

## ภาคผนวก ค

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ใบรับรองผลการตรวจวิเคราะห์

# ภาคผนวก ค-1

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คุณภาพอากาศในบรรยากาศ



## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** : 2248512-1  
**Sampled Date** : May 03, 2022  
**Sample Description** : Air Quality  
**Location** : บ้านพลอง  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** : 758 mmHg  
**Atmospheric Temperature** : 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	03/05/22 - 04/05/22	ppm	-	1.0	4.5	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	03/05/22 - 04/05/22	mg/m3	-	0.002	0.026	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By** : Norranon Tathongkham

**Remark :**

- LOD : Limit of Detection
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- Analyte(s) marked \* is/are not included in scope of Accreditation ISO/IEC 17025.

Approved by

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
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**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-2  
**Sampled Date** May 04, 2022  
**Sample Description** Air Quality  
**Location** บ้านพลง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	04/05/22 - 05/05/22	ppm	-	1.0	3.9	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	04/05/22 - 05/05/22	mg/m3	-	0.002	0.043	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-3  
**Sampled Date** May 05, 2022  
**Sample Description** Air Quality  
**Location** บ้านพลอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	05/05/22 - 06/05/22	ppm	-	1.0	4.0	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	05/05/22 - 06/05/22	mg/m3	-	0.002	0.058	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

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**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-4  
**Sampled Date** May 06, 2022  
**Sample Description** Air Quality  
**Location** บ้านพลง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	06/05/22 - 07/05/22	ppm	-	1.0	4.9	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	06/05/22 - 07/05/22	mg/m3	-	0.002	0.042	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

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**Sampled By** : Norranon Tathongkham

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**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-5  
**Sampled Date** May 07, 2022  
**Sample Description** Air Quality  
**Location** บ้านพลง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	07/05/22 - 08/05/22	ppm	-	1.0	5.0	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	07/05/22 - 08/05/22	mg/m3	-	0.002	0.048	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

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**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-6  
**Sampled Date** May 08, 2022  
**Sample Description** Air Quality  
**Location** บ้านพลง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	08/05/22 - 09/05/22	ppm	-	1.0	5.0	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	08/05/22 - 09/05/22	mg/m3	-	0.002	0.033	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

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**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-7  
**Sampled Date** May 09, 2022  
**Sample Description** Air Quality  
**Location** บ้านพลอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	09/05/22 - 10/05/22	ppm	-	1.0	3.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	09/05/22 - 10/05/22	mg/m3	-	0.002	0.015	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

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**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-8  
**Sampled Date** May 03, 2022  
**Sample Description** Air Quality  
**Location** โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	03/05/22 - 04/05/22	ppm	-	1.0	4.3	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	03/05/22 - 04/05/22	mg/m3	-	0.002	0.021	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

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**Sampled By :** Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** 2248512-9  
**Sampled Date** May 04, 2022  
**Sample Description** Air Quality  
**Location** โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	04/05/22 - 05/05/22	ppm	-	1.0	4.4	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	04/05/22 - 05/05/22	mg/m3	-	0.002	0.038	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

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**Project Location** : ROC

**Lot ID: 2248512**

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**Sample Number** 2248512-10  
**Sampled Date** May 05, 2022  
**Sample Description** Air Quality  
**Location** โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	05/05/22 - 06/05/22	ppm	-	1.0	4.1	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	05/05/22 - 06/05/22	mg/m3	-	0.002	0.061	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

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**Project Location** : ROC

**Lot ID: 2248512**

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**Sample Number** 2248512-11  
**Sampled Date** May 06, 2022  
**Sample Description** Air Quality  
**Location** โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	06/05/22 - 07/05/22	ppm	-	1.0	5.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	06/05/22 - 07/05/22	mg/m3	-	0.002	0.044	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

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**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
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**Sample Number** : 2248512-12  
**Sampled Date** : May 07, 2022  
**Sample Description** : Air Quality  
**Location** : โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** : 758 mmHg  
**Atmospheric Temperature** : 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	07/05/22 - 08/05/22	ppm	-	1.0	7.1	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	07/05/22 - 08/05/22	mg/m3	-	0.002	0.040	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

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**Project Location** : ROC

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**Sample Number** : 2248512-13  
**Sampled Date** : May 08, 2022  
**Sample Description** : Air Quality  
**Location** : โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** : 758 mmHg  
**Atmospheric Temperature** : 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	08/05/22 - 09/05/22	ppm	-	1.0	2.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	08/05/22 - 09/05/22	mg/m3	-	0.002	0.036	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By** : Norranon Tathongkham

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Approved by

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

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## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** : 2248512-14  
**Sampled Date** : May 09, 2022  
**Sample Description** : Air Quality  
**Location** : โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** : 758 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	09/05/22 - 10/05/22	ppm	-	1.0	2.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	09/05/22 - 10/05/22	mg/m3	-	0.002	0.038	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By** : Norranon Tathongkham

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## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** 2248512-15  
**Sampled Date** May 03, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	03/05/22 - 04/05/22	ppm	-	1.0	2.7	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	03/05/22 - 04/05/22	mg/m3	-	0.002	0.023	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** 2248512-16  
**Sampled Date** May 04, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	04/05/22 - 05/05/22	ppm	-	1.0	2.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	04/05/22 - 05/05/22	mg/m3	-	0.002	0.045	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By** : Norranon Tathongkham

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## Analysis / Test Report

TESTING  
No.0042

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** 2248512-17  
**Sampled Date** May 05, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	05/05/22 - 06/05/22	ppm	-	1.0	3.9	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	05/05/22 - 06/05/22	mg/m3	-	0.002	0.057	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Norranon Tathongkham

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**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** 2248512-18  
**Sampled Date** May 06, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	06/05/22 - 07/05/22	ppm	-	1.0	7.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	06/05/22 - 07/05/22	mg/m3	-	0.002	0.046	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Norranon Tathongkham

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No.0042

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**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

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**Sample Number** 2248512-19  
**Sampled Date** May 07, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	07/05/22 - 08/05/22	ppm	-	1.0	6.4	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	07/05/22 - 08/05/22	mg/m3	-	0.002	0.043	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Norranon Tathongkham

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## Analysis / Test Report

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**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

Page 20 of 21

**Sample Number** 2248512-20  
**Sampled Date** May 08, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	08/05/22 - 09/05/22	ppm	-	1.0	2.7	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	08/05/22 - 09/05/22	mg/m3	-	0.002	0.032	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Norranon Tathongkham

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## Analysis / Test Report

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248512**

Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292438-1

Page 21 of 21

**Sample Number** 2248512-21  
**Sampled Date** May 09, 2022  
**Sample Description** Air Quality  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Date Analysis Commenced** May 11, 2022  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag  
**Barometric Pressure** 758 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Total Hydrocarbon as Methane *	09/05/22 - 10/05/22	ppm	-	1.0	2.6	No Standard	EPA 40 CFR Part 50, Appendix C	-	Rayong
Total Suspended Particulate	09/05/22 - 10/05/22	mg/m3	-	0.002	0.016	0.33	US EPA 40 CFR Part 50, Appendix B	NEB No.24	Rayong

**Guideline :**

NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By** : Norranon Tathongkham

**Remark :**

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**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 2248497**

Date Received : May 10, 2022

Date Reported : May 17, 2022

Report Number: 2292431-1

Page 1 of 1

**Sample Description** Air Quality  
**Location** บ้านพลอง  
**Parameter** Nitrogen dioxide (ppm)  
**Measurement Date** May 03, 2022 - May 10, 2022  
**Measurement by** Norranon Tathongkham

	2248497-1 May 03, 2022	2248497-2 May 04, 2022	2248497-3 May 05, 2022	2248497-4 May 06, 2022	2248497-5 May 07, 2022	2248497-6 May 08, 2022	2248497-7 May 09, 2022
Time							
09:00 AM - 10:00 AM	0.001	0.001	0.003	0.005	0.005	0.006	0.009
10:00 AM - 11:00 AM	0.001	0.001	0.002	0.005	0.007	0.005	0.006
11:00 AM - 12:00 PM	0.002	0.001	0.003	0.007	0.004	0.004	0.004
12:00 PM - 01:00 PM	0.001	0.001	0.004	0.002	0.002	0.005	0.004
01:00 PM - 02:00 PM	0.002	0.001	0.007	0.006	0.005	0.009	0.004
02:00 PM - 03:00 PM	0.002	0.002	0.004	0.010	0.004	0.004	0.004
03:00 PM - 04:00 PM	0.001	0.001	0.010	0.009	0.006	0.010	0.006
04:00 PM - 05:00 PM	0.001	0.001	0.008	0.004	0.008	0.005	0.008
05:00 PM - 06:00 PM	0.002	0.001	0.008	0.007	0.006	0.005	0.005
06:00 PM - 07:00 PM	0.002	0.002	0.008	0.006	0.005	0.008	0.006
07:00 PM - 08:00 PM	0.003	0.003	0.007	0.007	0.005	0.010	0.007
08:00 PM - 09:00 PM	0.003	0.005	0.007	0.008	0.006	0.009	0.006
09:00 PM - 10:00 PM	0.003	0.006	0.006	0.004	0.006	0.010	0.008
10:00 PM - 11:00 PM	0.002	0.005	0.004	0.004	0.005	0.006	0.008
11:00 PM - 12:00 AM	0.002	0.008	0.004	0.009	0.006	0.006	0.006
12:00 AM - 01:00 AM	0.002	0.007	0.003	0.006	0.006	0.004	0.005
01:00 AM - 02:00 AM	0.002	0.004	0.008	0.006	0.005	0.006	0.006
02:00 AM - 03:00 AM	0.002	0.008	0.008	0.004	0.009	0.008	0.007
03:00 AM - 04:00 AM	0.001	0.009	0.010	0.004	0.007	0.008	0.009
04:00 AM - 05:00 AM	0.001	0.008	0.008	0.003	0.005	0.009	0.009
05:00 AM - 06:00 AM	0.002	0.007	0.006	0.004	0.008	0.006	0.009
06:00 AM - 07:00 AM	0.001	0.004	0.006	0.007	0.006	0.008	0.008
07:00 AM - 08:00 AM	0.001	0.003	0.005	<0.001	0.009	0.010	0.010
08:00 AM - 09:00 AM	0.001	0.003	0.006	0.002	0.006	0.009	0.009
Average	0.002	0.004	0.006	0.005	0.006	0.007	0.007
1hr - Maximum	0.003	0.009	0.010	0.010	0.009	0.010	0.010
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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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 2248497**

Date Received : May 10, 2022

Date Reported : May 17, 2022

Report Number: 2315087-1

Page 1 of 1

**Sample Description** Air Quality  
**Location** โรงเรียนบ้านมาตาตุด (โศภณราษฎร์นุรักษ์)  
**Parameter** Nitrogen dioxide (ppm)  
**Measurement Date** May 03, 2022 - May 10, 2022  
**Measurement by** Norranon Tathongkham

	2248497-8 May 03, 2022	2248497-9 May 04, 2022	2248497-10 May 05, 2022	2248497-11 May 06, 2022	2248497-12 May 07, 2022	2248497-13 May 08, 2022	2248497-14 May 09, 2022
Time							
10:00 AM - 11:00 AM	0.004	<0.001	0.012	0.009	0.006	0.005	0.006
11:00 AM - 12:00 PM	0.004	0.003	0.011	0.009	0.007	0.004	0.004
12:00 PM - 01:00 PM	0.003	0.005	0.008	0.008	0.007	0.006	0.004
01:00 PM - 02:00 PM	0.003	0.005	0.009	0.006	0.010	0.005	0.003
02:00 PM - 03:00 PM	0.004	0.005	0.008	0.007	0.015	0.007	0.004
03:00 PM - 04:00 PM	0.005	0.011	0.007	0.007	0.007	0.010	0.005
04:00 PM - 05:00 PM	0.007	0.015	0.006	0.006	0.010	0.009	0.005
05:00 PM - 06:00 PM	0.005	0.008	0.012	0.007	0.011	0.008	0.008
06:00 PM - 07:00 PM	0.008	0.012	0.007	0.009	0.011	0.011	0.013
07:00 PM - 08:00 PM	0.008	0.012	0.007	0.008	0.011	0.015	0.010
08:00 PM - 09:00 PM	0.005	0.012	0.007	0.012	0.011	0.006	0.010
09:00 PM - 10:00 PM	0.005	0.010	0.007	0.016	0.013	0.015	0.011
10:00 PM - 11:00 PM	0.004	0.008	0.007	0.010	0.006	0.009	0.008
11:00 PM - 12:00 AM	0.006	0.006	0.008	0.013	0.007	0.004	0.008
12:00 AM - 01:00 AM	0.005	0.006	0.008	0.009	0.004	0.006	0.008
01:00 AM - 02:00 AM	0.003	0.007	0.010	0.010	0.005	0.008	0.006
02:00 AM - 03:00 AM	0.003	0.006	0.014	0.010	0.008	0.011	0.006
03:00 AM - 04:00 AM	0.003	0.006	0.014	0.009	0.008	0.008	0.005
04:00 AM - 05:00 AM	0.004	0.007	0.012	0.009	0.008	0.010	0.002
05:00 AM - 06:00 AM	0.005	0.010	0.010	0.012	0.008	0.010	0.004
06:00 AM - 07:00 AM	0.008	0.012	0.009	0.015	0.011	0.010	0.009
07:00 AM - 08:00 AM	0.007	0.006	0.011	0.013	0.009	0.005	0.011
08:00 AM - 09:00 AM	0.005	0.015	0.011	0.013	0.009	0.006	0.005
09:00 AM - 10:00 AM	0.005	0.013	0.009	0.006	0.007	0.006	0.004
Average	0.005	0.008	0.009	0.010	0.009	0.008	0.007
1hr - Maximum	0.008	0.015	0.014	0.016	0.015	0.015	0.013
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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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 2248497**

Date Received : May 10, 2022

Date Reported : May 17, 2022

Report Number: 2315088-1

Page 1 of 1

<b>Sample Description</b>	Air Quality
<b>Location</b>	ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง
<b>Parameter</b>	Nitrogen dioxide (ppm)
<b>Measurement Date</b>	May 03, 2022 - May 10, 2022
<b>Measurement by</b>	Norranon Tathongkham

	2248497-15 May 03, 2022	2248497-16 May 04, 2022	2248497-17 May 05, 2022	2248497-18 May 06, 2022	2248497-19 May 07, 2022	2248497-20 May 08, 2022	2248497-21 May 09, 2022
Time							
11:00 AM - 12:00 PM	0.002	0.002	0.008	0.004	0.002	0.004	0.002
12:00 PM - 01:00 PM	0.002	0.003	0.006	0.003	0.006	0.003	0.001
01:00 PM - 02:00 PM	0.004	0.003	0.004	0.003	0.015	0.003	0.001
02:00 PM - 03:00 PM	0.004	0.003	0.002	0.002	0.007	0.006	0.001
03:00 PM - 04:00 PM	0.004	0.007	0.002	0.002	0.004	0.005	0.001
04:00 PM - 05:00 PM	0.004	0.014	0.021	0.002	0.011	0.004	0.002
05:00 PM - 06:00 PM	0.006	0.014	0.015	0.003	0.020	0.005	0.003
06:00 PM - 07:00 PM	0.005	0.008	0.017	0.005	0.020	0.009	0.005
07:00 PM - 08:00 PM	0.005	0.010	0.022	0.007	0.018	0.013	0.008
08:00 PM - 09:00 PM	0.004	0.011	0.024	0.012	0.019	0.014	0.006
09:00 PM - 10:00 PM	0.006	0.007	0.020	0.014	0.018	0.012	0.005
10:00 PM - 11:00 PM	0.005	0.006	0.021	0.013	0.014	0.007	0.004
11:00 PM - 12:00 AM	0.005	0.005	0.020	0.010	0.002	0.004	0.005
12:00 AM - 01:00 AM	0.003	0.006	0.011	0.007	0.003	0.006	0.003
01:00 AM - 02:00 AM	0.002	0.006	0.013	0.007	0.003	0.007	0.003
02:00 AM - 03:00 AM	0.002	0.006	0.014	0.007	0.007	0.007	0.004
03:00 AM - 04:00 AM	0.002	0.006	0.015	0.008	0.006	0.006	0.004
04:00 AM - 05:00 AM	0.003	0.008	0.015	0.008	0.005	0.006	0.002
05:00 AM - 06:00 AM	0.003	0.008	0.012	0.009	0.005	0.007	0.003
06:00 AM - 07:00 AM	0.004	0.015	0.013	0.012	0.008	0.007	0.006
07:00 AM - 08:00 AM	0.005	0.016	0.016	0.012	0.009	0.007	0.011
08:00 AM - 09:00 AM	0.005	0.013	0.014	0.009	0.008	0.004	0.004
09:00 AM - 10:00 AM	0.004	0.014	0.008	0.003	0.006	0.004	0.002
10:00 AM - 11:00 AM	0.003	0.010	0.006	0.003	0.006	0.003	0.001
Average	0.004	0.008	0.013	0.007	0.009	0.006	0.004
1hr - Maximum	0.006	0.016	0.024	0.014	0.020	0.014	0.011
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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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 2248507**

Date Received : May 10, 2022

Date Reported : May 17, 2022

Report Number: 2292433-1

Page 1 of 1

**Sample Description** Air Quality  
**Location** บ้านพลอง  
**Parameter** Sulfur Dioxide (ppm)  
**Measurement Date** May 03, 2022 - May 10, 2022  
**Measurement by** Norranon Tathongkham

	2248507-1	2248507-2	2248507-3	2248507-4	2248507-5	2248507-6	2248507-7
Time	May 03, 2022	May 04, 2022	May 05, 2022	May 06, 2022	May 07, 2022	May 08, 2022	May 09, 2022
09:00 AM - 10:00 AM	0.005	0.006	0.006	0.005	0.006	0.004	0.004
10:00 AM - 11:00 AM	0.005	0.005	0.006	0.006	0.006	0.002	0.007
11:00 AM - 12:00 PM	0.005	0.005	0.006	0.006	0.006	0.005	0.005
12:00 PM - 01:00 PM	0.005	0.006	0.006	0.007	0.007	0.006	0.005
01:00 PM - 02:00 PM	0.005	0.005	0.006	0.007	0.007	0.007	0.005
02:00 PM - 03:00 PM	0.006	0.005	0.007	0.006	0.007	0.008	0.005
03:00 PM - 04:00 PM	0.003	0.005	0.007	0.007	0.007	0.006	0.005
04:00 PM - 05:00 PM	0.005	0.004	0.007	0.009	0.007	0.005	0.005
05:00 PM - 06:00 PM	0.005	0.006	0.007	0.008	0.006	0.008	0.005
06:00 PM - 07:00 PM	0.006	0.007	0.008	0.008	0.005	0.007	0.005
07:00 PM - 08:00 PM	0.006	0.007	0.007	0.008	0.006	0.008	0.005
08:00 PM - 09:00 PM	0.007	0.008	0.006	0.008	0.006	0.008	0.006
09:00 PM - 10:00 PM	0.006	0.008	0.006	0.005	0.006	0.009	0.008
10:00 PM - 11:00 PM	0.005	0.007	0.006	0.006	0.006	0.006	0.008
11:00 PM - 12:00 AM	0.005	0.007	0.005	0.007	0.005	0.008	0.005
12:00 AM - 01:00 AM	0.005	0.006	0.006	0.007	0.006	0.005	0.006
01:00 AM - 02:00 AM	0.005	0.006	0.006	0.007	0.006	0.005	0.006
02:00 AM - 03:00 AM	0.005	0.006	0.006	0.008	0.005	0.005	0.006
03:00 AM - 04:00 AM	0.006	0.006	0.006	0.006	0.005	0.005	0.005
04:00 AM - 05:00 AM	0.006	0.006	0.006	0.006	0.005	0.007	0.006
05:00 AM - 06:00 AM	0.006	0.006	0.006	0.006	0.005	0.005	0.007
06:00 AM - 07:00 AM	0.006	0.005	0.005	0.006	0.005	0.008	0.010
07:00 AM - 08:00 AM	0.006	0.005	0.005	0.005	0.005	0.008	0.007
08:00 AM - 09:00 AM	0.006	0.006	0.005	0.005	0.005	0.008	0.007
Average	0.005	0.006	0.006	0.007	0.006	0.006	0.006
1hr - Maximum	0.007	0.008	0.008	0.009	0.007	0.009	0.010
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).

Reference Method : US EPA Method Part 53 and 58

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 2248507**

Date Received : May 10, 2022

Date Reported : May 17, 2022

Report Number: 2315089-1

Page 1 of 1

**Sample Description** Air Quality  
**Location** โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์นุรักษ์)  
**Parameter** Sulfur Dioxide (ppm)  
**Measurement Date** May 03, 2022 - May 10, 2022  
**Measurement by** Norranon Tathongkham

	2248507-8 May 03, 2022	2248507-9 May 04, 2022	2248507-10 May 05, 2022	2248507-11 May 06, 2022	2248507-12 May 07, 2022	2248507-13 May 08, 2022	2248507-14 May 09, 2022
Time							
10:00 AM - 11:00 AM	<0.001	<0.001	0.002	0.005	0.004	0.004	0.005
11:00 AM - 12:00 PM	0.001	<0.001	0.002	0.004	0.004	0.005	0.002
12:00 PM - 01:00 PM	0.001	<0.001	0.002	0.003	0.004	0.004	0.003
01:00 PM - 02:00 PM	<0.001	<0.001	0.004	0.002	0.002	0.004	0.004
02:00 PM - 03:00 PM	0.001	<0.001	0.003	0.003	0.004	0.004	0.003
03:00 PM - 04:00 PM	0.001	0.001	0.003	0.006	0.004	0.004	0.004
04:00 PM - 05:00 PM	0.001	<0.001	0.004	0.006	0.003	0.003	0.002
05:00 PM - 06:00 PM	0.001	<0.001	0.003	0.003	0.006	0.005	0.004
06:00 PM - 07:00 PM	0.001	<0.001	0.002	0.003	0.003	0.004	0.002
07:00 PM - 08:00 PM	0.002	0.002	0.003	0.002	0.002	0.004	0.003
08:00 PM - 09:00 PM	0.002	0.003	0.001	0.003	0.003	0.006	0.003
09:00 PM - 10:00 PM	0.002	0.005	0.002	0.005	0.003	0.005	0.002
10:00 PM - 11:00 PM	0.002	0.005	<0.001	0.004	0.003	0.006	0.005
11:00 PM - 12:00 AM	0.002	0.004	0.003	0.003	0.002	0.002	0.004
12:00 AM - 01:00 AM	0.002	0.004	0.004	0.005	0.003	0.002	0.003
01:00 AM - 02:00 AM	0.002	0.002	0.002	0.002	0.003	0.004	0.005
02:00 AM - 03:00 AM	0.002	0.003	0.004	0.003	0.002	0.002	0.001
03:00 AM - 04:00 AM	0.001	0.003	0.005	0.003	0.006	0.004	0.002
04:00 AM - 05:00 AM	<0.001	0.004	0.006	0.004	0.004	0.004	0.005
05:00 AM - 06:00 AM	<0.001	0.003	0.004	0.003	0.003	0.005	0.004
06:00 AM - 07:00 AM	0.002	0.003	0.003	0.004	0.006	0.002	0.004
07:00 AM - 08:00 AM	<0.001	0.003	0.002	0.004	0.004	0.004	0.004
08:00 AM - 09:00 AM	<0.001	0.003	0.002	0.002	0.007	0.004	0.006
09:00 AM - 10:00 AM	<0.001	0.002	0.002	0.002	0.004	0.005	0.005
Average	0.001	0.002	0.003	0.004	0.004	0.004	0.004
1hr - Maximum	0.002	0.005	0.006	0.006	0.007	0.006	0.006
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).

Reference Method : US EPA Method Part 53 and 58

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 2248507**

Date Received : May 10, 2022

Date Reported : May 17, 2022

Report Number: 2315095-1

Page 1 of 1

<b>Sample Description</b>	Air Quality
<b>Location</b>	ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง
<b>Parameter</b>	Sulfur Dioxide (ppm)
<b>Measurement Date</b>	May 03, 2022 - May 10, 2022
<b>Measurement by</b>	Norranon Tathongkham

	2248507-15 May 03, 2022	2248507-16 May 04, 2022	2248507-17 May 05, 2022	2248507-18 May 06, 2022	2248507-19 May 07, 2022	2248507-20 May 08, 2022	2248507-21 May 09, 2022
Time							
11:00 AM - 12:00 PM	0.003	0.005	0.007	0.005	0.003	0.003	0.008
12:00 PM - 01:00 PM	0.001	0.004	0.006	0.004	0.005	0.002	0.008
01:00 PM - 02:00 PM	0.003	0.002	0.002	0.004	0.002	0.003	0.008
02:00 PM - 03:00 PM	0.003	0.002	0.003	0.002	0.003	0.003	0.005
03:00 PM - 04:00 PM	0.003	0.002	0.004	0.003	0.002	0.002	0.004
04:00 PM - 05:00 PM	0.003	0.002	0.006	0.002	0.004	0.002	0.005
05:00 PM - 06:00 PM	0.003	0.002	0.003	0.002	0.003	0.003	0.004
06:00 PM - 07:00 PM	0.003	0.002	0.003	0.003	0.004	0.004	0.005
07:00 PM - 08:00 PM	0.002	0.002	0.004	0.003	0.002	0.003	0.005
08:00 PM - 09:00 PM	0.002	0.002	0.004	0.003	0.002	0.003	0.005
09:00 PM - 10:00 PM	0.004	0.003	0.006	0.006	0.002	0.003	0.004
10:00 PM - 11:00 PM	0.004	0.004	0.004	0.003	0.002	0.004	0.003
11:00 PM - 12:00 AM	0.004	0.005	0.010	0.002	0.002	0.004	0.003
12:00 AM - 01:00 AM	0.004	0.004	0.004	0.002	0.002	0.004	0.003
01:00 AM - 02:00 AM	0.006	0.005	0.003	0.002	0.003	0.004	0.003
02:00 AM - 03:00 AM	0.004	0.004	0.003	0.002	0.003	0.003	0.003
03:00 AM - 04:00 AM	0.004	0.003	0.003	0.002	0.005	0.002	0.004
04:00 AM - 05:00 AM	0.004	0.003	0.003	0.002	0.003	0.004	0.004
05:00 AM - 06:00 AM	0.003	0.003	0.002	0.002	0.002	0.007	0.004
06:00 AM - 07:00 AM	0.004	0.003	0.002	0.002	0.003	0.007	0.004
07:00 AM - 08:00 AM	0.004	0.003	0.002	0.002	0.004	0.009	0.005
08:00 AM - 09:00 AM	0.003	0.003	0.002	0.004	0.004	0.006	0.003
09:00 AM - 10:00 AM	0.005	0.004	0.004	0.004	0.003	0.007	0.004
10:00 AM - 11:00 AM	0.004	0.004	0.008	0.002	0.004	0.005	0.003
Average	0.003	0.003	0.004	0.003	0.003	0.004	0.004
1hr - Maximum	0.006	0.005	0.010	0.006	0.005	0.009	0.008
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).

