -2.5
	200	800	128.0	128.0	0.0	±1.0

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Job No. : VCSAC0064
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10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Lepeak (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %.

End of Calibration Certificate

T. Petch

Cert. No. : ACL24418
Page : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Pre-amplifier N81-24
Serial No. : 00623387 / 198634 / 26415
ID No. : RYG_F50612

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTANAKAN 40, PHATTANAKAN ROAD,
KHUANG PHATTANAKAN, KHET SUAN LUANG,
BANGKOK, 10250 THAILAND.Location :
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 1) kPa
Relative Humidity : (50.0 ± 20) %Received Date : 12 DECEMBER 2024
Calibration Date : 23 - 24 DECEMBER 2024
Date of Issue : 26 DECEMBER 2024

Calibrated by :

Nathakorn Petchumai

Approved by :

T. Petch
(Thanakul Petchumai)This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
other than in full, except with the prior written approval of the head of Calibration Laboratory.

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

402-403 Sathorn Road, Bangkok, Bangkok, 10700 Thailand
Tel: +66 2433 8338 Email: calibration@sithiporn.com



Cert. No. : ACL24418
Job No. : VCMAC0851
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC 61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Acoustic chamber and Reference Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY40017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53210104	EEL-0P 210267	13-FEB-25
Digital Multimeter	33461A	MY53210076	EEL-0P 200267	13-FEB-25
Digital Multimeter	34461A	MY60024273	EEL-0P 220267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	34560495	AA-3001-24	05-FEB-25

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

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).

T. Petch

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Cert. No. : ACL24418
Job No. : VCMAC0851
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long-term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.3	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

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Cert. No. : ACL24418
Job No. : VCMAC0851
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Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
14.6

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A-weight	11.6
C-weight	18.0
Flat	24.0

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 94 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.5	0.5	0.5	±1.5
1000	0.2	0.2	0.2	±1.0
8000	-0.7	-0.6	-0.6	±5.0

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Cert. No. : ACL24418
Job No. : VCMAC0851
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	-0.1	0.0	±2.0
125	0.0	0.1	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.0	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.2
C-weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	94.0	0.0	±0.1
Long	94.0	94.0	0.0	±0.1

6. Long-term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.3

T. Petch

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Cert. No. : ACL24418
Job No. : VCMAC0851
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7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±1.1
136.0	136.0	0.0	±1.1
135.0	135.0	0.0	±1.1
134.0	134.0	0.0	±1.1
133.0	133.0	0.0	±1.1
132.0	132.0	0.0	±1.1
131.0	131.0	0.0	±1.1
129.0	129.0	0.0	±1.1
124.0	124.0	0.0	±1.1
119.0	119.0	0.0	±1.1
114.0	114.0	0.0	±1.1
109.0	109.0	0.0	±1.1
104.0	104.0	0.0	±1.1
99.0	99.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	53.9	-0.1	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
39.0	38.9	-0.1	±1.1
34.0	33.9	-0.1	±1.1
30.0	30.0	0.0	±1.1
29.0	29.0	0.0	±1.1
28.0	28.0	0.0	±1.1
27.0	27.0	0.0	±1.1
26.0	26.0	0.0	±1.1
25.0	25.1	0.1	±1.1

T. Petch

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

402-403 Sathorn Road, Bangkok, Bangkok, 10700 Thailand
Tel: +66 2433 8338 Email: calibration@sithiporn.com



Cert. No. : ACL24418
Job No. : VCMAC0851
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Time burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5; -5.0
	2	8	117.0	117.0	0.0	1.0; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	2	8	108.0	108.0	0.0	1.5; -5.0
	200	800	127.5	127.5	0.0	±1.0
	0.25	1	99.0	98.9	-0.1	1.5; -5.0
SEL	2	8	108.0	108.0	0.0	1.0; -2.5
	200	800	128.0	128.1	0.1	±1.0

T. Petch

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Lpeak (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	89.6	±1.5
Negative one-half cycle	89.5	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$ or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

T. Petchu

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A/ Microphone UC-52 / Preamp/Filter NII-24
Serial No. : 00623392 / 198639 / 26420
ID No. : RYG_F30617

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTANAKAN 40, PHATTANAKAN ROAD,
KHUANG PHATTANAKAN, KHUANG SUAN LUANG,
BANGKOK, 10250 THAILAND.

Location :
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 1) kPa
Relative Humidity : (50.0 ± 20) %

Received Date : 07 JANUARY 2025
Calibration Date : 21 - 23 JANUARY 2025
Date of Issue : 24 JANUARY 2025

Calibrated by : Natchanon Pitsupim

Approved by : *T. Petchu*
(Thanakul Petchu)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

REVIEW BY : *S. S.*
APPROVED BY : *T. Petchu*
NEXT CAL DATE : 21/01/2026

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow in IEC-61672:3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.
For tests results of each item were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY68017078	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL_BP 21/02/26	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL_BP 20/02/26	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL_BP 22/02/26	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	34560495	AA-3001-24	05-FEB-25

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

3. This certificate is traceable to the international system of unit maintained at :

- National Institute of Metrology (Thailand).
- Thailand Institute of Scientific and Technological Research (TISTR).

T. Petchu

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long-term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

T. Petchu

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
15.4

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A-weight	12.6
C-weight	18.7
Flat	24.4

3. Acoustical signal tests of frequency weightings

Measure free-field acoustic response at a level of 84 dB

Frequency (Hz)	Flat	C-weight	A-weight	Acceptance Limits
125	0.2	0.2	0.2	±1.5
1000	0.0	0.0	0.0	±1.0
8000	1.2	1.2	1.2	±5.0

T. Petchu

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	-0.1	-0.1	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	-0.1	±1.5
500	0.0	0.0	-0.1	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.0	0.0	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.2
C-weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	93.9	-0.1	±0.1
Leq	94.0	94.0	0.0	±0.1

6. Long-term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.1	0.1	±0.3

T. Petchu

Cert. No. : ACL25077
Job No. : VCBAC0059
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7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	+1.1
136.0	136.0	0.0	+1.1
135.0	135.1	0.1	+1.1
134.0	134.1	0.1	+1.1
133.0	133.0	0.0	+1.1
132.0	132.0	0.0	+1.1
131.0	131.0	0.0	+1.1
129.0	129.1	0.1	+1.1
124.0	124.0	0.0	+1.1
119.0	119.1	0.1	+1.1
114.0	114.1	0.1	+1.1
109.0	109.0	0.0	+1.1
104.0	104.1	0.1	+1.1
99.0	99.0	0.0	+1.1
94.0	94.0	0.0	+1.1
89.0	89.0	0.0	+1.1
84.0	84.0	0.0	+1.1
79.0	79.0	0.0	+1.1
74.0	74.0	0.0	+1.1
69.0	69.0	0.0	+1.1
64.0	64.0	0.0	+1.1
59.0	59.0	0.0	+1.1
54.0	54.0	0.0	+1.1
49.0	49.0	0.0	+1.1
44.0	44.0	0.0	+1.1
39.0	39.0	0.0	+1.1
34.0	34.0	0.0	+1.1
30.0	30.0	0.0	+1.1
29.0	28.9	-0.1	+1.1
28.0	27.9	-0.1	+1.1
27.0	27.0	0.0	+1.1
26.0	25.9	-0.1	+1.1
25.0	25.0	0.0	+1.1

T. Petchum.

Cert. No. : ACL25077
Job No. : VCBAC0059
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	+1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	28.9	-0.1	+1.1

9. Tone burst response

Time Weighting	Tone burst duration, T _b (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	116.9	-0.1	1.0 ; -2.5
	200	800	134.0	134.0	0.0	+1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	+1.0
	0.25	1	99.0	98.8	-0.2	1.5 ; -5.0
SEL	2	8	108.0	107.9	-0.1	1.0 ; -2.5
	200	800	128.0	128.0	0.0	+1.0

T. Petchum.

Cert. No. : ACL25077
Job No. : VCBAC0059
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Leqpk (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	+3.0
One	133.4	133.4	0.0	+3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	+2.0
Positive half cycle	135.4	135.1	-0.3	+2.0
Negative half cycle	135.4	135.1	-0.3	+2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one half cycle	Negative one half cycle	0.0	+1.5
89.5	89.5		

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	+0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$ or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

T. Petchum.

Cert. No. : ACL25078
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A/ Microphone UC-52 / Pre-amplifier N31-24
Serial No.: 00623393 / 198640 / 26421
ID No.: RYG_F50618

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTIANAKAN 40, PHATTIANAKAN ROAD,
KHWAENG PHATTIANAKAN, KHET SUAN LUANG,
BANGKOK, 10250 THAILAND.

Location :
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (58.0 ± 20) %

Received Date : 07 JANUARY 2023
Calibration Date : 21 - 23 JANUARY 2023
Date of Issue : 24 JANUARY 2023

REVIEW BY: SPS
APPROVED BY: [Signature]
NEXT CAL DATE: 20F 01/ 2026

Calibrated by : Nuthakorn Pichumani

Approved by : T. Petchum.
(Thanakul Petchumani)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25078
Job No. : VCBAC0059
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-1 (01:1) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal test of frequency weighting with Acoustic chamber and Reference Standard Instruments.

For test results of each items were made by observation of each instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017036	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY53202742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEI-BP 210267	15-FEB-25
Digital Multimeter	33461A	MY53220076	EEI-BP 200267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEI-BP 220267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	3456495	AA-3001-24	05-FEB-25

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

3. This certificate is traceable to the international system of unit maintained at :

- National Institute of Metrology (Thailand).
- Thailand Institute of Scientific and Technological Research (TISTR).

T. Petchum.

Cert. No. : ACL25078
Job No. : VCBAC0059
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long-term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

T. Petchum.

Cert. No. : ACL25078
Job No. : VC8AC0059
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Result of calibration:

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
16.6

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A-weight	13.1
C-weight	17.9
Flat	24.4

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 94 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.5	0.5	0.5	±1.5
1000	0.1	0.1	0.1	±1.0
8000	2.3	2.2	2.3	±5.0

P. Petch.

Cert. No. : ACL25078
Job No. : VC8AC0059
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4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	-0.1	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	-0.1	±1.5
500	0.0	0.0	-0.1	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.2
C-weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	94.0	0.0	±0.1
Eq	94.0	94.0	0.0	±0.1

6. Long-term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.3

P. Petch.

Cert. No. : ACL25078
Job No. : VC8AC0059
Page : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	28.9	-0.1	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5; -5.0
	2	8	117.0	117.0	0.0	1.0; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	2	8	108.0	108.0	0.0	1.5; -5.0
	200	800	127.6	127.6	0.0	±1.0
	0.25	1	99.0	98.9	-0.1	1.5; -5.0
SEL	2	8	108.0	108.0	0.0	1.0; -2.5
	200	800	128.0	128.1	0.1	±1.0

P. Petch.

Cert. No. : ACL25078
Job No. : VC8AC0059
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10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±2.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor k = 2
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

P. Petch.

Cert. No. : ACL25078
Job No. : VC8AC0059
Page : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±1.1
136.0	136.0	0.0	±1.1
135.0	135.0	0.0	±1.1
134.0	134.0	0.0	±1.1
133.0	133.0	0.0	±1.1
132.0	132.0	0.0	±1.1
131.0	131.0	0.0	±1.1
129.0	129.0	0.0	±1.1
124.0	124.0	0.0	±1.1
119.0	119.0	0.0	±1.1
114.0	114.0	0.0	±1.1
109.0	109.0	0.0	±1.1
104.0	104.0	0.0	±1.1
99.0	99.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
39.0	39.0	0.0	±1.1
34.0	34.0	0.0	±1.1
30.0	30.0	0.0	±1.1
29.0	29.0	0.0	±1.1
28.0	28.0	0.0	±1.1
27.0	26.9	-0.1	±1.1
26.0	25.9	-0.1	±1.1
25.0	24.9	-0.1	±1.1

P. Petch.

40/41/2 Sirinon Road, Bangkum, Bangkok, 10250 Thailand
Tel: +66 2402 8330 Email: calibration@sithiporn.comCert. No. : ACC28854
Page : 1 of 3

Calibration Certificate

Equipment : SOUND CALIBRATOR
Manufacturer : RION
Model : NC-74
Serial No. : 34178123
ID No. : RYG_P50015

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTANAKAN 40, PHATTANAKAN ROAD,
KHUAEANG PHATTANAKAN, KHUET SIAM LUANG,
BANGKOK, 10250 THAILAND.Location :
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (50.0 ± 20) %Received Date : 18 OCTOBER 2024
Calibration Date : 22 OCTOBER 2024
Date of Issue : 24 OCTOBER 2024

Calibrated by : Nathorn Pitsopha

Approved by : P. Petch.
(Thanikul Petchum)This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
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SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

409/409/1 Sathorn Road, Bangkok, Thailand 10120
Tel: +66 2453 0330 Email: calibration@sithiporn.com



Cert. No. : ACC24854
Job No. : VCRAC0815
Pages : 2 of 3

Calibration Procedure : CP-AC-03

Calibration Method :

This equipment was calibrated by follow on IEC-60942-2003 Standard.
The sound pressure level, frequency and total distortion of the sound calibrator was measured using the reference microphone.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL-RP 210267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL-RP 200267	15-FEB-25
Digital Multimeter	33461A	MY60024273	EEL-RP 220267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	297500	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAI	34560495	AA-3001-24	05-FEB-25
Audio Analyzer	AVR-3360A	V74480609	EF-0009-24	09-FEB-25

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

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).

T. Petch.

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

409/409/1 Sathorn Road, Bangkok, Thailand 10120
Tel: +66 2453 0330 Email: calibration@sithiporn.com



Cert. No. : ACC24954
Job No. : VCRAC0815
Pages : 3 of 3

Result of calibration :

1. Sound pressure level

Specified sound pressure level (dB)	Measured value (dB)	Deviated value (dB)	Uncertainty (dB)	Acceptance limit (dB)
94	94.09	0.09	0.14	0.40

2. Frequency

Specified Frequency (Hz)	Measured value (Hz)	Deviated value (%)	Uncertainty (%)	Acceptance limit (%)
1000	1001.5	0.1	0.1	1.0

3. Total distortion

Measured value (%)	Uncertainty (%)	Acceptance limit (%)
1.55	0.10	3.0

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation providing a level of confidence of approximately 95 %

End of Calibration Certificate

T. Petch.

SITHIPORN ASSOCIATES CO., LTD. CALIBRATION LABORATORY

409/409/1 Sathorn Road, Bangkok, Thailand 10120
Tel: +66 2453 0330 Email: calibration@sithiporn.com



Cert. No. : ACL25872
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42 / Microphone UC-52 / Pre-amplifier NH-24
Serial No. : 01122807 / 145554 / 34373
ID No. : RYG_FS0019

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTANAKAN 40, PHATTANAKAN ROAD,
KHWAENG PHATTANAKAN, KHET SUAN LUANG,
BANGKOK, 10250 THAILAND.

Location : -
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (50.0 ± 20) %

Received Date : 07 JANUARY 2025
Calibration Date : 21-23 JANUARY 2025
Date of Issue : 24 JANUARY 2025

REVIEW BY : S.T.S.
APPROVED BY : T. Petch.
NEXT CAL. DATE : 21/01/2026

Calibrated by : Nuthakon Poutpauan

Approved by : T. Petch.
(Thanikul Petchumai)

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SITHIPORN ASSOCIATES CALIBRATION LABORATORY

Cert. No. : ACL25872
Job No. : VCRAC0859
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.

For tests results of each item were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL-RP 210267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL-RP 200267	15-FEB-25
Digital Multimeter	33461A	MY60024273	EEL-RP 220267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	297500	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAI	34560495	AA-3001-24	05-FEB-25

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

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).

T. Petch.



SITHIPORN ASSOCIATES CALIBRATION LABORATORY

Cert. No. : ACL25872
Job No. : VCRAC0859
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long-term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

T. Petch.



SITHIPORN ASSOCIATES CALIBRATION LABORATORY

Cert. No. : ACL25872
Job No. : VCRAC0859
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
16.0

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A-weight	12.6
C-weight	17.7
Flat	22.6

3. Acoustical signal tests of frequency weightings

Measure free-field acoustic response at a level of 94 dB

Frequency (Hz)	Flat	C-weight	A-weight	Acceptance Limit
125	0.5	0.5	0.5	±1.5
1000	0.1	0.1	0.1	±1.0
8000	-1.2	-1.2	-1.2	±5.0

T. Petch.

Cert. No. : ACL25072
Job No. : VCBAC0859
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	-0.1	±2.0
125	-0.1	0.0	-0.1	±1.5
250	-0.1	0.0	-0.1	±1.5
500	0.0	0.0	-0.1	±1.0
1000	0.0	0.0	0.0	±2.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±2.0
8000	0.0	0.0	0.0	±2.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.0	0.0	±0.2
C-weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	94.0	0.0	±0.1
Leq	94.0	94.0	0.0	±0.1

6. Long-term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	94.0	94.1	0.1	±0.3

T. Petchai

Cert. No. : ACL25072
Job No. : VCBAC0859
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±1.1
136.0	136.0	0.0	±1.1
135.0	135.0	0.0	±1.1
134.0	134.1	0.1	±1.1
133.0	133.0	0.0	±1.1
132.0	132.0	0.0	±1.1
131.0	131.0	0.0	±1.1
129.0	129.0	0.0	±1.1
124.0	124.0	0.0	±1.1
119.0	119.1	0.1	±1.1
114.0	114.1	0.1	±1.1
109.0	109.0	0.0	±1.1
104.0	104.1	0.1	±1.1
99.0	99.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
39.0	39.0	0.0	±1.1
34.0	34.0	0.0	±1.1
30.0	30.0	0.0	±1.1
29.0	29.0	0.0	±1.1
28.0	28.0	0.0	±1.1
27.0	27.0	0.0	±1.1
26.0	25.9	-0.1	±1.1
25.0	24.9	-0.1	±1.1

T. Petchai

Cert. No. : ACL25072
Job No. : VCBAC0859
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Time burst response

Time Weighting	Time burst duration, T _b (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	108.0	0.0	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.1	0.1	1.5 ; -5.0
	200	800	127.6	127.7	0.1	±1.0
	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
SF3	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

T. Petchai

Cert. No. : ACL25072
Job No. : VCBAC0859
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
On	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.1	-0.3	±2.0

11. Overview indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor k = 2
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

T. Petchai

40/401 (Sithiporn Road), Bangthumruang, Bangkok, 10700 Thailand
Tel : +66-2433-8338 Email : cal@csco.sithiporn.comCert. No. : ACL25073
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RIGON
Model : NL-42 / Microphone UC-S2 / Preamplifier NH-24
Serial No.: 01222716 / 143832 / 22763
ID No.: RYG_FS0020

Condition As Found : GOOD

Customer : ALS LABORATORY GROUP (THAILAND) CO., LTD.
104 PHATTHANAKAN 40, PHATTHANAKAN ROAD,
KIWAENG PHATTHANAKAN, KHUET SUAN LIANG,
BANGKOK, 10250 THAILAND.

Location :
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (50.0 ± 20) %

Received Date : 07 JANUARY 2025
Calibration Date : 21 - 23 JANUARY 2025
Date of Issue : 24 JANUARY 2025

REVIEW BY : SPS
APPROVED BY : [Signature]
NEXT CAL DATE : 21/01/2026

Calibrated by : Natchanon Pitsupat

Approved by : T. Petchai
(Thanakul Petchai)

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Job No. : VCBAC0859
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Acoustic chamber and Reference
Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	34461A	MY53220104	EF3_BP 21/02/26	13-FEB-25
Digital Multimeter	34461A	MY53220076	EF3_BP 20/02/26	15-FEB-25
Digital Multimeter	34461A	MY60024273	EF3_BP 22/02/26	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42CA1	34560495	AA-3001-24	05-FEB-25

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

3. This certificate is traceable to the international system of units maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

T. Petchai

Cert. No. : ACL25973
Job No. : VCMAC0859
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

T. Petch

Cert. No. : ACL25973
Job No. : VCMAC0859
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
13.6

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	10.8
C - weight	16.7
Flat	22.6

3. Acoustical signal tests of frequency weightings

Mean free-field acoustic response at a level of 84 dB

Frequency (Hz)	Flat	C-weight	A-weight	Acceptance Limits
125	-0.2	0.2	-0.2	±1.3
1000	-0.6	-0.6	-0.6	±1.0
8000	-1.0	-1.0	-1.0	±5.0

T. Petch

Cert. No. : ACL25973
Job No. : VCMAC0859
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.2	0.2	0.3	±2.0
125	0.2	0.2	0.2	±1.5
250	0.1	0.1	0.1	±1.5
500	0.1	0.1	0.1	±1.5
1000	0.0	0.0	0.1	±1.0
2000	0.0	0.0	0.0	±2.0
4000	-0.1	-0.1	0.0	±3.0
8000	-0.1	0.0	0.0	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	±0.2
C - weight	94.0	94.0	0.0	±0.2
Flat	94.0	94.0	0.0	±0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	±0.1
Slow	94.0	94.0	0.0	±0.1
Leq	94.0	94.0	0.0	±0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	±0.3

T. Petch

Cert. No. : ACL25973
Job No. : VCMAC0859
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	140.0	3.0	±1.1
136.0	140.0	4.0	±1.1
135.0	140.0	5.0	±1.1
134.0	140.0	6.0	±1.1
133.0	133.1	0.1	±1.1
132.0	132.1	0.1	±1.1
131.0	131.1	0.1	±1.1
129.0	129.1	0.1	±1.1
124.0	124.0	0.0	±1.1
119.0	119.1	0.1	±1.1
114.0	114.1	0.1	±1.1
109.0	109.0	0.0	±1.1
104.0	104.1	0.1	±1.1
99.0	99.1	0.1	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
39.0	39.0	0.0	±1.1
34.0	34.0	0.0	±1.1
30.0	30.1	0.1	±1.1
29.0	29.1	0.1	±1.1
28.0	28.2	0.2	±1.1
27.0	27.1	0.1	±1.1
26.0	26.2	0.2	±1.1
25.0	25.3	0.3	±1.1

T. Petch

Cert. No. : ACL25973
Job No. : VCMAC0859
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.2	0.2	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, T _b (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
SEL	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.0	0.0	±1.0

T. Petch

Cert. No. : ACL25973
Job No. : VCMAC0859
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Lepack (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	132.9	-0.1	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.1	-0.3	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.6	89.5	-0.1	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor k = 2
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

T. Petch



TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
COMPOSITE SERVICES & EQUIPMENT CALIBRATION AND TESTING SERVICES
104/101 Moo 5, T. Maenam Klu, A. Phakdaeng, Rayong 21140, Thailand
TEL: 0-3711-3000 (3L) FAX: 0-3711-3001



Cert.No.: 24CH6
Page: 1 of 3

Certificate of Calibration

Equipment: pH Meter
Manufacturer: Mettler Toledo
Model: SevenCompact 9220
Serial No.: C104059480
ID No.: RYD_EN0183
Condition As-Received: Used Item
Received Date: 18 January 2024
Calibration Date: 19 January 2024
Reference: 2401-057003C
Submitted by: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch)
616/10 Moo 5, T. Maenam Klu, A. Phakdaeng, Rayong 21140, Thailand

Ambient Temperature: (25 ± 2.5) °C
Relative Humidity: (50 ± 15) %
Calibration Procedure: In-house method
- CP-CMS by direct measurement with standard voltage calibrator and direct measurement with certified reference material (CRM)
- CP-CMS by comparison with temperature standard

Calibrated by: Watsorn Lempagtrakul

Approved by:

() Watsorn Lempagtrakul
() Porpan Pajon

Issue Date: 24 January 2024
The Uncertainty are for a confidence probability of approximately 95 %

This certificate may not be reproduced other than in full except with the prior written approval of the head of Composite Services & Equipment Calibration and Testing Services
Approval of the head of Equipment Services: 1. Representative Calibration Testing Service



A 0062854



Cert.No.: 24CH6
Page: 2 of 3

Condition of this calibration result

1. Reference Standard Instrument

Instrument	Serial No.	ID No.	Cert. No.	Due Date
1) Document Process Calibrator	54030049	130RC116	23E2002	27 Aug 2024
2) Ref. Standard Thermometer	4892054	110RC044	23901	25 July 2024

This certification is traceable to the International System of Unit maintained through:
- Technology Promotion Association (Thailand-Japan)
- The measurement results are traceable to SI through CPA client Ltd.,
ANSI-ASQ National Accreditation Board, Accredited No. AN-1836

2. Certified Reference Materials

Buffer Solution	Manufacturer	Lot No.	Exp. date
pH 4.008	CPA chem	940100	27 Nov 2025
pH 6.866	CPA chem	940104	02 Nov 2024
pH 9.907	CPA chem	940106	02 Nov 2024

3. This certificate is valid only to the item calibrated on date and place of calibration.

Calibration Results

Function: mV Measurement

Performing standard curve by Fluke at pH (4.7,10)

Unit Under Calibration	Nominal Value		Standard Voltage Input		Actual Reading		Uncertainty of Measurement (mV)	Coverage factor k
	pH	mV	mV	pH	mV	pH		
pH Meter	4.000	177.48	177.4	4.000	0.058	2.00		
SN: C104059480	7.000	0.00	0.0	7.000	0.058	2.00		
	10.000	-177.48	-177.5	10.000	0.058	2.00		

a 1198287



Cert.No.: 24CH6
Page: 3 of 3

Calibration Results

Function: pH Measurement

Performing three buffers standard curve by using buffer nominal pH (4.01, 7.00, 10.01)

Unit Under Calibration	Standard pH Buffer Solution	Actual pH Reading	Actual mV Reading (mV)	Uncertainty of pH Measurement (t)	Coverage factor k
pH Electrode	4.008	4.013	176.0	0.0054	2.07
SN: 3229367	7.000	6.983	2.2	0.0094	2.50
	9.987	9.996	-174.1	0.0085	2.00

Function: Temperature Measurement

(*) Without adjustment

This equipment was connected with Temperature Probe:

- Model: InLabExpert Pro-ISM

- Serial No.: 3225367

Dimension of probe:

- Length: 120 mm

- Diameter: 12 mm

- Immersion Depth: 100 mm

Calibration Point (°C)	Standard Temperature (°C)	UUC* Reading (°C)	Error (°C)	Uncertainty of measurement (°C)	Coverage factor k
35.0	25.001	35.2	0.199	0.13	2.00

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

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a 1198288



TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
COMPOSITE SERVICES & EQUIPMENT CALIBRATION AND TESTING SERVICES
104/101 Moo 5, T. Maenam Klu, A. Phakdaeng, Rayong 21140, Thailand
TEL: 0-3711-3000 (3L) FAX: 0-3711-3001

Certificate No.: 24E29
Page: 1 of 2

Certificate of Calibration

Equipment: pH Meter
Manufacturer: Mettler Toledo
Model: SevenCompact 9220
Serial No.: C104059480
ID No.: RYD_EN0183
Condition As-Received: Used Item
Received Date: 18 January 2024
Calibration Date: 23 January 2024
Reference: 2401-057003C
Submitted by: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch)
616/10 Moo 5, T. Maenam Klu, A. Phakdaeng, Rayong 21140, Thailand
Ambient Temperature: (25 ± 2.5) °C
Relative Humidity: (50 ± 15) %

Procedure used: Calibration was conducted using calibration procedure No. CP-CIT According to EURAMC reg 15

Condition of this result of Calibration

1. Reference standards instruments

Instrument	Model	Serial No.	Certificate No.	Due Date
1) Multi-Product Calibrator	00004	631511	E232300033	20 May 2024

2. This result of calibration was made on request of the client specified by customer.

3. This certificate is valid only to the item calibrated on date and place of calibration.

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

-NA Calibration Group Co., Ltd. ANAB Accredited No. Calibration AC 0058

Calibrated by: Watsorn Lempagtrakul
Issue Date: 24 January 2024
Approved Signatory:

a 0333295



Cert. No.: 24E29
Page: 2 of 2

Result of calibration: (*) Without adjustment (*) After adjustment

Function: DC voltage measurement

Standard Value (mV)	Range: 2000 mV		Error (mV)	Uncertainty (mV)
	UUC* Reading (mV)	Error (mV)		
-200.0000	-200.0	0.0	88	
-150.0000	-150.0	0.0	85	
-100.0000	-100.0	0.0	83	
-50.0000	-50.0	0.0	81	
0.0000	0.0	0.0	56	
50.0000	50.0	0.0	81	
100.0000	99.9	-0.1	83	
150.0000	149.9	-0.1	85	
200.0000	199.9	-0.1	88	

The 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 %

UUC* = Unit Under Calibration.

<0>

a 1198063

Sartorius (Thailand) Co., Ltd.
120 Rama 9 Road, Huaywang, Huaywang, Bangkok 10310
Tel: +66 2843 201-0, e-mail: service.thailand@sartorius.com



SARTORIUS

Certificate of Calibration

Model Number: MBE224S-100-DU
Description: Analytical Balance
Serial Number: 0026207038
ID No.: RYD_EN0002
Manufacturer: Sartorius
Certificate No.: 24E29
Issue Date: Friday, February 23, 2024
Reference No.: 229196
Page No.: 1 of 2

Customer Name: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch)
616/10 Moo 5 T. Maenam Klu, A. Phakdaeng, Rayong 21140, Thailand
Calibrated Place: ALS Laboratory Group (Thailand) Co., Ltd. (Balance Room)
616/10 Moo 5 T. Maenam Klu, A. Phakdaeng, Rayong 21140, Thailand.

Calibrated By: Mr Chonchai Inthana
Calibration Date: Thursday, February 22, 2024
Calibration Procedure No.: This calibration was conducted by Using In-house calibration procedure number RM-0039 Based on UKAS LAB 14: 2019

Metrological data:
Capacity: 220 g Readability: 0.0001 g
Temperature: 24.2 °C ± 0.0 °C
Humidity: 57.0 % RH ± 10.0 % RH
Pressure: ±

Reasons for calibration
☒ New Installation ☐ Service / Repair ☒ Re-calibration / Maintenance ☐ Good Operation ☐ New

Measurement Method UKAS Publication Ref: Lab 14

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor k=2 to provide a level of confidence of approximately 95%. It is determined in accordance with the Guide to Expression of Uncertainty in Measurement (GUM). The calibration certificate documents the traceability to National Standards, which realize the unit of measurement according to the International Standard System of Units (SI). Report of Tolerance came from list of Sartorius Metrological Specifications.

Traceability:

Model Number	Description	Traceability	Certificate No.	Due Date
YC5011-622-00	Sartorius weight set 1mg - 5000g E2, YC5011-622-00	YCS	M23081978	23-Aug-2025
MBS-3825D	Humidity/Balometer/Temp. Luton MBS-3825D	DKSH	C19231845	23-Aug-2024

This certificate relates and apply this equipment only.
This certificate may not be reproduced other than in full except with the prior written approval of the Verification Operation Division
Sartorius (Thailand) Co., Ltd.

Mr Chonchai Inthana (Technical Manager)



SOP FM 33 03 February 2022

Certificate of Calibration

Model Number: MSE224S-100-DU
Description: Analytical Balance
Serial Number: 062807038
ID No.: RYG_EN0002
Manufacturer: Sartorius

Certificate No.: 248C0099
Issued Date: Friday, February 23, 2024
Reference No.: 229196
Page No.: 2 of 2

Calibration Results : Without Adjustment

Repeatability		Eccentricity (Off-center loading error)	
The repeatability is the ability of a weighing instrument to display nearly identical results under identical test conditions when the same load within a measurement range is placed repeatedly on the weighing pan in the same manner. The standard deviation is used to assess repeatability quantitatively.		The off-center loading error is judged by the difference between the results of the load, i.e. 10 g or 100 g, measured separately placed in the middle of the weighing pan and between each of four additional measurement points (positions defined according to OIML R110).	
Nominal Value : (Low Load)	20.0000	199.9999	
20 g	20.0000	200.0000	
Tolerance	0.0001 g	0.0001 g	
Nominal Value : (High Load)	19.9999	200.0000	
200 g	20.0000	200.0000	
Tolerance	0.0001 g	0.0001 g	
Standard Deviation	0.00007	0.00006	

Linearity		Linearity	
The linearity, also called linearity error, describes the deviation of the characteristic curve of a weighing instrument from the linear slope.			
Tolerance	0.0002 g		
Nominal Value	Conventional Mass Value	Displayed Value	Deviation
0.01	0.0100	0.0100	0.0000
0.05	0.0500	0.0500	0.0000
0.1	0.1000	0.1000	0.0000
0.5	0.5000	0.5000	0.0000
1	1.0000	1.0000	0.0000
5	5.0000	5.0000	0.0000
10	10.0000	10.0000	0.0000
20	20.0000	20.0000	0.0000
50	50.0000	49.9999	-0.0001
100	100.0000	100.0000	0.0000
200	200.0000	199.9999	-0.0001

ISO/IEC 17025:2018

Calibration certificate No.: 258KL0004
Calibration Certificate

Adjustment Status

The measuring device was internally adjusted before the calibration.