Reference Method : US EPA Method Part 53 and 58

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Approved by

*Saranya C.*

Saranya Chalermthamrong

Scientist (4)

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-1  
**Sampled Date** : May 03, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	03/05/22 - 04/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	03/05/22 - 04/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

Remark :

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Supervisor



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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-2  
**Sampled Date** : May 04, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	04/05/22 - 05/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	04/05/22 - 05/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-3  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	05/05/22 - 06/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	05/05/22 - 06/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-4  
**Sampled Date** : May 06, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	06/05/22 - 07/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	06/05/22 - 07/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-5  
**Sampled Date** : May 07, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	07/05/22 - 08/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	07/05/22 - 08/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-6  
**Sampled Date** : May 08, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	08/05/22 - 09/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	08/05/22 - 09/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-7  
**Sampled Date** : May 09, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	09/05/22 - 10/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	09/05/22 - 10/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-8  
**Sampled Date** : May 03, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	03/05/22 - 04/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	03/05/22 - 04/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-9  
**Sampled Date** : May 04, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	04/05/22 - 05/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	04/05/22 - 05/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-10  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	05/05/22 - 06/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	05/05/22 - 06/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

Page 11 of 14

**Sample Number** : 2248520-11  
**Sampled Date** : May 06, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	06/05/22 - 07/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	06/05/22 - 07/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-12  
**Sampled Date** : May 07, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	07/05/22 - 08/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	07/05/22 - 08/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-13  
**Sampled Date** : May 08, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	08/05/22 - 09/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	08/05/22 - 09/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248520**

Date Received : May 10, 2022  
Date Reported : May 23, 2022  
Report Number : 2292443-1

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**Sample Number** : 2248520-14  
**Sampled Date** : May 09, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 11, 2022  
**Condition of Sample** : Drawn into one 25-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Air Testing</b>							
Ethylene	09/05/22 - 10/05/22	ppm	-	1.0	<1.0	Based on ASTM, D 2712	Bangkok
Propylene	09/05/22 - 10/05/22	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

**Sampled By** : Norranon Tathongkham

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248527  
Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292446-1

Page 1 of 2

**Sample Number** : 2248527-1 to 7  
**Parameter** : Wind Speed / Wind Direction  
**Location** : บ้านพลอง  
**Sampling Date** : May 03 - May 10, 2022  
**Sampling by** : Norranon Tathongkham

Time	May 03 - May 04, 2022			May 04 - May 05, 2022			May 05 - May 06, 2022			May 06 - May 07, 2022			May 07 - May 08, 2022			May 08 - May 09, 2022			May 09 - May 10, 2022		
	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)	
09:00 AM - 10:00 AM	1.8	140.0	SE	1.0	183.0	S	2.7	149.0	SSE	0.3	150.0	SSE	3.7	137.0	SE	1.1	147.0	SSE	3.0	152.0	SSE
10:00 AM - 11:00 AM	2.1	145.0	SE	2.2	209.0	SSW	2.8	117.0	ESE	2.1	186.0	S	1.8	114.0	ESE	1.8	150.0	SSE	2.2	140.0	SE
11:00 AM - 12:00 PM	1.1	130.0	SE	1.0	167.0	SSE	1.6	127.0	SE	1.3	114.0	ESE	1.3	126.0	SE	2.4	154.0	SSE	1.0	119.0	ESE
12:00 PM - 01:00 PM	0.9	140.0	SE	1.3	139.0	SE	2.7	159.0	SSE	4.0	108.0	ESE	1.5	122.0	ESE	1.8	153.0	SSE	2.0	155.0	SSE
01:00 PM - 02:00 PM	1.2	150.0	SSE	1.8	159.0	SSE	1.5	160.0	SSE	3.6	109.0	ESE	2.0	117.0	ESE	3.3	155.0	SSE	1.8	147.0	SSE
02:00 PM - 03:00 PM	2.3	120.0	ESE	1.6	150.0	SSE	3.9	158.0	SSE	1.6	130.0	SE	1.7	113.0	ESE	3.3	116.0	ESE	1.1	128.0	SE
03:00 PM - 04:00 PM	1.4	148.0	SSE	1.7	179.0	S	1.7	118.0	ESE	2.0	115.0	ESE	3.9	129.0	SE	1.4	134.0	SE	1.7	147.0	SSE
04:00 PM - 05:00 PM	1.0	140.0	SE	3.6	148.0	SSE	2.2	150.0	SSE	1.8	153.0	SSE	2.3	157.0	SSE	0.4	150.0	SSE	2.8	112.0	ESE
05:00 PM - 06:00 PM	1.2	135.0	SE	1.5	145.0	SE	2.3	156.0	SSE	3.2	178.0	S	1.2	86.0	E	2.8	106.0	ESE	1.7	143.0	SE
06:00 PM - 07:00 PM	2.0	124.0	SE	2.6	120.0	ESE	2.0	128.0	SE	3.6	176.0	S	0.6	166.0	SSE	2.7	126.0	SE	0.5	140.0	SE
07:00 PM - 08:00 PM	2.3	161.0	SSE	2.0	93.0	E	2.3	148.0	SSE	2.8	155.0	SSE	1.1	169.0	S	3.1	131.0	SE	0.7	108.0	ESE
08:00 PM - 09:00 PM	2.6	146.0	SE	2.7	136.0	SE	1.4	140.0	SE	2.9	47.0	NE	2.7	182.0	S	3.8	147.0	SSE	1.0	107.0	ESE
09:00 PM - 10:00 PM	1.5	164.0	SSE	2.8	94.0	E	2.9	103.0	ESE	0.4	50.0	NE	1.2	168.0	SSE	3.9	147.0	SSE	2.9	108.0	ESE
10:00 PM - 11:00 PM	1.2	157.0	SSE	2.2	90.0	E	1.5	108.0	ESE	0.8	104.0	ESE	0.8	157.0	SSE	1.3	150.0	SSE	2.9	109.0	ESE
11:00 PM - 12:00 AM	1.7	126.0	SE	1.9	129.0	SE	0.3	150.0	SSE	2.2	116.0	ESE	0.3	152.0	SSE	3.8	146.0	SE	0.5	109.0	ESE
12:00 AM - 01:00 AM	1.3	129.0	SE	1.8	138.0	SE	1.4	155.0	SSE	2.1	126.0	SE	1.5	160.0	SSE	0.3	145.0	SE	0.8	50.0	NE
01:00 AM - 02:00 AM	1.5	134.0	SE	1.1	140.0	SE	0.8	131.0	SE	2.6	128.0	SE	0.8	164.0	SSE	0.2	-	-	0.7	45.0	NE
02:00 AM - 03:00 AM	0.9	153.0	SSE	0.9	146.0	SE	1.2	139.0	SE	2.8	125.0	SE	0.3	164.0	SSE	0.3	157.0	SSE	1.2	55.0	NE
03:00 AM - 04:00 AM	1.7	138.0	SE	1.4	150.0	SSE	1.6	145.0	SE	1.5	120.0	ESE	0.7	175.0	S	0.2	-	-	0.3	59.0	ENE
04:00 AM - 05:00 AM	1.0	138.0	SE	1.7	142.0	SE	1.4	152.0	SSE	1.1	124.0	SE	0.3	160.0	SSE	2.2	145.0	SE	1.5	60.0	ENE
05:00 AM - 06:00 AM	2.4	139.0	SE	1.2	148.0	SSE	1.0	156.0	SSE	1.0	161.0	SSE	0.5	148.0	SSE	0.5	160.0	SSE	2.4	58.0	ENE
06:00 AM - 07:00 AM	2.3	159.0	SSE	1.7	147.0	SSE	1.0	161.0	SSE	2.7	110.0	ESE	0.7	122.0	ESE	3.0	162.0	SSE	3.1	17.0	NNE
07:00 AM - 08:00 AM	2.6	135.0	SE	2.9	160.0	SSE	1.3	139.0	SE	1.3	129.0	SE	1.1	147.0	SSE	2.7	152.0	SSE	3.2	33.0	NNE
08:00 AM - 09:00 AM	0.9	187.0	S	1.8	170.0	S	0.6	146.0	SE	3.8	145.0	SE	0.7	133.0	SE	3.3	148.0	SSE	3.4	90.0	E

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

Sarayuth Jittrantont  
Assistant General Manager





## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

**Lot ID** : 2248527

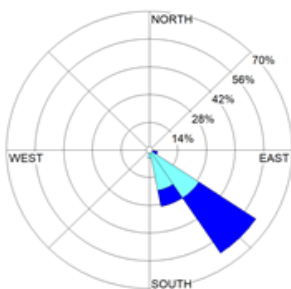
Date Received : May 10, 2022

Date Reported : May 18, 2022

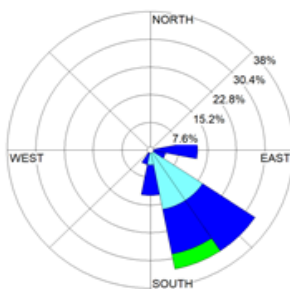
Report Number : 2292446-1

Page 2 of 2

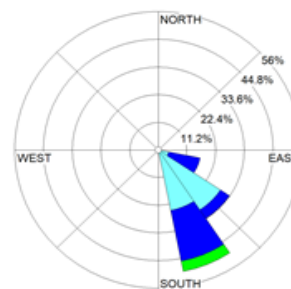
### Wind Rose



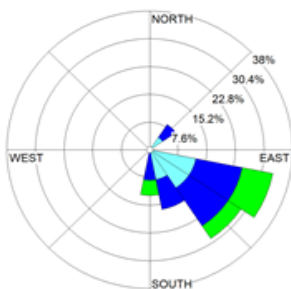
Date : May 03-04, 2022



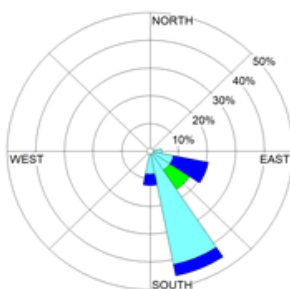
Date : May 04-05, 2022



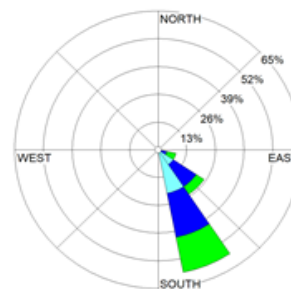
Date : May 05-06, 2022



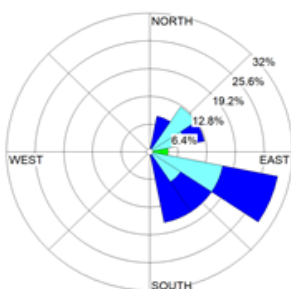
Date : May 06-07, 2022



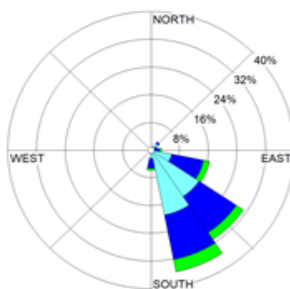
Date : May 07-08, 2022



Date : May 08-09, 2022



Date : May 09-10, 2022



Date : May 03-10, 2022

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	8.93
1.7-3.3	42.26
0.3-1.7	47.62
Calms	1.19

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



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248527  
Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292446-1

Page 1 of 2

**Sample Number** : 2248527-8 to 14  
**Parameter** : Wind Speed / Wind Direction  
**Location** : โรงเรียนบ้านมาบตาพุด (โศภณราษฎร์บูรณะ)  
**Sampling Date** : May 03 - May 10, 2022  
**Sampling by** : Norranon Tathongkham

Time	May 03 - May 04, 2022			May 04 - May 05, 2022			May 05 - May 06, 2022			May 06 - May 07, 2022			May 07 - May 08, 2022			May 08 - May 09, 2022			May 09 - May 10, 2022		
	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	2.8	153.0	SSE	2.1	170.0	S	2.8	155.0	SSE	3.7	160.0	SSE	2.0	126.0	SE	1.7	161.0	SSE	1.6	151.0	SSE
11:00 AM - 12:00 PM	2.3	126.0	SE	2.3	190.0	S	3.1	130.0	SE	3.6	174.0	S	2.0	123.0	ESE	2.7	146.0	SE	1.5	213.0	SSW
12:00 PM - 01:00 PM	2.6	158.0	SSE	2.9	169.0	S	1.1	127.0	SE	1.2	141.0	SE	1.7	145.0	SE	2.7	150.0	SSE	1.7	146.0	SE
01:00 PM - 02:00 PM	1.9	139.0	SE	2.3	154.0	SSE	2.1	153.0	SSE	3.9	130.0	SE	1.4	126.0	SE	1.5	142.0	SE	1.0	123.0	ESE
02:00 PM - 03:00 PM	1.8	170.0	S	2.4	140.0	SE	1.9	141.0	SE	2.8	92.0	E	1.0	124.0	SE	2.0	127.0	SE	1.5	123.0	ESE
03:00 PM - 04:00 PM	3.8	129.0	SE	2.0	144.0	SE	3.6	156.0	SSE	1.8	146.0	SE	2.8	120.0	ESE	1.3	91.0	E	1.6	129.0	SE
04:00 PM - 05:00 PM	1.4	144.0	SE	1.5	171.0	S	2.1	144.0	SE	1.2	148.0	SSE	1.4	126.0	SE	1.4	111.0	ESE	1.3	138.0	SE
05:00 PM - 06:00 PM	3.5	142.0	SE	3.1	168.0	SSE	1.3	142.0	SE	3.6	157.0	SSE	1.3	129.0	SE	1.5	152.0	SSE	2.0	144.0	SE
06:00 PM - 07:00 PM	2.3	148.0	SSE	2.4	141.0	SE	2.2	122.0	ESE	3.2	193.0	SSW	2.0	101.0	E	2.0	90.0	E	1.7	130.0	SE
07:00 PM - 08:00 PM	1.2	128.0	SE	1.0	140.0	SE	2.2	143.0	SE	1.5	158.0	SSE	1.1	170.0	S	1.5	95.0	E	1.9	114.0	ESE
08:00 PM - 09:00 PM	2.2	163.0	SSE	1.2	86.0	E	2.3	125.0	SE	1.6	144.0	SE	2.1	176.0	S	1.7	138.0	SE	2.1	119.0	ESE
09:00 PM - 10:00 PM	1.0	150.0	SSE	1.2	157.0	SSE	2.2	151.0	SSE	1.7	67.0	ENE	3.3	181.0	S	2.7	125.0	SE	2.0	117.0	ESE
10:00 PM - 11:00 PM	0.9	145.0	SE	0.9	124.0	SE	3.8	155.0	SSE	2.6	76.0	ENE	2.0	139.0	SE	1.4	152.0	SSE	1.5	95.0	E
11:00 PM - 12:00 AM	1.1	157.0	SSE	0.7	104.0	ESE	3.3	138.0	SE	2.4	93.0	E	1.3	150.0	SSE	0.9	121.0	ESE	1.7	93.0	E
12:00 AM - 01:00 AM	1.3	157.0	SSE	0.7	137.0	SE	1.5	140.0	SE	1.4	126.0	SE	0.9	140.0	SE	0.7	138.0	SE	1.1	84.0	E
01:00 AM - 02:00 AM	1.1	157.0	SSE	0.6	129.0	SE	1.7	140.0	SE	1.9	138.0	SE	0.8	160.0	SSE	1.0	150.0	SSE	2.2	79.0	E
02:00 AM - 03:00 AM	1.0	157.0	SSE	1.0	164.0	SSE	2.2	142.0	SE	3.1	107.0	ESE	0.9	150.0	SSE	1.8	155.0	SSE	0.5	37.0	NE
03:00 AM - 04:00 AM	0.9	157.0	SSE	0.7	162.0	SSE	2.4	144.0	SE	3.6	145.0	SE	1.0	170.0	S	1.4	162.0	SSE	0.9	52.0	NE
04:00 AM - 05:00 AM	0.9	157.0	SSE	0.5	161.0	SSE	2.4	143.0	SE	2.4	134.0	SE	1.2	182.0	S	3.2	145.0	SE	0.4	63.0	ENE
05:00 AM - 06:00 AM	1.1	157.0	SSE	0.7	162.0	SSE	2.6	146.0	SE	1.3	132.0	SE	1.8	175.0	S	2.4	120.0	ESE	0.6	48.0	NE
06:00 AM - 07:00 AM	2.0	157.0	SSE	1.8	162.0	SSE	3.5	145.0	SE	3.7	147.0	SSE	1.5	155.0	SSE	1.5	148.0	SSE	1.3	61.0	ENE
07:00 AM - 08:00 AM	1.9	161.0	SSE	4.0	164.0	SSE	1.4	144.0	SE	0.9	105.0	ESE	1.7	139.0	SE	1.3	147.0	SSE	2.1	19.0	NNE
08:00 AM - 09:00 AM	1.5	134.0	SE	3.1	152.0	SSE	3.8	154.0	SSE	1.2	157.0	SSE	0.9	156.0	SSE	1.7	144.0	SE	1.8	38.0	NE
09:00 AM - 10:00 AM	1.8	168.0	SSE	3.3	158.0	SSE	1.2	141.0	SE	2.3	155.0	SSE	2.1	129.0	SE	1.0	119.0	ESE	1.7	85.0	E

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

**Lot ID** : 2248527

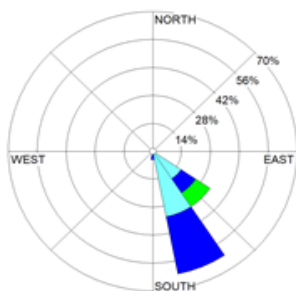
Date Received : May 10, 2022

Date Reported : May 18, 2022

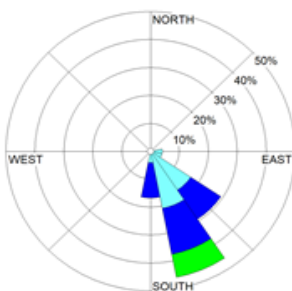
Report Number : 2292446-1

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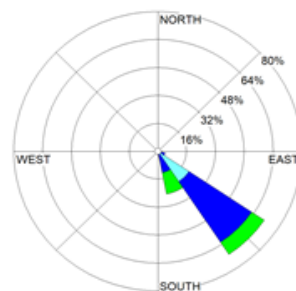
### Wind Rose



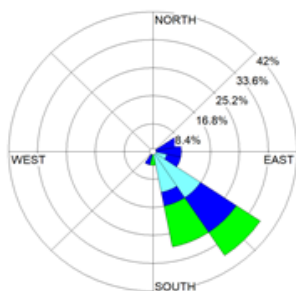
**Date : May 03-04, 2022**



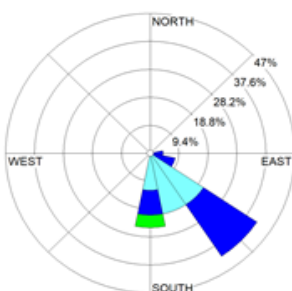
**Date : May 04-05, 2022**



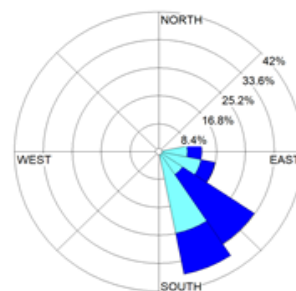
**Date : May 05-06, 2022**



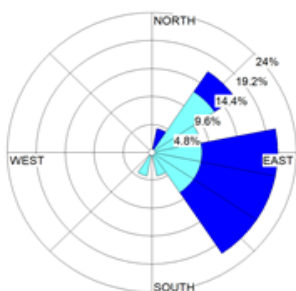
**Date : May 06-07, 2022**



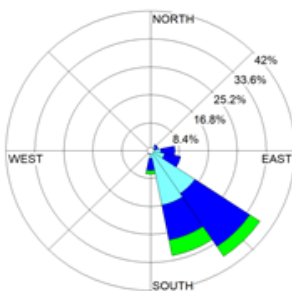
**Date : May 07-08, 2022**



**Date : May 08-09, 2022**



**Date : May 09-10, 2022**



**Date : May 03-10, 2022**

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	9.52
1.7-3.3	45.24
0.3-1.7	45.24
Calms	0.00

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



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248527  
Date Received : May 10, 2022  
Date Reported : May 18, 2022  
Report Number : 2292446-1

Page 1 of 2

**Sample Number** : 2248527-15 to 21  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Sampling Date** : May 03 - May 10, 2022  
**Sampling by** : Norranon Tathongkham

Time	May 03 - May 04, 2022			May 04 - May 05, 2022			May 05 - May 06, 2022			May 06 - May 07, 2022			May 07 - May 08, 2022			May 08 - May 09, 2022			May 09 - May 10, 2022		
	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	3.1	116.0	ESE	1.0	192.0	SSW	3.3	153.0	SSE	1.1	157.0	SSE	1.6	132.0	SE	1.0	150.0	SSE	1.8	59.0	ENE
12:00 PM - 01:00 PM	1.6	235.0	SW	0.7	178.0	S	0.5	129.0	SE	2.1	178.0	S	1.8	153.0	SSE	1.4	130.0	SE	1.9	51.0	NE
01:00 PM - 02:00 PM	1.8	147.0	SSE	0.5	150.0	SSE	1.1	148.0	SSE	0.8	135.0	SE	2.5	153.0	SSE	1.6	166.0	SSE	0.5	112.0	ESE
02:00 PM - 03:00 PM	3.7	132.0	SE	0.8	126.0	SE	0.7	135.0	SE	0.6	122.0	ESE	2.4	152.0	SSE	2.1	135.0	SE	0.6	131.0	SE
03:00 PM - 04:00 PM	2.5	173.0	S	1.5	158.0	SSE	1.9	144.0	SE	0.8	88.0	E	3.6	134.0	SE	1.9	142.0	SE	1.6	111.0	ESE
04:00 PM - 05:00 PM	2.1	139.0	SE	1.7	144.0	SE	1.8	160.0	SSE	0.6	147.0	SSE	1.6	133.0	SE	1.1	153.0	SSE	0.8	130.0	SE
05:00 PM - 06:00 PM	3.4	130.0	SE	1.1	200.0	SSW	3.7	129.0	SE	0.9	116.0	ESE	2.0	146.0	SE	1.3	106.0	ESE	1.3	120.0	ESE
06:00 PM - 07:00 PM	1.9	150.0	SSE	1.3	157.0	SSE	1.9	163.0	SSE	1.0	155.0	SSE	1.7	138.0	SE	1.9	165.0	SSE	2.0	108.0	ESE
07:00 PM - 08:00 PM	3.6	127.0	SE	1.9	150.0	SSE	2.6	136.0	SE	1.0	183.0	S	2.2	95.0	E	2.4	112.0	ESE	2.0	107.0	ESE
08:00 PM - 09:00 PM	2.6	116.0	ESE	0.8	137.0	SE	2.9	137.0	SE	1.6	171.0	S	3.3	182.0	S	2.3	115.0	ESE	2.4	139.0	SE
09:00 PM - 10:00 PM	1.1	153.0	SSE	1.0	108.0	ESE	3.6	128.0	SE	1.2	130.0	SE	1.6	179.0	S	2.3	124.0	SE	2.8	127.0	SE
10:00 PM - 11:00 PM	3.1	135.0	SE	0.7	143.0	SE	3.5	137.0	SE	1.3	58.0	ENE	1.2	179.0	S	1.7	145.0	SE	1.3	145.0	SE
11:00 PM - 12:00 AM	1.3	126.0	SE	1.0	144.0	SE	1.9	157.0	SSE	1.3	61.0	ENE	1.4	156.0	SSE	2.3	114.0	ESE	1.0	106.0	ESE
12:00 AM - 01:00 AM	0.6	153.0	SSE	0.9	98.0	E	2.3	119.0	ESE	1.5	82.0	E	0.9	153.0	SSE	1.5	128.0	SE	0.7	108.0	ESE
01:00 AM - 02:00 AM	0.2	-	-	0.7	149.0	SSE	2.5	165.0	SSE	2.0	130.0	SE	1.3	155.0	SSE	1.7	151.0	SSE	2.2	82.0	E
02:00 AM - 03:00 AM	0.2	-	-	1.1	147.0	SSE	2.1	153.0	SSE	1.2	130.0	SE	0.9	152.0	SSE	1.7	158.0	SSE	1.4	38.0	NE
03:00 AM - 04:00 AM	0.2	-	-	1.4	152.0	SSE	2.8	150.0	SSE	0.9	135.0	SE	1.0	148.0	SSE	2.0	153.0	SSE	1.1	39.0	NE
04:00 AM - 05:00 AM	0.2	-	-	0.8	163.0	SSE	2.9	149.0	SSE	1.0	118.0	ESE	1.3	154.0	SSE	3.5	160.0	SSE	1.4	36.0	NE
05:00 AM - 06:00 AM	0.4	112.0	ESE	2.3	298.0	WNW	2.0	150.0	SSE	3.0	157.0	SSE	2.0	163.0	SSE	2.3	120.0	ESE	2.0	59.0	ENE
06:00 AM - 07:00 AM	1.0	102.0	ESE	1.7	152.0	SSE	1.8	160.0	SSE	2.4	110.0	ESE	2.4	170.0	S	1.8	148.0	SSE	1.8	50.0	NE
07:00 AM - 08:00 AM	2.3	132.0	SE	1.5	157.0	SSE	1.6	153.0	SSE	2.0	153.0	SSE	2.0	140.0	SE	3.1	150.0	SSE	1.5	50.0	NE
08:00 AM - 09:00 AM	2.8	179.0	S	0.9	159.0	SSE	1.9	155.0	SSE	1.7	87.0	E	2.9	118.0	ESE	1.8	148.0	SSE	2.9	27.0	NNE
09:00 AM - 10:00 AM	3.7	129.0	SE	2.9	148.0	SSE	3.2	135.0	SE	0.6	115.0	ESE	2.3	139.0	SE	1.7	159.0	SSE	1.8	40.0	NE
10:00 AM - 11:00 AM	3.4	169.0	S	1.8	160.0	SSE	1.2	151.0	SSE	1.2	160.0	SSE	1.1	150.0	SSE	1.7	120.0	ESE	2.1	83.0	E

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

**Lot ID** : 2248527

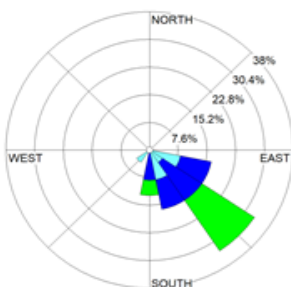
Date Received : May 10, 2022

Date Reported : May 18, 2022

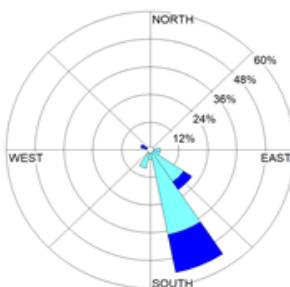
Report Number : 2292446-1

Page 2 of 2

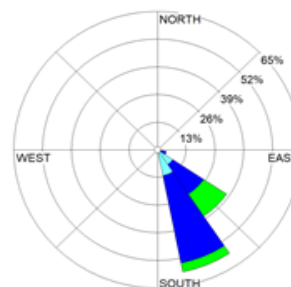
### Wind Rose



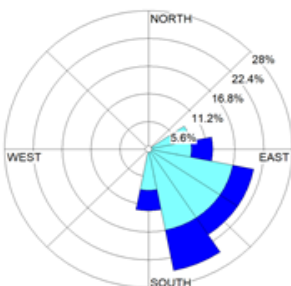
**Date : May 03-04, 2022**



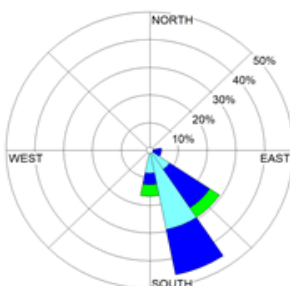
**Date : May 04-05, 2022**



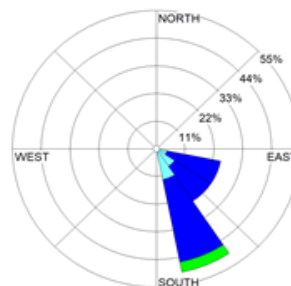
**Date : May 05-06, 2022**



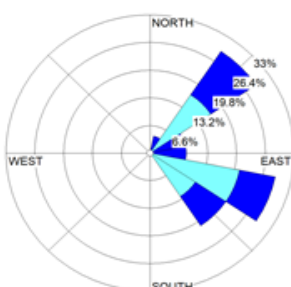
**Date : May 06-07, 2022**



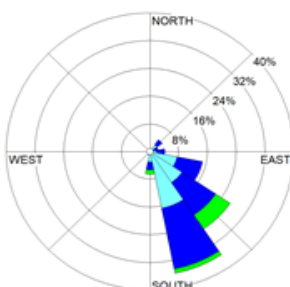
**Date : May 07-08, 2022**



**Date : May 08-09, 2022**



**Date : May 09-10, 2022**



**Date : May 03-10, 2022**

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	7.14
1.7-3.3	45.24
0.3-1.7	45.24
Calms	2.38