Environmental and measuring conditions

Date of calibration: 20 Feb 2025
Temperature at place of calibration: Temp. diff: 24.4 °C | 0.6 K

Weights : Type: The installation site is suitable. The device was levelled. Balance was loaded up to Max before test.
Comments: Humidity 50.2 %RH

Measurement results | Measurement uncertainties

Repeatability		Eccentricity	
Test load (nominal): 10 g 200 g		Test load (nominal): 100 g	
10 g	200 g	Center	100.0000 g
10.0000 g	200.0000 g	Front-left	99.9999 g
10.0000 g	200.0000 g	Back-left	100.0000 g
10.0000 g	200.0000 g	Back-right	100.0000 g
10.0000 g	200.0000 g	Front-right	100.0000 g
10.0000 g	200.0000 g	Maximum deviation from center loading indication	0.0001 g
10.0000 g	200.0000 g	Max. max. ± 0.0002 g	

Error of indication		Expansion factor	
Testload	Indication	Error	Uncertainty
0.0100 g	0.0100 g	0.0000 g	0.0001 g
0.1000 g	0.1000 g	0.0000 g	0.0001 g
0.5000 g	0.5000 g	0.0000 g	0.0001 g
1.0000 g	1.0000 g	0.0000 g	0.0001 g
5.0000 g	5.0000 g	0.0000 g	0.0001 g
10.0000 g	10.0000 g	0.0000 g	0.0001 g
20.0000 g	20.0000 g	0.0000 g	0.0001 g
50.0000 g	50.0000 g	0.0000 g	0.0001 g
100.0000 g	100.0000 g	0.0000 g	0.0001 g
200.0000 g	200.0000 g	0.0000 g	0.0001 g
220.0000 g	220.0000 g	0.0000 g	0.0001 g

Maximum error of indication: $E_{\text{max}} = \pm 0.0001 \text{ g}$
The repeatability of the weighing results is assessed by the standard deviation of the results. The repeatability of the weighing results is assessed by the standard deviation of the results. The repeatability of the weighing results is assessed by the standard deviation of the results. The repeatability of the weighing results is assessed by the standard deviation of the results.



Accredited by
NSC-TIS-TIS 17025
Calibration 0426

Calibration certificate

Calibration Certificate No.: 258KL0004

Object	Electronic non-automatic weighing instrument	This calibration certificate documents the traceability to national standards.
Manufacturer	Sartorius	Uncertainties of measurements are taken into account when only statements of compliance are made.
Type	MSE224S-100-DU	This certificate was prepared by Sartorius Corporation in accordance to the current ISO/IEC 17025:2017 standard and Sartorius Work Instruction (Method) SOP-WI-05.
Serial QM Ident. no.	26207038 RYG_EN0002	This certificate relates and apply this equipment only.
Customer	ALS Laboratory Group (Thailand) Co. Ltd. (Rayong Branch)	
Order no.	616/10 Moo 5 T. Maenam Khu. A. Phak Daeng, Rayong 21140, Thailand.	
Number of pages	4	
Date of calibration	20 Feb 2025	

This calibration certificate may not be reproduced other than in full, except with the permission of NSC-TIS-TIS-17025 and the issuing laboratory. Calibration certificates without signature are not valid. The user is obliged to have the object recalibrated at appropriate intervals.

Date: 06 Mar 2025 Approval of the Calibration Certificate

Person in charge

Mr. Chonchai Inthama

Kachen Latie

Sartorius (Thailand) Co., Ltd.
129 Rama 9 Road, Huaykwang,
10310 Bangkok

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Page 1 | 4

Interpretation of measurement results | Appendix to the calibration certificate

Uncertainty of measurement in use

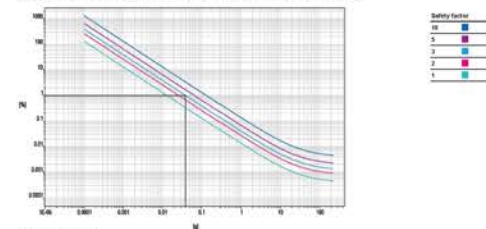
Device adjusted before measurement: Yes
Temperature deviation considered: 1.5 K (soCAL active)
Temperature coefficient considered: 1 10⁻⁵ /K

Uncertainty of the weighing result $U_p(W)$ $U_p(W) = 0.00015 \text{ g} + 3.95 \cdot 10^{-6} \cdot R$

Reference note: The current uncertainty of measurement is calculated by entering of the reading of the balance into this formula. In relation to this, there is no need for a separate indication error. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied with an expansion factor of 2, determined in accordance with the European Calibration Guideline EURAMET CG-16, V4.0. There is a 95 % probability that the value of the measured result will be in the assigned value range.

Indication in % from max. load	Net indication	Uncertainty $U_p(W)$	Uncertainty relative $U_p(W)/W$
1 %	2.0000 g	0.00014 g	0.00007 %
25 %	50.0000 g	0.00036 g	0.00007 %
50 %	100.0000 g	0.00050 g	0.00005 %
75 %	150.0000 g	0.00078 g	0.00005 %
100 %	220.0000 g	0.00100 g	0.00045 %

Graphic realization of the relative uncertainty of measurement | process accuracy



Displayed example

Process accuracy: 1.00 %
Safety factor: 3
Minimum sample weight: 0.0350 g

Calibration certificate No.: 258KL0004
Calibration Certificate

Calibration object

Single range instrument

Model: MSE224S-100-DU
Serial Number: 26207038
QM Ident. no. | Inventory no.: RYG_EN0002 | —

Maximum capacity (Max. load): 220.0000 g
Measured range: 220.0000 g
Scale interval: 0.0001 g

Place of calibration

Address: According to page 1
Department | Cost center: Laboratory Department | —
Building | Floor: — | 1st Floor
Room: Balance Room
Maximum temperature variation at place of calibration: 5 K

Calibration procedure

EURAMET cg-16, V4.0 - Guidelines on the Calibration of Non-Automatic Weighing Instruments

Test equipment

Test equipment type	Test equipment ID	Valid until
Thermometer	MH9-362SD sh8011342 Traceable to SI unit through CKSH	21 Aug 2025
Test weight set OIML R111 E2	Certificate No M3081975_E2(Traceable to SI unit through TC8)	23 Aug 2025

Sartorius (Thailand) Co., Ltd.
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10310 Bangkok

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Page 2 | 4



TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3 EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLIANG, SUANLIANG BANGKOK 10250
TEL: 0-2717-3000-29 FAX: 0-2719-9484



Certificate of Calibration

Cert. No.: 2474802
Page: 1 of 3

Equipment:	Hot Air Oven
Manufacturer:	Mettler
Model:	UFE 500
Serial No.:	G511.1572
ID No.:	RYG_EN0010

Submitted by: ALS Laboratory Group (Thailand) Co. Ltd. (Rayong Branch)
616/10 Moo 5 T. Maenam Khu. A. Phak Daeng, Rayong 21140 Thailand

Location: Oven Room

Received Order: 21 March 2024

Calibration Date: 21 March 2024

Ambient Temperature: (26 ± 1) °C

Relative Humidity: (50 ± 3) %

Calibrated by: Man Pattanasongpaiboon

Approved by: [Signature]
Approved Signatory

() Pomsippa Tamoyakul
() Unnophol Harachai
() Suwit Injai

Issue Date: 22 March 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written approval of the head of Corporate Services 3 Equipment Calibration and Testing Services.



Equipment : Hot Air Oven
Condition As-Received : Used Item
Reference : 2403.05630C-1

Cert. No.: 24TM332
Page : 2 of 3

Procedure Used :-

Calibration was conducted using calibration procedure CP-0702 according to direct measurement method with Data Acquisition which connected with Resistance Temperature Detector (RTD) and Thermocouple Type T.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument-

Instrument : MYS7013711 Serial No. 23LM115 Traceable Due Date 11 Jul 2024

2. This certificate is valid only to the item calibrated on date and place of calibration.

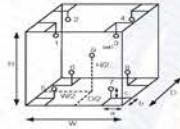
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration : (°) Without Adjustment

Function of UUC* : Temperature Source

Fresh air setting : Close



Probe Installation Details : Dimension of Chamber :
a = 5.0 cm D = 0.40 m
b = 5.0 cm W = 0.56 m
c = 5.0 cm H = 0.48 m
Capacity = 0.11 m³

Environment during calibration		
	Beginning	Finished
Temp. (°C)	27	27
REL.Humd. (%)	57	59
AC Supply (Volt)	222	224

Ref. Std. ID No. @ Calibration Point

Position :	(180) °C	(104) °C
1	18-18TC-01	18-18RTD-01
2	18-18TC-02	18-18RTD-02
3	18-18TC-03	18-18RTD-03
4	18-18TC-04	18-18RTD-04
5	18-18TC-05	18-18RTD-05
6	18-18TC-06	23-18RTD-06
7	18-18TC-07	18-18RTD-07
8	18-18TC-08	23-18RTD-08
9 (ref.)	18-18TC-09	18-18RTD-09



Equipment : Hot Air Oven
Condition As-Received : Used Item
Reference : 2403.05630C-1

Cert. No.: 24TM332
Page : 3 of 3

Procedure Used :-

Calibration was conducted using calibration procedure CP-0702 according to direct measurement method with Data Acquisition which connected with Resistance Temperature Detector (RTD) and Thermocouple Type T.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument-

Instrument : MYS7013711 Serial No. 23LM115 Traceable Due Date 11 Jul 2024

2. This certificate is valid only to the item calibrated on date and place of calibration.

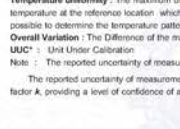
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration : (°) Without Adjustment

Function of UUC* : Temperature Source

Fresh air setting : Close



Probe Installation Details : Dimension of Chamber :
a = 5.0 cm D = 0.40 m
b = 5.0 cm W = 0.56 m
c = 5.0 cm H = 0.48 m
Capacity = 0.11 m³

Environment during calibration		
	Beginning	Finished
Temp. (°C)	27	27
REL.Humd. (%)	57	59
AC Supply (Volt)	222	224

Ref. Std. ID No. @ Calibration Point

Position :	(180) °C	(104) °C
1	18-18TC-01	18-18RTD-01
2	18-18TC-02	18-18RTD-02
3	18-18TC-03	18-18RTD-03
4	18-18TC-04	18-18RTD-04
5	18-18TC-05	18-18RTD-05
6	18-18TC-06	23-18RTD-06
7	18-18TC-07	18-18RTD-07
8	18-18TC-08	23-18RTD-08
9 (ref.)	18-18TC-09	18-18RTD-09

Calibration Point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Temperature stability (± °C)	Temperature uniformity (°C)	Overall Variation (°C)	Coverage Factor
104.0	104.0	104.0	0.051	0.59	0.62	2
180.0	180.0	180.0	0.15	1.3	1.7	2

Average* : The average of 30 values in each position.

Temperature stability : One-half of the greatest maximum difference of measured temperature at any one sensor.

Temperature uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location, which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.

Overall Variation : The Difference of the maximum and minimum measured temperatures throughout observation.

UUC* : Unit Under Calibration

Note : The reported uncertainty of measurement was included stability and excluded uniformity.

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

-000-



Equipment : Hot Air Oven
Condition As-Received : Used Item
Reference : 2403.05630C-3

Cert. No.: 24TM334
Page : 2 of 3

Procedure Used :-

Calibration was conducted using calibration procedure CP-0702 according to direct measurement method with Data Acquisition which connected with Resistance Temperature Detector (RTD) and Thermocouple Type T.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument-

Instrument : MYS7013711 Serial No. 23LM115 Traceable Due Date 11 Jul 2024

2. This certificate is valid only to the item calibrated on date and place of calibration.

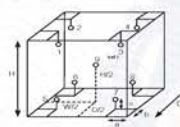
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration : (°) Without Adjustment

Function of UUC* : Temperature Source

Fresh air setting : Close



Probe Installation Details : Dimension of Chamber :
a = 5.0 cm D = 0.40 m
b = 5.0 cm W = 0.56 m
c = 5.0 cm H = 0.48 m
Capacity = 0.11 m³

Environment during calibration		
	Beginning	Finished
Temp. (°C)	27	27
REL.Humd. (%)	59	59
AC Supply (Volt)	224	223

Ref. Std. ID No. @ Calibration Point

Position :	(180) °C	(104) °C
1	18-18TC-01	18-18RTD-01
2	18-18TC-02	18-18RTD-02
3	18-18TC-03	18-18RTD-03
4	18-18TC-04	18-18RTD-04
5	18-18TC-05	18-18RTD-05
6	18-18TC-06	23-18RTD-06
7	18-18TC-07	18-18RTD-07
8	18-18TC-08	23-18RTD-08
9 (ref.)	18-18TC-09	18-18RTD-09



Equipment : Hot Air Oven
Condition As-Received : Used Item
Reference : 2403.05630C-3

Cert. No.: 24TM334
Page : 3 of 3

Procedure Used :-

Calibration was conducted using calibration procedure CP-0702 according to direct measurement method with Data Acquisition which connected with Resistance Temperature Detector (RTD) and Thermocouple Type T.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument-

Instrument : MYS7013711 Serial No. 23LM115 Traceable Due Date 11 Jul 2024

2. This certificate is valid only to the item calibrated on date and place of calibration.

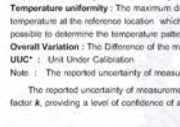
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration : (°) Without Adjustment

Function of UUC* : Temperature Source

Fresh air setting : Close



Probe Installation Details : Dimension of Chamber :
a = 5.0 cm D = 0.40 m
b = 5.0 cm W = 0.56 m
c = 5.0 cm H = 0.48 m
Capacity = 0.11 m³

Calibration Point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Temperature stability (± °C)	Temperature uniformity (°C)	Overall Variation (°C)	Coverage Factor
104.0	104.0	104.0	0.055	0.52	0.60	2
180.0	180.0	180.0	0.20	1.2	2.0	2

Calibration Point (°C)	Measured Temperature (°C)									Uncertainty (± °C)
	Position									
	1	2	3	4	5	6	7	8	9 (ref.)	
104.0	104.169	103.906	103.898	103.712	103.772	103.730	104.269	103.805	103.796	0.42
180.0	180.701	179.239	179.935	179.999	180.127	180.138	180.895	179.313	180.211	1.1

Average* : The average of 30 values in each position.

Temperature stability : One-half of the greatest maximum difference of measured temperature at any one sensor.

Temperature uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location, which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.

Overall Variation : The Difference of the maximum and minimum measured temperatures throughout observation.

UUC* : Unit Under Calibration

Note : The reported uncertainty of measurement was included stability and excluded uniformity.

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

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES & EQUIPMENT CALIBRATION AND TESTING SERVICES
334/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2711-3000-29 FAX.0-2719-9484



Certificate of Calibration

Cert. No.: 24TM334
Page : 1 of 3

Equipment : Hot Air Oven

Manufacturer : Memmert

Model : UF 110

Serial No. : B423.0853

ID No. : RYG_EN0213

Submitted by : ALS Laboratory Group (Thailand) Co.,Ltd. (Rayong Branch)

616/10 Moo 5 T. Maenam Khu, A. Plukdaeng, Rayong 21140 Thailand

Location : Oven Room

Received Order : 21 March 2024

Calibration Date : 21 - 22 March 2024

Ambient Temperature : (26 ± 10) °C

Relative Humidity : (50 ± 30) %

Calibrated by : Man Pattanapongsaoborn

Approved by :

() Ponthipha Tamayakul

() Unnopphol Harachai

() Suwit Injai

Issue Date : 23 March 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written approval of the head of Corporate Services & Equipment Calibration and Testing Services.



Metrology
SCI ECO Services Company Limited
33/2 Moo 3, T. Bangpa, A. Kaengkhro, Saraburi 18110, Thailand.
Saraburi Tel: +66 3627 3096 Fax: +66 3627 3100
Bangkok Tel: +668 9205 6851, +668 8247 2360
Website: www.scieco.co.th E-Mail: calibrate@scg.com



Certificate No. T250454

Page 1 of 3

Certificate of Calibration

Equipment : Chamber (Oven)

Manufacturer : MEMMERT

Model : UF 110

Serial No. : B423.0853

Customer Code : RYG_EN0213

ID No. : TSS8845

Customer : ALS Laboratory Group (Thailand) Co.,Ltd. (Rayong Branch)

616/10 Moo 5 T. Maenam Khu,

A. Plukdaeng, Rayong 21140

Customer Location : ENVIRONMENT LABORATORY

Date of Receipt : 12 March 2025

Calibrated By : Sujjar Naknakred (Site Calibration Manager)

Approved By : Boonchai Sarriyawong (Site Calibration Manager)

Date of Issue : 21 MAR 2025

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

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation

Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrology.



Certificate No. T250454

Page 2 of 3

Calibration Report

Equipment : Chamber (Oven)
Date of Calibration : 19 March 2025
Environment : Temperature : 26.5-26.9 °C
Line Voltage : 223.9-231.3 V
Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. This equipment was calibrated by insert nine resistance thermometer detectors into its chamber , the other one resistance thermometer detector was for ambient temperature measurement . The calibration was done in according to WI-729 (based on ASTM E145-94 (Reapproved 2019) and AS2853-1985) .
All data above below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .

2. Reference Standard Instrument :

Instrument	Model	Instrument No.	Certificate No.	Due Date
RTD	100 ohm	27-(CH)-10	T240709	19 April 2025
DATA LOGGER	34970A	T149	T240709	19 April 2025

3. This certificate is traceable to :

National Institute of Metrology (Thailand) through Metrological Center (NSC-TIS-TIS 17025 CALIBRATION 0244)

4. Condition of calibrated item : good

Equipment Description :

Time Constant : 1 Hour 44 Minute At 104 °C
Fresh Air Damper : ☐ Open ☐ Min ☐ Medium ☐ Max
☒ Close
☐ Not Available

5. Adjustment :

() without adjustment (X) after adjustment

Approved By:

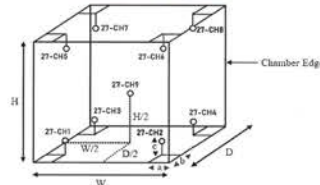
FM-L12 (18)16-08-46



Certificate No. T250454

Page 3 of 3

Calibration Report



Remark : Internal Dimensions of Chamber : W (Width) = 54 cm , H (Height) = 48 cm and D (Depth) = 48 cm .
Size of installed standard sensor number 27-CH1 to number 27-CH10 : $\phi = 1.5$ cm , $\phi = 1.5$ cm , and $\phi = 1.5$ cm .
Size of installed standard sensor number 27-CH1 : W2 = 54 cm / 2 , H2 = 48 cm / 2 , and D2 = 48 cm / 2 .

Measurement Results

Average Standard Reading at each position (°C)									
Calibration Point	27-CH1	27-CH2	27-CH3	27-CH4	27-CH5	27-CH6	27-CH7	27-CH8	27-CH9
104	103.84	104.55	104.10	104.48	103.73	104.14	103.95	103.57	104.22
180	179.41	179.92	180.80	183.17	179.54	179.52	179.82	179.41	180.31

Chamber (Outer)		Temperature Distribution					
Setting °C	Reading (°C)		Average (°C)	Stability (°C)	Uncertainty (°C)	Uncertainty (°C)	Coverage Factor k
	Min	Max					
104.0	103.8	104.3	104.0	0.08	0.05	0.42	2.00
180.0	-	180.0	180.01	0.17	1.20	0.49	2.00

* The quoted uncertainty exclude "uniformity"

The calibration result apply only the above calibrated item.

The result of test was found accurate as shown on date and place of test only.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k which for a t-distribution, providing a level of confidence of approximately 95 % .

End of Certificate

Approved By:

FM-L12 (18)16-08-46



Certificate of Calibration

Cert. No.: 24TM335
Page : 1 of 3

Equipment : Water Bath
Manufacturer : Memmert
Model : WNB22
Serial No. : L513.0648
ID No. : RYG_EN0061

Submitted by : ALS Laboratory Group (Thailand) Co.,Ltd. (Raying Branch)
616/10 Moo 5, T. Maenam Khu, A. Phukdeang,
Raying 21140, Thailand
Wet Chemistry Lab

Location :

Received Order : 21 March 2024
Calibration Date : 21 March 2024
Ambient Temperature : (26 ± 10) °C
Relative Humidity : (50 ± 30) %

Calibrated by : Man Pattanapongsaaboon

Approved by :
Approved Signatory

() Ponthipha Tanayakul
() Unmoghut Harsachai
(x) Suwail Imjai

Issue Date : 23 March 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the Head of Corporate Services 3 : Equipment Calibration and Testing Services.



Equipment : Water Bath
Condition As-Received : Used Item
Reference : 2403-09630C-4
Procedure Used :-

Cert. No.: 24TM335
Page : 2 of 3

Calibration were conducted using in-house calibration procedure CP-OT04 Based on ASTM E715 according to direct measurement method with Data Acquisition which connected with Industrial Platinum Resistance Thermometer (IRT) .

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY51012711	23LM113	TPA	11 Jul 2024

2. This certificate is valid only to the item calibrated on date and place of calibration.

3. This certification is traceable to the International System of Unit.

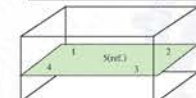
Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- () Without Adjustment

Function of UUC* : Temperature Source

Heat transfer medium used : Water

	Environmental		AC Voltage Supply
	(°C)	(%RH)	(Volt)
Beginning of Calibration	25	55	222
Finished of Calibration	25	57	223



Front

Position	Ref. Std. ID No.
1	4803988-001
2	4803988-002
3	4803988-003
4	4803988-004
5(ref.)	4803988-005



Equipment : Water Bath
Condition As-Received : Used Item
Reference : 2403-09630C-4
Result of Calibration :- () Without Adjustment
Function of UUC* : Temperature Source

Cert. No.: 24TM335
Page : 3 of 3

Calibration point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Average* Standard Reading (°C)					Uncertainty (± °C)
			1	2	3	4	5 (ref.)	
85.0	85.0	85.0	84.428	84.424	84.489	84.507	84.477	0.18

Calibration point (°C)	Uniformity (°C)	Stability (± °C)	Coverage Factor k
85.0	0.19	0.11	2

Average* : The average of 30 values in each position.

Uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.

Stability : One-half of the greatest maximum difference of measured temperature at any one probe.

UUC* : Unit Under Calibration

Note : The reported uncertainty of measurement was included stability and excluded uniformity.

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

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Cert.No.: 23TM196
Page: 1 of 2

Certificate of Testing

Equipment : DO Meter
Manufacturer : YSI
Model : 5000-115V
Serial No. : 15E102796
ID No. : RYG_EN0032
Received Date : 21 July 2023
Test Date : 24 July 2023
Reference : 2307-0713D060-1

Submitted by : ALS Laboratory Group (Thailand) Co.,Ltd.
Raying Branch
616/10 Moo 5, T. Maenam Khu, A. Phukdeang,
Raying 21140, Thailand

Laboratory Condition : Temperature (25 ± 5) °C
Humidity (50 ± 20) %
Test Procedure : In - house method : CP-CH9
by Comparison Technique with Acids Modification Method

Tested by : Walatak Sittibean

Approved by :
Approved Signatory

() Maier Bulkruss
(x) Sathip Meangmai
() Wankorn Lemgagrakul

Issue Date : 28 July 2023

W 0320211

Cert.No: 23TW158
Page: 2 of 2

Condition of this result of calibration

1. Reference Standard Instruments :
This certification is traceable to the International System of Unit through the reference standards laboratory of Industrial Calibration Center, Technology Promotion Association (Thailand-Japan).

Instrument	Serial No.	ID No.	Certificate No.	Due Date
1) Burette	-	130BU10	23CG1172	22 Mar 2025
2) Balance	1126143764	14DRCC04	22MM50	20 Sep 2023

2. Standard Material :-

Material	Manufacturer	Lot No.	Assay
Sodium Thiosulfate pentahydrate	Marck	AM1763315	100.2%

Result : Dissolved Oxygen Meter Adjustment With Air 100 %
Dissolved Oxygen Probe No.: 15E100464

Titration Method (Azide Modification Method)	DO Meter Reading	Standard Deviation
(mg/L)	(mg/L)	(mg/L)
8.16	8.17	0.0055

This report was certified only for the instrument we tested. It is allowable to use for study the system efficiency. The environmental impact control and present to organization it may concerned intend to use for advertising and referral purpose is prohibited. This report may not be reproduced in full without written approval of the laboratory.

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a 1172155

Cert. No.: 23LM125
Page: 1 of 2

Certificate of Calibration

Equipment : DO Meter with Sensor
Manufacturer : YSI
Model : 5000-115V
Serial No. : 15E102796
ID No. : RYG_EN0032

Submitted by : ALS Laboratory Group (Thailand) Co., Ltd.
Rayong Branch
616/10 Moo 5 T. Maenam Khu. A. Phukdaeng,
Rayong 21140 Thailand
Location : TPA On Site Calibration Laboratory

Received Order : 25 July 2023
Calibrated Date : 27 July 2023
Ambient Temperature : (26 ± 10) °C
Relative Humidity : (50 ± 30) %
AC Line Voltage : (220 ± 22) V

Calibrated by : Preecha Hstah
Approved by :
Approved Signatory

☐ Ponthippa Tameykatul
☐ Mailee Subkruea
☒ Suwit Imjai

Issue Date : 31 July 2023

The Uncertainties are for a confidence probability of approximately 95%
This certificate may not be reproduced other than in full, except with the prior written approval of the head of Corporate Services 3, Equipment Calibration and Testing Services.

A 0053616

Cert. No.: 23LM125
Page: 2 of 2

Equipment : DO Meter with Sensor
Condition As-Received : Used Item
Reference : 23OT-07130SC-2

Procedure Used :-
Calibration were conducted using in-house calibration procedure CP-OT01 according to comparison with Industrial Platinum Resistance Thermometer (IPRT) into Temperature Bath.
The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Digital Thermometer	2188080	231285	TPA	21 Oct 2023

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.
Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (") Without Adjustment
Function : Temperature measurement.

This instrument was connected with temperature sensor, S/N: 1228475367

Calibration Point (°C)	Immersion Depth (mm)	Standard Temperature (°C)	UUC ¹ Reading (°C)	Error (°C)	Uncertainty (± °C)	Coverage Factor k
20.00	100	20.011	19.91	-0.101	0.15	2.00

UUC¹ : Unit Under Calibration

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

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a 1159515

Cert. No.: 25LM10
Page: 1 of 2

Certificate of Calibration

Equipment : DO Meter with Sensor
Manufacturer : YSI
Model : 5000-115V
Serial No. : 15E102796
ID No. : RYG_EN0032

Submitted by : ALS Laboratory Group (Thailand) Co., Ltd.
Rayong Branch
616/10 Moo 5 T. Maenam Khu. A. Phukdaeng,
Rayong 21140 Thailand
Location : TPA On Site Calibration Laboratory

Received Order : 17 January 2025
Calibrated Date : 20 January 2025
Ambient Temperature : (26 ± 10) °C
Relative Humidity : (50 ± 30) %
AC Line Voltage : (220 ± 22) V

Calibrated by : Watsorn Lemagrakul
Approved by :
Approved Signatory

☐ Chakrit Watsornwong
☒ Suwit Imjai
☐ Kunchit Promprat

Issue Date : 23 January 2025

The Uncertainties are for a confidence probability of approximately 95%
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Cert. No.: 25LM10
Page: 2 of 2

Equipment : DO Meter with Sensor
Condition As-Received : Used Item
Reference : 2501-0500SC-2

Procedure Used :-
Calibration were conducted using in-house calibration procedure CP-OT01 according to comparison with Industrial Platinum Resistance Thermometer (IPRT) into Temperature Bath.
The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Digital Thermometer	2188080	241002	TPA	17 Sep 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.
Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (") Without Adjustment
Function : Temperature measurement.

This instrument was connected with temperature sensor, S/N: 15E100464

Calibration Point (°C)	Immersion Depth (mm)	Standard Temperature (°C)	UUC ¹ Reading (°C)	Error (°C)	Uncertainty (± °C)	Coverage Factor k
20.00	90	20.002	19.91	-0.192	0.15	2.00

UUC¹ : Unit Under Calibration

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

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Cert.No.: 25TW15
Page: 1 of 2

Certificate of Testing

Equipment : DO Meter
Manufacturer : YSI
Model : 5000-115V
Serial No. : 15E102796
ID No. : RYG_EN0032

Received Date : 17 January 2025
Test Date : 20 January 2025
Reference : 2501-0500SC-1

Submitted by : ALS Laboratory Group (Thailand) Co., Ltd.
Rayong Branch
616/10 Moo 5, T. Maenam Khu. A. Phukdaeng,
Rayong 21140 Thailand

Laboratory Condition : Temperature : (25 ± 5) °C
Humidity : (50 ± 20) %
In - house method : CP-CHG
by Comparison Technique with Azide Modification Method

Test Procedure :

Tested by : Watsorn Lemagrakul
Approved by :
Approved Signatory

☐ Ponthippa Tameykatul
☐ Pongpan Paisim
☒ Sathip Maingmal

Issue Date : 21 January 2025



Cert.No.: 25TW15
Page: 2 of 2

Condition of this result of calibration

- Reference Standard Instruments:
This certification is traceable to the International System of Unit through the reference standards laboratory of Industrial Calibration Center, Technology Promotion Association (Thailand-Japan).

Instruments	Serial No.	ID No.	Certificate No.	Due Date
1. Burette	1308010	20031172	24M73281	23 Mar 2025
2. Balance	14233021	110RC001	24MM131	04 July 2025

Material	Manufacturer	Lot No.	Assay
Sodium Thiosulfate 5-Hydrate AR	KEMAS	2203102447	99.6%

Result : Dissolved Oxygen Meter Adjustment With Air 100 %
Dissolved Oxygen Probe No.: 15E100454

Titration Method (Azide Modification Method)	DO Meter Reading	Standard Deviation
(mg/L)	(mg/L)	(mg/L)
8.20	8.20	0.0094

This report was certified only for the instrument we tested. It is allowable to use for study
Intend to use for advertising and referral purpose is prohibited. This report may not be reproduced
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33/44 PHATTHAKARN ROAD SOI 18, SUKUMVIT, SUKUMVIT BANGKOK 10250
TEL 0-2717-3000-29 FAX 0-2719-8484



Certificate of Calibration

Cert. No.: 24TM1953
Page: 1 of 3

Equipment : Low Temp. Incubator
Manufacturer : Mammart
Model : BPP750
Serial No.: V618.0064
ID No.: RYQ_EN0154

Submitted by : ALS Laboratory Group (Thailand) Co., Ltd. Rayong Branch
616/10 Moo 5, T. Maenam Khu, A. Phakdaeng,
Rayong 21140, Thailand
Location : BOD Room

Received Order : 01 November 2024
Calibration Date : 01 November 2024
Ambient Temperature : $(26 \pm 10) ^\circ\text{C}$
Relative Humidity : $(50 \pm 30) \%$
AC Line Voltage : $(220 \pm 22) \text{ V}$

Calibrated by : Kunda Malee

Approved by :
() Porpan Papiin
() Suwit Injai
(✓) Kunchit Promprut

Issue Date : 07 November 2024

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

This certificate may not be reproduced other than in full, except with the prior written
Approval of the Head of Corporate Services & Equipment Calibration and Testing Services.