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Sarayuth Jitranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148638**

Date Received : Jan 07, 2022  
Date Reported : Jan 13, 2022  
Report Number : 2182825-1C9

Page 1 of 2

**Sample Number** : 21148638-1  
**Sampled Date** : Jan 06, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : Jan 08, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	06/01/22 - 07/01/22	ug/m3	0.04	0.11	0.97	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	06/01/22 - 07/01/22	ug/m3	0.05	0.16	2.36	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Norranon Tathongkham

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148638**

Date Received : Jan 07, 2022  
Date Reported : Jan 13, 2022  
Report Number : 2182825-1C9

Page 2 of 2

**Sample Number** : 21148638-2  
**Sampled Date** : Jan 06, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : Jan 08, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	06/01/22 - 07/01/22	ug/m3	0.04	0.11	0.88	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	06/01/22 - 07/01/22	ug/m3	0.05	0.16	2.24	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Norranon Tathongkham

**Remark :**

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

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Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148771**

Date Received : Feb 03, 2022  
Date Reported : Feb 08, 2022  
Report Number : 2183004-1C9

Page 1 of 2

**Sample Number** : 21148771-1  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	02/02/22 - 03/02/22	ug/m3	0.04	0.11	0.27	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	02/02/22 - 03/02/22	ug/m3	0.05	0.16	0.38	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148771**

Date Received : Feb 03, 2022  
Date Reported : Feb 08, 2022  
Report Number : 2183004-1C9

Page 2 of 2

**Sample Number** : 21148771-2  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	02/02/22 - 03/02/22	ug/m3	0.04	0.11	0.22	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	02/02/22 - 03/02/22	ug/m3	0.05	0.16	0.45	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 21148770  
Date Received : Feb 03, 2022  
Date Reported : Feb 07, 2022  
Report Number : 2182999-1

Page 1 of 2

**Sample Number** : 21148770-1  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Sampling Date** : Feb 02 - Feb 03, 2022  
**Sampling by** : Nantawat Sarin

Time	Feb 02 - Feb 03, 2022		-		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	1.0	156.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.0	150.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.5	135.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.0	125.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	2.1	146.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.9	115.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	1.4	144.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.5	120.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	1.5	150.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	1.2	140.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.0	156.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.8	156.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.4	140.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.2	144.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.4	140.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Assistant General Manager



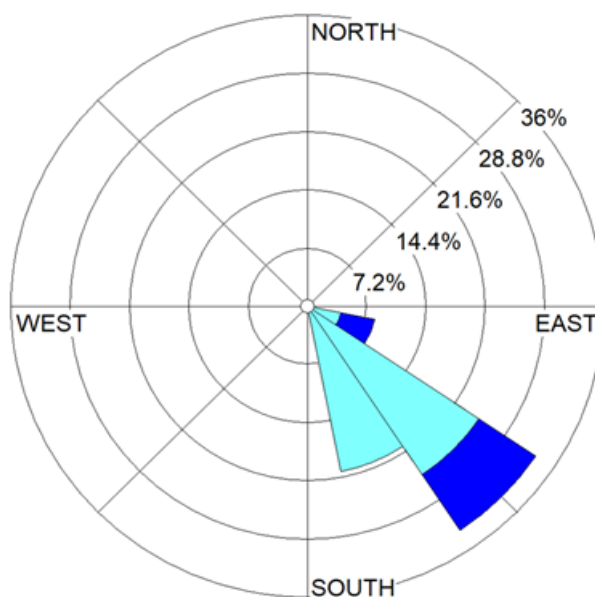
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 21148770  
Date Received : Feb 03, 2022  
Date Reported : Feb 07, 2022  
Report Number : 2182999-1

Page 2 of 2

### Wind Rose



Date : Feb 02-03, 2022

	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	12.50
	0.3-1.7	50.00
	Calms	37.50

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Sarayuth Jittranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 21148770  
Date Received : Feb 03, 2022  
Date Reported : Feb 07, 2022  
Report Number : 2182999-1

Page 1 of 2

**Sample Number** : 21148770-2  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ริมรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Sampling Date** : Feb 02 - Feb 03, 2022  
**Sampling by** : Nantawat Sarin

Time	Feb 02 - Feb 03, 2022			-			-			-			-			-			-		
	WS (m/s)	WD (deg)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.0	111.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.9	157.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.3	265.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.0	128.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.2	118.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	1.4	126.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	1.1	133.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.0	133.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.1	133.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.4	133.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.0	131.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.0	144.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.8	144.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittrantont  
Assistant General Manager



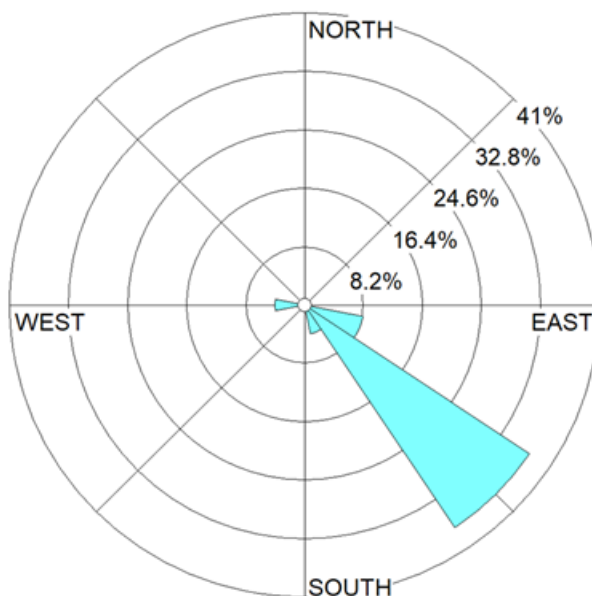
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 21148770  
Date Received : Feb 03, 2022  
Date Reported : Feb 07, 2022  
Report Number : 2182999-1

Page 2 of 2

### Wind Rose



Date : Feb 02-03, 2022

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	0.00
0.3-1.7	54.17
Calms	45.83

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Sarayuth Jitranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2220426**

Date Received : Mar 04, 2022  
Date Reported : Mar 10, 2022  
Report Number : 2233744-1C9

Page 1 of 2

**Sample Number** : 2220426-1  
**Sampled Date** : Mar 03, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : Mar 05, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	03/03/22 - 04/03/22	ug/m3	0.04	0.11	0.71	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/03/22 - 04/03/22	ug/m3	0.05	0.16	2.88	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Jakkarin Manwicha

**Remark :**

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

Approved by

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2220426**

Date Received : Mar 04, 2022  
Date Reported : Mar 10, 2022  
Report Number : 2233744-1C9

Page 2 of 2

**Sample Number** : 2220426-2  
**Sampled Date** : Mar 03, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : Mar 05, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	03/03/22 - 04/03/22	ug/m3	0.04	0.11	1.59	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	03/03/22 - 04/03/22	ug/m3	0.05	0.16	2.81	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Jakkarin Manwicha

**Remark :**

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

Approved by

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2220424  
Date Received : Mar 04, 2022  
Date Reported : Mar 09, 2022  
Report Number : 2233737-1

Page 1 of 2

**Sample Number** : 2220424-1  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Sampling Date** : Mar 03 - Mar 04, 2022  
**Sampling by** : Jakkarin Manwicha

Time	Mar 03 - Mar 04, 2022		-		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	1.1	174.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.3	159.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.8	124.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.3	131.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.8	81.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.4	128.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	2.6	79.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.6	124.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.8	76.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	1.2	135.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.6	129.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.1	144.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	2.8	145.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittranont  
Assistant General Manager





## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

**Lot ID** : 2220424

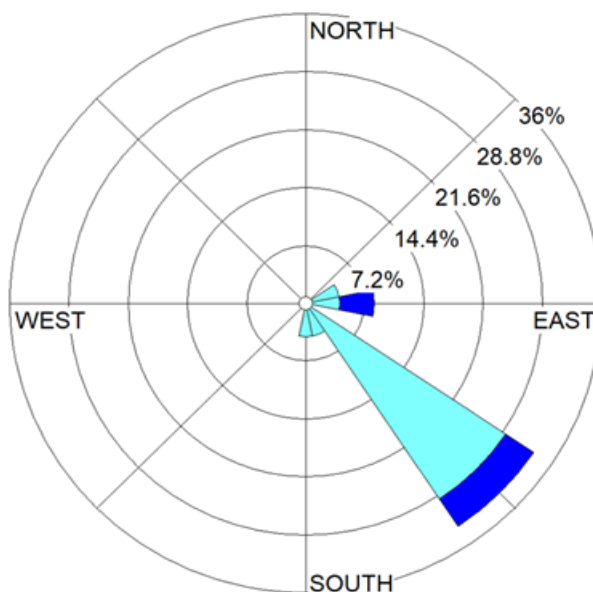
Date Received : Mar 04, 2022

Date Reported : Mar 09, 2022

Report Number : 2233737-1

Page 2 of 2

### Wind Rose



Date : Mar 03-04, 2022

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	8.34
0.3-1.7	45.83
Calms	45.83

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Sarayuth Jitranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2220424  
Date Received : Mar 04, 2022  
Date Reported : Mar 09, 2022  
Report Number : 2233737-1

Page 1 of 2

**Sample Number** : 2220424-2  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ริมรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Sampling Date** : Mar 03 - Mar 04, 2022  
**Sampling by** : Jakkarin Manwicha

Time	Mar 03 - Mar 04, 2022		-		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.3	37.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.3	333.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.3	352.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.5	349.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.6	332.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.6	339.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	1.1	278.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.2	13.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	1.3	25.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	0.6	300.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.5	350.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.3	321.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranont  
Assistant General Manager



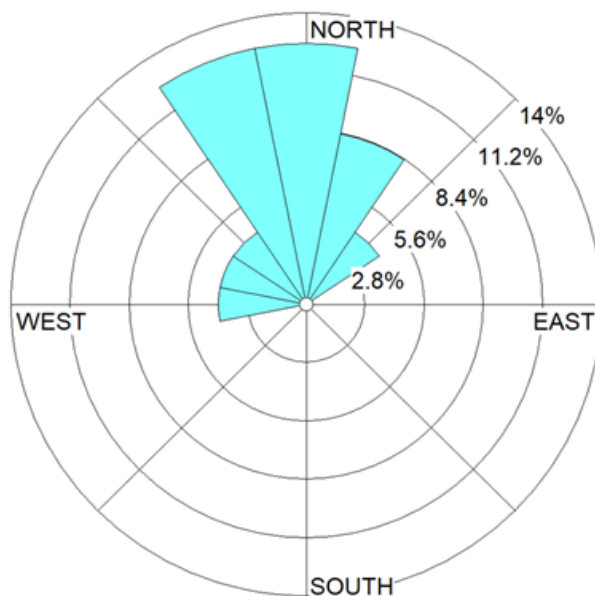
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2220424  
Date Received : Mar 04, 2022  
Date Reported : Mar 09, 2022  
Report Number : 2233737-1

Page 2 of 2

### Wind Rose



Date : Mar 03-04, 2022

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	0.00
0.3-1.7	50.00
Calms	50.00

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Sarayuth Jitranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228265**

Date Received : Apr 05, 2022  
Date Reported : Apr 11, 2022  
Report Number : 2248431-1C9

Page 1 of 2

**Sample Number** : 2228265-1  
**Sampled Date** : Apr 04, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : Apr 06, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	04/04/22 - 05/04/22	ug/m3	0.04	0.11	0.75	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	04/04/22 - 05/04/22	ug/m3	0.05	0.16	2.36	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228265**

Date Received : Apr 05, 2022  
Date Reported : Apr 11, 2022  
Report Number : 2248431-1C9

Page 2 of 2

**Sample Number** : 2228265-2  
**Sampled Date** : Apr 04, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มร้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : Apr 06, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	04/04/22 - 05/04/22	ug/m3	0.04	0.11	1.99	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	04/04/22 - 05/04/22	ug/m3	0.05	0.16	2.24	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID** : 2228264  
Date Received : Apr 05, 2022  
Date Reported : Apr 07, 2022  
Report Number : 2248428-1

Page 1 of 2

**Sample Number** : 2228264-1  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Sampling Date** : Apr 04 - Apr 05, 2022  
**Sampling by** : Nantawat Sarin

Time	Apr 04 - Apr 05, 2022			-		-		-	-		-	-		-	-		-	-	
	WS (m/s)	WD (deg)		-	-	-	-		-	-		-	-		-	-		-	-
10:00 AM - 11:00 AM	0.7	354.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.5	56.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.0	98.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.2	26.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.5	84.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.9	355.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.9	322.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.5	50.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.4	62.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.3	40.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.1	36.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	1.2	359.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.3	10.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	2.0	30.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.9	39.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.0	45.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.5	50.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.0	5.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.0	19.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.5	22.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranont  
Assistant General Manager



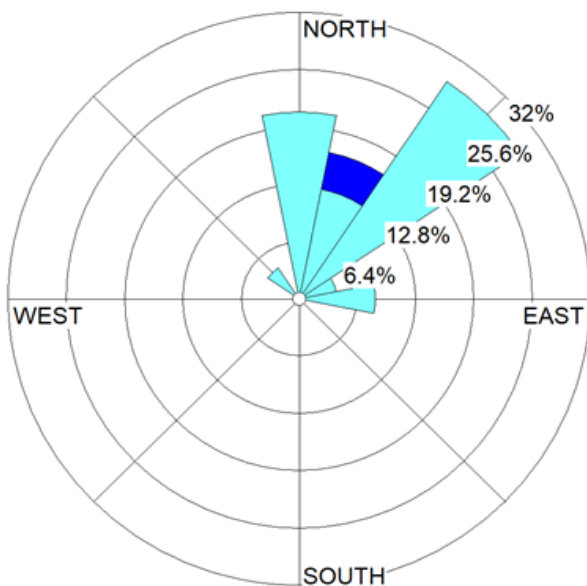
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID** : 2228264  
Date Received : Apr 05, 2022  
Date Reported : Apr 07, 2022  
Report Number : 2248428-1

Page 2 of 2

### Wind Rose



Date : Apr 04-05, 2022

WS(m/s)	%
$\geq 10.0$	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	4.16
0.3-1.7	79.17
Calms	16.67

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Sarayuth Jittranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID** : 2228264  
Date Received : Apr 05, 2022  
Date Reported : Apr 07, 2022  
Report Number : 2248428-1

Page 1 of 2

**Sample Number** : 2228264-2  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ริมรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Sampling Date** : Apr 04 - Apr 05, 2022  
**Sampling by** : Nantawat Sarin

Time	Apr 04 - Apr 05, 2022			-		-		-	-		-	-		-	-		-	-		-
	WS (m/s)	WD (deg)		-	-	-	-		-	-		-	-		-	-		-	-	
11:00 AM - 12:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.5	174.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.5	186.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.6	129.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.7	126.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	1.3	125.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.5	121.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.3	121.0	ESE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	1.0	49.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	1.7	20.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	2.2	31.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	4.0	19.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	2.0	36.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.6	10.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	1.7	34.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.7	16.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.1	15.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.5	345.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.3	15.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranont  
Assistant General Manager





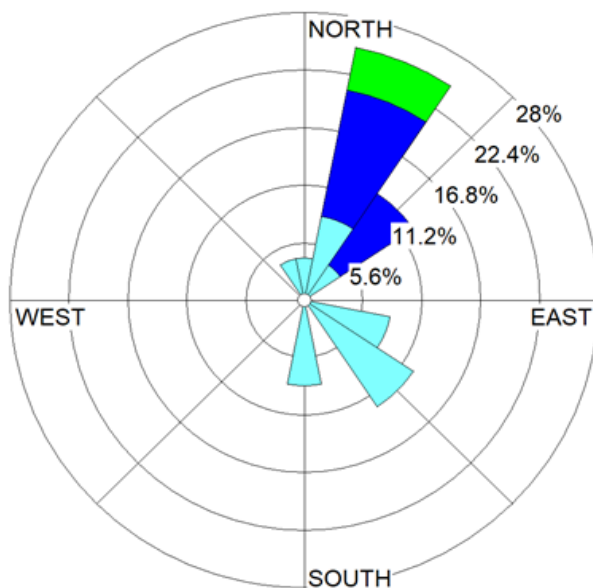
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID** : 2228264  
Date Received : Apr 05, 2022  
Date Reported : Apr 07, 2022  
Report Number : 2248428-1

Page 2 of 2

### Wind Rose



Date : Apr 04-05, 2022

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	4.17
1.7-3.3	20.83
0.3-1.7	50.00
Calms	25.00

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Sarayuth Jittranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248558**

Date Received : May 06, 2022  
Date Reported : May 12, 2022  
Report Number : 2292464-1C9

Page 1 of 2

**Sample Number** : 2248558-1  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	05/05/22 - 06/05/22	ug/m3	0.04	0.11	0.13	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	05/05/22 - 06/05/22	ug/m3	0.05	0.16	1.28	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Norranon Tathongkham

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2248558**

Date Received : May 06, 2022  
Date Reported : May 12, 2022  
Report Number : 2292464-1C9

Page 2 of 2

**Sample Number** : 2248558-2  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : ร่มรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	05/05/22 - 06/05/22	ug/m3	0.04	0.11	0.13	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	05/05/22 - 06/05/22	ug/m3	0.05	0.16	1.60	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By** : Norranon Tathongkham

**Remark :**

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248554  
Date Received : May 06, 2022  
Date Reported : May 10, 2022  
Report Number : 2292462-1

Page 1 of 2

**Sample Number** : 2248554-1  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Sampling Date** : May 05 - May 06, 2022  
**Sampling by** : Norranon Tathongkham

Time	May 05 - May 06, 2022		-		-		-		-		-		-		-		-	
	WS (m/s)	WD (deg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.3	321.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.6	346.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.3	353.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.4	342.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.3	352.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.3	312.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.4	311.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.4	336.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.6	334.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.6	298.0	WNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.5	311.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.3	310.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.6	331.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.3	334.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.4	128.0	SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.6	82.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.5	81.0	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranont  
Assistant General Manager



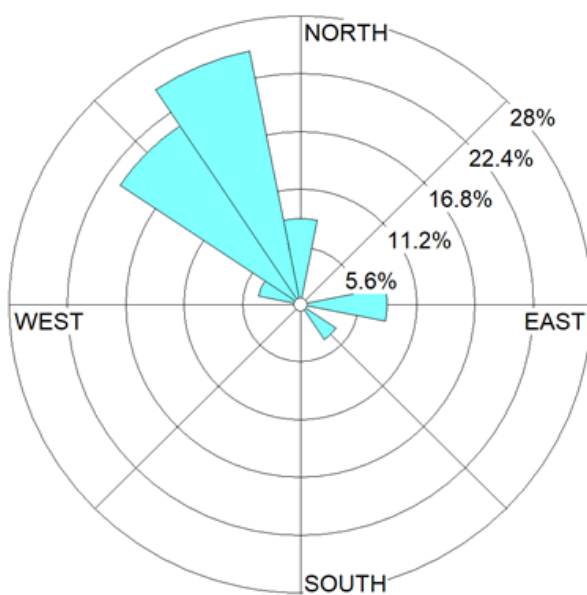
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248554  
Date Received : May 06, 2022  
Date Reported : May 10, 2022  
Report Number : 2292462-1

Page 2 of 2

### Wind Rose



Date : May 05-06, 2022

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	0.00
0.3-1.7	70.83
Calms	29.17

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Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248554  
Date Received : May 06, 2022  
Date Reported : May 10, 2022  
Report Number : 2292462-1

Page 1 of 2

**Sample Number** : 2248554-2  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ริมรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Sampling Date** : May 05 - May 06, 2022  
**Sampling by** : Norranon Tathongkham

Time	May 05 - May 06, 2022			-			-			-			-			-			-		
	WS (m/s)	WD (deg)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.4	316.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.8	330.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.7	342.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.1	350.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.6	338.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	1.8	353.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.9	350.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.8	353.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.0	341.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.1	316.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	1.3	339.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	1.1	332.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.8	335.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.7	175.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.2	312.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	2.1	322.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.9	328.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.7	331.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.5	336.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.9	332.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	2.1	320.0	NW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	1.8	21.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.3	21.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.7	26.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont  
Assistant General Manager



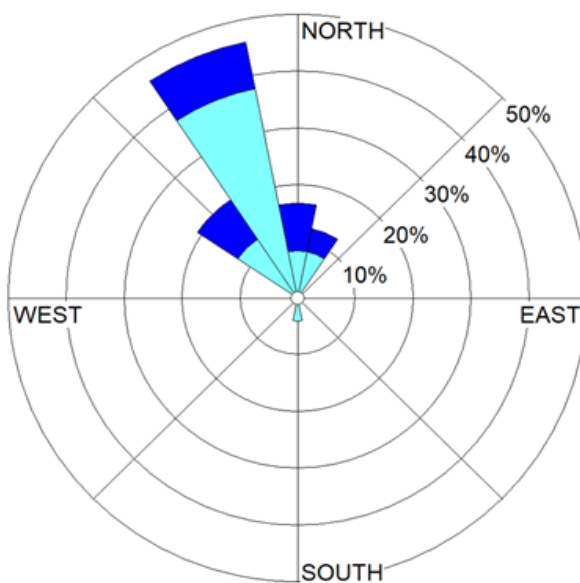
## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID** : 2248554  
Date Received : May 06, 2022  
Date Reported : May 10, 2022  
Report Number : 2292462-1

Page 2 of 2

### Wind Rose



Date : May 05-06, 2022

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	29.17
0.3-1.7	70.83
Calms	0.00

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Sarayuth Jittrantont  
Assistant General Manager



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2273302**

Date Received : Jun 21, 2022

Date Reported : Jun 24, 2022

Report Number : 2344012-1C9

Page 1 of 2

**Sample Number** 2273302-1  
**Sampled Date** Jun 20, 2022  
**Sample Description** Air Quality  
**Location** ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Date Analysis Commenced** Jun 22, 2022  
**Condition of Sample** Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	20/06/22 - 21/06/22	ug/m3	0.04	0.11	0.44	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	20/06/22 - 21/06/22	ug/m3	0.05	0.16	1.60	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By :** Jakkarin Manwicha

Remark :

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2273302**

Date Received : Jun 21, 2022

Date Reported : Jun 24, 2022

Report Number : 2344012-1C9

Page 2 of 2

**Sample Number** 2273302-2  
**Sampled Date** Jun 20, 2022  
**Sample Description** Air Quality  
**Location** ร่มร้าวด้านทิศตะวันออกของกลุ่มโรงงาน  
**Date Analysis Commenced** Jun 22, 2022  
**Condition of Sample** Drawn into one 6-L Canister

Analyte	Sampling Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	20/06/22 - 21/06/22	ug/m3	0.04	0.11	0.40	5.3	Based on US EPA Compendium Method, TO-15	PCD	Rayong
Benzene	20/06/22 - 21/06/22	ug/m3	0.05	0.16	1.66	7.6	Based on US EPA Compendium Method, TO-15	PCD	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).

**Sampled By :** Jakkarin Manwicha

Remark :

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

Approved by

Dej Changchon  
Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** :  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID** : 2273306

Date Received : Jun 21, 2022  
Date Reported : Jun 24, 2022  
Report Number : 2344014-1

Page 1 of 2

**Sample Number** : 2273306-1  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ด้านหน้าของโรงงานติดกับถนนสุขุมวิท  
**Sampling Date** : Jun 20 - Jun 21, 2022  
**Sampling by** : Jakkarin Manwicha

Time	Jun 20 - Jun 21, 2022			-		-		-	-		-	-		-	-		-	-		-
	WS (m/s)	WD (deg)		-	-	-	-		-	-		-	-		-	-		-	-	
10:00 AM - 11:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.6	189.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.4	243.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	1.2	269.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.4	267.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.4	227.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	1.3	226.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.6	279.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.0	157.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.5	205.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.3	2.0	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.3	250.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** :

**Project Name** : Environmental Monitoring

**Project Location** :

**Lot ID** : 2273306

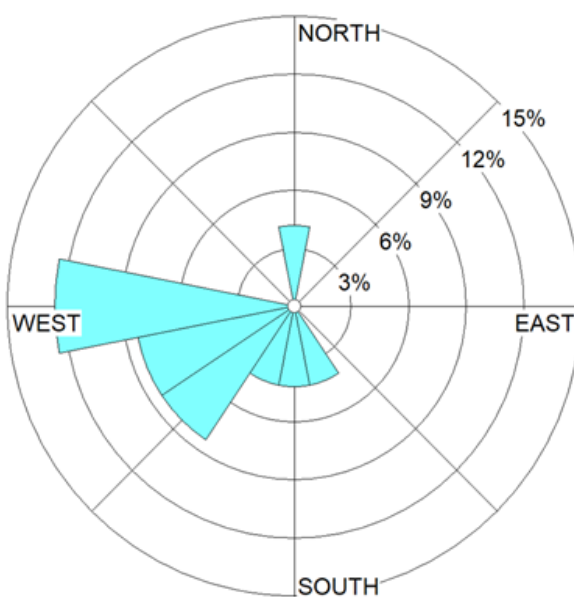
Date Received : Jun 21, 2022

Date Reported : Jun 24, 2022

Report Number : 2344014-1

Page 2 of 2

### Wind Rose



Date : Jun 20-21, 2022

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	0.00
	0.3-1.7	45.83
	Calms	54.17

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Sarayuth Jitranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** :  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID : 2273306**  
Date Received : Jun 21, 2022  
Date Reported : Jun 24, 2022  
Report Number : 2344014-1

Page 1 of 2

**Sample Number** : 2273306-2  
**Parameter** : Wind Speed / Wind Direction  
**Location** : ริมรั้วด้านทิศตะวันออกของกลุ่มโรงงาน  
**Sampling Date** : Jun 20 - Jun 21, 2022  
**Sampling by** : Jakkarin Manwicha

Time	Jun 20 - Jun 21, 2022			-			-			-			-			-			-		
	WS (m/s)	WD (deg)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.3	251.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	1.1	252.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	1.1	252.0	WSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.3	329.0	NNW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.5	264.0	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	1.1	58.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	1.9	177.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.6	222.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	2.4	225.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.6	154.0	SSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranont  
Assistant General Manager



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** :

**Project Name** : Environmental Monitoring

**Project Location** :

**Lot ID : 2273306**

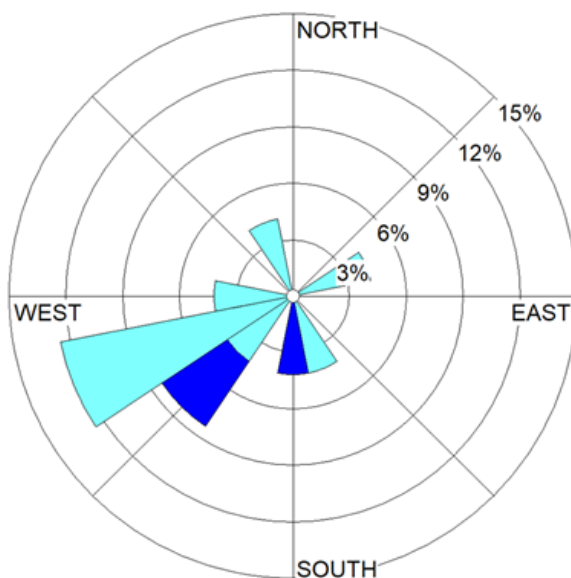
Date Received : Jun 21, 2022

Date Reported : Jun 24, 2022

Report Number : 2344014-1

Page 2 of 2

### Wind Rose



Date : Jun 20-21, 2022

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	8.34
0.3-1.7	33.33
Calms	58.33

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Sarayuth Jitranont  
Assistant General Manager