REVIEW BY: *Thantak*
APPROVED BY: *Dha*
NEXT CAL DATE: 01/05/26



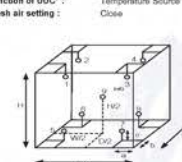
Equipment : Low Temp. Incubator
Condition As-Received : Used Item
Reference : 2411-00020G-1

Cert. No.: 24TM1953
Page: 2 of 3

Condition of this result of calibration

- Reference Standard Instruments:
1. Data Acquisition MY44073281 24M73 TPA 18 May 2025
- This certificate is valid only to the item calibrated on date and place of calibration.
- This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)
Result of Calibration : (°) Without Adjustment
Function of UUC : Temperature Source
Fresh air setting : Close



Environment during calibration		
	Beginning	Finished
Temp. (°C)	24	25
REL Humid. (%)	55	55
AC Supply (Volt)	220	221

Position	Ref. Std. ID No.
1	1RTD-211
2	1RTD-32
3	22-01RTD-03
4	1RTD-24
5	1RTD-25
6	1RTD-26
7	23-01RTD-07
8	1RTD-38
9 (ref.)	23-01RTD-09

Probe Installation Details :
a = 10 cm
b = 10 cm
c = 10 cm
Dimension of Chamber :
D = 0.60 m
W = 1.0 m
H = 1.2 m
Capacity = 0.72 m³



Equipment : Low Temp. Incubator
Condition As-Received : Used Item
Reference : 2411-00020G-1
Result of Calibration : (°) Without Adjustment
Function of UUC : Temperature Source
Fresh air setting : Close

Cert. No.: 24TM1953
Page: 3 of 3

Calibration Point (°C)	UUC Setting (°C)	UUC Reading (°C)	Temperature stability (± °C)	Temperature uniformity (°C)	Overall Variation (°C)	Coverage Factor
20.0	20.0	20.0	0.026	0.53	0.53	2

Measured Temperature (°C)									Uncertainty (± °C)
Point	1	2	3	4	5	6	7	8	
20.0	20.071	19.915	20.273	20.179	19.977	19.782	20.056	20.026	0.30

Average : The average of 30 values in each position.
Temperature stability : One-half of the greatest maximum difference of measured temperature at any one sensor.
Temperature uniformity : The maximum difference of measured temperature at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.
Overall Variation : The Difference of the maximum and minimum measured temperature throughout observation.
UUC : Unit Under Calibration
Note : The reported uncertainty of measurement was included stability and excluded uniformity.

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

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TEL 0-2717-3000-29 FAX 0-2719-8484



Certificate of Calibration

Cert. No.: 24CG3997
Page: 1 of 2

Equipment : Burette
Capacity : 50 mL
Serial No.: -
ID No.: RYQ_EN0162

Manufacturer : Witeg
Made in : Germany
Submitted by : ALS Laboratory Group (Thailand) Co., Ltd. Rayong Branch
616/10 Moo 5, T. Maenam Khu, A. Phakdaeng,
Rayong 21140, Thailand

Ambient Temperature : $(20 \pm 2.5) ^\circ\text{C}$
Relative Humidity : $(50 \pm 10) \%$
Barometric Pressure : 758 mmHg
Calibration Procedure : ASTM E 942 - 01

Calibrated by : Srisuda Khamtha

Approved by :
() Srisuda Khamtha
(✓) Porpan Papiin
() Unnopphol Harachai

Issue Date : 21 October 2024

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

This certificate may not be reproduced other than in full, except with the prior written
Approval of the Head of Corporate Services & Equipment Calibration and Testing Services.

REVIEW BY: *Thantak*
APPROVED BY: *Dha*
NEXT CAL DATE: 21/10/25



Equipment : Burette
Received Date : 16 October 2024
Condition As-Received : Used Item
Calibration Date : 21 October 2024
Reference : 2410-0547D9C-1

Cert. No.: 24CG3997
Page: 2 of 2

Condition of this result of calibration

- Reference Standard Instruments :

Instruments	Model	Serial No.	ID No.	Certificate No.	Traceability	Due date
1) Balance	MS204TS	C226356983	140RC010	24MA693	TPA	10 Oct 2025
2) Thermo-Hygraph	THDX-CE	00016540	140EC001	24H1153	TPA	10 June 2025
3) Thermometer		1594592	140EC010	24I175	TPA	20 Feb 2025
- This certificate is valid only to the item calibrated on date and place of calibration.
- True value is converted to true volume at the standard temperature of 20 °C

Calibration result

Nominal capacity (mL)	Reading (mL)	Uncertainty (± mL)	k Factor
50	49.9643	0.010	2.00

Remark : mL = cm³

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

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Certificate of Calibration

Equipment: SPECTROPHOTOMETER
Model: DR6000
Serial No. (or ID.): 1627845 (RYG_EN0037)
Manufacturer: HACH
Condition: In Condition

Certificate No.: C06230441
Issued Date: 19 September 2023
Job No.: WO-0005382
Page: 1 of 3

Customer: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch)
616/10 Moo 5 T. Maenam Khu,
A.Pluakdaeng, Rayong 21140, Thailand.

Environment Condition: Temperature 23.9 °C ± 0.2 °C
Humidity 65.3 %RH ± 1.4 %RH

Calibration Place: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch) (Wet Chemistry)
616/10 Moo 5 T. Maenam Khu,
A.Pluakdaeng, Rayong 21140, Thailand.

Calibration By: Mr. Natapat Rungsuang
Calibration Date: 18 September 2023
The Method used: In house method, CAL-WI-24, base on ASTM E 275-08 and ASTM E 387-04
Traceability: This certificate is traceable to the CRM maintained by National Institute of Standards and Technology (NIST) through Starna Scientific Limited.

The standard for Wavelength Certificate No. 111563 and 111564
The standard for Photometric Certificate No. 9114964 and 111558
The standard for Stray light Certificate No. 111586 and 111585
The standard for Spectral resolution Certificate No. 111587

REVIEWED BY: *[Signature]*
APPROVED BY: *[Signature]*
NEXT CAL. DATE: 28/12/25

(Mr. Natapat Rungsuang)
Person in charge

(Mr. Nilnun Sriwan)
Authorized signatory

This certificate is issued for the purpose of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.
The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with the Guide to Expression of Uncertainty in Measurement (GUM).
These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of DKSH Technology Limited.

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2555 หมู่ที่ 5 ตำบลบ้านใหม่ อำเภอวังจันทร์ จังหวัดระยอง 20090
Phone: +66 200 7100 Email: info@dksh.com Website: www.dksh.com/thailand

Delivering Growth - In Asia and Beyond.

CAL-FM-C06-15: 12 Sep 2022

Calibration Results:
Without Adjustment

Wavelength Accuracy (nm), The spectral bandwidth of 80d at 2 nm and UUC at 2 nm				
Standard Wavelength	Unit Under Calibration	Correction	Uncertainty	
418.61	418.3	0.31	0.13	
536.66	536.6	0.06	0.13	
637.86	638.3	-0.32	0.13	
748.48	748.7	-0.22	0.13	
807.03	807.4	-0.27	0.13	

Photometric Accuracy (Absorbance)				
Wavelength	Standard absorbance	Unit Under Calibration	Correction	Uncertainty
420 nm	0.0000	0.000	0.0000	0.0045
	0.2930	0.289	0.0040	0.0045
	0.5168	0.518	-0.0022	0.0045
	1.0298	1.029	0.0008	0.0045
440 nm	0.0000	0.000	0.0000	0.0045
	0.2967	0.283	0.0037	0.0045
	0.5073	0.509	-0.0017	0.0045
	1.0063	1.007	0.0013	0.0045
465 nm	0.0000	0.000	0.0000	0.0045
	0.2516	0.250	0.0016	0.0045
	0.4595	0.462	-0.0025	0.0045
	0.9334	0.933	0.0004	0.0045
546.1 nm	0.0000	0.000	0.0000	0.0045
	0.2461	0.245	0.0011	0.0045
	0.4652	0.466	-0.0008	0.0045
	0.9468	0.946	0.0008	0.0045
590 nm	0.0000	0.000	0.0000	0.0045
	0.2584	0.259	0.0004	0.0045
	0.5040	0.506	-0.0010	0.0045
	1.0032	1.002	0.0012	0.0045
635 nm	0.0000	0.000	0.0000	0.0045
	0.2579	0.257	0.0009	0.0045
	0.4971	0.497	0.0001	0.0045
	0.9720	0.971	0.0010	0.0045

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Phone: +66 200 7100 Email: info@dksh.com Website: www.dksh.com/thailand

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CAL-FM-C06-15: 12 Sep 2022

Calibration Results:
Without Adjustment

Photometric Accuracy (Absorbance)				
Wavelength	Standard absorbance	Unit Under Calibration	Correction	Uncertainty
235 nm	0.0000	0.000	0.0000	0.0080
	0.7385	0.737	-0.0015	0.0080
257 nm	0.0000	0.000	0.0000	0.0080
	0.8574	0.857	0.0004	0.0080
313 nm	0.0000	0.000	0.0000	0.0080
	0.2864	0.290	-0.0036	0.0080
350 nm	0.0000	0.000	0.0000	0.0080
	0.6374	0.637	0.0004	0.0080

Stray light *			
Standard: cut-off	UUC: Wavelength (nm)	UUC: Transmission (NT)	Absorbance (A)
260.82 ± 0.11 nm	260.8	1.3	1.88
391.44 ± 0.11 nm	391.4	1.3	1.88

Spectral Resolution *				
Nominal Concentration 0.02 % v/v	Peak	Trough	Ratio	BBW
Standard Wavelength (nm)	268.86	266.69	1.36	2.50
UUC: Wavelength (nm)	268.2	266.1		
Std Absorbance (A)	0.4566	0.2780		
Absorbance (A)	0.413	0.300		

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

The End of Certificate

DKSH Technology Limited
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CAL-FM-C06-15: 12 Sep 2022

ใบตรวจสอบสภาพเครื่องวัดสิ่งแวดล้อม

ชนิดเครื่องวัด: SPECTROPHOTOMETER รุ่น: DR6000
เลขที่ใบงาน: WO-0005382
หมายเลขเครื่อง: 1627845

ตรวจสอบ (ผู้)		รายการตรวจวัด		ตรวจสอบ (ผู้)		หมายเหตุ	
18 Sep 2023				18 Sep 2023			
ผ่าน	ไม่ผ่าน			ผ่าน	ไม่ผ่าน		
General							
<input type="checkbox"/>	<input type="checkbox"/>	1. ความแม่นยำเครื่อง		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	2. ความสะอาด (ช่องใส่ตัวอย่าง, ภายในเครื่องมือ)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	3. สวิตช์ ปิด - เปิด เครื่อง (On-Off Switch)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	4. ปุ่มกด (Keypad)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	5. หน้าจอ (Display, Screen Contrast)		<input type="checkbox"/>	<input type="checkbox"/>		
Spectrophotometer							
<input type="checkbox"/>	<input type="checkbox"/>	6. แบตเตอรี่สำรอง (Battery Backup) >= 2.5 VDC		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	7. ควบคุมแสงความยาวคลื่น (Wavelength Control)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	8. ความยาวคลื่น (Wavelength Check)		<input type="checkbox"/>	<input type="checkbox"/>	"	
<input type="checkbox"/>	<input type="checkbox"/>	9. เวลาการวัด (N/A < 3.000 hour)		<input type="checkbox"/>	<input type="checkbox"/>	9.2 Hours	
<input type="checkbox"/>	<input type="checkbox"/>	10. เวลาการวัด (Visible < 5.000 hour)		<input type="checkbox"/>	<input type="checkbox"/>	741.5 Hours	
<input type="checkbox"/>	<input type="checkbox"/>	11. ช่องใส่ตัวอย่าง (Cuvette Module)		<input type="checkbox"/>	<input type="checkbox"/>		
pH Meter and Conductivity Meter							
<input type="checkbox"/>	<input type="checkbox"/>	12. อิเล็กโทรด (Electrode and Connection Cable)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	13. ระดับการละลาย Electrode (Level KCl)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	14. ฝาปิดป้องกัน Electrode (Dust Protection Hood)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	15. ขาตั้งอิเล็กโทรด (Stand)		<input type="checkbox"/>	<input type="checkbox"/>		
Turbidimeter							
<input type="checkbox"/>	<input type="checkbox"/>	16. การวางตัวอย่าง (No Sample)		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	17. ระดับการละลายตัวอย่าง (N/A < 2.5 ไม่เกิน 3.0)		<input type="checkbox"/>	<input type="checkbox"/>		
Automatic Rinsing							
<input type="checkbox"/>	<input type="checkbox"/>	18. ล้าง Rinse Burette		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	19. Function Rinsing and Dosing		<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	20. ระบบล้างและเติมสารละลาย		<input type="checkbox"/>	<input type="checkbox"/>		

เส้นขอบเขตวัด: *566.1nm=566.1nm
*488.0nm=488.5nm

Mr. Natapat Rungsuang
Service Engineer

DKSH Technology Limited
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CAL-FM-R31-03: 20 Jul 2022



Certificate of Calibration

Equipment: SPECTROPHOTOMETER
Model: DR6000
Serial No. (or ID.): 1627845 (RYG_EN0037)
Manufacturer: HACH
Condition: In Condition

Certificate No.: C06250106
Issued Date: 18 March 2025
Job No.: WO-00064378
Page: 1 of 3

Customer: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch)
616/10 Moo 5 T. Maenam Khu,
A.Pluakdaeng, Rayong 21140, Thailand.

Environment Condition: Temperature 24.4 °C ± 0.3 °C
Humidity 60.8 %RH ± 3.5 %RH

Calibration Place: ALS Laboratory Group (Thailand) Co., Ltd. (Rayong Branch)
(Wet Chemistry Lab)
616/10 Moo 5 T. Maenam Khu, A.Pluakdaeng, Rayong 21140, Thailand.

Calibration By: Mr. Precha Phooanai
Calibration Date: 18 March 2025
The Method used: In house method, CAL-WI-24, base on ASTM E 275-08 and ASTM E 387-04
Traceability: This certificate is traceable to the CRM maintained by National Institute of Standards and Technology (NIST) through Starna Scientific Limited.

The standard for Wavelength Certificate No. 111563 and 111564
The standard for Photometric Certificate No. 9114964 and 111558
The standard for Stray light Certificate No. 111586 and 111585
The standard for Spectral resolution Certificate No. 111587

APPROVED BY: *[Signature]*
NEXT CAL. DATE: 18/03/26

(Mr. Precha Phooanai)
Person in charge

(Mr. Kawkan Sundach)
Authorized signatory

This certificate is issued for the purpose of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.
The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with the Guide to Expression of Uncertainty in Measurement (GUM).
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CAL-FM-C06-15: 11 Mar 2024

Calibration Results:
Without Adjustment

Wavelength Accuracy (nm), The spectral bandwidth of 80d at 2 nm and UUC at 2 nm				
Standard Wavelength	Unit Under Calibration	Correction	Uncertainty	
418.61	418.5	0.11	0.13	
536.66	536.7	-0.04	0.13	
637.86	638.3	-0.32	0.13	
748.48	748.8	-0.32	0.13	
807.03	807.5	-0.47	0.13	

Photometric Accuracy (Absorbance)				
Wavelength	Standard absorbance	Unit Under Calibration	Correction	Uncertainty
420 nm	0.0000	0.000	0.0000	0.0045
	0.2930	0.291	0.0020	0.0045
	0.5168	0.518	-0.0012	0.0045
	1.0298	1.031	-0.0012	0.0045
440 nm	0.0000	0.000	0.0000	0.0045
	0.2967	0.295	0.0017	0.0045
	0.5073	0.508	-0.0007	0.0045
	1.0063	1.009	-0.0027	0.0045
465 nm	0.0000	0.000	0.0000	0.0045
	0.2516	0.250	0.0016	0.0045
	0.4595	0.461	-0.0015	0.0045
	0.9334	0.935	-0.0016	0.0045
546.1 nm	0.0000	0.000	0.0000	0.0045
	0.2461	0.246	0.0001	0.0045
	0.4652	0.466	-0.0008	0.0045
	0.9468	0.948	-0.0012	0.0045
590 nm	0.0000	0.000	0.0000	0.0045
	0.2584	0.259	0.0004	0.0045
	0.5040	0.505	-0.0010	0.0045
	1.0032	1.004	-0.0008	0.0045
635 nm	0.0000	0.000	0.0000	0.0045
	0.2579	0.258	-0.0001	0.0045
	0.4971	0.497	0.0001	0.0045
	0.9720	0.973	-0.0010	0.0045

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Phone: +66 200 7100 Email: info@dksh.com Website: www.dksh.com/thailand

Delivering Growth - In Asia and Beyond.