# ภาคผนวก ค-2

---

คุณภาพอากาศจากปล่องระบาย



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249325**  
Date Received : May 09, 2022  
Date Reported : May 17, 2022  
Report Number : 2293913-1

Page 1 of 1

**Sample Number** : 2249325-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH1 : Cracking Furnace (Heater) 1 (H-100A)  
**Measurement Date** : May 09, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	5.09 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.09 %
Type of Process	Combustion	Stack Temperature	156 °C	Gas Velocity	28.50 m/s
Type of Fuel	Fuel Gas	Moisture	14.06 %	Flow Rate	95280 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	11:10 AM - 11:30 AM	5.09	8.06	54.21	47.66	0.25	0.22
2	11:31 AM - 11:51 AM	5.07	8.17	53.90	47.34	0.27	0.23
3	11:52 AM - 12:12 PM	5.09	8.04	53.21	46.80	0.27	0.24
Average (ppm)		5.09	8.09	53.77	47.27	0.26	0.23
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				101.17	88.92	0.30	0.26
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.6777		0.0080	
Guideline <sup>1/</sup> (g/s)				3.14		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager  
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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249326**  
Date Received : May 05, 2022  
Date Reported : May 17, 2022  
Report Number : 2293915-1

Page 1 of 1

**Sample Number** : 2249326-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH2 : Cracking Furnace (Heater) 2 (H-100B)  
**Measurement Date** : May 05, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	4.63 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.64 %
Type of Process	Combustion	Stack Temperature	243 °C	Gas Velocity	33.08 m/s
Type of Fuel	Fuel Gas	Moisture	12.35 %	Flow Rate	93752 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	11:10 AM - 11:30 AM	4.63	8.63	58.25	49.75	0.50	0.42
2	11:31 AM - 11:51 AM	4.62	8.65	58.59	50.03	0.35	0.30
3	11:52 AM - 12:12 PM	4.64	8.63	58.51	50.01	0.24	0.20
Average (ppm)		4.63	8.64	58.45	49.93	0.36	0.31
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				109.96	93.94	0.41	0.35
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.8637		0.0108	
Guideline <sup>1/</sup> (g/s)				3.05		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249327**  
Date Received : May 09, 2022  
Date Reported : May 17, 2022  
Report Number : 2293923-1

Page 1 of 1

**Sample Number** : 2249327-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH3 : Cracking Furnace (Heater) 3 (H-100C)  
**Measurement Date** : May 09, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	5.32 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.28 %
Type of Process	Combustion	Stack Temperature	232 °C	Gas Velocity	32.47 m/s
Type of Fuel	Fuel Gas	Moisture	16.98 %	Flow Rate	89113 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	12:00 PM - 12:20 PM	5.31	8.29	60.84	54.25	0.31	0.28
2	12:21 PM - 12:41 PM	5.32	8.27	60.71	54.18	0.21	0.19
3	12:42 PM - 01:02 PM	5.34	8.29	60.48	54.02	0.17	0.16
Average (ppm)		5.32	8.28	60.68	54.15	0.23	0.21
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				114.16	101.88	0.27	0.24
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.8258		0.0066	
Guideline <sup>1/</sup> (g/s)				3.18		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249328**  
Date Received : Jun 27, 2022  
Date Reported : Jun 29, 2022  
Report Number : 2293924-1

Page 1 of 1

**Sample Number** : 2249328-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH4 : Cracking Furnace (Heater) 4 (H-100D)  
**Measurement Date** : Jun 27, 2022

### Stack Description

Ambient Temperature	30 °C	Diameter	0.884 x 1.770 m	Oxygen	4.49 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.51 %
Type of Process	Combustion	Stack Temperature	143 °C	Gas Velocity	28.61 m/s
Type of Fuel	Fuel Gas	Moisture	13.36 %	Flow Rate	99425 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	11:30 AM - 11:50 AM	4.36	8.60	56.91	47.84	0.36	0.30
2	11:51 AM - 12:11 PM	4.53	8.47	56.46	47.93	0.41	0.35
3	12:12 PM - 12:32 PM	4.58	8.47	55.84	47.57	0.41	0.35
Average (ppm)		4.49	8.51	56.40	47.78	0.39	0.33
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				106.12	89.89	0.45	0.38
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.9307		0.0125	
Guideline <sup>1/</sup> (g/s)				3.12		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249329**  
Date Received : May 05, 2022  
Date Reported : May 17, 2022  
Report Number : 2293926-1

Page 1 of 1

**Sample Number** : 2249329-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH5 : Cracking Furnace (Heater) 5 (H-100E)  
**Measurement Date** : May 05, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	4.41 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.49 %
Type of Process	Combustion	Stack Temperature	140 °C	Gas Velocity	23.21 m/s
Type of Fuel	Fuel Gas	Moisture	12.17 %	Flow Rate	82394 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	02:30 PM - 02:50 PM	4.16	8.59	57.41	47.66	0.22	0.18
2	02:51 PM - 03:11 PM	4.43	8.45	58.04	48.99	0.18	0.15
3	03:12 PM - 03:32 PM	4.64	8.41	57.81	49.41	0.15	0.13
Average (ppm)		4.41	8.49	57.75	48.69	0.19	0.16
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				108.65	91.60	0.21	0.18
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.4868		0.0049	
Guideline <sup>1/</sup> (g/s)				3.18		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249330**  
Date Received : May 06, 2022  
Date Reported : May 17, 2022  
Report Number : 2293929-1

Page 1 of 1

**Sample Number** : 2249330-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH6 : Cracking Furnace (Heater) 6 (H-100F)  
**Measurement Date** : May 06, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	4.71 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.26 %
Type of Process	Combustion	Stack Temperature	153 °C	Gas Velocity	29.25 m/s
Type of Fuel	Fuel Gas	Moisture	18.06 %	Flow Rate	93860 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	12:10 PM - 12:30 PM	4.78	8.20	55.38	47.76	0.20	0.18
2	12:31 PM - 12:51 PM	4.74	8.24	54.60	46.95	0.22	0.19
3	12:52 PM - 01:12 PM	4.61	8.34	54.18	46.22	0.41	0.35
Average (ppm)		4.71	8.26	54.72	46.98	0.28	0.24
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				102.95	88.38	0.32	0.27
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.6842		0.0083	
Guideline <sup>1/</sup> (g/s)				3.18		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249331**  
Date Received : May 05, 2022  
Date Reported : May 17, 2022  
Report Number : 2293931-1

Page 1 of 1

**Sample Number** : 2249331-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH7 : Cracking Furnace (Heater) 7 (H-100G)  
**Measurement Date** : May 05, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.824 x 1.723 m	Oxygen	4.79 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.60 %
Type of Process	Combustion	Stack Temperature	157 °C	Gas Velocity	22.93 m/s
Type of Fuel	Fuel Gas	Moisture	12.35 %	Flow Rate	70806 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	02:30 PM - 02:50 PM	4.70	8.65	46.85	40.18	0.19	0.16
2	02:51 PM - 03:11 PM	4.80	8.58	47.06	40.63	0.22	0.19
3	03:12 PM - 03:32 PM	4.86	8.58	47.20	40.90	0.22	0.19
Average (ppm)		4.79	8.60	47.03	40.57	0.21	0.18
Guideline <sup>1/</sup> (ppm)				-	50.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				88.49	76.33	0.24	0.21
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	94.1	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				1.7404		0.0047	
Guideline <sup>1/</sup> (g/s)				1.81		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager  
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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249332**  
Date Received : May 06, 2022  
Date Reported : May 17, 2022  
Report Number : 2293934-1

Page 1 of 1

**Sample Number** : 2249332-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH8 : Cracking Furnace (Heater) 8 (H-100H)  
**Measurement Date** : May 05, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	4.36 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.82 %
Type of Process	Combustion	Stack Temperature	148 °C	Gas Velocity	26.64 m/s
Type of Fuel	Fuel Gas	Moisture	20.47 %	Flow Rate	84008 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	11:05 AM - 11:25 AM	4.34	8.83	56.68	47.58	1.37	1.15
2	11:26 AM - 11:46 AM	4.34	8.84	56.83	47.69	1.26	1.06
3	11:47 AM - 12:07 PM	4.42	8.79	56.95	48.02	1.34	1.13
Average (ppm)		4.36	8.82	56.82	47.76	1.32	1.11
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				106.90	89.86	1.52	1.27
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.4946		0.0354	
Guideline <sup>1/</sup> (g/s)				3.18		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Sathapron Thakaw  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249333**  
Date Received : May 06, 2022  
Date Reported : May 17, 2022  
Report Number : 2293936-1

Page 1 of 1

**Sample Number** : 2249333-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH9 : Cracking Furnace (Heater) 9 (H-100I)  
**Measurement Date** : May 06, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.884 x 1.770 m	Oxygen	4.33 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.80 %
Type of Process	Combustion	Stack Temperature	142 °C	Gas Velocity	28.09 m/s
Type of Fuel	Fuel Gas	Moisture	15.54 %	Flow Rate	95336 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	12:10 PM - 12:30 PM	4.16	8.89	50.69	42.08	0.22	0.19
2	12:31 PM - 12:51 PM	4.35	8.81	50.70	42.57	0.24	0.20
3	12:52 PM - 01:12 PM	4.50	8.70	50.58	42.87	0.25	0.22
Average (ppm)		4.33	8.80	50.66	42.51	0.24	0.20
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				95.30	79.97	0.27	0.23
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.5239		0.0073	
Guideline <sup>1/</sup> (g/s)				3.51		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249334**  
Date Received : Jun 27, 2022  
Date Reported : Jun 29, 2022  
Report Number : 2293940-1

Page 1 of 1

**Sample Number** : 2249334-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH10 : Cracking Furnace (Heater) 10 (H-120R)  
**Measurement Date** : Jun 27, 2022

### Stack Description

Ambient Temperature	30 °C	Diameter	3.002 x 2.702 m	Oxygen	4.48 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.52 %
Type of Process	Combustion	Stack Temperature	163 °C	Gas Velocity	6.80 m/s
Type of Fuel	Fuel Gas	Moisture	12.34 %	Flow Rate	118328 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	02:30 PM - 02:50 PM	3.88	8.87	33.86	27.66	0.46	0.38
2	02:51 PM - 03:11 PM	4.70	8.40	34.33	29.45	0.30	0.26
3	03:12 PM - 03:32 PM	4.87	8.29	34.35	29.79	0.27	0.23
Average (ppm)		4.48	8.52	34.18	28.97	0.34	0.29
Guideline <sup>1/</sup> (ppm)				-	50.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				64.31	54.50	0.39	0.33
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	94.1	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.1137		0.0129	
Guideline <sup>1/</sup> (g/s)				2.83		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
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**Approved by**

Sarayuth Jittranont  
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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249335**  
Date Received : May 09, 2022  
Date Reported : May 17, 2022  
Report Number : 2293942-1

Page 1 of 1

**Sample Number** : 2249335-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH11 : Cracking Furnace (Heater) 11 (H-100J)  
**Measurement Date** : May 09, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	1.95 x 1.55 m	Oxygen	4.20 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.92 %
Type of Process	Combustion	Stack Temperature	144 °C	Gas Velocity	14.05 m/s
Type of Fuel	Fuel Gas	Moisture	17.18 %	Flow Rate	90028 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	02:40 PM - 03:00 PM	4.43	8.79	35.71	30.15	0.25	0.21
2	03:01 PM - 03:21 PM	4.14	8.96	34.90	28.94	0.34	0.28
3	03:22 PM - 03:42 PM	4.03	9.01	34.40	28.35	0.35	0.29
Average (ppm)		4.20	8.92	35.01	29.15	0.31	0.26
Guideline <sup>1/</sup> (ppm)				-	50.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				65.86	54.83	0.36	0.30
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	94.1	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				1.6470		0.0090	
Guideline <sup>1/</sup> (g/s)				1.90		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Sathapron Thakaw  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
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**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249336**  
Date Received : Jun 30, 2022  
Date Reported : Jul 01, 2022  
Report Number : 2293946-1

Page 1 of 1

**Sample Number** : 2249336-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH12 : Cracking Furnace (Heater) 12 (H-100K)  
**Measurement Date** : Jun 29, 2022

### Stack Description

Ambient Temperature	32 °C	Diameter	1.95 x 1.55 m	Oxygen	4.24 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.65 %
Type of Process	Combustion	Stack Temperature	138 °C	Gas Velocity	18.16 m/s
Type of Fuel	Fuel Gas	Moisture	20.56 %	Flow Rate	113150 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	03:00 PM - 03:20 PM	4.18	8.64	45.92	38.17	0.24	0.20
2	03:21 PM - 03:41 PM	4.25	8.54	46.00	38.41	0.26	0.22
3	03:42 PM - 04:02 PM	4.27	8.77	45.01	37.63	0.29	0.25
Average (ppm)		4.24	8.65	45.64	38.07	0.27	0.22
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				85.87	71.63	0.31	0.25
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				2.6991		0.0096	
Guideline <sup>1/</sup> (g/s)				3.03		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249337**  
Date Received : May 05, 2022  
Date Reported : May 17, 2022  
Report Number : 2293947-1

Page 1 of 1

**Sample Number** : 2249337-1  
**Sample Description** : Emission from Stationary Source  
**Location** : CH13 : Cracking Furnace (Heater) 13 (H-100Q)  
**Measurement Date** : May 05, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	1.95 x 1.55 m	Oxygen	4.02 %
Ambient Pressure	756 mmHg	Shape	Rectangular	Carbon dioxide	8.66 %
Type of Process	Combustion	Stack Temperature	157 °C	Gas Velocity	15.92 m/s
Type of Fuel	Fuel Gas	Moisture	13.38 %	Flow Rate	103454 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	10:40 AM - 11:00 AM	4.11	8.52	57.16	47.33	0.21	0.18
2	11:01 AM - 11:21 AM	4.02	8.68	56.01	46.11	0.40	0.33
3	11:22 AM - 11:42 AM	3.94	8.76	55.10	45.16	0.56	0.46
Average (ppm)		4.02	8.66	56.09	46.20	0.39	0.32
Guideline <sup>1/</sup> (ppm)				-	65.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				105.52	86.92	0.45	0.37
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	122.3	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				3.0324		0.0129	
Guideline <sup>1/</sup> (g/s)				3.22		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Saksit Phaisanphisut  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249307**  
Date Received : May 06, 2022  
Date Reported : May 17, 2022  
Report Number : 2293898-1

Page 1 of 1

**Sample Number** : 2249307-1  
**Sample Description** : Emission from Stationary Source  
**Location** : UBS1 : Utility Boiler Stack 1 (H-2050A)  
**Measurement Date** : May 05, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	2.31 m	Oxygen	5.37 %
Ambient Pressure	756 mmHg	Shape	Circle	Carbon dioxide	8.45 %
Type of Process	Combustion	Stack Temperature	209 °C	Gas Velocity	16.15 m/s
Type of Fuel	Fuel Gas	Moisture	13.59 %	Flow Rate	129460 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	02:50 PM - 03:10 PM	5.48	8.26	70.75	63.79	1.49	1.35
2	03:11 PM - 03:31 PM	5.40	8.32	73.33	65.78	1.52	1.36
3	03:32 PM - 03:52 PM	5.23	8.77	73.50	65.21	1.55	1.37
Average (ppm)		5.37	8.45	72.53	64.93	1.52	1.36
Guideline <sup>1/</sup> (ppm)				-	89.6	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				136.45	122.16	1.74	1.56
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	168.6	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				4.9070		0.0626	
Guideline <sup>1/</sup> (g/s)				6.73		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Sathapron Thakarw  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
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**Approved by**

Sarayuth Jittrantont  
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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249324**  
Date Received : May 06, 2022  
Date Reported : May 17, 2022  
Report Number : 2293900-1

Page 1 of 1

**Sample Number** : 2249324-1  
**Sample Description** : Emission from Stationary Source  
**Location** : UBS2 : Utility Boiler Stack 2 (H-2050B)  
**Measurement Date** : May 06, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	2.31 m	Oxygen	5.05 %
Ambient Pressure	756 mmHg	Shape	Circle	Carbon dioxide	8.48 %
Type of Process	Combustion	Stack Temperature	206 °C	Gas Velocity	20.76 m/s
Type of Fuel	Fuel Gas	Moisture	12.88 %	Flow Rate	168802 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	01:50 PM - 02:10 PM	6.46	7.74	61.41	59.13	1.89	1.82
2	02:11 PM - 02:31 PM	4.79	8.63	72.13	62.22	1.85	1.59
3	02:32 PM - 02:52 PM	3.91	9.08	81.20	66.42	1.86	1.52
Average (ppm)		5.05	8.48	71.58	62.59	1.87	1.65
Guideline <sup>1/</sup> (ppm)				-	87.6	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				134.67	117.75	2.14	1.88
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	164.9	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				6.3145		0.1002	
Guideline <sup>1/</sup> (g/s)				6.85		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Sathapron Thakarw  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
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**Approved by**

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249426**  
Date Received : May 06, 2022  
Date Reported : May 17, 2022  
Report Number : 2294005-1

Page 1 of 1

**Sample Number** 2249426-1  
**Sample Description** Emission from Stationary Source  
**Location** UBS3 : Utility Boiler Stack 3 (H-2050C)  
**Sampled Date** May 06, 2022

### Stack Description

Ambient Temperature	31	°C	Diameter	2.31	m	Oxygen	5.74	%
Ambient Pressure	756	mmHg	Shape	Circle		Carbon dioxide	9.68	%
Type of Process	Combustion		Stack Temperature	218	°C	Gas Velocity	21.43	m/s
Type of Fuel	Fuel Gas		Moisture	15.28	%	Flow Rate	165318	Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)		Oxides of Nitrogen (ppm)		Sulfur Dioxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	10:15 AM - 10:35 AM	6.58	9.15	2.41	2.34	61.70	59.87	12.07	11.71
2	10:36 AM - 10:56 AM	6.54	9.19	1.76	1.70	60.91	58.94	12.35	11.95
3	10:57 AM - 11:17 AM	4.12	10.71	1.80	1.49	76.87	63.66	15.90	13.17
Average (ppm)		5.74	9.68	1.99	1.85	66.49	60.82	13.44	12.28
Guideline <sup>1/</sup> (ppm)				-	-	-	88.9	-	27.0
Guideline <sup>2/</sup> (ppm)				-	690	-	200	-	60
Result (mg/m <sup>3</sup> )				2.28	2.11	125.10	114.43	35.17	32.13
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	-	-	167.3	-	70.7
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	790	-	376	-	157
Emission Rate at Actual O <sub>2</sub> (g/s)				0.105		5.745		1.615	
Guideline <sup>1/</sup> (g/s)				-		7.00		2.96	
Method				US EPA Method 10		US EPA Method 7E		US EPA Method 6C	

**Sampled By :** Sathaporn Thakaw

**Guideline :** <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

<sup>2/</sup> 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)

**Technical Management**

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**Approved by**

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249702**

Date Received : May 06, 2022  
Date Reported : May 25, 2022  
Report Number: 2294076-1 Rev. No.1

Page 1 of 2

**Sample Number** 2249702-1  
**Sampled Date** May 06, 2022  
**Sample Description** Emission from Stationary Source  
**Location** UBS3 : Utility Boiler Stack 3 (H-2050C)  
**Date Analysis Commenced** May 09, 2022  
**Condition of Sample** Extracted into one 10-L air sampling bag, one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	756	mmHg	Diameter	2.31	m	Oxygen	5.7	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	9.7	%
Type of Process	Combustion		Stack Temperature	218	°C	Gas Velocity	21.4	m/s
Type of Fuel	Fuel Gas		Moisture	15.14	%	Flow Rate (Actual O2)	165347	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 % O <sub>2</sub>	Result at 5.7 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	10:20 AM - 11:08 AM	mg/m3	-	0.5	2.4	2.6	320	120	US EPA, Method 5	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)  
Guideline(2) : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)  
ทะเบียนเลขที่ ว-323-จ-9447

Approved by

*D. Changchon.*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249702**

Date Received : May 06, 2022  
Date Reported : May 25, 2022  
Report Number: 2294076-1 Rev. No.1

Page 2 of 2

**Sample Number** 2249702-1  
**Sampled Date** May 06, 2022  
**Sample Description** Emission from Stationary Source  
**Location** UBS3 : Utility Boiler Stack 3 (H-2050C)  
**Date Analysis Commenced** May 09, 2022  
**Condition of Sample** Extracted into one 10-L air sampling bag, one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	756	mmHg	Diameter	2.31	m	Oxygen	5.7	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	9.7	%
Type of Process	Combustion		Stack Temperature	218	°C	Gas Velocity	21.4	m/s
Type of Fuel	Fuel Gas		Moisture	15.14	%	Flow Rate (Actual O2)	165347	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate *	10:20 AM - 11:08 AM	g/s	-	-	0.121	-	5.02	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)  
Guideline(2) : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

### Note:

This Analysis test report is reissued to supersede report No2294076-1, Date Reported : May 13, 2022 due to revise guideline/specification

**Sampled By :** Kantaphon Maneesampan , Tarin Octjinda

### 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

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)  
ทะเบียนเลขที่ ว-323-จ-9447

Approved by

*D. Changchon.*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249715**  
Date Received : May 09, 2022  
Date Reported : May 17, 2022  
Report Number : 2294082-1

Page 1 of 1

**Sample Number** : 2249715-1  
**Sample Description** : Emission from Stationary Source  
**Location** : GHU2 : GHU2 Feed Heater (H-840)  
**Measurement Date** : May 09, 2022

### Stack Description

Ambient Temperature	31 °C	Diameter	0.76 m	Oxygen	13.15 %
Ambient Pressure	756 mmHg	Shape	Circle	Carbon dioxide	4.02 %
Type of Process	Combustion	Stack Temperature	436 °C	Gas Velocity	5.88 m/s
Type of Fuel	Fuel Gas	Moisture	8.31 %	Flow Rate	3681 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	10:50 AM - 11:10 AM	13.18	4.01	28.32	50.98	8.98	16.17
2	11:11 AM - 11:31 AM	13.13	4.03	29.44	52.65	7.89	14.11
3	11:32 AM - 11:52 AM	13.15	4.01	29.42	52.80	7.55	13.55
Average (ppm)		13.15	4.02	29.06	52.14	8.14	14.61
Guideline <sup>1/</sup> (ppm)				-	79.0	-	-
Guideline <sup>2/</sup> (ppm)				-	200	-	690
Result (mg/m <sup>3</sup> )				54.67	98.10	9.32	16.73
Guideline <sup>1/</sup> (mg/m <sup>3</sup> )				-	148.7	-	-
Guideline <sup>2/</sup> (mg/m <sup>3</sup> )				-	376	-	790
Emission Rate at Actual O <sub>2</sub> (g/s)				0.0559		0.0095	
Guideline <sup>1/</sup> (g/s)				0.15		-	
Method				US EPA Method 7E		US EPA Method 10	

**Sampled By** : Sathapron Thakarw  
**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.  
<sup>2/</sup> 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)

**Technical Management**

Wichan Choonharat  
Manager  
ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jittrantont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249724**

Date Received : May 09, 2022  
Date Reported : May 25, 2022  
Report Number: 2322556-2

Page 1 of 2

**Sample Number** 2249724-1  
**Sampled Date** May 09, 2022  
**Sample Description** Emission from Stationary Source  
**Location** GHU2 : GHU2 Feed Heater (H-840)  
**Date Analysis Commenced** May 13, 2022  
**Condition of Sample** Extracted into two10-L air sampling bags and one sorbent tube, refrigerated

### Stack Description

Ambient Pressure	756	mmHg	Diameter	0.76	m	Oxygen	13.2	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	4.0	%
Type of Process	Combustion		Stack Temperature	436	°C	Gas Velocity	5.9	m/s
Type of Fuel	Fuel Gas		Moisture	8.31	%	Flow Rate (Actual O2)	3677	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 13.2 % O <sub>2</sub>	Method	Testing Location
<b>Air Testing</b>								
Total Hydrocarbon as Methane	11:10 AM - 11:20 AM	ppm	-	1.0	3.2	1.8	Total Hydrocarbon Analyzer, Based on US EPA Method 25A	Rayong

Approved by

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249724**

Date Received : May 09, 2022  
Date Reported : May 25, 2022  
Report Number: 2322556-2

Page 2 of 2

**Sample Number** 2249724-1  
**Sampled Date** May 09, 2022  
**Sample Description** Emission from Stationary Source  
**Location** GHU2 : GHU2 Feed Heater (H-840)  
**Date Analysis Commenced** May 13, 2022  
**Condition of Sample** Extracted into two 10-L air sampling bags and one sorbent tube, refrigerated

### Stack Description

Ambient Pressure	756	mmHg	Diameter	0.76	m	Oxygen	13.2	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	4.0	%
Type of Process	Combustion		Stack Temperature	436	°C	Gas Velocity	5.9	m/s
Type of Fuel	Fuel Gas		Moisture	8.31	%	Flow Rate (Actual O2)	3677	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Method	Testing Location
<b>Air Testing</b>							
Total Hydrocarbon as Methane	11:10 AM - 11:20 AM	g/s	-	-	0.0009	Calculated	Rayong

### Comment:

This Analysis test report is reissued to supersede report No.2294087-1, Date Reported : May 21, 2022 due to revise analytical information.

**Sampled By :** Tarin Octjinda , Chatchai Sukpia

### 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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# ภาคผนวก ค-3

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คุณภาพน้ำทิ้ง



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0042**  
**Lot ID: 21148669**  
Date Received : Jan 06, 2022  
Date Reported : Jan 13, 2022  
Report Number : 2182846-1

Page 1 of 1

<b>Sample Number</b>	21148669-1
<b>Sampled Date</b>	Jan 06, 2022 11:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Jan 06, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	51	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	29	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	28	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6280	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤50	APHA (2017), 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).  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Technical Management

*N. Banchongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 21148669**  
Date Received : Jan 06, 2022  
Date Reported : Jan 28, 2022  
Report Number : 2182846-2 Rev. No.1

Page 1 of 2

<b>Sample Number</b>	21148669-1						
<b>Sampled Date</b>	Jan 06, 2022 11:00 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Outlet WWT Check Basin						
<b>Date Analysis Commenced</b>	Jan 06, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
No.0009

**Lot ID: 21148669**

Date Received : Jan 06, 2022

Date Reported : Jan 28, 2022

Report Number : 2182846-2 Rev. No.1

Page 2 of 2

<b>Sample Number</b>	21148669-1
<b>Sampled Date</b>	Jan 06, 2022 11:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Jan 06, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	3.9	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Flow rate *	m3/s	-	-	0.0331	No Standard	Flow meter	Rayong
Sulfate *	mg/L	0.6	2	3809	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 21148671**

Date Received : Jan 06, 2022

Date Reported : Jan 13, 2022

Report Number : 2182847-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	21148671-1
<b>Sampled Date</b>	Jan 06, 2022 10:50 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Jan 06, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	26	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	13	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	11	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.8	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	728	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Technical Management

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 21148671**

Date Received : Jan 06, 2022

Date Reported : Jan 28, 2022

Report Number : 2182847-2

Page 1 of 2

<b>Sample Number</b>	21148671-1
<b>Sampled Date</b>	Jan 06, 2022 10:50 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Jan 07, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**  
**Lot ID: 21148671**  
Date Received : Jan 06, 2022  
Date Reported : Jan 28, 2022  
Report Number : 2182847-2

Page 2 of 2

<b>Sample Number</b>	21148671-1						
<b>Sampled Date</b>	Jan 06, 2022 10:50 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Storm Drain						
<b>Date Analysis Commenced</b>	Jan 07, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.2	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	369	No Standard	Based on APHA (2017), 4500-SO4(E)	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).  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0042**  
**Lot ID: 21148672**  
Date Received : Jan 06, 2022  
Date Reported : Jan 13, 2022  
Report Number : 2182848-1

Page 1 of 1

<b>Sample Number</b>	21148672-1
<b>Sampled Date</b>	Jan 06, 2022 11:40 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	Jan 06, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	44	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	28	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	27	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.2	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6280	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤50	APHA (2017), 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).  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Technical Management

*N. Banchongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**  
**Lot ID: 21148672**  
Date Received : Jan 06, 2022  
Date Reported : Jan 28, 2022  
Report Number : 2182848-2

Page 1 of 2

**Sample Number** 21148672-1  
**Sampled Date** Jan 06, 2022 11:40 AM  
**Sample Description** Wastewater  
**Location** WWT Check basin  
**Date Analysis Commenced** Jan 07, 2022  
**Condition of Sample** Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**  
**Lot ID: 21148672**  
Date Received : Jan 06, 2022  
Date Reported : Jan 28, 2022  
Report Number : 2182848-2

Page 2 of 2

<b>Sample Number</b>	21148672-1						
<b>Sampled Date</b>	Jan 06, 2022 11:40 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	Jan 07, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	4.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	3924	No Standard	Based on APHA (2017), 4500-SO4(E)	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).  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148675**

Date Received : Jan 06, 2022

Date Reported : Jan 13, 2022

Report Number : 2182849-1

Page 1 of 1

<b>Sample Number</b>	21148675-1
<b>Sampled Date</b>	Jan 06, 2022 11:50 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent from Equalization basin
<b>Date Analysis Commenced</b>	Jan 06, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
BOD (5 days at 20 Degree C)	mg/L	-	2	435	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	751	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	145	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	141	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	15	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.6	Based on APHA (2017), 4500-H (B)	Rayong
Phenol *	mg/L	0.005	0.01	11.41	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	11.1	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	35.5	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6560	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	58	APHA (2017), 2540 D	Rayong

**Sampled By** : Paramet Sattayakun , 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.

Technical Management

*N. Banchongkit*

Narumon Banchongkit  
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148675**

Date Received : Jan 06, 2022

Date Reported : Jan 28, 2022

Report Number : 2182849-2

Page 1 of 2

<b>Sample Number</b>	21148675-1
<b>Sampled Date</b>	Jan 06, 2022 11:50 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent from Equalization basin
<b>Date Analysis Commenced</b>	Jan 07, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Volatile Organics Compounds</b>						
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	19.9	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Trichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok

### Water Testing

Approved by

Siriluk P.

Siriluk Puenggang  
Supervisor

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148675**

Date Received : Jan 06, 2022

Date Reported : Jan 28, 2022

Report Number : 2182849-2

Page 2 of 2

<b>Sample Number</b>	21148675-1					
<b>Sampled Date</b>	Jan 06, 2022 11:50 AM					
<b>Sample Description</b>	Wastewater					
<b>Location</b>	Effluent from Equalization basin					
<b>Date Analysis Commenced</b>	Jan 07, 2022					
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Dissolved Oxygen *	mg/L	-	0.1	<0.1	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	3775	Based on APHA (2017), 4500-SO <sub>4</sub> (E)	Rayong

**Sampled By** : Paramet Sattayakun , 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.

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Approved by

Siriluk P.

Siriluk Puenggang  
Supervisor

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0042**  
**Lot ID: 21148676**  
Date Received : Jan 06, 2022  
Date Reported : Jan 13, 2022  
Report Number : 2182852-1

Page 1 of 1

**Sample Number** 21148676-1  
**Sampled Date** Jan 06, 2022 11:20 AM  
**Sample Description** Wastewater  
**Location** IEAT Drainage  
**Date Analysis Commenced** Jan 06, 2022  
**Condition of Sample** Contained in one amber glass bottle, five plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	47	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	30	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	27	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.4	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2360	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	33	≤50	APHA (2017), 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).

**Sampled By :** Paramet Sattayakun , Thanasoun Namakunna

Remark :

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- "<" : 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**

*N. Banchongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**  
**Lot ID: 21148676**  
Date Received : Jan 06, 2022  
Date Reported : Jan 28, 2022  
Report Number : 2182852-2

Page 1 of 2

**Sample Number** 21148676-1  
**Sampled Date** Jan 06, 2022 11:20 AM  
**Sample Description** Wastewater  
**Location** IEAT Drainage  
**Date Analysis Commenced** Jan 07, 2022  
**Condition of Sample** Contained in one amber glass bottle, five plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**  
**Lot ID: 21148676**  
Date Received : Jan 06, 2022  
Date Reported : Jan 28, 2022  
Report Number : 2182852-2

Page 2 of 2

<b>Sample Number</b>	21148676-1						
<b>Sampled Date</b>	Jan 06, 2022 11:20 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	IEAT Drainage						
<b>Date Analysis Commenced</b>	Jan 07, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, five plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3430	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.8	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	1428	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Turbidity *	NTU	-	0.1	16.0	No Standard	Based on APHA (2017), 2130 B	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).

**Sampled By :** Paramet Sattayakun , Thanasoun Namakunna

Remark :

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Approved by

Siriluk P.

Siriluk Puenggang  
Supervisor



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 21148780**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183032-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	21148780-1
<b>Sampled Date</b>	Feb 03, 2022 10:15 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Feb 03, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	36	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	25	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	23	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	32.7	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6540	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 21148780**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183032-2

Page 1 of 2

**Sample Number** 21148780-1  
**Sampled Date** Feb 03, 2022 10:15 AM  
**Sample Description** Wastewater  
**Location** Outlet WWT Check Basin  
**Date Analysis Commenced** Feb 03, 2022  
**Condition of Sample** Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Siriluk Puengpang  
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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 21148780**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183032-2

Page 2 of 2

<b>Sample Number</b>	21148780-1
<b>Sampled Date</b>	Feb 03, 2022 10:15 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Feb 03, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.2	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Flow rate *	m3/s	-	-	0.020	No Standard	Flow meter	Rayong
Sulfate *	mg/L	0.6	2	4014	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Mani

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.

Approved by

Siriluk P.

Siriluk Puenggang  
Supervisor

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 21148782**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183068-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	21148782-1
<b>Sampled Date</b>	Feb 03, 2022 10:40 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Feb 03, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	5	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	32	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	15	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	12	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	904	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Manit

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**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148782**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183068-2

Page 1 of 2

**Sample Number** 21148782-1  
**Sampled Date** Feb 03, 2022 10:40 AM  
**Sample Description** Wastewater  
**Location** Storm Drain  
**Date Analysis Commenced** Feb 04, 2022  
**Condition of Sample** Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor





## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148782**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183068-2

Page 2 of 2

<b>Sample Number</b>	21148782-1						
<b>Sampled Date</b>	Feb 03, 2022 10:40 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Storm Drain						
<b>Date Analysis Commenced</b>	Feb 04, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen	mg/L	-	0.1	6.8	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate	mg/L	0.6	2	385	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Mani

Remark :

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

Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**TESTING**  
**No.0042**  
**Lot ID: 21148784**  
Date Received : Feb 03, 2022  
Date Reported : Feb 11, 2022  
Report Number : 2183071-1

Page 1 of 1

<b>Sample Number</b>	21148784-1
<b>Sampled Date</b>	Feb 03, 2022 10:55 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	Feb 03, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	42	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	27	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	24	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.010	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6600	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤50	APHA (2017), 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).  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Pathompong Kornawat , Panupong Manit

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**

*N. Banchongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148784**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183071-2

Page 1 of 2

**Sample Number** 21148784-1  
**Sampled Date** Feb 03, 2022 10:55 AM  
**Sample Description** Wastewater  
**Location** WWT Check basin  
**Date Analysis Commenced** Feb 04, 2022  
**Condition of Sample** Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148784**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183071-2

Page 2 of 2

<b>Sample Number</b>	21148784-1						
<b>Sampled Date</b>	Feb 03, 2022 10:55 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	Feb 04, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen	mg/L	-	0.1	6.3	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate	mg/L	0.6	2	3656	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Mani

Remark :

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

Approved by

Siriluk P.

Siriluk Puenggang  
Supervisor

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## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148787**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183074-1

Page 1 of 1

**Sample Number** : 21148787-1  
**Sampled Date** : Feb 03, 2022 11:15 AM  
**Sample Description** : Wastewater  
**Location** : Effluent from Equalization basin  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Contained in one amber glass bottle, four plastic bottles, one BOD bottle, two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
BOD (5 days at 20 Degree C)	mg/L	-	2	221	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	475	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	87	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	84	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Based on APHA (2017), 4500-H (B)	Rayong
Phenol *	mg/L	0.005	0.01	12.48	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	7.7	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	37.1	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6560	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	APHA (2017), 2540 D	Rayong

**Sampled By** : Pathompong Kornswat , Panupong Manit

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

*N. Banongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Manager  
ทะเบียนเลขที่ ว-225-ค-5283

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148787**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183074-2

Page 1 of 2

**Sample Number** 21148787-1  
**Sampled Date** Feb 03, 2022 11:15 AM  
**Sample Description** Wastewater  
**Location** Effluent from Equalization basin  
**Date Analysis Commenced** Feb 04, 2022  
**Condition of Sample** Contained in one amber glass bottle, four plastic bottles, one BOD bottle, two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Volatile Organics Compounds</b>						
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	14.6	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Trichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok

### Water Testing

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Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148787**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183074-2

Page 2 of 2

<b>Sample Number</b>	21148787-1					
<b>Sampled Date</b>	Feb 03, 2022 11:15 AM					
<b>Sample Description</b>	Wastewater					
<b>Location</b>	Effluent from Equalization basin					
<b>Date Analysis Commenced</b>	Feb 04, 2022					
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle, two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Dissolved Oxygen	mg/L	-	0.1	<0.1	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate	mg/L	0.6	2	3812	Based on APHA (2017), 4500-SO <sub>4</sub> (E)	Rayong

**Sampled By** : Pathompong Kornawat , Panupong Mani

Remark :

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

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 21148789**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183083-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	21148789-1
<b>Sampled Date</b>	Feb 03, 2022 10:20 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	Feb 03, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, five plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	34	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	19	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	20	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.7	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2540	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Manit

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**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148789**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183083-2

Page 1 of 2

**Sample Number** 21148789-1  
**Sampled Date** Feb 03, 2022 10:20 AM  
**Sample Description** Wastewater  
**Location** IEAT Drainage  
**Date Analysis Commenced** Feb 04, 2022  
**Condition of Sample** Contained in one amber glass bottle, five plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148789**

Date Received : Feb 03, 2022

Date Reported : Feb 11, 2022

Report Number : 2183083-2

Page 2 of 2

<b>Sample Number</b>	21148789-1						
<b>Sampled Date</b>	Feb 03, 2022 10:20 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	IEAT Drainage						
<b>Date Analysis Commenced</b>	Feb 04, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, five plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	3960	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate	mg/L	0.6	2	1683	No Standard	Based on APHA (2017), 4500-SO <sub>4</sub> (E)	Rayong
Turbidity	NTU	-	0.1	2.5	No Standard	Based on APHA (2017), 2130 B	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Pathompong Kornawat , Panupong Manit

Remark :

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

Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2220430**

Date Received : Mar 03, 2022

Date Reported : Mar 10, 2022

Report Number : 2233750-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	2220430-1
<b>Sampled Date</b>	Mar 03, 2022 10:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Mar 03, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	27	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	25	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	23	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	31.6	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	5020	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**TESTING**  
**No.0009**

**Lot ID: 2220430**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233750-2

Page 1 of 2

**Sample Number** 2220430-1  
**Sampled Date** Mar 03, 2022 10:00 AM  
**Sample Description** Wastewater  
**Location** Outlet WWT Check Basin  
**Date Analysis Commenced** Mar 03, 2022  
**Condition of Sample** Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2220430**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233750-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 2 of 2

<b>Sample Number</b>	2220430-1
<b>Sampled Date</b>	Mar 03, 2022 10:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Mar 03, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	4.8	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Flow rate *	m3/s	-	-	0.035	No Standard	Flow meter	Rayong
Sulfate *	mg/L	0.6	2	3870	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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.

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2220433**

Date Received : Mar 03, 2022

Date Reported : Mar 10, 2022

Report Number : 2233755-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	2220433-1
<b>Sampled Date</b>	Mar 03, 2022 10:30 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Mar 03, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	15	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	17	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	15	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.4	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	324	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 2220433**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233755-2

Page 1 of 2

**Sample Number** 2220433-1  
**Sampled Date** Mar 03, 2022 10:30 AM  
**Sample Description** Wastewater  
**Location** Storm Drain  
**Date Analysis Commenced** Mar 04, 2022  
**Condition of Sample** Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Siriluk P.*

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2220433**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233755-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location:** ROC

Page 2 of 2

<b>Sample Number</b>	2220433-1						
<b>Sampled Date</b>	Mar 03, 2022 10:30 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Storm Drain						
<b>Date Analysis Commenced</b>	Mar 04, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	199	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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.

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor





## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0042**

**Lot ID: 2220436**

Date Received : Mar 03, 2022

Date Reported : Mar 10, 2022

Report Number : 2233767-1

Page 1 of 1

<b>Sample Number</b>	2220436-1
<b>Sampled Date</b>	Mar 03, 2022 10:45 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	Mar 03, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	31	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	54	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	51	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	31.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	5800	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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**

*N. Banchongkit*

Narumon Banchongkit  
Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon  
Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 2220436**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233767-2

Page 1 of 2

**Sample Number** 2220436-1  
**Sampled Date** Mar 03, 2022 10:45 AM  
**Sample Description** Wastewater  
**Location** WWT Check basin  
**Date Analysis Commenced** Mar 04, 2022  
**Condition of Sample** Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Siriluk P.*

Siriluk Puengpang  
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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
No.0009

**Lot ID: 2220436**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233767-2

Page 2 of 2

<b>Sample Number</b>	2220436-1						
<b>Sampled Date</b>	Mar 03, 2022 10:45 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	Mar 04, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	5.2	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	3912	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

Remark :

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

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## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2220440**

Date Received : Mar 03, 2022  
Date Reported : Mar 10, 2022  
Report Number : 2233777-1

Page 1 of 1

<b>Sample Number</b>	2220440-1
<b>Sampled Date</b>	Mar 03, 2022 10:50 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent from Equalization basin
<b>Date Analysis Commenced</b>	Mar 03, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
BOD (5 days at 20 Degree C)	mg/L	-	2	489	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	824	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	199	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	195	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	12	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Based on APHA (2017), 4500-H (B)	Rayong
Phenol *	mg/L	0.005	0.01	12.69	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	7.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.2	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6820	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	APHA (2017), 2540 D	Rayong

**Sampled By** : Paramet Sattayakun , Panupong Manit

Remark :

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- "<" : 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

*N. Banongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Manager  
ทะเบียนเลขที่ ว-225-ค-5283

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2220440**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233777-2

Page 1 of 2

<b>Sample Number</b>	2220440-1
<b>Sampled Date</b>	Mar 03, 2022 10:50 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent from Equalization basin
<b>Date Analysis Commenced</b>	Mar 04, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Volatile Organics Compounds</b>						
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	13.2	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	5.3	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Trichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok

### Water Testing

Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2220440**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233777-2

Page 2 of 2

<b>Sample Number</b>	2220440-1					
<b>Sampled Date</b>	Mar 03, 2022 10:50 AM					
<b>Sample Description</b>	Wastewater					
<b>Location</b>	Effluent from Equalization basin					
<b>Date Analysis Commenced</b>	Mar 04, 2022					
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Dissolved Oxygen *	mg/L	-	0.1	<0.1	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	4180	Based on APHA (2017), 4500-SO4(E)	Rayong

**Sampled By** : Paramet Sattayakun , Panupong Mani

Remark :

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

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2220442**

Date Received : Mar 03, 2022

Date Reported : Mar 10, 2022

Report Number : 2233783-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	2220442-1
<b>Sampled Date</b>	Mar 03, 2022 10:10 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	Mar 03, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	28	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	20	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	21	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.4	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1340	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 2220442**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233783-2

Page 1 of 2

**Sample Number** 2220442-1  
**Sampled Date** Mar 03, 2022 10:10 AM  
**Sample Description** Wastewater  
**Location** IEAT Drainage  
**Date Analysis Commenced** Mar 04, 2022  
**Condition of Sample** Contained in two glass vials, one amber glass bottle, one BOD bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor





## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**TESTING**  
**No.0009**

**Lot ID: 2220442**

Date Received : Mar 03, 2022

Date Reported : Mar 14, 2022

Report Number : 2233783-2

Page 2 of 2

<b>Sample Number</b>	2220442-1						
<b>Sampled Date</b>	Mar 03, 2022 10:10 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	IEAT Drainage						
<b>Date Analysis Commenced</b>	Mar 04, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3730	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.2	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	1511	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Turbidity *	NTU	-	0.1	6.9	No Standard	Based on APHA (2017), 2130 B	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , Panupong Manit

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.

Approved by

Siriluk P.

Siriluk Puenggang  
Supervisor

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2228289**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248478-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 1

<b>Sample Number</b>	2228289-1
<b>Sampled Date</b>	Apr 07, 2022 10:45 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	29	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	19	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	17	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.6	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	4540	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

**Technical Management**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2228289**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248478-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 2

<b>Sample Number</b>	2228289-1
<b>Sampled Date</b>	Apr 07, 2022 10:45 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2228289**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248478-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 2 of 2

<b>Sample Number</b>	2228289-1
<b>Sampled Date</b>	Apr 07, 2022 10:45 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Flow rate *	m3/s	-	-	0.011	No Standard	Flow meter	Rayong
Sulfate *	mg/L	0.6	2	3183	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2228293**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248485-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 1

<b>Sample Number</b>	2228293-1
<b>Sampled Date</b>	Apr 07, 2022 11:30 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	28	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	17	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	17	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	35.7	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	912	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

**Technical Management**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2228293**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248485-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 2

<b>Sample Number</b>	2228293-1
<b>Sampled Date</b>	Apr 07, 2022 11:30 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Apr 08, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2228293**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248485-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 2 of 2

<b>Sample Number</b>	2228293-1						
<b>Sampled Date</b>	Apr 07, 2022 11:30 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Storm Drain						
<b>Date Analysis Commenced</b>	Apr 08, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	5.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	462	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1

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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2228297**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248489-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 1

<b>Sample Number</b>	2228297-1
<b>Sampled Date</b>	Apr 07, 2022 11:40 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	4	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	30	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	21	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	19	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	36.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	4960	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

**Technical Management**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**TESTING**  
**No.0009**  
**Lot ID: 2228297**  
Date Received : Apr 07, 2022  
Date Reported : Apr 19, 2022  
Report Number : 2248489-2

Page 1 of 2

**Sample Number** 2228297-1  
**Sampled Date** Apr 07, 2022 11:40 AM  
**Sample Description** Wastewater  
**Location** WWT Check basin  
**Date Analysis Commenced** Apr 08, 2022  
**Condition of Sample** Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING  
No.0009

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2228297**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248489-2

Page 2 of 2

<b>Sample Number</b>	2228297-1						
<b>Sampled Date</b>	Apr 07, 2022 11:40 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	Apr 08, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.0	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	3164	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

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Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228298**

Date Received : Apr 07, 2022  
Date Reported : Apr 19, 2022  
Report Number : 2248491-1

Page 1 of 1

<b>Sample Number</b>	2228298-1
<b>Sampled Date</b>	Apr 07, 2022 12:00 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent from Equalization basin
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
BOD (5 days at 20 Degree C)	mg/L	-	2	157	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	331	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	22	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	20	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	6	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.8	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	6.10	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	5.9	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.9	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	4080	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	APHA (2017), 2540 D	Rayong

**Sampled By** : Paramet Sattayakun , 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.

Technical Management

*N. Banongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Manager  
ทะเบียนเลขที่ ว-225-ค-5283

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228298**

Date Received : Apr 07, 2022  
Date Reported : Apr 19, 2022  
Report Number : 2248491-2

Page 1 of 2

**Sample Number** 2228298-1  
**Sampled Date** Apr 07, 2022 12:00 PM  
**Sample Description** Wastewater  
**Location** Effluent from Equalization basin  
**Date Analysis Commenced** Apr 08, 2022  
**Condition of Sample** Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Volatile Organics Compounds</b>						
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	5.4	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Trichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok

### Water Testing

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING  
No.0009

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**Lot ID: 2228298**

Date Received : Apr 07, 2022  
Date Reported : Apr 19, 2022  
Report Number : 2248491-2

Page 2 of 2

<b>Sample Number</b>	2228298-1
<b>Sampled Date</b>	Apr 07, 2022 12:00 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent from Equalization basin
<b>Date Analysis Commenced</b>	Apr 08, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Dissolved Oxygen *	mg/L	-	0.1	<0.1	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	2777	Based on APHA (2017), 4500-SO <sub>4</sub> (E)	Rayong

**Sampled By :** Paramet Sattayakun , 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.

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2228301**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248493-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 1

<b>Sample Number</b>	2228301-1
<b>Sampled Date</b>	Apr 07, 2022 11:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	Apr 07, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	4	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	39	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	18	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	18	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	35.4	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2260	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun , 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.

Technical Management

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**TESTING**  
**No.0009**  
**Lot ID: 2228301**  
Date Received : Apr 07, 2022  
Date Reported : Apr 19, 2022  
Report Number : 2248493-2

Page 1 of 2

**Sample Number** 2228301-1  
**Sampled Date** Apr 07, 2022 11:00 AM  
**Sample Description** Wastewater  
**Location** IEAT Drainage  
**Date Analysis Commenced** Apr 08, 2022  
**Condition of Sample** Contained in two glass vials, one BOD bottle, one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor





## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2228301**

Date Received : Apr 07, 2022

Date Reported : Apr 19, 2022

Report Number : 2248493-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

Page 2 of 2

<b>Sample Number</b>	2228301-1						
<b>Sampled Date</b>	Apr 07, 2022 11:00 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	IEAT Drainage						
<b>Date Analysis Commenced</b>	Apr 08, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle, one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3766	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	947	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Turbidity *	NTU	-	0.1	9.6	No Standard	Based on APHA (2017), 2130 B	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Paramet Sattayakun , 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.

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor





## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2249795**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294128-1

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

Page 1 of 1

<b>Sample Number</b>	2249795-1
<b>Sampled Date</b>	May 05, 2022 2:10 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	May 05, 2022
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	37	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	20	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	19	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	5820	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai, Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**TESTING**  
**No.0009**  
**Lot ID: 2249795**  
Date Received : May 05, 2022  
Date Reported : May 18, 2022  
Report Number : 2294128-2

Page 1 of 2

**Sample Number** 2249795-1  
**Sampled Date** May 05, 2022 2:10 PM  
**Sample Description** Wastewater  
**Location** Outlet WWT Check Basin  
**Date Analysis Commenced** May 05, 2022  
**Condition of Sample** Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249795**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294128-2

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 2 of 2

<b>Sample Number</b>	2249795-1						
<b>Sampled Date</b>	May 05, 2022 2:10 PM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Outlet WWT Check Basin						
<b>Date Analysis Commenced</b>	May 05, 2022						
<b>Condition of Sample</b>	Contained in one amber glass bottle, four plastic bottles, one BOD bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Flow rate *	m3/s	-	-	0.033	No Standard	Flow meter	Rayong
Sulfate *	mg/L	0.6	2	3346	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai, Panupong Mani

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.

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2249798**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294132-1

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 1 of 1

<b>Sample Number</b>	2249798-1
<b>Sampled Date</b>	May 05, 2022 2:30 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	May 05, 2022
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	23	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	14	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	15	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	336	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai, Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249798**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294132-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 1 of 2

<b>Sample Number</b>	2249798-1
<b>Sampled Date</b>	May 05, 2022 2:30 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	May 06, 2022
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249798**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294132-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 2 of 2

<b>Sample Number</b>	2249798-1						
<b>Sampled Date</b>	May 05, 2022 2:30 PM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Storm Drain						
<b>Date Analysis Commenced</b>	May 06, 2022						
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.4	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	116	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

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.

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Siriluk Puengpang  
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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2249801**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294134-1

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

Page 1 of 1

<b>Sample Number</b>	2249801-1
<b>Sampled Date</b>	May 05, 2022 2:45 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	May 05, 2022
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	38	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	22	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	21	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	32.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	5700	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249801**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294134-2

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 1 of 2

<b>Sample Number</b>	2249801-1
<b>Sampled Date</b>	May 05, 2022 2:45 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	May 06, 2022
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor





## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249801**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2294134-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 2 of 2

<b>Sample Number</b>	2249801-1						
<b>Sampled Date</b>	May 05, 2022 2:45 PM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	May 06, 2022						
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	6.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	3434	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Manit

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.

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249805**

Date Received : May 05, 2022  
Date Reported : May 18, 2022  
Report Number : 2294136-1

Page 1 of 1

**Sample Number** : 2249805-1  
**Sampled Date** : May 05, 2022 2:50 PM  
**Sample Description** : Wastewater  
**Location** : Effluent from Equalization basin  
**Date Analysis Commenced** : May 05, 2022  
**Condition of Sample** : Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
BOD (5 days at 20 Degree C)	mg/L	-	2	510	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	734	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	28	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	25	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.3	Based on APHA (2017), 4500-H (B)	Rayong
Phenol *	mg/L	0.005	0.01	11.12	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	13.3	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.7	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6460	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	30	APHA (2017), 2540 D	Rayong

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Manit

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

*N. Banongkit*

Narumon Banhongkit  
Supervisor  
ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249805**

Date Received : May 05, 2022  
Date Reported : May 18, 2022  
Report Number : 2294136-2

Page 1 of 2

**Sample Number** : 2249805-1  
**Sampled Date** : May 05, 2022 2:50 PM  
**Sample Description** : Wastewater  
**Location** : Effluent from Equalization basin  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Volatile Organics Compounds</b>						
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	8.3	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	6.3	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Trichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok

### Water Testing

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249805**

Date Received : May 05, 2022  
Date Reported : May 18, 2022  
Report Number : 2294136-2

Page 2 of 2

**Sample Number** 2249805-1  
**Sampled Date** May 05, 2022 2:50 PM  
**Sample Description** Wastewater  
**Location** Effluent from Equalization basin  
**Date Analysis Commenced** May 06, 2022  
**Condition of Sample** Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Dissolved Oxygen *	mg/L	-	0.1	<0.1	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	3534	Based on APHA (2017), 4500-SO4(E)	Rayong

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

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.

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Approved by

Siriluk P.

Siriluk Puengpang  
Supervisor



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2249807**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2316110-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :** ROC

Page 1 of 1

<b>Sample Number</b>	2249807-1
<b>Sampled Date</b>	May 05, 2022 2:05 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	May 05, 2022
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	31	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	19	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	18	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	840	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon

Senior Manager

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249807**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2316110-2

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 1 of 2

<b>Sample Number</b>	2249807-1
<b>Sampled Date</b>	May 05, 2022 2:05 PM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	May 06, 2022
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2249807**

Date Received : May 05, 2022

Date Reported : May 18, 2022

Report Number : 2316110-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** : ROC

Page 2 of 2

<b>Sample Number</b>	2249807-1						
<b>Sampled Date</b>	May 05, 2022 2:05 PM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	IEAT Drainage						
<b>Date Analysis Commenced</b>	May 06, 2022						
<b>Condition of Sample</b>	Contained in four plastic bottles, one BOD bottle, one amber glass bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1491	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	39.1	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Turbidity *	NTU	-	0.1	3.5	No Standard	Based on APHA (2017), 2130 B	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

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.