CAL-FM-C06-15: 11 Mar 2024



Certificate of Calibration

Cert.No.: 24CH1061
Page.: 1 of 2

Equipment : pH Meter
Manufacturer : Mettler Toledo
Model : SevenGo S2
Serial No. : C423217387
ID No. : RVG_FS0713
Condition As-Received : Used Item
Received Date : 29 August 2024
Calibration Date : 30 August 2024
Reference : 2405-068DSG-5
Submitted by : ALS Laboratory Group (Thailand) Co.,Ltd. (Rayong Branch)
616/10 Moo 5, T.Mahinam Khui,
A.Pluakdaeng, Rayong 21140, Thailand

Ambient Temperature : (25 ± 2.5) °C
Relative Humidity : (50 ± 15) %
Calibration Procedure : In-house method :
- CP-CHS by direct measurement with DC voltage
standard and direct measurement with
certified reference material (CRM)

Calibrated by : Warakorn Lenggrasakul
Approved by :
() Umpaphot Hanschai
() Poranan Paipim
(✓) Sathit Meangnial
Issue Date : 2 September 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services & Equipment Calibration and Testing Services.



Cert.No.: 24CH1061
Page.: 2 of 2

Condition of this calibration result

1. Reference Standard Instrument

Instrument Serial No. ID No. Cert. No. Due Date
1) Document Process Calibrator 5844003 130RC120 23E3607 13 Nov 2024
- This Certification is traceable to SI through Technology Promotion Association (Thailand - Japan)

2. Certified Reference Materials

The measurement results are traceable to SI through Hach Lange GmbH Ltd.
Deutsche Akkreditierungsstelle, Accredited No.D-RM-15193-01-00
The measurement results are traceable to SI through CPA chem Ltd.
ANSI-ASQ National Accreditation Board, Accredited No. AN-1835

Buffer Solution	Manufacturer	Lot No.	Exp. date
pH 4.006	Hach Lange GmbH	C03146	23 Feb 2026
pH 7.000	Hach Lange GmbH	C03020	13 Dec 2024
pH 9.997	CPA chem	970853	25 Apr 2025

3. This certificate is valid only to the item calibrated on date and place of calibration.

Calibration Results

Function : mV Measurement

Performing standard curve by Document Process Calibrator at pH (4.7,10)

Unit Under Calibration	Nominal Value	Standard Voltage Input	Actual Reading		Uncertainty of Measurement (mV)	Coverage factor k
	pH	mV	mV	pH		
pH Meter S/N: C423217387	4.00	177.48	178	4.00	0.58	2.00
	7.00	0.00	0	7.00	0.58	2.00
	10.00	-177.48	-178	10.00	0.58	2.00

Function : pH Measurement

Performing three buffers standard curve by using buffer nominal pH (4,7,10)

Unit Under Calibration	Standard pH Buffer Solution	Actual pH Reading	Actual mV Reading (mV)	Uncertainty of pH Measurement (pH)	Coverage factor k
pH Electrode S/N: 4265463	4.006	4.01	185	0.0277	2.00
	7.000	7.00	9	0.0094	2.00
	9.997	10.00	-167	0.0085	2.00

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

-000-



Certificate of Calibration

Cert.No.: 24LM141
Page.: 1 of 2

Equipment : pH Meter with Sensor
Manufacturer : Mettler Toledo
Model : SevenGo S2
Serial No. : C423217387
ID No. : RVG_FS0713
Submitted by : ALS Laboratory Group (Thailand) Co.,Ltd. (Rayong Branch)
616/10 Moo 5, T.Mahinam Khui,
A.Pluakdaeng, Rayong 21140, Thailand
Location : TPA On Site Calibration Laboratory

Received Order : 29 August 2024
Calibrated Date : 30 August 2024
Ambient Temperature : (26 ± 1.0) °C
Relative Humidity : (50 ± 30) %
AC Line Voltage : (220 ± 22) V

Calibrated by : Warakorn Lenggrasakul

Approved by :
() Poranan Paipim
() Suwit Injai
(✓) Kunchit Promprut
Issue Date : 02 September 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services & Equipment Calibration and Testing Services.



Equipment : pH Meter with Sensor
Condition As-Received : Used Item
Reference : 2405-068DSG-5

Cert. No.: 24LM141
Page.: 2 of 2

Procedure Used :-

Calibration were conducted using in-house calibration procedure CP-0701 according to comparison with Industrial Platinum Resistance Thermometer (IPRT) into Temperature Bath.
The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Digital Thermometer	20410013	240651	TPA	06 Aug 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration : (°) Without Adjustment

Function :-

This instrument was connected with temperature sensor, S/N: 4200403

Calibration Point (°C)	Immersion Depth (mm)	Standard Temperature (°C)	UUC ¹ Reading (°C)	Error (°C)	Uncertainty (± °C)	Coverage Factor k
25.0	100	25.004	25.0	-0.004	0.16	2.00
30.0	100	30.003	30.0	-0.003	0.16	2.00
40.0	100	40.002	40.1	0.098	0.16	2.00
50.0	100	50.002	50.1	0.098	0.16	2.00

UUC¹ : Unit Under Calibration

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

-000-

ภาคผนวก จ

สำเนาหนังสือใบอนุญาตขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๐ พฤศจิกายน ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๔ สิงหาคม ๒๕๖๖

- สิ่งที่ส่งมาด้วย ๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ แผ่น
๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๕ แผ่น
๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๑ แผ่น

ตามหนังสือที่อ้างถึง บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ขอต่ออายุหนังสือ
รับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐
ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด
ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

- ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๖ ราย ตามสิ่งที่ส่งมาด้วย ๑
ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ ๑๘๑ ราย ตามสิ่งที่ส่งมาด้วย ๒
ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย น้ำใต้ดิน อากาศเสีย สิ่งปฏิกูล
หรือวัสดุที่ไม่ใช้แล้ว และดิน ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๒ กันยายน ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือ
รับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อ
กรมโรงงานอุตสาหกรรม ภายใน ๓๐ วัน ก่อนวันสิ้นสุดอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายสิระ จันทรีเจ็ด)

นักวิทยาศาสตร์เชี่ยวชาญ วิชาการการแพน
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน

กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ

โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕

โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๔๙

ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”



สิ่งที่ส่งมาด้วย ๑

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔

ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘ ลงวันที่ ๒๐ พฤศจิกายน ๒๕๖๖

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๖ ราย

- | | |
|--------------------------------|----------------------------|
| ๑) นางสาวพาพร จันทรเปล่ง | ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๑ |
| ๒) นางสาวฉันทย์ โกมารกุล ณ นคร | ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๒ |
| ๓) นายศรายุทธ จิตรานนท์ | ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๓ |
| ๔) นางสาวกนกกร เอนก | ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๔ |
| ๕) นายสุริยา สอนแก้ว | ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๕ |
| ๖) นายวิชาญ ชุนหรัตน์ | ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๖ |

วิมล

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท เอแอลเอส แลบลอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔

ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘ ลงวันที่ ๒๐ พฤศจิกายน ๒๕๖๖

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๑๘๑ ราย

๑) นายภาณุวัฒน์ กิตติสุขพาณิชย์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๑
๒) นายภัทรพล สว่างใจธรรม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๒
๓) นายณารัตน์ เทือกชัยคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๓
๔) นายศิริโชค พงษ์ประสม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๔
๕) นายณัฐวุฒิ ดั่งวงแหง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๕
๖) นางสาวจินดา ไขจูลธรรม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๖
๗) นางสาวสาวิตร์ น้อยเสงี่ยม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๗
๘) นางสาวชนัญญาญจน์ อัมมขม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๘
๙) นางสาวนรินทร์ สายเส็ง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๙
๑๐) นางสาวนันท์ สัมบูรณ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๐
๑๑) นางสาวศรียา เฉลิมธารังค์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๑
๑๒) นางสาวธัญญธร มงคลจิรวุฒิ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๒
๑๓) นางสาวศิริลักษณ์ บุญนาค	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๓
๑๔) นายณพพงศ์ จันทร์พันธุ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๔
๑๕) นายนเรศเรษฐ์ โกมลาลัย	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๕
๑๖) นายธินา จริยา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๖
๑๗) นางสาวเกศรินทร์ แก้วมัน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๗
๑๘) นางสาวสุวิมล ชัยเรืองวุฒิ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๘
๑๙) นางสาวสุชาดา ธรรมถาวร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๙
๒๐) นางสาวเปรมิกา ชัยเดชธนกุล	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๐
๒๑) นางสาวศศิธร หมุสวัสดี	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๑
๒๒) นางสาวเสาวลักษณ์ ภูณาทำพร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๒
๒๓) นายอภิสิทธิ์ สิงหา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๓
๒๔) นายศักดิ์สิทธิ์ ไพศาลพิสุทธิ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๔
๒๕) ว่าที่ร้อยตรีหญิง พรรณิภา จำเจริญ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๕
๒๖) นางจิตดา คำแก้ว	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๖
๒๗) นางสาวอรรพรรณ รักยง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๗
๒๘) นางสาวนพรัตน์ แยมกรานต์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๘
๒๙) นายจุลเดช วารินทร์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๙
๓๐) นางสาวดาญรัตน์ ร้องคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๐
๓๑) นายพรมมี ศรีปัตเนตร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๑
๓๒) นายอุทิศ อุ่นลิ้ม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๒
๓๓) ว่าที่ร้อยตรี เฉลิมเกียรติ ออมศรีเสริม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๓
๓๔) นางสาววริยา สร้างนา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๔
๓๕) นายอนุพงศ์ รัตนศรีประเสริฐ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๕

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๓๖) นางสาวจุฑารัตน์...

๓๖) นางสาวจุฑารัตน์ โอนสันเทียะ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๖
๓๗) นางสาวจารุวรรณ พิมพ์อภิกฤติยา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๗
๓๘) นางสาวปรางค์ทิพย์ กิจไพศาลศักดิ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๘
๓๙) นางสาวเดือนใจ ทางกลาง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๙
๔๐) นางสาวจิราพร ศิริเวช	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๐
๔๑) นายวรากร ผูกิร์กซ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๑
๔๒) นายทง วิริยะสหกิจ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๒
๔๓) นายธนิธ เจนจบ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๓
๔๔) นายคณิศร ข้าเพชร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๔
๔๕) นายภูวิช พรหมสะอาด	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๕
๔๖) นายธนเดช โภคาพิพัฒน์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๖
๔๗) นายชวฤทธิ์ วงษ์จันทร์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๗
๔๘) นายอาทิตย์ ศรีเสน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๘
๔๙) นายเจตตินทร์ คงศักดิ์ไทย	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๙
๕๐) นายจรัส บุญยั้ง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๐
๕๑) นายธนาณัติ เอนก	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๑
๕๒) นายอภิวัฒน์ ทุมหนู	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๒
๕๓) นางสาวสุภาวัญ มาก	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๓
๕๔) นางสาวทัตพร ขวาลสมบูรณ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๔
๕๕) นางสาวอติมา บุญเพ็ง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๕
๕๖) นางสาวภาณุมาศ นามวัฒน์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๖
๕๗) นางสาวอุไรรัตน์ ทังสร้างแป้น	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๗
๕๘) นายธีรวัฒน์ ปวงสุข	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๘
๕๙) นายอิทธิพล ยะโส	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๙
๖๐) นายประพจน์ วรรณชูชัย	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๐
๖๑) นายชยธร พงทิพย์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๑
๖๒) นางสาวกนกวรรณ จันทบาล	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๒
๖๓) นายสิทธิโชค ธงเงิน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๓
๖๔) นางศิลาวรรณ ใจบุญ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๔
๖๕) นางสาวพรรณธิดา พุ่มคง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๕
๖๖) นายนวกักร ศรีวิริยะ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๖
๖๗) นายสุวิชา ทองอ่อน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๗
๖๘) นายวิญญู บุญตะนัย	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๘
๖๙) นายสมบูรณ์ บุตรจันทร์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๙
๗๐) นายวิรัตน์ ไชยชนะรา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๐
๗๑) นายณกฤษณ์ เพิ่มพูน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๑
๗๒) นายจิรณัฐ ขวาลอ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๒
๗๓) นายอัสรี นามบุรี	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๓
๗๔) นายอัศเรศ จอสา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๔

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๗๕) นายประเสริฐ...

๗๕) นายประเสริฐ สุระขันธุ์
๗๖) นายบุญล จันทรเนียม
๗๗) นายพิรพงษ์ ทองคุณปรีดา
๗๘) นายณฤพล ทองนุช
๗๙) นายอนุวัฒน์ ม่วงแพ
๘๐) นายเจตศราวุฒิ ปัตตะมะ
๘๑) นายกฤษณะ สายวรรณ
๘๒) นายพิชัย บุญยงค์
๘๓) นายภาณุพงศ์ โยมวงศ์
๘๔) นายสามารถ คุ่มปลี
๘๕) นายสัญญา โกศรีนาม
๘๖) นายณัฐวุฒิ ศรีประเสริฐ
๘๗) นายขวัญชัย นาคพนม
๘๘) นายพงศธร ชัยทิพย์
๘๙) นายสิทธิโชค ทาสีดา
๙๐) นายธนากร อินสุตา
๙๑) นางสาววรรณิษา ขาติวันชัย
๙๒) นางสาวพิมพ์ตะวัน มินากุล
๙๓) นางสาวเพชรรัตน์ สิงห์สมบุญ
๙๔) นางสาวอญานิน พรหมจันทร์
๙๕) นายกิตติ หวีราช
๙๖) นายจักริน หมั่นวิชา
๙๗) นายฉัตรชัย สุขเปี้ย
๙๘) นายณรนนท์ ต๊ะทองคำ
๙๙) นายศุภผล สนนอก
๑๐๐) นายทักษ์ดนัย อุบลศรี
๑๐๑) นายธนศร นามะกฤษณา
๑๐๒) นายธิตีพงศ์ บัวแดง
๑๐๓) นายณนทชัย อุปลัมภ์
๑๐๔) นายณัฐพล คุณสุทธิ
๑๐๕) นายณัฏฐวัฒน์ สาริน
๑๐๖) นายปิยะนัฐ พลมะศรี
๑๐๗) นายพงศ์สิริ โสมเขียว
๑๐๘) นายพิรพัฒน์ กำคำ
๑๐๙) นายภาณุพงศ์ มานิตย์
๑๑๐) นายมงคล ผลาทิพย์
๑๑๑) นายสิรินนท ทองอัน
๑๑๒) นายอเนชา พันสมัย
๑๑๓) นายอดิศักดิ์ ผมไผ

ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๕
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๑๑๔) นายอนันต์ชัย...

๑๑๔) นายอนันต์ชัย วิสม
๑๑๕) นายวรารุณ ดีนัก
๑๑๖) นายแสงตะวัน นະตะสัด
๑๑๗) นายยุทธพงศ์ รัตนะ
๑๑๘) นายชัยวุฒิ ไชยชนะ
๑๑๙) นายวิศรุต ศรีธรรมมา
๑๒๐) นายณนทกร เผือกผ่อง
๑๒๑) นายคำชัย สุทธะ
๑๒๒) นางสาวณัฐภรณ์ บุญตะนัย
๑๒๓) นางสาวพัชรินทร์ แสนสร้อย
๑๒๔) นายไพโรจน์ เปี่ยมพิมาย
๑๒๕) นางสาวศุภมาศ ทองมาก
๑๒๖) นางสาวลลิตา จิตรสว่าง
๑๒๗) นางสาวไมพร เล็กภูเขียว
๑๒๘) นางสาวกฤติมาพร คำมีแก่น
๑๒๙) นางสาวสกุลรัตน์ ภาณุภูมิ
๑๓๐) นางสาวไพรินทร์ ศรีรูปี
๑๓๑) นางสาวทิพนตร ผุยปัญญา
๑๓๒) นางสาวสาธิตา ปานทอง
๑๓๓) นางสาวอริสา ทองนวล
๑๓๔) นางสาวอรยา คำคลอง
๑๓๕) นางสาวชุตติภรณ์ สุนทรสนาน
๑๓๖) นางสาวอัญชลี คำจันทร์
๑๓๗) นายบุญฤทธิ์ เอี่ยมเทศ
๑๓๘) นางสาวศุภรดา ปันมยุรา
๑๓๙) นางสาวพาทิตี คุณนาน
๑๔๐) นางสาวจิราเจต ฟองดา
๑๔๑) นางสาวอารยา มีชัย
๑๔๒) นางสาววิชชุดา นาคผจญ
๑๔๓) นางสาวนันทิยา จันทะลุน
๑๔๔) นายกิตติพงศ์ แซ่ลี
๑๔๕) นายอนุวัติ ภูถวิล
๑๔๖) นายธีรพล แสงทอง
๑๔๗) นายศักดิ์ทิพย์ บุญมัน
๑๔๘) นายฐิติวัตร เอมอุไร
๑๔๙) นายชัยณรงค์ ศรีบุรินทร์
๑๕๐) นางสาวอัจฉราวรรณ สอนสนอง
๑๕๑) นางสาวณัฐราพร สิงหา
๑๕๒) นายกัมเศศ หมายโต

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ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๒

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๑๕๓) นางสาวอุบล...