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1





## Analysis / Test Report

TESTING  
No.0042

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2253337**

Date Received : Jun 02, 2022  
Date Reported : Jun 11, 2022  
Report Number : 2302700-1

Page 1 of 1

**Sample Number** 2253337-1  
**Sampled Date** Jun 02, 2022 10:30 AM  
**Sample Description** Wastewater  
**Location** Effluent from Equalization basin  
**Date Analysis Commenced** Jun 02, 2022  
**Condition of Sample** Contained in two glass vials, three amber glass bottles, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
BOD (5 days at 20 Degree C)	mg/L	-	2	418	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	648	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	342	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	331	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	6	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.8	Based on APHA (2017), 4500-H (B)	Rayong
Phenol *	mg/L	0.005	0.01	1.53	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	7.1	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	36.5	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6620	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	53	APHA (2017), 2540 D	Rayong

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

*N. Banongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ ว-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2253337**

Date Received : Jun 02, 2022  
Date Reported : Jun 11, 2022  
Report Number : 2302700-2

Page 1 of 2

**Sample Number** 2253337-1  
**Sampled Date** Jun 02, 2022 10:30 AM  
**Sample Description** Wastewater  
**Location** Effluent from Equalization basin  
**Date Analysis Commenced** Jun 06, 2022  
**Condition of Sample** Contained in two glass vials, three amber glass bottles, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Volatile Organics Compounds</b>						
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	25.5	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	6.0	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	16.2	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	<5	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	6.7	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Trichloroethylene	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	Based on US EPA, Method 5030B and 8260D	Bangkok

### Water Testing

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2253337**

Date Received : Jun 02, 2022  
Date Reported : Jun 11, 2022  
Report Number : 2302700-2

Page 2 of 2

**Sample Number** 2253337-1  
**Sampled Date** Jun 02, 2022 10:30 AM  
**Sample Description** Wastewater  
**Location** Effluent from Equalization basin  
**Date Analysis Commenced** Jun 06, 2022  
**Condition of Sample** Contained in two glass vials, three amber glass bottles, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Dissolved Oxygen *	mg/L	-	0.1	<0.1	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	5264	Based on APHA (2017), 4500-SO4(E)	Rayong

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

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.
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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2253342**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302702-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 1

<b>Sample Number</b>	2253342-1
<b>Sampled Date</b>	Jun 02, 2022 10:05 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	Jun 02, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	40	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	25	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	24	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.6	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	3480	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Manit

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**

*N. Banchongkit*

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253342**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302702-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2253342-1
<b>Sampled Date</b>	Jun 02, 2022 10:05 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	IEAT Drainage
<b>Date Analysis Commenced</b>	Jun 04, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253342**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302702-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 2 of 2

<b>Sample Number</b>	2253342-1						
<b>Sampled Date</b>	Jun 02, 2022 10:05 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	IEAT Drainage						
<b>Date Analysis Commenced</b>	Jun 04, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	7094	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	8.0	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	1744	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Turbidity *	NTU	-	0.1	5.0	No Standard	Based on APHA (2017), 2130 B	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Mani

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.

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2253380**

Date Received : Jun 02, 2022

Date Reported : Jun 13, 2022

Report Number : 2302747-1

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 1

<b>Sample Number</b>	2253380-1
<b>Sampled Date</b>	Jun 02, 2022 10:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Jun 02, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	61	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	34	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	33	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	32.9	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6220	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Manit

Remark :

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

*N. Banchongkit*

Narumon Banchongkit

Supervisor

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**Approved by**

*D. Changchon*

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253380**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302747-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2253380-1
<b>Sampled Date</b>	Jun 02, 2022 10:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Jun 02, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1





## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253380**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302747-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 2 of 2

<b>Sample Number</b>	2253380-1
<b>Sampled Date</b>	Jun 02, 2022 10:00 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Outlet WWT Check Basin
<b>Date Analysis Commenced</b>	Jun 02, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	5.9	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Flow rate *	m3/s	-	-	0.014	No Standard	Flow meter	Rayong
Sulfate *	mg/L	0.6	2	5823	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai, Panupong Mani

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.

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1





## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2253396**  
Date Received : Jun 02, 2022  
Date Reported : Jun 11, 2022  
Report Number : 2302768-1

Page 1 of 1

**Sample Number** 2253396-1  
**Sampled Date** Jun 02, 2022 10:15 AM  
**Sample Description** Wastewater  
**Location** Storm Drain  
**Date Analysis Commenced** Jun 02, 2022  
**Condition of Sample** Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	31	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	14	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	13	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	34.1	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	728	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai, Panupong Manit

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

*N. Banchongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ จ-323-จ-9445

Approved by

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253396**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302768-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2253396-1
<b>Sampled Date</b>	Jun 02, 2022 10:15 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Storm Drain
<b>Date Analysis Commenced</b>	Jun 06, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING  
No.0009

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

**Lot ID: 2253396**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302768-2

Page 2 of 2

<b>Sample Number</b>	2253396-1						
<b>Sampled Date</b>	Jun 02, 2022 10:15 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Storm Drain						
<b>Date Analysis Commenced</b>	Jun 06, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	9.1	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	385	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

Remark :

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Approved by

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2253413**  
Date Received : Jun 02, 2022  
Date Reported : Jun 11, 2022  
Report Number : 2302784-1

Page 1 of 1

<b>Sample Number</b>	2253413-1						
<b>Sampled Date</b>	Jun 02, 2022 10:35 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	Jun 02, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	61	≤120	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	37	≤300	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	34	≤300	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1.0	APHA (2017), 5530 D	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	36.1	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	6180	(1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	APHA (2017), 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).  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Manit

Remark :

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

**Technical Management**

*N. Banchongkit*

Narumon Banchongkit  
Supervisor  
ทะเบียนเลขที่ จ-323-จ-9445

**Approved by**

*D. Changchon*

Dej Changchon  
Senior Manager  
ทะเบียนเลขที่ จ-323-ค-9442

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## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253413**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302784-2

**Client :** Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

Page 1 of 2

<b>Sample Number</b>	2253413-1
<b>Sampled Date</b>	Jun 02, 2022 10:35 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	WWT Check basin
<b>Date Analysis Commenced</b>	Jun 06, 2022
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
1,1,1-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1,2-Trichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,1-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,2-Dichloroethane	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
1,3-Dichloropropane *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Benzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Carbontetrachloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
cis-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Ethylbenzene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Hexachlorobutadiene *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methyl Chloride *	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Methylene Chloride (Dichloromethane)	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Styrene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Tetrachloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Toluene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Total Xylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
trans-1,2-Dichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok

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Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1



## Analysis / Test Report

TESTING

No.0009

**Lot ID: 2253413**

Date Received : Jun 02, 2022

Date Reported : Jun 11, 2022

Report Number : 2302784-2

**Client** : Rayong Olefins Co., Ltd.

271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

Page 2 of 2

<b>Sample Number</b>	2253413-1						
<b>Sampled Date</b>	Jun 02, 2022 10:35 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	WWT Check basin						
<b>Date Analysis Commenced</b>	Jun 06, 2022						
<b>Condition of Sample</b>	Contained in two glass vials, one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Volatile Organics Compounds</b>							
Trichloroethylene	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
Vinyl chloride	ug/L	1.5	5	Not Detected	No Standard	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Water Testing</b>							
Dissolved Oxygen *	mg/L	-	0.1	4.7	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Sulfate *	mg/L	0.6	2	6142	No Standard	Based on APHA (2017), 4500-SO4(E)	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Mani

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.

Approved by

*Nant Somb*

Nanthawadee Somboon  
Specialist 1

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# ภาคผนวก ค-4

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คุณภาพน้ำทะเล



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :** ROC

**Lot ID: 21148679**

Date Received : Jan 06, 2022

Date Reported : Jan 10, 2022

Report Number : 2182856-1

Page 1 of 1

<b>Sample Number</b>	21148679-1
<b>Sampled Date</b>	Jan 06, 2022 1:05 PM
<b>Sample Description</b>	Sea Water
<b>Location</b>	หาดทรายทอง
<b>Date Analysis Commenced</b>	Jan 07, 2022
<b>Condition of Sample</b>	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33650	(1)	APHA (2017), 2540 C	Rayong

**Guideline :** Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment  
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun

Remark :

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

Approved by

*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148791**

Date Received : Feb 03, 2022

Date Reported : Feb 07, 2022

Report Number : 2183116-1

Page 1 of 1

<b>Sample Number</b>	21148791-1
<b>Sampled Date</b>	Feb 03, 2022 12:15 PM
<b>Sample Description</b>	Sea Water
<b>Location</b>	หาดทรายทอง
<b>Date Analysis Commenced</b>	Feb 04, 2022
<b>Condition of Sample</b>	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31850	APHA (2017), 2540 C	Rayong

**Sampled By** : Pathompong Kornawat

Remark :

- LOD : Limit of Detection
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Approved by

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2220446**

Date Received : Mar 03, 2022

Date Reported : Mar 07, 2022

Report Number : 2233786-1

Page 1 of 1

**Sample Number** 2220446-1  
**Sampled Date** Mar 03, 2022 11:45 AM  
**Sample Description** Sea Water  
**Location** หาดทรายทอง  
**Date Analysis Commenced** Mar 04, 2022  
**Condition of Sample** Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31350	(1)	APHA (2017), 2540 C	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

**Sampled By :** Paramet Sattayakun

Remark :

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

Approved by

Narumon Banchongkit  
Supervisor

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**Client** : Rayong Olefins Co., Ltd.  
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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228302**

Date Received : Apr 07, 2022

Date Reported : Apr 12, 2022

Report Number : 2248494-1

Page 1 of 1

**Sample Number** : 2228302-1  
**Sampled Date** : Apr 07, 2022 12:50 PM  
**Sample Description** : Sea Water  
**Location** : หาดทรายทอง  
**Date Analysis Commenced** : Apr 08, 2022  
**Condition of Sample** : Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35350	APHA (2017), 2540 C	Rayong

**Sampled By** : Paramet Sattayakun

Remark :

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Approved by

Wilawan Borirak  
Assistant Manager

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249810**

Date Received : May 05, 2022

Date Reported : May 10, 2022

Report Number : 2294142-1

Page 1 of 1

**Sample Number** : 2249810-1  
**Sampled Date** : May 05, 2022 11:00 AM  
**Sample Description** : Sea Water  
**Location** : หาดทรายทอง  
**Date Analysis Commenced** : May 07, 2022  
**Condition of Sample** : Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
<b>Water Testing</b>						
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33120	APHA (2017), 2540 C	Rayong

**Sampled By** : Chainusorn Lertnanthakunchai

Remark :

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*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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**Client** : Rayong Olefins Co., Ltd.  
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**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

**Lot ID: 2253422**

Date Received : Jun 02, 2022

Date Reported : Jun 08, 2022

Report Number : 2302792-1

Page 1 of 1

<b>Sample Number</b>	2253422-1
<b>Sampled Date</b>	Jun 02, 2022 11:30 AM
<b>Sample Description</b>	Sea Water
<b>Location</b>	หาดทรายทอง
<b>Date Analysis Commenced</b>	Jun 04, 2022
<b>Condition of Sample</b>	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30250	(1)	APHA (2017), 2540 C	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).

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Remark :

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

Approved by

*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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# ภาคผนวก ค-5

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คุณภาพน้ำใต้ดิน



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O** : PMM-SCGCH-2019-345

**Project Name** : Environmental Monitoring

**Project Location** :

**Lot ID: 2220447**

Date Received : Mar 24, 2022

Date Reported : May 12, 2022

Report Number : 2273255-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2220447-1
<b>Sampled Date</b>	Mar 24, 2022 10:50 AM
<b>Sample Description</b>	Groundwater
<b>Location</b>	บริเวณหน้าประตูทางเข้า 3 ด้านทิศเหนือของโรงงาน (ROC-N1)
<b>Date Analysis Commenced</b>	Mar 25, 2022
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and four glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline** : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note** : This Analysis test report is reissued to supersede report No.2273255-2, Date Reported : Apr 06, 2022 due to revise analytical information.

**Sampled By** : Chainusorn Lertnanthakunchai

Remark :

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

Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2220447**

Date Received : Mar 24, 2022  
Date Reported : May 12, 2022  
Report Number : 2273256-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2220447-2						
<b>Sampled Date</b>	Mar 24, 2022 11:00 AM						
<b>Sample Description</b>	Groundwater						
<b>Location</b>	บริเวณหน้าบ่อบำบัดเพลิง (Fire Pump) ด้านทิศเหนือของโรงงาน (ROC-N2)						
<b>Date Analysis Commenced</b>	Mar 25, 2022						
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and four glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline** : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note** : This Analysis test report is reissued to supersede report No.2273256-2, Date Reported : Apr 06, 2022 due to revise analytical information.

**Sampled By** : Chainusorn Lertnanthakunchai

Remark :

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Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2220447**

Date Received : Mar 24, 2022

Date Reported : May 12, 2022

Report Number : 2273262-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2220447-8						
<b>Sampled Date</b>	Mar 24, 2022 10:18 AM						
<b>Sample Description</b>	Groundwater						
<b>Location</b>	บริเวณหน้าถังเก็บ Cracker Bottom (TK-1600A/B) ด้านทิศใต้ของโรงงาน (ROC-S1)						
<b>Date Analysis Commenced</b>	Mar 25, 2022						
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and four glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline :** Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note :** This Analysis test report is reissued to supersede report No.2273262-2, Date Reported : Apr 06, 2022 due to revise analytical information.

**Sampled By :** Chainusorn Lertnanthakunchai

Remark :

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Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2238202**

Date Received : Mar 25, 2022

Date Reported : May 12, 2022

Report Number : 2273249-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2238202-1
<b>Sampled Date</b>	Mar 25, 2022 11:35 AM
<b>Sample Description</b>	Groundwater
<b>Location</b>	บริเวณริมรั้วโครงการหน้า BTU Plant ด้านทิศเหนือของโรงงาน จุดที่ 1 (ROC-N3)
<b>Date Analysis Commenced</b>	Mar 26, 2022
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline :** Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note :** This Analysis test report is reissued to supersede report No.2273249-2, Date Reported : Apr 07, 2022 due to revise analytical information.

**Sampled By :** Chainusorn Lertnanthakunchai, Panupong Manit

Remark :

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

Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanok Korn Anek

Kanok Korn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**Lot ID: 2238202**

Date Received : Mar 25, 2022  
Date Reported : May 12, 2022  
Report Number : 2273250-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2238202-2						
<b>Sampled Date</b>	Mar 25, 2022 11:45 AM						
<b>Sample Description</b>	Groundwater						
<b>Location</b>	บริเวณริมรั้วโครงการหน้า BTU Plant ด้านทิศเหนือของโรงงาน จุดที่ 2 (ROC-N4)						
<b>Date Analysis Commenced</b>	Mar 26, 2022						
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline :** Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note :** This Analysis test report is reissued to supersede report No.2273250-2, Date Reported : Apr 07, 2022 due to revise analytical information.

**Sampled By :** Chainusorn Lertnanthakunchai, Panupong Manit

Remark :

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

Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2238202**

Date Received : Mar 25, 2022

Date Reported : May 12, 2022

Report Number : 2273251-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2238202-3						
<b>Sampled Date</b>	Mar 25, 2022 9:20 AM						
<b>Sample Description</b>	Groundwater						
<b>Location</b>	บริเวณหน้าถังเก็บ Cracker Bottom (TK-1760) ด้านทิศใต้ของโรงงาน (ROC-N5)						
<b>Date Analysis Commenced</b>	Mar 26, 2022						
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline :** Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note :** This Analysis test report is reissued to supersede report No.2273251-2, Date Reported : Apr 07, 2022 due to revise analytical information.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Manit

Remark :

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

Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2238202**

Date Received : Mar 25, 2022  
Date Reported : May 12, 2022  
Report Number : 2273252-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2238202-4						
<b>Sampled Date</b>	Mar 25, 2022 10:45 AM						
<b>Sample Description</b>	Groundwater						
<b>Location</b>	บริเวณใต้ชั้นวางท่อ (Pipe Rack) ด้านทิศใต้ของโรงงาน (ROC-S5)						
<b>Date Analysis Commenced</b>	Mar 26, 2022						
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline** : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note** : This Analysis test report is reissued to supersede report No.2273252-2, Date Reported : Apr 07, 2022 due to revise analytical information.

**Sampled By** : Chainusorn Lertnanthakunchai , Panupong Manit

Remark :

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Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :** PMM-SCGCH-2019-345

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2238202**

Date Received : Mar 25, 2022

Date Reported : May 12, 2022

Report Number : 2273253-2 Rev. No.1

Page 1 of 1

<b>Sample Number</b>	2238202-5						
<b>Sampled Date</b>	Mar 25, 2022 11:00 AM						
<b>Sample Description</b>	Groundwater						
<b>Location</b>	บริเวณหน้าถังเก็บ Mixed C4 (TK-1400A/B) ด้านทิศใต้ของโรงงาน (ROC-S2)						
<b>Date Analysis Commenced</b>	Mar 26, 2022						
<b>Condition of Sample</b>	Contained in two amber glass bottles, one plastic bottle and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Organic Compounds</b>							
Methanol	mg/L	-	2.0	<2.0	60	Based on APHA (2017), 6200B	Bangkok
<b>Petroleum Hydrocarbons</b>							
TPH C>16-C35	mg/L	-	0.05	<0.05	0.1	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C>8-C16	mg/L	-	0.05	<0.05	1.7	Based on US EPA, Method 3510C and 8015C	Bangkok
TPH C5-C8	mg/L	-	0.01	<0.01	1.4	Based on US EPA, Method 5030B and 8260D	Bangkok
<b>Volatile Organics Compounds</b>							
Benzene	mg/L	0.00003	0.0005	Not Detected	0.2	Based on APHA (2017), 6200B	Bangkok
Ethylbenzene	mg/L	0.00003	0.0005	Not Detected	2.0	Based on APHA (2017), 6200B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Based on APHA (2017), 6200B	Bangkok

**Guideline :** Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

**Note :** This Analysis test report is reissued to supersede report No.2273253-2, Date Reported : Apr 07, 2022 due to revise analytical information.

**Sampled By :** Chainusorn Lertnanthakunchai , Panupong Manit

Remark :

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Technical Management

Siriluk P.

Siriluk Puengpang

Supervisor

ทะเบียนเลขที่ ว-204-จ-4720

Approved by

Kanok Korn Anek

Kanok Korn Anek

Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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# ภาคผนวก ค-6

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ระดับเสียง



## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311154-1

Page 1 of 1

**Sample Number** 2248562-1  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 03 - May 04, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	68.0	85.6	58.3
10:00 AM - 11:00 AM	68.3	80.1	58.8
11:00 AM - 12:00 PM	63.1	72.0	61.8
12:00 PM - 01:00 PM	63.4	75.1	61.9
01:00 PM - 02:00 PM	67.8	77.4	59.6
02:00 PM - 03:00 PM	63.9	76.4	62.3
03:00 PM - 04:00 PM	63.3	78.1	61.8
04:00 PM - 05:00 PM	65.5	72.6	62.0
05:00 PM - 06:00 PM	67.5	76.7	61.7
06:00 PM - 07:00 PM	67.6	79.3	61.9
07:00 PM - 08:00 PM	63.3	70.4	62.1
08:00 PM - 09:00 PM	63.4	74.6	61.9
09:00 PM - 10:00 PM	63.4	67.5	62.2
10:00 PM - 11:00 PM	63.1	66.9	62.0
11:00 PM - 12:00 AM	64.2	76.2	61.9
12:00 AM - 01:00 AM	67.0	77.8	52.0
01:00 AM - 02:00 AM	63.3	73.6	61.9
02:00 AM - 03:00 AM	64.0	78.8	61.8
03:00 AM - 04:00 AM	63.6	77.5	61.1
04:00 AM - 05:00 AM	65.4	74.9	51.0
05:00 AM - 06:00 AM	62.1	71.4	60.5
06:00 AM - 07:00 AM	66.3	79.7	51.1
07:00 AM - 08:00 AM	65.5	75.7	50.2
08:00 AM - 09:00 AM	66.1	75.4	51.3

Leq Average 24 hrs. (dB(A)) 65.4  
Lmax (dB(A)) 85.6  
L90 (dB(A)) 61.8  
Ldn (dB(A)) 71.2  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311155-1

Page 1 of 1

**Sample Number** 2248562-2  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 04 - May 05, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	61.7	67.5	60.1
10:00 AM - 11:00 AM	64.0	72.0	61.4
11:00 AM - 12:00 PM	68.1	77.8	57.0
12:00 PM - 01:00 PM	63.0	72.2	60.8
01:00 PM - 02:00 PM	69.7	79.2	55.8
02:00 PM - 03:00 PM	62.9	76.1	60.8
03:00 PM - 04:00 PM	67.2	81.0	60.5
04:00 PM - 05:00 PM	63.5	74.2	60.7
05:00 PM - 06:00 PM	66.9	77.0	61.2
06:00 PM - 07:00 PM	67.5	76.9	60.7
07:00 PM - 08:00 PM	62.3	69.8	60.6
08:00 PM - 09:00 PM	61.8	66.8	60.1
09:00 PM - 10:00 PM	62.0	67.7	60.4
10:00 PM - 11:00 PM	62.1	68.1	60.5
11:00 PM - 12:00 AM	61.6	65.9	60.2
12:00 AM - 01:00 AM	68.4	77.7	52.8
01:00 AM - 02:00 AM	65.4	77.5	61.1
02:00 AM - 03:00 AM	63.9	77.9	61.1
03:00 AM - 04:00 AM	61.9	73.5	60.4
04:00 AM - 05:00 AM	61.3	77.2	59.9
05:00 AM - 06:00 AM	67.3	75.2	51.3
06:00 AM - 07:00 AM	66.5	74.5	51.6
07:00 AM - 08:00 AM	61.8	72.6	59.8
08:00 AM - 09:00 AM	68.7	78.0	55.0

Leq Average 24 hrs. (dB(A)) 65.4  
Lmax (dB(A)) 81.0  
L90 (dB(A)) 60.4  
Ldn (dB(A)) 71.5  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311156-1

Page 1 of 1

**Sample Number** 2248562-3  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 05 - May 06, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	61.4	73.0	59.8
10:00 AM - 11:00 AM	69.6	78.1	55.7
11:00 AM - 12:00 PM	65.9	75.9	55.7
12:00 PM - 01:00 PM	63.6	75.2	60.5
01:00 PM - 02:00 PM	69.1	78.0	58.5
02:00 PM - 03:00 PM	67.3	77.7	61.6
03:00 PM - 04:00 PM	68.6	76.8	60.9
04:00 PM - 05:00 PM	68.5	79.9	61.6
05:00 PM - 06:00 PM	67.5	78.2	60.6
06:00 PM - 07:00 PM	69.7	77.6	61.1
07:00 PM - 08:00 PM	63.7	81.1	60.9
08:00 PM - 09:00 PM	61.9	69.4	60.8
09:00 PM - 10:00 PM	62.0	75.1	60.4
10:00 PM - 11:00 PM	66.1	75.0	55.5
11:00 PM - 12:00 AM	66.5	77.2	61.9
12:00 AM - 01:00 AM	66.1	75.0	55.5
01:00 AM - 02:00 AM	64.5	82.8	62.8
02:00 AM - 03:00 AM	64.1	79.4	62.5
03:00 AM - 04:00 AM	66.2	76.2	56.0
04:00 AM - 05:00 AM	63.9	75.5	60.8
05:00 AM - 06:00 AM	69.5	81.3	60.9
06:00 AM - 07:00 AM	62.8	77.3	60.8
07:00 AM - 08:00 AM	62.2	66.6	61.2
08:00 AM - 09:00 AM	62.5	75.7	60.5

Leq Average 24 hrs. (dB(A)) 66.4  
Lmax (dB(A)) 82.8  
L90 (dB(A)) 60.8  
Ldn (dB(A)) 72.5  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311157-1

Page 1 of 1

**Sample Number** 2248562-4  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 06 - May 07, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.6	73.8	61.4
10:00 AM - 11:00 AM	63.7	78.2	61.7
11:00 AM - 12:00 PM	63.0	74.7	61.5
12:00 PM - 01:00 PM	62.5	75.6	60.9
01:00 PM - 02:00 PM	63.9	75.7	62.3
02:00 PM - 03:00 PM	65.9	76.7	60.4
03:00 PM - 04:00 PM	65.5	81.7	62.8
04:00 PM - 05:00 PM	67.9	78.7	62.4
05:00 PM - 06:00 PM	67.2	75.9	62.0
06:00 PM - 07:00 PM	65.6	75.2	61.5
07:00 PM - 08:00 PM	68.0	78.7	61.4
08:00 PM - 09:00 PM	63.7	73.2	62.2
09:00 PM - 10:00 PM	70.0	77.1	62.0
10:00 PM - 11:00 PM	65.8	73.6	63.0
11:00 PM - 12:00 AM	63.6	67.0	62.7
12:00 AM - 01:00 AM	63.7	71.8	62.7
01:00 AM - 02:00 AM	68.0	75.1	60.0
02:00 AM - 03:00 AM	64.0	77.2	62.9
03:00 AM - 04:00 AM	64.1	81.7	62.4
04:00 AM - 05:00 AM	67.3	78.1	61.8
05:00 AM - 06:00 AM	66.6	75.3	61.4
06:00 AM - 07:00 AM	65.0	74.6	60.9
07:00 AM - 08:00 AM	63.1	75.5	61.6
08:00 AM - 09:00 AM	63.5	70.7	61.9

Leq Average 24 hrs. (dB(A)) 65.7  
Lmax (dB(A)) 81.7  
L90 (dB(A)) 61.8  
Ldn (dB(A)) 72.1  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311158-1

Page 1 of 1

**Sample Number** 2248562-5  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 07 - May 08, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	66.7	74.8	65.7
10:00 AM - 11:00 AM	63.8	69.3	63.0
11:00 AM - 12:00 PM	63.7	75.6	62.3
12:00 PM - 01:00 PM	63.8	71.5	62.7
01:00 PM - 02:00 PM	64.1	78.0	62.1
02:00 PM - 03:00 PM	65.9	82.5	64.3
03:00 PM - 04:00 PM	65.5	80.6	62.0
04:00 PM - 05:00 PM	68.1	76.0	62.7
05:00 PM - 06:00 PM	69.1	78.0	62.4
06:00 PM - 07:00 PM	68.6	90.4	62.6
07:00 PM - 08:00 PM	65.6	82.2	64.0
08:00 PM - 09:00 PM	65.5	81.7	64.1
09:00 PM - 10:00 PM	65.8	82.1	64.2
10:00 PM - 11:00 PM	65.6	81.6	63.8
11:00 PM - 12:00 AM	64.6	76.0	63.5
12:00 AM - 01:00 AM	64.2	70.6	63.1
01:00 AM - 02:00 AM	64.6	76.5	63.2
02:00 AM - 03:00 AM	64.7	72.4	63.6
03:00 AM - 04:00 AM	65.0	78.9	63.0
04:00 AM - 05:00 AM	66.8	83.4	65.2
05:00 AM - 06:00 AM	66.4	81.5	62.9
06:00 AM - 07:00 AM	69.0	76.9	63.6
07:00 AM - 08:00 AM	70.0	78.9	63.3
08:00 AM - 09:00 AM	69.5	91.3	63.5

Leq Average 24 hrs. (dB(A)) 66.6  
Lmax (dB(A)) 91.3  
L90 (dB(A)) 63.2  
Ldn (dB(A)) 72.5  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311159-1

Page 1 of 1

**Sample Number** 2248562-6  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 08 - May 09, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	66.5	83.1	64.9
10:00 AM - 11:00 AM	62.5	68.1	61.6
11:00 AM - 12:00 PM	64.6	71.1	63.3
12:00 PM - 01:00 PM	62.7	72.4	61.7
01:00 PM - 02:00 PM	63.7	68.1	62.0
02:00 PM - 03:00 PM	67.3	73.8	66.0
03:00 PM - 04:00 PM	65.0	74.1	63.4
04:00 PM - 05:00 PM	65.9	75.3	63.7
05:00 PM - 06:00 PM	67.6	81.9	63.1
06:00 PM - 07:00 PM	64.3	70.8	63.0
07:00 PM - 08:00 PM	66.6	76.6	63.1
08:00 PM - 09:00 PM	66.6	76.0	62.7
09:00 PM - 10:00 PM	64.5	70.1	63.6
10:00 PM - 11:00 PM	64.1	77.2	62.4
11:00 PM - 12:00 AM	64.0	77.1	62.4
12:00 AM - 01:00 AM	64.2	74.8	62.6
01:00 AM - 02:00 AM	65.7	84.3	64.6
02:00 AM - 03:00 AM	64.7	84.6	63.1
03:00 AM - 04:00 AM	65.2	78.6	63.0
04:00 AM - 05:00 AM	65.0	79.0	61.4
05:00 AM - 06:00 AM	63.7	79.9	61.9
06:00 AM - 07:00 AM	62.7	81.3	61.6
07:00 AM - 08:00 AM	63.7	72.0	57.8
08:00 AM - 09:00 AM	62.5	77.1	60.8

Leq Average 24 hrs. (dB(A)) 65.0  
Lmax (dB(A)) 84.6  
L90 (dB(A)) 62.7  
Ldn (dB(A)) 71.0  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311160-1

Page 1 of 1

**Sample Number** 2248562-7  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ช้างเรือนพยาบาล  
**Measurement Date** May 09 - May 10, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222723

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	66.0	80.2	63.3
10:00 AM - 11:00 AM	64.7	75.0	61.7
11:00 AM - 12:00 PM	69.9	83.1	62.2
12:00 PM - 01:00 PM	63.5	75.6	62.5
01:00 PM - 02:00 PM	63.8	80.6	62.4
02:00 PM - 03:00 PM	67.1	90.3	62.8
03:00 PM - 04:00 PM	66.9	87.7	63.9
04:00 PM - 05:00 PM	67.0	81.0	63.4
05:00 PM - 06:00 PM	68.7	77.0	62.8
06:00 PM - 07:00 PM	65.8	80.0	63.1
07:00 PM - 08:00 PM	67.9	75.8	63.0
08:00 PM - 09:00 PM	64.6	74.6	61.1
09:00 PM - 10:00 PM	67.0	77.6	63.2
10:00 PM - 11:00 PM	68.9	78.7	63.0
11:00 PM - 12:00 AM	67.6	90.8	63.3
12:00 AM - 01:00 AM	67.1	82.6	65.2
01:00 AM - 02:00 AM	63.8	75.9	62.8
02:00 AM - 03:00 AM	64.5	75.8	63.2
03:00 AM - 04:00 AM	65.4	79.5	63.6
04:00 AM - 05:00 AM	65.8	82.6	64.4
05:00 AM - 06:00 AM	68.7	92.1	62.6
06:00 AM - 07:00 AM	63.6	82.2	62.5
07:00 AM - 08:00 AM	64.3	74.3	60.8
08:00 AM - 09:00 AM	64.5	77.6	62.9

Leq Average 24 hrs. (dB(A)) 66.5  
Lmax (dB(A)) 92.1  
L90 (dB(A)) 62.9  
Ldn (dB(A)) 73.0  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311161-1

Page 1 of 1

**Sample Number** 2248562-8  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่วัดวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 03 - May 04, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.6	92.1	62.3
10:00 AM - 11:00 AM	63.5	75.2	62.5
11:00 AM - 12:00 PM	63.3	67.7	62.7
12:00 PM - 01:00 PM	63.9	74.7	63.0
01:00 PM - 02:00 PM	64.4	71.1	63.3
02:00 PM - 03:00 PM	63.8	69.8	63.2
03:00 PM - 04:00 PM	64.0	68.4	63.4
04:00 PM - 05:00 PM	63.7	68.8	63.3
05:00 PM - 06:00 PM	63.5	66.7	63.2
06:00 PM - 07:00 PM	63.5	71.3	63.1
07:00 PM - 08:00 PM	63.8	68.8	63.3
08:00 PM - 09:00 PM	63.8	67.6	63.4
09:00 PM - 10:00 PM	63.8	66.8	63.4
10:00 PM - 11:00 PM	63.9	68.6	63.5
11:00 PM - 12:00 AM	64.2	68.9	63.6
12:00 AM - 01:00 AM	64.3	69.2	63.8
01:00 AM - 02:00 AM	64.1	69.6	63.5
02:00 AM - 03:00 AM	63.8	70.9	63.3
03:00 AM - 04:00 AM	63.7	74.2	63.1
04:00 AM - 05:00 AM	63.2	67.3	62.7
05:00 AM - 06:00 AM	63.1	74.4	62.6
06:00 AM - 07:00 AM	62.8	76.0	62.1
07:00 AM - 08:00 AM	62.3	76.1	61.9
08:00 AM - 09:00 AM	62.2	67.7	61.8

Leq Average 24 hrs. (dB(A)) 63.6  
Lmax (dB(A)) 92.1  
L90 (dB(A)) 63.2  
Ldn (dB(A)) 70.1  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป  
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Technical Management

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Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311162-1

Page 1 of 1

**Sample Number** 2248562-9  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่ศตวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 04 - May 05, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.4	73.8	62.0
10:00 AM - 11:00 AM	63.6	71.3	62.2
11:00 AM - 12:00 PM	63.9	66.3	63.5
12:00 PM - 01:00 PM	63.6	75.2	63.2
01:00 PM - 02:00 PM	63.1	67.7	62.5
02:00 PM - 03:00 PM	62.8	68.7	62.4
03:00 PM - 04:00 PM	63.1	64.7	62.8
04:00 PM - 05:00 PM	63.5	67.2	62.9
05:00 PM - 06:00 PM	65.3	75.5	64.9
06:00 PM - 07:00 PM	65.2	67.3	65.0
07:00 PM - 08:00 PM	63.7	71.4	63.0
08:00 PM - 09:00 PM	63.3	68.5	62.9
09:00 PM - 10:00 PM	63.3	66.7	63.0
10:00 PM - 11:00 PM	63.2	65.8	62.9
11:00 PM - 12:00 AM	63.3	65.7	63.0
12:00 AM - 01:00 AM	63.4	66.2	63.0
01:00 AM - 02:00 AM	63.1	71.4	62.7
02:00 AM - 03:00 AM	63.1	77.2	62.7
03:00 AM - 04:00 AM	62.6	68.6	62.3
04:00 AM - 05:00 AM	62.5	79.5	62.2
05:00 AM - 06:00 AM	62.6	75.6	62.1
06:00 AM - 07:00 AM	62.0	66.7	61.7
07:00 AM - 08:00 AM	61.9	74.5	61.5
08:00 AM - 09:00 AM	62.0	68.7	61.6

Leq Average 24 hrs. (dB(A)) 63.3  
Lmax (dB(A)) 79.5  
L90 (dB(A)) 62.7  
Ldn (dB(A)) 69.4  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

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Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311163-1

Page 1 of 1

**Sample Number** 2248562-10  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่วัดวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 05 - May 06, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.2	71.5	61.8
10:00 AM - 11:00 AM	63.6	75.4	62.0
11:00 AM - 12:00 PM	62.3	68.2	62.0
12:00 PM - 01:00 PM	63.9	70.4	62.2
01:00 PM - 02:00 PM	64.1	70.7	62.7
02:00 PM - 03:00 PM	63.0	65.7	62.6
03:00 PM - 04:00 PM	63.1	65.8	62.8
04:00 PM - 05:00 PM	63.8	69.8	62.6
05:00 PM - 06:00 PM	62.9	67.6	62.6
06:00 PM - 07:00 PM	62.7	66.6	62.4
07:00 PM - 08:00 PM	63.1	64.3	62.7
08:00 PM - 09:00 PM	63.3	69.9	62.9
09:00 PM - 10:00 PM	63.4	67.1	63.1
10:00 PM - 11:00 PM	63.3	71.7	63.0
11:00 PM - 12:00 AM	63.0	66.3	62.7
12:00 AM - 01:00 AM	63.4	66.6	63.0
01:00 AM - 02:00 AM	63.1	67.2	62.8
02:00 AM - 03:00 AM	62.7	67.5	62.4
03:00 AM - 04:00 AM	63.3	82.7	62.3
04:00 AM - 05:00 AM	64.1	65.7	63.7
05:00 AM - 06:00 AM	64.1	66.2	63.6
06:00 AM - 07:00 AM	62.9	73.1	62.5
07:00 AM - 08:00 AM	63.0	70.1	62.7
08:00 AM - 09:00 AM	62.9	66.6	62.5

Leq Average 24 hrs. (dB(A)) 63.2  
Lmax (dB(A)) 82.7  
L90 (dB(A)) 62.6  
Ldn (dB(A)) 69.7  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311164-1

Page 1 of 1

**Sample Number** 2248562-11  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่วัดวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 06 - May 07, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.9	89.0	62.0
10:00 AM - 11:00 AM	63.5	69.6	62.1
11:00 AM - 12:00 PM	62.3	64.9	62.0
12:00 PM - 01:00 PM	63.6	69.3	62.1
01:00 PM - 02:00 PM	62.5	66.9	62.3
02:00 PM - 03:00 PM	62.7	67.2	62.4
03:00 PM - 04:00 PM	62.7	66.3	62.5
04:00 PM - 05:00 PM	62.8	65.7	62.5
05:00 PM - 06:00 PM	62.7	65.5	62.5
06:00 PM - 07:00 PM	62.8	65.9	62.5
07:00 PM - 08:00 PM	62.8	65.6	62.6
08:00 PM - 09:00 PM	63.0	71.1	62.7
09:00 PM - 10:00 PM	63.0	68.3	62.7
10:00 PM - 11:00 PM	62.9	65.0	62.7
11:00 PM - 12:00 AM	63.1	66.0	62.9
12:00 AM - 01:00 AM	63.1	65.5	62.8
01:00 AM - 02:00 AM	63.9	92.2	62.4
02:00 AM - 03:00 AM	62.3	69.3	61.9
03:00 AM - 04:00 AM	61.9	68.4	61.5
04:00 AM - 05:00 AM	62.0	65.6	61.2
05:00 AM - 06:00 AM	61.7	64.1	61.3
06:00 AM - 07:00 AM	61.8	65.9	61.5
07:00 AM - 08:00 AM	63.7	85.1	62.1
08:00 AM - 09:00 AM	63.7	69.0	63.0

Leq Average 24 hrs. (dB(A)) 62.8  
Lmax (dB(A)) 92.2  
L90 (dB(A)) 62.4  
Ldn (dB(A)) 69.1  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311165-1

Page 1 of 1

**Sample Number** 2248562-12  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่ศตวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 07 - May 08, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.2	67.0	62.9
10:00 AM - 11:00 AM	63.2	71.2	62.8
11:00 AM - 12:00 PM	63.1	67.2	62.8
12:00 PM - 01:00 PM	63.1	68.4	62.7
01:00 PM - 02:00 PM	62.9	67.6	62.5
02:00 PM - 03:00 PM	64.2	68.3	62.8
03:00 PM - 04:00 PM	63.6	70.3	63.1
04:00 PM - 05:00 PM	68.2	78.9	63.3
05:00 PM - 06:00 PM	65.1	79.5	63.8
06:00 PM - 07:00 PM	64.2	71.3	63.8
07:00 PM - 08:00 PM	64.8	68.3	64.1
08:00 PM - 09:00 PM	67.6	73.6	65.3
09:00 PM - 10:00 PM	67.6	74.8	65.4
10:00 PM - 11:00 PM	66.7	74.3	64.5
11:00 PM - 12:00 AM	65.1	71.5	63.7
12:00 AM - 01:00 AM	64.0	68.5	63.7
01:00 AM - 02:00 AM	63.7	69.9	63.4
02:00 AM - 03:00 AM	63.3	69.2	62.9
03:00 AM - 04:00 AM	62.9	64.5	62.6
04:00 AM - 05:00 AM	63.1	70.4	62.4
05:00 AM - 06:00 AM	62.5	70.8	62.1
06:00 AM - 07:00 AM	62.0	71.0	61.5
07:00 AM - 08:00 AM	62.9	82.9	61.5
08:00 AM - 09:00 AM	64.5	67.0	64.2

Leq Average 24 hrs. (dB(A)) 64.6  
Lmax (dB(A)) 82.9  
L90 (dB(A)) 62.9  
Ldn (dB(A)) 70.5  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311166-1

Page 1 of 1

**Sample Number** 2248562-13  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่วัดวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 08 - May 09, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.9	68.1	63.5
10:00 AM - 11:00 AM	63.9	80.3	63.4
11:00 AM - 12:00 PM	63.9	71.2	63.4
12:00 PM - 01:00 PM	65.1	72.2	64.1
01:00 PM - 02:00 PM	64.1	71.1	63.8
02:00 PM - 03:00 PM	64.1	66.3	63.7
03:00 PM - 04:00 PM	63.8	72.0	63.2
04:00 PM - 05:00 PM	65.4	78.3	63.0
05:00 PM - 06:00 PM	66.5	78.8	63.5
06:00 PM - 07:00 PM	65.6	77.6	64.0
07:00 PM - 08:00 PM	64.8	78.0	63.8
08:00 PM - 09:00 PM	66.7	78.6	64.1
09:00 PM - 10:00 PM	66.3	70.8	64.4
10:00 PM - 11:00 PM	65.1	70.5	64.4
11:00 PM - 12:00 AM	64.5	66.7	64.2
12:00 AM - 01:00 AM	64.3	71.0	64.0
01:00 AM - 02:00 AM	63.9	68.6	63.5
02:00 AM - 03:00 AM	63.4	68.5	63.0
03:00 AM - 04:00 AM	63.3	80.5	62.9
04:00 AM - 05:00 AM	63.0	70.6	62.6
05:00 AM - 06:00 AM	62.9	68.0	62.4
06:00 AM - 07:00 AM	62.4	69.1	62.0
07:00 AM - 08:00 AM	62.5	74.9	62.0
08:00 AM - 09:00 AM	62.6	71.1	62.2

Leq Average 24 hrs. (dB(A)) 64.4  
Lmax (dB(A)) 80.5  
L90 (dB(A)) 63.5  
Ldn (dB(A)) 70.3  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Thanita Kulsuriwong  
Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311167-1

Page 1 of 1

**Sample Number** 2248562-14  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ที่ศตวันออกของกลุ่มโรงงาน (site 3)  
**Measurement Date** May 09 - May 10, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222724

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.8	65.5	62.3
10:00 AM - 11:00 AM	63.4	67.3	62.8
11:00 AM - 12:00 PM	63.2	65.5	62.9
12:00 PM - 01:00 PM	64.2	68.9	63.0
01:00 PM - 02:00 PM	65.1	71.1	63.6
02:00 PM - 03:00 PM	64.4	67.3	64.1
03:00 PM - 04:00 PM	64.3	74.5	63.9
04:00 PM - 05:00 PM	65.8	79.5	64.1
05:00 PM - 06:00 PM	65.7	77.9	64.1
06:00 PM - 07:00 PM	65.9	83.9	63.9
07:00 PM - 08:00 PM	64.7	78.0	63.8
08:00 PM - 09:00 PM	64.9	72.4	62.8
09:00 PM - 10:00 PM	67.4	80.8	62.9
10:00 PM - 11:00 PM	65.4	77.2	64.2
11:00 PM - 12:00 AM	65.1	71.2	64.1
12:00 AM - 01:00 AM	65.5	70.4	65.2
01:00 AM - 02:00 AM	65.2	72.7	64.8
02:00 AM - 03:00 AM	64.8	66.5	64.4
03:00 AM - 04:00 AM	63.9	77.5	63.5
04:00 AM - 05:00 AM	64.2	76.1	61.6
05:00 AM - 06:00 AM	63.8	68.3	61.9
06:00 AM - 07:00 AM	62.6	68.0	61.9
07:00 AM - 08:00 AM	62.0	64.2	61.7
08:00 AM - 09:00 AM	61.8	68.5	61.5

Leq Average 24 hrs. (dB(A)) 64.6  
Lmax (dB(A)) 83.9  
L90 (dB(A)) 63.5  
Ldn (dB(A)) 71.0  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311168-1

Page 1 of 1

**Sample Number** 2248562-15  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 03 - May 04, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	60.8	98.1	44.6
12:00 PM - 01:00 PM	49.8	72.6	43.9
01:00 PM - 02:00 PM	48.0	71.6	43.3
02:00 PM - 03:00 PM	48.4	70.7	43.4
03:00 PM - 04:00 PM	50.0	71.5	44.8
04:00 PM - 05:00 PM	49.8	78.8	44.6
05:00 PM - 06:00 PM	56.2	75.5	46.7
06:00 PM - 07:00 PM	52.7	67.5	47.6
07:00 PM - 08:00 PM	53.1	65.7	46.5
08:00 PM - 09:00 PM	51.5	63.1	45.2
09:00 PM - 10:00 PM	46.8	62.5	44.6
10:00 PM - 11:00 PM	46.5	55.3	44.9
11:00 PM - 12:00 AM	46.3	60.6	44.6
12:00 AM - 01:00 AM	45.4	55.0	44.1
01:00 AM - 02:00 AM	44.7	52.8	43.2
02:00 AM - 03:00 AM	44.3	49.7	43.1
03:00 AM - 04:00 AM	45.0	51.3	43.7
04:00 AM - 05:00 AM	56.2	80.0	44.4
05:00 AM - 06:00 AM	51.4	75.1	47.0
06:00 AM - 07:00 AM	51.2	70.5	46.0
07:00 AM - 08:00 AM	49.6	68.0	44.6
08:00 AM - 09:00 AM	48.4	71.9	42.9
09:00 AM - 10:00 AM	54.6	91.4	43.4
10:00 AM - 11:00 AM	48.7	66.3	43.0

Leq Average 24 hrs. (dB(A)) 52.3  
Lmax (dB(A)) 98.1  
L90 (dB(A)) 44.6  
Ldn (dB(A)) 57.0  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311169-1

Page 1 of 1

**Sample Number** 2248562-16  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 04 - May 05, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	47.6	73.6	42.6
12:00 PM - 01:00 PM	50.3	65.3	43.4
01:00 PM - 02:00 PM	49.2	73.7	45.1
02:00 PM - 03:00 PM	48.9	65.9	46.4
03:00 PM - 04:00 PM	50.2	72.2	47.0
04:00 PM - 05:00 PM	49.1	64.4	47.5
05:00 PM - 06:00 PM	56.3	70.0	47.4
06:00 PM - 07:00 PM	54.6	63.9	51.2
07:00 PM - 08:00 PM	52.1	58.1	48.4
08:00 PM - 09:00 PM	48.0	56.4	46.4
09:00 PM - 10:00 PM	50.2	56.6	47.0
10:00 PM - 11:00 PM	55.0	65.2	46.5
11:00 PM - 12:00 AM	50.3	56.5	46.0
12:00 AM - 01:00 AM	50.5	57.3	44.5
01:00 AM - 02:00 AM	45.0	53.8	42.8
02:00 AM - 03:00 AM	52.2	74.4	43.3
03:00 AM - 04:00 AM	52.0	72.7	43.0
04:00 AM - 05:00 AM	57.6	75.9	43.7
05:00 AM - 06:00 AM	51.3	76.4	45.9
06:00 AM - 07:00 AM	51.9	76.8	46.1
07:00 AM - 08:00 AM	52.7	77.4	45.0
08:00 AM - 09:00 AM	50.2	78.4	43.5
09:00 AM - 10:00 AM	49.8	76.6	43.3
10:00 AM - 11:00 AM	46.7	64.9	43.0

Leq Average 24 hrs. (dB(A)) 51.9  
Lmax (dB(A)) 78.4  
L90 (dB(A)) 45.1  
Ldn (dB(A)) 59.1  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311170-1

Page 1 of 1

**Sample Number** 2248562-17  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 05 - May 06, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	48.2	69.3	42.7
12:00 PM - 01:00 PM	49.7	63.9	47.1
01:00 PM - 02:00 PM	50.4	63.0	47.5
02:00 PM - 03:00 PM	49.7	64.4	47.7
03:00 PM - 04:00 PM	48.4	64.0	46.8
04:00 PM - 05:00 PM	48.2	67.5	46.1
05:00 PM - 06:00 PM	61.3	71.5	47.2
06:00 PM - 07:00 PM	54.4	63.2	51.2
07:00 PM - 08:00 PM	53.0	60.6	50.3
08:00 PM - 09:00 PM	52.1	57.5	48.8
09:00 PM - 10:00 PM	51.8	60.2	48.8
10:00 PM - 11:00 PM	53.3	63.2	49.1
11:00 PM - 12:00 AM	50.3	57.0	47.4
12:00 AM - 01:00 AM	48.1	55.0	47.1
01:00 AM - 02:00 AM	51.2	78.7	45.0
02:00 AM - 03:00 AM	50.4	73.2	45.0
03:00 AM - 04:00 AM	51.7	72.3	43.8
04:00 AM - 05:00 AM	59.4	80.2	44.5
05:00 AM - 06:00 AM	53.4	78.6	46.6
06:00 AM - 07:00 AM	52.8	78.7	45.5
07:00 AM - 08:00 AM	49.1	70.3	44.6
08:00 AM - 09:00 AM	51.5	84.7	46.9
09:00 AM - 10:00 AM	52.8	83.3	49.0
10:00 AM - 11:00 AM	52.1	62.4	48.6

Leq Average 24 hrs. (dB(A)) 53.4  
Lmax (dB(A)) 84.7  
L90 (dB(A)) 47.1  
Ldn (dB(A)) 60.0  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311171-1

Page 1 of 1

**Sample Number** 2248562-18  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 06 - May 07, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	51.7	65.2	48.6
12:00 PM - 01:00 PM	50.8	58.8	49.2
01:00 PM - 02:00 PM	52.6	66.8	49.7
02:00 PM - 03:00 PM	52.2	70.3	49.9
03:00 PM - 04:00 PM	52.8	74.7	49.6
04:00 PM - 05:00 PM	56.1	65.3	49.1
05:00 PM - 06:00 PM	55.2	68.5	51.3
06:00 PM - 07:00 PM	50.9	60.5	48.8
07:00 PM - 08:00 PM	50.0	57.6	47.8
08:00 PM - 09:00 PM	48.7	55.0	47.2
09:00 PM - 10:00 PM	49.7	57.6	47.0
10:00 PM - 11:00 PM	50.4	68.5	46.5
11:00 PM - 12:00 AM	51.9	74.4	45.0
12:00 AM - 01:00 AM	45.3	51.3	44.0
01:00 AM - 02:00 AM	44.8	54.2	43.4
02:00 AM - 03:00 AM	44.7	52.7	42.8
03:00 AM - 04:00 AM	59.0	79.5	45.0
04:00 AM - 05:00 AM	50.8	72.9	45.9
05:00 AM - 06:00 AM	50.1	76.7	44.1
06:00 AM - 07:00 AM	50.4	67.5	42.8
07:00 AM - 08:00 AM	49.7	71.7	41.9
08:00 AM - 09:00 AM	51.1	72.6	44.8
09:00 AM - 10:00 AM	51.4	73.0	47.5
10:00 AM - 11:00 AM	52.6	70.3	47.8

Leq Average 24 hrs. (dB(A)) 52.2  
Lmax (dB(A)) 79.5  
L90 (dB(A)) 47.0  
Ldn (dB(A)) 58.6  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311172-1

Page 1 of 1

**Sample Number** 2248562-19  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 07 - May 08, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	49.8	71.0	46.6
12:00 PM - 01:00 PM	54.4	79.1	44.4
01:00 PM - 02:00 PM	48.6	72.2	44.1
02:00 PM - 03:00 PM	48.4	72.0	44.5
03:00 PM - 04:00 PM	47.4	66.8	45.1
04:00 PM - 05:00 PM	53.9	73.9	46.2
05:00 PM - 06:00 PM	55.6	63.8	51.6
06:00 PM - 07:00 PM	54.1	63.3	50.3
07:00 PM - 08:00 PM	50.8	61.8	48.9
08:00 PM - 09:00 PM	66.2	84.8	47.8
09:00 PM - 10:00 PM	53.4	78.8	45.0
10:00 PM - 11:00 PM	48.1	68.0	44.8
11:00 PM - 12:00 AM	49.3	63.7	47.9
12:00 AM - 01:00 AM	48.5	62.4	45.3
01:00 AM - 02:00 AM	46.2	62.4	45.2
02:00 AM - 03:00 AM	46.1	62.7	44.7
03:00 AM - 04:00 AM	56.4	93.6	44.7
04:00 AM - 05:00 AM	48.9	70.8	45.9
05:00 AM - 06:00 AM	48.3	70.0	45.0
06:00 AM - 07:00 AM	48.1	71.0	43.2
07:00 AM - 08:00 AM	48.6	70.7	42.9
08:00 AM - 09:00 AM	47.5	70.4	42.7
09:00 AM - 10:00 AM	48.7	68.9	44.5
10:00 AM - 11:00 AM	50.6	71.1	46.2

Leq Average 24 hrs. (dB(A)) 54.8  
Lmax (dB(A)) 93.6  
L90 (dB(A)) 45.0  
Ldn (dB(A)) 58.2  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311173-1

Page 1 of 1

**Sample Number** 2248562-20  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 08 - May 09, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	51.1	71.0	47.2
12:00 PM - 01:00 PM	49.3	70.5	47.3
01:00 PM - 02:00 PM	48.7	72.1	46.8
02:00 PM - 03:00 PM	48.7	70.4	46.9
03:00 PM - 04:00 PM	47.9	72.3	45.6
04:00 PM - 05:00 PM	54.0	69.9	46.2
05:00 PM - 06:00 PM	55.8	64.4	50.8
06:00 PM - 07:00 PM	50.0	57.2	48.8
07:00 PM - 08:00 PM	50.3	63.4	48.6
08:00 PM - 09:00 PM	49.3	63.8	46.0
09:00 PM - 10:00 PM	49.5	59.6	48.1
10:00 PM - 11:00 PM	48.9	64.2	47.4
11:00 PM - 12:00 AM	46.9	57.8	45.5
12:00 AM - 01:00 AM	47.3	58.5	44.5
01:00 AM - 02:00 AM	49.2	70.9	44.5
02:00 AM - 03:00 AM	45.5	66.4	44.3
03:00 AM - 04:00 AM	54.0	73.0	45.4
04:00 AM - 05:00 AM	50.7	74.0	45.5
05:00 AM - 06:00 AM	47.7	69.9	43.2
06:00 AM - 07:00 AM	47.1	68.8	42.9
07:00 AM - 08:00 AM	48.6	66.2	45.0
08:00 AM - 09:00 AM	51.8	69.9	47.0
09:00 AM - 10:00 AM	52.2	75.2	46.9
10:00 AM - 11:00 AM	54.6	73.5	48.5

Leq Average 24 hrs. (dB(A)) 50.8  
Lmax (dB(A)) 75.2  
L90 (dB(A)) 46.2  
Ldn (dB(A)) 56.2  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

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Approved by

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Supot Salamteh  
Section Head

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2248562**

Date Received : May 10, 2022  
Date Reported : May 13, 2022  
Report Number: 2311174-1

Page 1 of 1

**Sample Number** 2248562-21  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ศูนย์วิจัยและฝึกอบรมทรัพยากรมนุษย์เพื่ออุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ วิทยาเขตระยอง  
**Measurement Date** May 09 - May 10, 2022  
**Measurement by** Norranon Tathongkham  
**Sound Level meter** Serial No. 1222716

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	54.7	82.0	47.8
12:00 PM - 01:00 PM	52.6	69.9	47.4
01:00 PM - 02:00 PM	53.0	69.2	48.9
02:00 PM - 03:00 PM	52.5	70.7	49.3
03:00 PM - 04:00 PM	51.4	74.9	49.2
04:00 PM - 05:00 PM	55.2	69.3	49.5
05:00 PM - 06:00 PM	59.4	72.3	52.5
06:00 PM - 07:00 PM	54.1	64.3	50.6
07:00 PM - 08:00 PM	51.9	59.7	49.6
08:00 PM - 09:00 PM	50.0	62.5	47.7
09:00 PM - 10:00 PM	51.5	56.2	49.8
10:00 PM - 11:00 PM	51.3	55.5	49.2
11:00 PM - 12:00 AM	52.3	63.8	50.4
12:00 AM - 01:00 AM	51.6	79.6	45.2
01:00 AM - 02:00 AM	63.6	91.8	44.5
02:00 AM - 03:00 AM	56.0	79.3	51.3
03:00 AM - 04:00 AM	55.0	78.4	47.4
04:00 AM - 05:00 AM	48.4	72.0	46.1
05:00 AM - 06:00 AM	50.4	74.9	46.1
06:00 AM - 07:00 AM	48.0	71.4	45.4
07:00 AM - 08:00 AM	50.6	69.9	46.8
08:00 AM - 09:00 AM	59.8	95.5	48.7
09:00 AM - 10:00 AM	52.7	75.7	47.4
10:00 AM - 11:00 AM	55.1	74.0	49.0

Leq Average 24 hrs. (dB(A)) 55.3  
Lmax (dB(A)) 95.5  
L90 (dB(A)) 48.7  
Ldn (dB(A)) 62.4  
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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# ภาคผนวก ค-7

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สภาพแวดล้อมในการทำงาน

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ความร้อน



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**Lot ID: 2228270**

Date Received : Apr 22, 2022  
Date Reported : May 06, 2022  
Report Number: 2306017-1 Rev. No.1

Page 1 of 1

**Sample Number** 2228270-1  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Apr 22, 2022  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Cracking Furnace	120	29.4	27.1	34.8	34.6
Average (WBGT)		29.4			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Guideline:**

ประกาศกระทรวงอุตสาหกรรม เรื่องมาตรการคุ้มครองความปลอดภัยในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ. 2546 และตามกฎหมายว่าด้วยการกำหนดมาตรฐานในการบริหารและจัดการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน

**Note:**

This Analysis test report is reissued to supersede report No. 2248440-1 Date Reported : Apr 30, 2022 due to revise analytical information

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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แสงสว่าง





## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228273**

Date Received : Apr 25, 2022  
Date Reported : May 18, 2022  
Report Number : 2299295-1 Rev. No.2

Page 1 of 1

Page 2 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
1	Spot - อาคาร CCB : Board								
	2228273-1	22 Apr 2022	Day time	1	325	-	300-400	-	Pass
2	Spot - อาคาร CCB : Computer Manager								
	2228273-2	22 Apr 2022	Day time	1	678	-	400-500	-	Pass
3	Spot - อาคาร CCB : Console BTU Section								
	2228273-3	22 Apr 2022	Day time	1	503	-	400-500	-	Pass
4	Spot - อาคาร CCB : Console Cold Section								
	2228273-4	22 Apr 2022	Day time	1	455	-	400-500	-	Pass
5	Spot - อาคาร CCB : Console UT Section								
	2228273-5	22 Apr 2022	Day time	1	579	-	400-500	-	Pass
6	Spot - อาคาร CCB : Console Hot Section								
	2228273-6	22 Apr 2022	Day time	1	432	-	400-500	-	Pass
7	Spot - อาคาร CCB : Meeting Table								
	2228273-7	22 Apr 2022	Day time	1	674	-	400-500	-	Pass

**Measurement by** : Norranon Tathongkham Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Note** : This Analysis test report is reissued to supersede report No. 2299295-1 Rev. No.1, Date Reported : May 06, 2022 due to revise sample information.