๑๕๓) นางสาวอุบล เคิกศิริ
๑๕๔) นางสาวมโนรัตน์ ทองบุตร
๑๕๕) นายภาคภูมิ แทนไทย
๑๕๖) นางสาวสุภาณัฐ เมล์พ่วง
๑๕๗) นางสาวพรทิศา สาตาชนม์
๑๕๘) นายเอกวิทย์ วันทะนา
๑๕๙) นายไตรมณฑล ทิพย์วรรณ
๑๖๐) นายจิรเมธ ประเสริฐศิริพงศ์
๑๖๑) นายจิรายุส เกษมสุข
๑๖๒) นายจิรศักดิ์ ศรีวิชัย
๑๖๓) นายณัฐกฤษณ์ สะพานแก้ว
๑๖๔) นายบุญศักดิ์ ปะที
๑๖๕) นายปิ่นณวิญญ์ เสมอทรัพย์
๑๖๖) นายพิษณุพงษ์ ไชยา
๑๖๗) นายภัทรพงษ์ มณฑาทอง
๑๖๘) นายวสันต์ ตรีนกุล
๑๖๙) นายภาณุเดช เพชรสุด
๑๗๐) นายอนุกุล วิลแสง
๑๗๑) นายภัทรพงษ์ มีสุข
๑๗๒) นางสาวนุชวี ลีละทีป
๑๗๓) นางสาวสุภาวดี โกศรีนาม
๑๗๔) นางสาวอรณิศา เทียนคำ
๑๗๕) นางสาวพรเพ็ญ ชอบสอน
๑๗๖) นางสาววันวิสา ขอนพิกุล
๑๗๗) นางสาวอรรณณ เถาว์ทอง
๑๗๘) นางสาวอัยยลิณ เมอร์วิณณ์
๑๗๙) นางสาววิสา ค่วยครอง
๑๘๐) นายวุฒิกกร ศิริวรรณ
๑๘๑) นางสาวจรรวรรณ กระจำพันธุ์

ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๓
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วิมล

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔
ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘ ลงวันที่ ๒๐ พฤศจิกายน ๒๕๖๖

ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๗๔ รายการ
น้ำเสีย จำนวน 60 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldicarb	High-Performance Liquid Chromatographic Method ⁽⁴⁾
2	Aldicarb Sulfone	High-Performance Liquid Chromatographic Method ⁽⁴⁾
3	Aldicarb Sulfoxide	High-Performance Liquid Chromatographic Method ⁽⁴⁾
4	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
5	Arsenic	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
6	Barium	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
7	α-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
8	β-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
9	δ-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
10	γ-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
11	Biochemical Oxygen Demand	1) 5-Day BOD Test, Azide Modification Method ⁽⁴⁾ 2) 5-Day BOD Test, Membrane Electrode Method ⁽⁴⁾
12	Carbaryl	High-Performance Liquid Chromatographic Method ⁽⁴⁾
13	Carbofuran	High-Performance Liquid Chromatographic Method ⁽⁴⁾
14	Cadmium	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
15	Chemical Oxygen Demand	1) Closed Reflux, Colorimetric Method ⁽⁴⁾ 2) Closed Reflux, Titrmetric Method ⁽⁴⁾
16	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
17	Chromium	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
18	Color	ADMI Weighted-Ordinate Spectrophotometric Method ⁽⁴⁾

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Copper	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
20	Cyanide	Distillation, Colorimetric Method ⁽⁴⁾
21	2,4'-DDD	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
22	4,4'-DDD	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
23	2,4'-DDE	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
24	4,4'-DDE	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
25	2,4'-DDT	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
26	4,4'-DDT	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
27	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
28	Endosulfan Sulfate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
29	Endosulfan I	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
30	Endosulfan II	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
31	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
32	Endrin Aldehyde	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
33	Formaldehyde	Distillation, Colorimetric Method ⁽³⁾
34	Free Chlorine	1) DPD Ferrous Titrimetric Method ⁽⁴⁾ 2) DPD Colorimetric Method ⁽⁴⁾
35	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
36	Heptachlor Epoxide	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
37	Hexavalent Chromium	Colorimetric Method ⁽⁴⁾
38	3-Hydroxycarbofuran	High-Performance Liquid Chromatographic Method ⁽⁴⁾
39	Lead	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
40	Manganese	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
41	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass spectrometric Method ⁽⁴⁾
42	Methiocarb	High-Performance Liquid Chromatographic Method ⁽⁴⁾
43	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
44	Methomyl	High-Performance Liquid Chromatographic Method ⁽⁴⁾
45	Nickel	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
46	Oil & Grease	1) Liquid-Liquid, Partition-Gravimetric Method ⁽⁴⁾ 2) Soxhlet Extraction Method ⁽⁴⁾
47	Oxamyl	High-Performance Liquid Chromatographic Method ⁽⁴⁾
48	Propoxur	High-Performance Liquid Chromatographic Method ⁽⁴⁾
49	pH	Electrometric Method ⁽⁴⁾
50	Phenols	1) Distillation, Chloroform Extraction Method ⁽⁴⁾ 2) Distillation, Direct Photometric Method ⁽⁴⁾
51	Selenium	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ⁽⁴⁾
52	Sulfide	Iodometric Method ⁽⁴⁾
53	Temperature	Laboratory and Field Methods ⁽⁴⁾
54	Total Dissolved Solids	Dried at 180 °C ⁽⁴⁾
55	Total Kjeldahl Nitrogen	Semi-Micro Kjeldahl Method ⁽⁴⁾
56	Total Phosphorous	Digestion, Colorimetric Method ⁽⁴⁾
57	Total Suspended Solids	Dried from 103-105 °C ⁽⁴⁾
58	Toxaphene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
59	Trivalent Chromium	1) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Colorimetric Method; Calculation ⁽⁴⁾
60	Zinc	1) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ⁽⁴⁾

น้ำใต้ดิน จำนวน 126 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
2	Acetone	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
5	Antimony	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
6	Arsenic	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
7	Atrazine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
8	Barium	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
9	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
10	Benzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
11	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
12	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
13	Benzoic Acid	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
14	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
15	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
16	Beryllium	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
17	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]

18 Bis(2-ethylhexyl)phthalate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
18	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
19	Bromodichloromethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
20	Bromoform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
21	Butanol	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
22	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
23	Cadmium	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
24	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
25	Carbon disulfide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
26	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
27	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
28	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
29	Chlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
30	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
31	Chloroform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
32	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
33	Chromium	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
34	Chromium (III)	1) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Colorimetric Method; Calculation ^[4]
35	Chromium (VI)	Colorimetric Method ^[4]

36 Chrysene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
36	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
37	Cyanide	Distillation, Colorimetric Method ⁽⁴⁾
38	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
39	DDD	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
40	DDE	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
41	DDT	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
42	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
43	Di-n-Butyl Phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
44	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
45	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
46	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
47	3,3-Dichlorobenzidine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
48	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
49	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
50	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
51	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
52	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
53	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
54	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
55	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
56	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
57	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
58	Diethyl Phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
59	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
60	2,4-Dinitrophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
61	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
62	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
63	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
64	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
65	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
66	Ethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
67	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
68	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
69	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
70	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
71	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
72	Hexachloro-1,3-butadiene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
73	n-Hexane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
74	α-HCH	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
75	β-HCH	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
76	γ-HCH	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
77	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
78	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
79	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
80	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
81	Lead	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
82	Manganese	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
83	Mercury	1) Digestion, Cold Vapor Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
84	Methanol	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
85	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
86	Methyl bromide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
87	Methylene chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
88	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
89	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
90	Methyl tert-butyl Ether	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
91	Naphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
92	Nickel	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
93	Nitrobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
94	N-Nitrosodiphenylamine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
95	N-Nitrosodi-n-Propylamine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
96	Polychlorinated Biphenyls - PCB 1016 - PCB 1221 - PCB 1232 - PCB 1242 - PCB 1248 - PCB 1254 - PCB 1260	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
97	Pentachlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
98	pH	Electrometric Method ^[4]
99	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
100	Phenol	1) Distillation, Chloroform Extraction Method ^[4] 2) Distillation, Direct Photometric Method ^[4] 3) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
101	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
102	Selenium	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
103	Silver	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[4]
104	Styrene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
105	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
106	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
107	Toluene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[4]
108	Toxaphene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
109	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[14,25]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
110	TPH (C ₈ -C ₁₆)	Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[9,22]
111	TPH (C ₁₆ -C ₃₅)	Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[9,22]
112	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
113	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
114	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
115	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
116	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
117	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
118	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
119	Vanadium	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[4]
120	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
121	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
122	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
123	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
124	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
125	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
126	Zinc	1) Digestion, Inductively Coupled Plasma Method ^[4] 2) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[4]

อากาศเสีย (ปล่องระบาย) จำนวน 28 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
2	Arsenic	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5] 1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
3	Beryllium	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5] 1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
4	Cadmium	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5] 1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
5	Carbon Monoxide	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5] 1) Instrumental Analyzer Method ^[5]
6	Chlorine	2) Sampling Bag Non-Dispersive Infrared Method ^[5] 1) Absorption Sampling, Ion Chromatographic Method ^[5]
7	Chromium	2) Isokinetic Sampling, Ion Chromatographic Method ^[5] 1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
8	Cobalt	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5] 1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
9	Copper	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5] 1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
10	Cresol	Adsorption Sampling, Gas Chromatographic Method ^[5]
11	Dioxins	Isokinetic Sampling ^[5]
12	Hydrogen Chloride	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
13	Hydrogen Fluoride	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
14	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	Lead	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
16	Manganese	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
17	Mercury	1) Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[5] 2) Isokinetic Sampling, Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method ^[5]
18	Nickel	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
19	Opacity	Ringelmann's Method ^[2]
20	Oxides of Nitrogen	1) Absorption Sampling, Phenoldisulfonic Acid Method ^[5] 2) Absorption Sampling, Alkaline Permanganate/Colorimetric Method ^[5] 3) Instrumental Analyzer Method ^[5]
21	Selenium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
22	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Method ^[5] 2) Instrumental Analyzer Method ^[5]
23	Sulfuric Acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[5]
24	Tellurium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
25	Tin	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
26	Total Suspended Particulate	1) Isokinetic Sampling, Gravimetric Method ^[5] 2) Paired Train, Isokinetic Sampling, Gravimetric Method ^[5]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
27	Vanadium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[5]
28	Xylene	Adsorption Sampling, Gas Chromatographic Method ^[5]

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 35 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
2	Antimony	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
3	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
4	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
5	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
6	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
7	Chlordane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
8	Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
9	Chromium (III)	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction, Colorimetric Method; Calculation Method ^[1,6,16,19] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method; Waste Extraction, Colorimetric Method; Calculation Method ^[1,6,17,19] 3) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^[7,8,16,19] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^[7,8,17,19]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Chromium (VI)	1) Waste Extraction, Colorimetric Method ^[1,6,19] 2) Alkaline Digestion, Colorimetric Method ^[8,19]
11	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
12	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
13	2,4-D	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
14	DDD	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
15	DDE	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
16	DDT	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
17	Dieldrin	2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26) 1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
18	Endrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
19	Heptachlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
20	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(1,6,16) 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^(1,6,17) 3) Digestion, Inductively Coupled Plasma Method ^(7,16) 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^(7,17)
21	Lindane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
22	Mercury	1) Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^(1,6,20) 2) Waste Extraction, Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method ^(1,6,30) 3) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ⁽²⁰⁾ 4) Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method ⁽³⁰⁾ 5) Thermal Decomposition Amalgamation and Atomic Absorption Spectrometric Method ⁽²¹⁾
23	Methoxychlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic /Mass Spectrometric Method ^(11,26)
24	Mirex	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic /Mass Spectrometric Method ^(11,26)
25	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(1,6,16) 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^(1,6,17) 3) Digestion, Inductively Coupled Plasma Method ^(7,16) 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^(7,17)
26	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(1,6,16) 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^(1,6,17) 3) Digestion, Inductively Coupled Plasma Method ^(7,16) 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^(7,17)
27	Polychlorinated biphenyls (PCBs) - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^(1,9,26) 2) Soxhlet Extraction, Gas Chromatographic Method ^(10,26) 3) Automated Soxhlet Extraction, Gas Chromatographic Method ^(11,26)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
28	<ul style="list-style-type: none"> - 2-Chlorobiphenyl - 2,3-Dichlorobiphenyl - 2,2',5-Trichlorobiphenyl - 2,4',5-Trichlorobiphenyl - 2,2',3,5'-Tetrachlorobiphenyl - 2,2',5,5'-Tetrachlorobiphenyl - 2,3',4,4'-Tetrachlorobiphenyl - 2,2',3,4,5'-Pentachlorobiphenyl - 2,2',4,5,5'-Pentachlorobiphenyl - 2,3,3',4',6-Pentachlorobiphenyl - 2,2',3,4,4',5'-Hexachlorobiphenyl - 2,2',3,4,5,5'-Hexachlorobiphenyl - 2,2',3,5,5',6-Hexachlorobiphenyl - 2,2',4,4',5,5'-Hexachlorobiphenyl - 2,2',3,3',4,4',5-Heptachlorobiphenyl - 2,2',3,4,4',5,5'-Heptachlorobiphenyl - 2,2',3,4,4',5',6-Heptachlorobiphenyl - 2,2',3,4',5,5',6-Heptachlorobiphenyl - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl - Pentachlorophenol 	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26] Electrometric Method ^[23,24]
29	pH	
30	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
31	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
32	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
33	Toxaphene	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
34	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]
35	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[1,6,17] 3) Digestion, Inductively Coupled Plasma Method ^[7,16] 4) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method ^[7,17]

ดิน จำนวน 125 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
2	Acetone	1) Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25] 2) Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method ^[13]
3	Aldrin	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
4	Anthracene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
5	Antimony	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
6	Arsenic	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
7	Atrazine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
8	Barium	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
9	Benz(a)anthracene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
10	Benzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]

11 Benzo(b)fluoranthene

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
11	Benzo(b)fluoranthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
12	Benzo(k)fluoranthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
13	Benzoic acid	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
14	Benzo(a)pyrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
15	Benzo(g,h,i)perylene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
16	Beryllium	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
17	Bis(2-chloroethyl)ether	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
18	Bis(2-ethylhexyl)phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
19	Bromodichloromethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
20	Bromoform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
21	Butanol	Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
22	Butyl Benzyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]

23 Cadmium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
23	Cadmium	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
24	Carbazole	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
25	Carbon Disulfide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
26	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
27	Chlordane	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
28	p-Chloroaniline	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
29	Chlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
30	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
31	Chloroform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
32	2-Chlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
33	Chromium	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
34	Chromium (III)	1) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^[7,8,16,19] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^[7,8,17,19]
35	Chromium (VI)	Alkaline Digestion, Colorimetric Method ^[8,19]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
36	Chrysene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
37	Cyanide	Extraction, Distillation, Colorimetric Method ^[27,28,29]
38	2,4-D	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
39	DDD	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
40	DDE	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
41	DDT	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
42	Dibenz(a,h)anthracene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
43	Di-n-Butyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
44	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
45	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
46	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
47	3,3-Dichlorobenzidine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
48	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
49	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
50	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
51	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
52	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
53	2,4-Dichlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
54	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
55	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
56	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
57	Dieldrin	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
58	Diethyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
59	2,4-Dimethylphenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
60	2,4-Dinitrophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
61	2,4-Dinitrotoluene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
62	2,6-Dinitrotoluene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
63	Di-n-Octyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
64	Endosulfan	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
65	Endrin	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
66	Ethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
67	Fluoranthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
68	Fluorene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
69	Heptachlor	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
70	Heptachlor epoxide	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
71	Hexachlorobenzene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
72	Hexachloro-1,3-butadiene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
73	n-Hexane	1) Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25] 2) Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method ^[13]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
74	α -HCH	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
75	β -HCH	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
76	γ -HCH	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
77	Hexachlorocyclopentadiene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
78	Hexachloroethane	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
79	Indeno(1,2,3-cd)pyrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
80	Isophorone	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
81	Lead	1) Digestion, Inductively Coupled Plasma Method ^(7,16) 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^(7,17)
82	Manganese	1) Digestion, Inductively Coupled Plasma Method ^(7,16) 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^(7,17)
83	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ⁽²⁰⁾ 2) Thermal Decomposition, Amalgamation, and Atomic Absorption Spectrophotometry ⁽²¹⁾ 3) Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method ⁽³⁰⁾

31m21

84 Methanol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
84	Methanol	1) Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(15,25) 2) Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
85	Methoxychlor	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
86	Methyl Bromide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(15,25)
87	Methylene Chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(15,25)
88	2-methylphenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
89	2-Methylnaphthalene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
90	Methyl tert-Butyl Ether	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(15,25)
91	Naphthalene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
92	Nickel	1) Digestion, Inductively Coupled Plasma Method ^(7,16) 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^(7,17)
93	Nitrobenzene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
94	N-Nitrosodiphenylamine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
95	N-Nitrosodi-n-propylamine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26) 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)

31m21

96 Polychlorinated biphenyls (PCBs)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
96	Polychlorinated biphenyls (PCBs) - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260 - 2-Chlorobiphenyl - 2,2',3,5'-Tetrachlorobiphenyl - 2,2',5,5'-Tetrachlorobiphenyl - 2,3',4,4'-Tetrachlorobiphenyl - 2,2',3,4,5'-Pentachlorobiphenyl - 2,2',4,5,5'-Pentachlorobiphenyl - 2,3,3',4',6-Pentachlorobiphenyl - 2,2',3,4,4',5'-Hexachlorobiphenyl - 2,2',3,4,5,5'-Hexachlorobiphenyl - 2,2',3,5,5',6-Hexachlorobiphenyl - 2,2',4,4',5,5'-Hexachlorobiphenyl - 2,2',3,3',4,4',5-Heptachlorobiphenyl - 2,2',3,4,4',5,5'-Heptachlorobiphenyl - 2,2',3,4,4',5,6-Heptachlorobiphenyl - 2,2',3,4',5,5',6-Heptachlorobiphenyl - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
97	Pentachlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
98	Phenanthrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
99	Phenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
100	Pyrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
101	Selenium	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
102	Silver	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
103	Styrene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
104	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
105	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
106	Toluene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
107	Toxaphene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
108	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
109	TPH (C ₈ -C ₁₆)	1) Automate Extraction, Gas Chromatographic Method ^[11,22] 2) Solvent Extraction, Gas Chromatographic Method ^[12,22] 3) Ultrasonic Extraction, Gas Chromatographic Method ^[22,31]
110	TPH (C ₁₆ -C ₃₅)	1) Automate Extraction, Gas Chromatographic Method ^[11,22] 2) Solvent Extraction, Gas Chromatographic Method ^[12,22] 3) Ultrasonic Extraction, Gas Chromatographic Method ^[22,31]
111	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
112	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
113	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
114	Trichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
115	2,4,5-Trichlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
116	2,4,6-Trichlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
117	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
118	Vanadium	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]
119	Vinyl Acetate	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
120	Vinyl Chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
121	m-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
122	o-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
123	p-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
124	Xylene (Total)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[15,25]
125	Zinc	1) Digestion, Inductively Coupled Plasma Method ^[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method ^[7,17]

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ที่ อก ๐๓๑๐(๑)/ ๔ ๑ ๒ ๑

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๕ เมษายน ๒๕๖๗

เรื่อง เปลี่ยนแปลงบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๒๔ มีนาคม ๒๕๖๗

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอเปลี่ยนแปลงบุคลากร ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว มีความเห็นดังนี้

๑. ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓ ราย

๑) นางสาวพรณิศา พุ่มคง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๕
๒) นายกำชัย สุทธระ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๑
๓) นางสาวศุภรดา ปันมยุรา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๘

๒. ให้เพิ่มเจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๑๒ ราย

๑) นางสาวฐานิดา กลิ่นเขียว	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๒
๒) นางสาวกัญญภัทสร สายคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๓
๓) นางสาวณัฐนันท์ กันทะวงศ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๔
๔) นายอำนาจ วงษาเคน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๕
๕) นายกฤษณพล ปิณญาวงศ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๖
๖) นายณชากร ทรธรา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๗
๗) นายวัชรินทร์ ผ่องสามสวน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๘
๘) นายณัฐพงศ์ ไสภา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๙
๙) นายศักรินทร์ ปานเพ็ง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๐
๑๐) นายณัฐพล ชุ่มชื่น	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๑
๑๑) นายธนา สุพาพันธุ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๒
๑๒) นายนราธร แก้วพงษ์ชา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๓

อนึ่ง หนังสือฉบับนี้จะหมดอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
ในวันที่ ๒ กันยายน ๒๕๖๔

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ


(นายพริต ก้อนกรอง)
รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕
โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๔๔
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ที่ อก ๐๓๑๐(๑)/ ๑๒๓๖ ๘ /

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๑๘ ธันวาคม ๒๕๖๗

เรื่อง ยกเลิกบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบลอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และขณัตติสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๒ ธันวาคม ๒๕๖๗

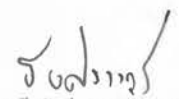
ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบลอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการ
วิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ
เขตสวนหลวง กรุงเทพมหานคร ขอยกเลิกบุคลากร ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์
จำนวน ๘ ราย ได้แก่

๑) นายประพจน์ วรรณชูชัย	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๐
๒) นายจิรณัฐ ขาวละออ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๒
๓) นายพีรพัฒน์ กำคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๘
๔) นางสาวอรยา คำคล่อง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๔
๕) นายกิตติพงศ์ แซ่ลี	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๔
๖) นายจิรเมธ ประเสริฐศิริพงษ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๐
๗) นายภัทรพงษ์ มณฑาทอง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๗
๘) นางสาวจารุวรรณ กระจำงพันธ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๑

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ


(นายธีรทัศน์ อิศรางกูร ณ อยุธยา)
รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕
โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๔๔
ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th





๐๔ สิงหาคม ๒๕๖๗

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๒๗ พฤษภาคม ๒๕๖๗

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด จำนวน ๓ แผ่น

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ๖-๓๒๓ สถานที่ตั้งเลขที่ ๖๑๖/๑๐ หมู่ที่ ๕ ตำบลแม่ไม้คู้ อำเภอบางพลี จังหวัดระยอง ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

ก. ผู้ควบคุมห้องปฏิบัติการวิเคราะห์เอกชน

- | | |
|--------------------------|----------------------------|
| ๑) นายเดช ช้างชน | ทะเบียนเลขที่ ๖-๓๒๓-๓-๐๐๐๑ |
| ๒) นายวิลาวัลย์ บริรักษ์ | ทะเบียนเลขที่ ๖-๓๒๓-๓-๐๐๐๒ |
| ๓) นายสุพจน์ สลามเต๊ะ | ทะเบียนเลขที่ ๖-๓๒๓-๓-๐๐๐๓ |

ข. เจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน

- | | |
|--------------------------------|----------------------------|
| ๑) นายณัฐพงษ์ เพ็ชรขาวนา | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๑ |
| ๒) นางสาวกัลยทรรศน์ รักดี | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๒ |
| ๓) นางสาวจุฑารัตน์ สีทองกลาง | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๓ |
| ๔) นางสาวจิตสุภา ประเทืองสุข | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๔ |
| ๕) นายสรเสริญ คุ้มยศ | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๕ |
| ๖) นายณัฐวุฒิ อภิมพมราช | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๖ |
| ๗) นายจิตรกร สีวะสา | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๗ |
| ๘) นายสิทวิชญ์ สุวรรณรัตน์ | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๘ |
| ๙) นายสิทธิพันธ์ เสนาชีว | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๐๙ |
| ๑๐) นายอนุวัฒน์ เตมา | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๐ |
| ๑๑) นายสุวิทย์ นราพงษ์ | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๑ |
| ๑๒) นายณัฐพล เจริญวิวงศ์ | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๒ |
| ๑๓) นายชานน บุญชื่น | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๓ |
| ๑๔) นายณัฐกานต์ วงศ์อินทร์อยู่ | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๔ |
| ๑๕) นายอานนท์ โพธิ์พระทอง | ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๕ |

๑๖) นายณัฐพล...

- ๑๖) นายณัฐพล ฉ่ำกลาง
- ๑๗) นายศุภณัฐ พิสัยพันธ์
- ๑๘) นายวสันต์ คินันติ
- ๑๙) นายวรัญญู ฉิมพาลี
- ๒๐) นายศุภณัฐ สกฤตติมงคลศักดิ์
- ๒๑) นายเอกชัย อินทอง
- ๒๒) นายพงษ์เทพ สิทธิเลา
- ๒๓) นายทินกร กุมภาชี
- ๒๔) นางสาวนันทยา เบญจจันทร์
- ๒๕) นายสิทธิชัย ยันพิมาย
- ๒๖) นางสาวปภาณิน หลอดทอง
- ๒๗) นางสาวพจนา สีดา
- ๒๘) นางสาวธนิศา กุลศิริวงศ์
- ๒๙) นายพิทยา ทองแดง
- ๓๐) นางสาวชลธิชา สูงภข
- ๓๑) ว่าที่ร้อยตรี รณชัย ม่วงมา
- ๓๒) นายวราวุฒิ พับพา
- ๓๓) นายศักดิ์นรินทร์ จรัสกาย
- ๓๔) นายสุศักดิ์ สาจีน
- ๓๕) นายสถาพร ถาแก้ว
- ๓๖) นายสุหิธดำรง โชคบิดนันท์
- ๓๗) นายวัลลภ หันไชยเนาว์
- ๓๘) นางสาวนาถิ์ เจริญญะตระกูล
- ๓๙) นายธนะสิทธิ์ วงศ์ไชย
- ๔๐) นายชัยนุสรณ์ เลิศนันทกุลชัย
- ๔๑) นายสัจจา เพ็ชรแสง
- ๔๒) นายกณตภณ มณีสัมพันธ์
- ๔๓) นายธารินทร์ อ็อกจินดา
- ๔๔) นายศุภชัย วงศ์สุริย์ฉาย
- ๔๕) นายไสว ตันโพธิ์
- ๔๖) นางสาวกิตติยา สัญญาอาริยากรณ์
- ๔๗) นางสาวธิดารัตน์ ศิริมงคลโร
- ๔๘) นายพิพัฒน์ นิกัทธิเศรษฐ์
- ๔๙) นายศิริวิทย์ เรืองสม
- ๕๐) นายปารามศ สัตยาคุณ
- ๕๑) นายนฤนาท ธรรมะโร
- ๕๒) นางสาวศุภรัตน์ โสจันทร์

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| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๗ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๘ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๑๙ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๒๐ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๒๑ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๒๒ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๒๓ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๒๔ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๒๕ |
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| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๑ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๒ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๓ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๔ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๕ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๖ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๗ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๘ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๓๙ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๔๐ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๔๑ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๔๒ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๔๓ |
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| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๕๐ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๕๑ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๕๒ |
| ทะเบียนเลขที่ ๖-๓๒๓-๖-๐๐๕๓ |

๕๒) นายพชรกร...

๕๒) นายพชรกร เจริญ	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๔
๕๓) นายทิวากร เชื้อมาก	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๕
๕๔) นายอนุรักษ์ ทองขจรศักดิ์	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๖
๕๕) นายอภิชาติ วิลาศ	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๗
๕๖) นายจรินทร์ ศรีรักษา	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๘
๕๘) นายประสาธน์มิตร เชื้อนเพชร	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๙
๕๙) นายภาณุวัฒน์ วัชรบง	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๖๐
๖๐) นายสันติ ชัยชนะ	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๖๑
๖๑) นายทินกร กุลชาติ	ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๖๒

ค. ขอบข่ายชนิดสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย น้ำใต้ดิน อากาศเสีย ตามสิ่งที่ส่งมาด้วย

หนังสือฉบับนี้จะหมดอายุในวันที่ ๒๘ มิถุนายน ๒๕๖๑ หากประสงค์จะต่ออายุหนังสือ รับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรมภายใน ๖๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ


(นายพยศ กอนกรอง)
รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๔ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ airw@dlw.mail.go.th



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”



เอกสารแนบท้ายหนังสือเปลี่ยนแปลงสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๓๒๓
ที่ ๐๓๒๐/ ๗ ๙ ๓ ๘ ลงวันที่ ๐๔ สิงหาคม ๒๕๖๗

ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๕ รายการ
น้ำเสีย จำนวน 14 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Biochemical Oxygen Demand	1) 5-Day BOD Test, Membrane Electrode Method ^[2] 2) 5-Day BOD Test, Azide Modification Method ^[2]
2	Chemical Oxygen Demand	1) Open Reflux, Titrimetric Method ^[2] 2) Closed Reflux, Colorimetric Method ^[2] 3) Closed Reflux, Titrimetric Method ^[2]
3	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[2]
4	Cyanide	Distillation, Colorimetric Method ^[2]
5	Formaldehyde	Distillation, Colorimetric Method ^[1]
6	Free Chlorine	DPD Ferrous Titrimetric Method ^[2]
7	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[2]
8	pH	Electrometric Method ^[2]
9	Phenols	1) Distillation, Chloroform Extraction Method ^[2] 2) Distillation, Direct Photometric Method ^[2]
10	Sulfide	ZnS Precipitation, Iodometric Method ^[2]
11	Temperature	Field Method ^[2]
12	Total Dissolved Solids	Dried at 180 °C ^[2]
13	Total Kjeldahl Nitrogen	Semi-Macro Kjeldahl Method ^[2]
14	Total Suspended Solids	Dried at 103-105 °C ^[2]

น้ำใต้ดิน จำนวน 3 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Cyanide	Distillation, Colorimetric Method ^[2]
2	pH	Electrometric Method ^[2]
3	Phenols	Distillation, Direct Photometric Method ^[2]

อากาศเสีย...

อากาศเสีย (ปล่อยระบาย) จำนวน 7 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Carbon Monoxide	1) Sampling Bag, Non-Dispersive Infrared Method ^[5] 2) Instrumental Analyzer Method ^[9]
2	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]
3	Opacity	Ringelmann's Method ^[3,4]
4	Oxide of Nitrogen	1) Absorption Sampling, Phenoldisulfonic Acid Method ^[8] 2) Instrumental Analyzer Method ^[10]
5	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Acid Method ^[5] 2) Instrumental Analyzer Method ^[11]
6	Sulfuric Acid	Isokinetic Sampling, Barium – Titrimetric Method ^[6]
7	Total Suspended Particulate	Isokinetic Sampling, Gravimetric Method ^[7]



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ที่ อก ๐๓๒๐/ ๑๐๐๕ ๕



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๕๐๐

๐๕ ตุลาคม ๒๕๖๗

เรื่อง แก้อิสรายชื่อเจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง หนังสือ บริษัท เอแอลเอส แลบบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขที่ Env 2024/005

ลงวันที่ ๓๐ สิงหาคม ๒๕๖๗

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กรมโรงงานอุตสาหกรรม ได้รับทราบและดำเนินการแก้ไขรายชื่อเจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๕ ราย ตามที่แจ้งเรียบร้อยแล้ว เป็นดังนี้

ลำดับที่ ๒๗ นางพจนา สีตา

ลำดับที่ ๒๘ นางสาวอนิศา กุลสุริวงศ์

ลำดับที่ ๓๐ นางชลธิชา สุนงกษ

ลำดับที่ ๓๖ นายสุทธิดำรง โชคปิตินันท์

ลำดับที่ ๔๒ นายกันตภณ มณีสัมพันธ์

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

น

(นายพรยศ กลิ่นกรอง)
รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

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ที่ อก ๐๓๑๐(๓)/ ๕๒ ๔ ๖

กรมโรงงานอุตสาหกรรม
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๒๐ พฤษภาคม ๒๕๖๘

เรื่อง ยกเลิกบุคลากรของห้องปฏิบัติการวิเคราะห์

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ลงวันที่ ๑๐ เมษายน ๒๕๖๘

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กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้ยกเลิกเจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๑ ราย ได้แก่ นายปารามศ สัตยาคุณ ทะเบียนเลขที่ ว-๓๒๓-จ-๐๐๕๑

จึงเรียนมาเพื่อทราบ

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