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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ระดับเสียงเฉลี่ยตลอดระยะเวลาทำงาน



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**Lot ID: 2228268**

Date Received : Apr 22, 2022  
Date Reported : Apr 27, 2022  
Report Number: 2296132-1

Page 1 of 1

**Sample Number** 2228268-1  
**Parameter** Noise (Leq 12 hrs.)  
**Location** บริเวณ Deaerator  
**Measurement Date** Apr 22, 2022  
**Measurement by** Kantaphon Maneesampan

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:12 AM - 09:12 AM	81.1	86.8	80.5
09:12 AM - 10:12 AM	81.6	87.3	81.0
10:12 AM - 11:12 AM	80.7	83.3	80.0
11:12 AM - 12:12 PM	80.1	82.0	79.4
12:12 PM - 01:12 PM	80.0	82.5	79.4
01:12 PM - 02:12 PM	80.1	82.0	79.5
02:12 PM - 03:12 PM	80.4	81.8	79.8
03:12 PM - 04:12 PM	80.6	82.4	80.0
04:12 PM - 05:12 PM	80.4	81.9	79.9
05:12 PM - 06:12 PM	80.4	82.1	79.9
06:12 PM - 07:12 PM	80.4	83.0	79.7
07:12 PM - 08:12 PM	80.8	82.6	80.2
Leq Average 12 hrs. (dB(A))	80.6		
Lmax (dB(A))		87.3	
Standard (dB(A))	87	140	

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**Lot ID: 2228268**

Date Received : Apr 22, 2022  
Date Reported : Apr 27, 2022  
Report Number: 2296133-1

Page 1 of 1

**Sample Number** 2228268-2  
**Parameter** Noise (Leq 12 hrs.)  
**Location** บริเวณ Agitator  
**Measurement Date** Apr 22, 2022  
**Measurement by** Kantaphon Maneesampan

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
07:50 AM - 08:50 AM	68.2	79.0	66.6
08:50 AM - 09:50 AM	68.6	74.5	65.4
09:50 AM - 10:50 AM	65.4	69.9	64.9
10:50 AM - 11:50 AM	67.3	72.4	66.3
11:50 AM - 12:50 PM	67.9	71.9	67.4
12:50 PM - 01:50 PM	68.2	76.4	67.7
01:50 PM - 02:50 PM	68.2	73.3	67.7
02:50 PM - 03:50 PM	68.0	72.9	67.4
03:50 PM - 04:50 PM	68.1	72.1	67.6
04:50 PM - 05:50 PM	68.3	74.2	65.1
05:50 PM - 06:50 PM	67.9	76.1	67.4
06:50 PM - 07:50 PM	68.1	73.2	67.6
Leq Average 12 hrs. (dB(A))	67.9		
Lmax (dB(A))		79.0	
Standard (dB(A))	87	140	

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :**

**Lot ID: 2228268**

Date Received : Apr 22, 2022  
Date Reported : Apr 27, 2022  
Report Number: 2296134-1

Page 1 of 1

**Sample Number** 2228268-3  
**Parameter** Noise (Leq 12 hrs.)  
**Location** บริเวณ Steam Boiler  
**Measurement Date** Apr 22, 2022  
**Measurement by** Kantaphon Maneesampan

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:18 AM - 09:18 AM	77.5	81.0	76.8
09:18 AM - 10:18 AM	78.7	86.1	77.3
10:18 AM - 11:18 AM	77.9	83.1	77.1
11:18 AM - 12:18 PM	77.7	79.8	77.1
12:18 PM - 01:18 PM	77.5	79.4	77.0
01:18 PM - 02:18 PM	77.9	85.6	77.1
02:18 PM - 03:18 PM	80.9	105.3	77.2
03:18 PM - 04:18 PM	77.5	85.2	76.9
04:18 PM - 05:18 PM	77.7	79.6	77.2
05:18 PM - 06:18 PM	77.6	81.1	76.9
06:18 PM - 07:18 PM	77.8	85.5	77.2
07:18 PM - 08:18 PM	77.6	79.5	77.1
Leq Average 12 hrs. (dB(A))	78.1		
Lmax (dB(A))		105.3	
Standard (dB(A))	87	140	

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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Technical Management

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

Approved by

*Supot S.*

Supot Salamteh  
Section Head

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ปริมาณเสี่ยงสะสมที่ตัวพนักงาน



## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2263253**

Date Received : Jun 02, 2022

Date Reported : Jun 07, 2022

Report Number : 2323532-1

Page 15 of 16

**Sample Number** 2263253-15  
**Sampled Date** May 31, 2022  
**Sample Description** Noise Dose  
**Location** ชัยฤทธิ์ ธารารักษ์ : Field Operator#1 [ ARU ]\_BTU Section  
**Personal Sampling** คุณชัยฤทธิ์ ธารารักษ์  
**Date Analysis Commenced** Jun 06, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	5.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	4.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	70.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	71.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 16 of 17

**Sample Number** 2265860-16  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** ภูมิชัย ไซยขาน : Field Operator#1 [ ARU ]\_BTU Section  
**Personal Sampling** คุณภูมิชัย ไซยขาน  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	95.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	93.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	82.8	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	84.7	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2263253**

Date Received : Jun 02, 2022

Date Reported : Jun 07, 2022

Report Number : 2323532-1

Page 16 of 16

**Sample Number** 2263253-16  
**Sampled Date** May 31, 2022  
**Sample Description** Noise Dose  
**Location** ศุภชัย ชูเลิศ : Field Operator#2 [ ARU ]\_BTU Section  
**Personal Sampling** คุณศุภชัย ชูเลิศ  
**Date Analysis Commenced** Jun 06, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	72.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	69.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	81.6	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	83.4	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 17 of 17

**Sample Number** 2265863-17  
**Sampled Date** Jun 06, 2022  
**Sample Description** Noise Dose  
**Location** อติพงษ์ พรเฉลิมเกียรติ : Field Operator#2 [ ARU ]\_BTU Section  
**Personal Sampling** คุณอติพงษ์ พรเฉลิมเกียรติ  
**Date Analysis Commenced** Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	63.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	60.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	81.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	82.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 17 of 17

**Sample Number** 2265866-17  
**Sampled Date** Jun 10, 2022  
**Sample Description** Noise Dose  
**Location** ภาคใต้ มณฑลพิษณุโลก : Field Operator#2 [ ARU ]\_BTU Section  
**Personal Sampling** คุณภาคใต้ มณฑลพิษณุโลก  
**Date Analysis Commenced** Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	45.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	42.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	79.6	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	81.3	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2263253**

Date Received : Jun 02, 2022

Date Reported : Jun 07, 2022

Report Number : 2323532-1

Page 14 of 16

**Sample Number** 2263253-14  
**Sampled Date** May 31, 2022  
**Sample Description** Noise Dose  
**Location** แทน สัพพ : Unit Supervisor\_BTU Section  
**Personal Sampling** คุณแทน สัพพ  
**Date Analysis Commenced** Jun 06, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	27.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	26.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	77.4	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	79.2	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 15 of 17

**Sample Number** 2265863-15  
**Sampled Date** Jun 06, 2022  
**Sample Description** Noise Dose  
**Location** วินัย หมั่นชัย : Unit Supervisor\_BTU Section  
**Personal Sampling** คุณวินัย หมั่นชัย  
**Date Analysis Commenced** Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	6.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	5.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	70.8	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	72.6	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2263253**

Date Received : Jun 02, 2022

Date Reported : Jun 07, 2022

Report Number : 2323532-1

Page 8 of 16

**Sample Number** 2263253-8  
**Sampled Date** May 31, 2022  
**Sample Description** Noise Dose  
**Location** จุดมัสกด์ แสนหาญ : Field Operator#1 [ Comp ]\_Cold Section  
**Personal Sampling** คุณจุดมัสกด์ แสนหาญ  
**Date Analysis Commenced** Jun 06, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	25.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	24.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	77.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	78.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 8 of 17

**Sample Number** 2265860-8  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** กฤตย์ นิลโมจน์ : Field Operator#1 [ Comp ]\_Cold Section  
**Personal Sampling** คุณกฤตย์ นิลโมจน์  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	79.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	75.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	82.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	83.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 9 of 17

**Sample Number** 2265860-9  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** ภาณุพันธ์ มุทรไทย : Field Operator#2 [ C2 Train ]\_Cold Section  
**Personal Sampling** คุณภาณุพันธ์มุทรไทย  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	58.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	57.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	80.7	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	82.6	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 9 of 17

**Sample Number** 2265866-9  
**Sampled Date** Jun 10, 2022  
**Sample Description** Noise Dose  
**Location** ศุภฤกษ์ สิทธิไกร : Field Operator#2 [ C2 Train ]\_Cold Section  
**Personal Sampling** คุณศุภฤกษ์ สิทธิไกร  
**Date Analysis Commenced** Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	40.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	38.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	79.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	80.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 10 of 17

**Sample Number** 2265860-10  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** เกียรดีศักดิ์ ดาทอง : Field Operator#3 [ C3 Train ]\_Cold Section  
**Personal Sampling** คุณเกียรดีศักดิ์ ดาทอง  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	46.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	44.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	79.7	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	81.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 10 of 17

**Sample Number** 2265866-10  
**Sampled Date** Jun 10, 2022  
**Sample Description** Noise Dose  
**Location** น้รัวฉฉ น้ยมพงษ : Field Operator#3 [ C3 Train ]\_Cold Section  
**Personal Sampling** คณน้รัวฉฉ น้ยมพงษ  
**Date Analysis Commenced** Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	51.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	49.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	80.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	81.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2263253**

Date Received : Jun 02, 2022

Date Reported : Jun 07, 2022

Report Number : 2323532-1

Page 7 of 16

**Sample Number** 2263253-7  
**Sampled Date** May 31, 2022  
**Sample Description** Noise Dose  
**Location** กิตติวัฒน์ คำนันดา : Unit Supervisor\_Cold Section  
**Personal Sampling** คุณกิตติวัฒน์ คำนันดา  
**Date Analysis Commenced** Jun 06, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	41.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	38.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	79.2	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	80.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 7 of 17

**Sample Number** 2265860-7  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** ฝักรั้ววิทย์ วิสาสะพานิช : Unit Supervisor\_Cold Section  
**Personal Sampling** คุณฝักรั้ววิทย์ วิสาสะพานิช  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	46.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	43.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	79.7	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	81.4	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 7 of 17

**Sample Number** 2265866-7  
**Sampled Date** Jun 10, 2022  
**Sample Description** Noise Dose  
**Location** จีรพันธ์ สิทธิโชค : Unit Supervisor\_Cold Section  
**Personal Sampling** คุณจีรพันธ์ สิทธิโชค  
**Date Analysis Commenced** Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	17.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	17.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	75.5	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	77.3	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2280360**

Date Received : Jul 01, 2022

Date Reported : Jul 05, 2022

Report Number : 2360042-1

Page 2 of 4

**Sample Number** 2280360-2  
**Sampled Date** Jun 30, 2022  
**Sample Description** Noise Dose  
**Location** วงศ์วิศ ไสระสิงห์ : Field Operator#3 [ C3 Train ]\_Cold Section  
**Personal Sampling** คุณวงศ์วิศ ไสระสิงห์  
**Date Analysis Commenced** Jul 05, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	38.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	37.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	78.9	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	80.7	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 2 of 17

**Sample Number** 2265860-2  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** วิทยา อ่อนคำ : Field Operator#1 [ Furnace ]\_Hot Section  
**Personal Sampling** คุณวิทยา อ่อนคำ  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	43.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	41.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	79.4	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	81.2	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 2 of 17

**Sample Number** 2265863-2  
**Sampled Date** Jun 06, 2022  
**Sample Description** Noise Dose  
**Location** ซีระ แก้วสาราน : Field Operator#1 [ Furnace ]\_Hot Section  
**Personal Sampling** คุณซีระ แก้วสาราน  
**Date Analysis Commenced** Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	77.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	74.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	81.9	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	83.7	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265860**

Date Received : Jun 06, 2022

Date Reported : Jun 09, 2022

Report Number : 2327401-1

Page 3 of 17

**Sample Number** 2265860-3  
**Sampled Date** Jun 02, 2022  
**Sample Description** Noise Dose  
**Location** เฉลิมชัย สมบัติ : Field Operator#2 [ Furnace ]\_Hot Section  
**Personal Sampling** คุณเฉลิมชัย สมบัติ  
**Date Analysis Commenced** Jun 08, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	75.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	72.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	81.8	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	83.6	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 3 of 17

**Sample Number** 2265866-3  
**Sampled Date** Jun 10, 2022  
**Sample Description** Noise Dose  
**Location** วรธร เฟืองหมื่นราช : Field Operator#2 [ Furnace ]\_Hot Section  
**Personal Sampling** คุณวรธร เฟืองหมื่นราช  
**Date Analysis Commenced** Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	20.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	19.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	76.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	77.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2263253**

Date Received : Jun 02, 2022

Date Reported : Jun 07, 2022

Report Number : 2323532-1

Page 4 of 16

**Sample Number** 2263253-4  
**Sampled Date** May 31, 2022  
**Sample Description** Noise Dose  
**Location** เทพฤทธิ์ สดี : Field Operator#3 [ Furnace ]\_Hot Section  
**Personal Sampling** คุณเทพฤทธิ์ สดี  
**Date Analysis Commenced** Jun 06, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	67.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	63.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	81.3	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	83.0	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

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Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 4 of 17

**Sample Number** 2265863-4  
**Sampled Date** Jun 06, 2022  
**Sample Description** Noise Dose  
**Location** ฟิร์พอล บวบทอง : Field Operator#3 [ Furnace ]\_Hot Section  
**Personal Sampling** คุณฟิร์พอล บวบทอง  
**Date Analysis Commenced** Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	22.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	20.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	76.5	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	78.2	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 1 of 17

**Sample Number** 2265863-1  
**Sampled Date** Jun 06, 2022  
**Sample Description** Noise Dose  
**Location** สิทธิศักดิ์ สุขสถาน : Unit Supervisor\_Hot Section  
**Personal Sampling** คุณสิทธิศักดิ์ สุขสถาน  
**Date Analysis Commenced** Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	81.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	75.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	82.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	83.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 1 of 17

**Sample Number** 2265866-1  
**Sampled Date** Jun 10, 2022  
**Sample Description** Noise Dose  
**Location** กองอาคาร วงศ์ชัย : Unit Supervisor\_Hot Section  
**Personal Sampling** คุณกองอาคาร วงศ์ชัย  
**Date Analysis Commenced** Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	14.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	14.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	74.7	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	76.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
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**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265866**

Date Received : Jun 13, 2022

Date Reported : Jun 16, 2022

Report Number : 2327446-1

Page 12 of 17

<b>Sample Number</b>	2265866-12
<b>Sampled Date</b>	Jun 10, 2022
<b>Sample Description</b>	Noise Dose
<b>Location</b>	ชัยศิริ มีบุญ : Field Operator#2 [ RWT/ DW/ PSC; CW Feed Pump; DG-5000 ]_UT Section
<b>Personal Sampling</b>	คุณชัยศิริ มีบุญ
<b>Date Analysis Commenced</b>	Jun 16, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	24.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	22.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	76.8	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	78.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

- MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Natthapon Jiengwareewong

Remark :

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

Approved by

*Wichan Choonharat*

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 12 of 17

<b>Sample Number</b>	2265863-12
<b>Sampled Date</b>	Jun 06, 2022
<b>Sample Description</b>	Noise Dose
<b>Location</b>	พิษณุ ตั้งตัวดี : Field Operator#2 [ RWT/DW/PSC; CW Feed Pump; DG-5000 ]_UT Section
<b>Personal Sampling</b>	คุณพิษณุ ตั้งตัวดี
<b>Date Analysis Commenced</b>	Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	58.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	56.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	80.7	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	82.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150

**P/O :**

**Project Name :** Environmental Monitoring

**Project Location :**

**Lot ID: 2265863**

Date Received : Jun 07, 2022

Date Reported : Jun 10, 2022

Report Number : 2327415-1

Page 11 of 17

**Sample Number** 2265863-11  
**Sampled Date** Jun 06, 2022  
**Sample Description** Noise Dose  
**Location** ทินกร วิเชียร : Unit Supervisor\_UT Section  
**Personal Sampling** คุณทินกร วิเชียร  
**Date Analysis Commenced** Jun 09, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	31.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	30.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	78.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	79.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

### Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)  
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)  
\* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

**Sampled By :** Norranon Tathongkham

Remark :

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

Approved by

Wichan Choonharat  
Assistant Manager

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# ภาคผนวก ค-8

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คุณภาพอากาศในสถานประกอบการ



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 1 of 11

**Sample Number** : 21148773-1  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Cracking Furnace (Heater)  
**Date Analysis Commenced** : Feb 04, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 757 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	09:40 AM - 11:40 AM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Nantawat Sarin

**Remark :**

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

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Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 2 of 11

**Sample Number** : 21148773-2  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Chilling Fractionation Unit  
**Date Analysis Commenced** : Feb 04, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 757 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	09:40 AM - 11:40 AM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Nantawat Sarin

**Remark :**

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

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Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 3 of 11

**Sample Number** : 21148773-3  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Tank Farm  
**Date Analysis Commenced** : Feb 04, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 757 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	09:40 AM - 11:40 AM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Nantawat Sarin

**Remark :**

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Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 4 of 11

**Sample Number** : 21148773-4  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Deethanization Unit  
**Date Analysis Commenced** : Feb 04, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 757 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	09:40 AM - 11:40 AM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Nantawat Sarin

**Remark :**

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Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 5 of 11

**Sample Number** : 21148773-5  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Tank Farm  
**Date Analysis Commenced** : Feb 04, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Propylene	09:40 AM - 11:40 AM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 6 of 11

**Sample Number** : 21148773-6  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Depropanization Unit  
**Date Analysis Commenced** : Feb 04, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Propylene	09:40 AM - 11:40 AM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 7 of 11

**Sample Number** : 21148773-7  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Spent Caustic Treatment Unit  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Drawn into one amber plastic bottle, 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
<b>Air Testing</b>									
Hydrogen Sulfide	09:40 AM - 11:40 AM	ppm	-	0.04	<0.04	20(C)	NIOSH (1994), P&CAM126	MOL	Rayong

**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** : Nantawat Sarin

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 8 of 11

**Sample Number** 21148773-8  
**Sampled Date** Feb 02, 2022  
**Sample Description** Air Quality  
**Location** Feed Preparation/Pretreatment  
**Date Analysis Commenced** Feb 03, 2022  
**Condition of Sample** Drawn into one sorbent tube, refrigerated

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Dimethyl Disulfide	09.40 AM - 11.40 AM	ppm	-	0.05	<0.05	0.5	Based on ASTM, D 6228	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By :** Nantawat Sarin

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 9 of 11

**Sample Number** : 21148773-9  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : บริเวณ Truck Loading Station  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Drawn into 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
<b>Air Testing</b>									
Ethylbenzene	12:00 PM - 02:00 PM	ppm	-	0.05	<0.05	100	Based on NIOSH (2003), 1501	MOL	Bangkok
Toluene	12:00 PM - 02:00 PM	ppm	-	0.05	<0.05	200	Based on NIOSH (2003), 1501	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** : Nantawat Sarin

**Remark :**

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Approved by

*Saranya C.*

Saranya Chalermthamrong  
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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 10 of 11

**Sample Number** : 21148773-10  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Benzene & Toluene Extraction Unit  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Drawn into 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
<b>Air Testing</b>									
Benzene	09:40 AM - 11:40 AM	ppm	-	0.06	<0.06	1	Based on NIOSH (2003), 1501	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** : Nantawat Sarin

**Remark :**

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148773**

Date Received : Feb 02, 2022  
Date Reported : Feb 22, 2022  
Report Number : 2183025-1

Page 11 of 11

**Sample Number** : 21148773-11  
**Sampled Date** : Feb 02, 2022  
**Sample Description** : Air Quality  
**Location** : Debutanization Unit  
**Date Analysis Commenced** : Feb 03, 2022  
**Condition of Sample** : Drawn into 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
<b>Air Testing</b>									
1,3-Butadiene	09:40 AM - 11:40 AM	ppm	-	0.05	<0.05	1	NIOSH (1994), 1024	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** : Nantawat Sarin

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022  
Date Reported : May 26, 2022  
Report Number : 2294093-1

Page 1 of 11

**Sample Number** : 2249740-1  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Cracking Furnace (Heater)  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 756 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	10:30 AM - 12:30 PM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

**Remark :**

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Supervisor



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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022  
Date Reported : May 26, 2022  
Report Number : 2294093-1

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**Sample Number** : 2249740-2  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Chilling Fractionation Unit  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 756 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	10:10 AM - 12:10 PM	ppm	-	1.0	6.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

**Remark :**

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022  
Date Reported : May 26, 2022  
Report Number : 2294093-1

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**Sample Number** : 2249740-3  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Tank Farm  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 756 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	10:20 AM - 12:20 PM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

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**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022

Date Reported : May 26, 2022

Report Number : 2294093-1

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**Sample Number** : 2249740-4  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Deethanization Unit  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag  
**Barometric Pressure** : 756 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylene	10:10 AM - 12:10 PM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

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**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022  
Date Reported : May 26, 2022  
Report Number : 2294093-1

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**Sample Number** : 2249740-5  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Tank Farm  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Propylene	10:20 AM - 12:20 PM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022  
Date Reported : May 26, 2022  
Report Number : 2294093-1

Page 6 of 11

**Sample Number** : 2249740-6  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Depropanization Unit  
**Date Analysis Commenced** : May 06, 2022  
**Condition of Sample** : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Propylene	10:00 AM - 12:00 PM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

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## Analysis / Test Report

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271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249740**

Date Received : May 05, 2022

Date Reported : May 26, 2022

Report Number : 2294093-1

Page 7 of 11

**Sample Number** 2249740-7  
**Sampled Date** May 05, 2022  
**Sample Description** Air Quality  
**Location** Spent Caustic Treatment Unit  
**Date Analysis Commenced** May 05, 2022  
**Condition of Sample** Drawn into one amber plastic bottle, refrigerated  
**Barometric Pressure** 756 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Hydrogen Sulfide	10:15 AM - 12:15 PM	ppm	-	0.04	<0.04	20(C)	NIOSH (1994), P&CAM126	MOL	Rayong

**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 :** Mongkon Phalathip

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022  
Date Reported : May 26, 2022  
Report Number : 2294093-1

Page 8 of 11

**Sample Number** : 2249740-8  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Feed Preparation/Pretreatment  
**Date Analysis Commenced** : May 05, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Dimethyl Disulfide	09:50 AM - 11:50 AM	ppm	-	0.05	<0.05	0.5	Based on ASTM, D 6228	ACGIH	Bangkok

**Guideline :**

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2020).

**Sampled By** : Mongkon Phalathip

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022

Date Reported : May 26, 2022

Report Number : 2294093-1

Page 9 of 11

**Sample Number** : 2249740-9  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : บริเวณ Truck Loading Station  
**Date Analysis Commenced** : May 07, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 756 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Ethylbenzene	01:00 PM - 03:00 PM	ppm	-	0.05	<0.05	100	Based on NIOSH (2003), 1501	MOL	Bangkok
Toluene	01:00 PM - 03:00 PM	ppm	-	0.05	<0.05	200	Based on NIOSH (2003), 1501	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** : Mongkon Phalathip

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249740**

Date Received : May 05, 2022

Date Reported : May 26, 2022

Report Number : 2294093-1

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**Sample Number** : 2249740-10  
**Sampled Date** : May 05, 2022  
**Sample Description** : Air Quality  
**Location** : Benzene & Toluene Extraction Unit  
**Date Analysis Commenced** : May 07, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 756 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Benzene	09:45 AM - 11:45 AM	ppm	-	0.06	<0.06	1	Based on NIOSH (2003), 1501	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** : Mongkon Phalathip

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**P/O :** PMM-SCGCH-2019-345  
**Project Name :** Environmental Monitoring  
**Project Location :** ROC

**Lot ID: 2249740**

Date Received : May 05, 2022

Date Reported : May 26, 2022

Report Number : 2294093-1

Page 11 of 11

**Sample Number** 2249740-11  
**Sampled Date** May 05, 2022  
**Sample Description** Air Quality  
**Location** Debutanization Unit  
**Date Analysis Commenced** May 07, 2022  
**Condition of Sample** Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** 756 mmHg  
**Atmospheric Temperature** 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
1,3-Butadiene	09:50 AM - 11:50 AM	ppm	-	0.05	<0.05	1	NIOSH (1994), 1024	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 :** Mongkon Phalathip

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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148667**

Date Received : Jan 17, 2022  
Date Reported : Jan 27, 2022  
Report Number : 2182833-1

Page 1 of 1

**Sample Number** : 21148667-1  
**Sampled Date** : Jan 17, 2022  
**Sample Description** : Air Quality  
**Location** : Vent Canister Truckload  
**Date Analysis Commenced** : Jan 18, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 755 mmHg  
**Atmospheric Temperature** : 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Toluene	01:00 PM - 01:15 PM	ppm	-	0.05	<0.05	95	Based on NIOSH (2003), 1501	EIA	Bangkok

**Guideline :**

EIA : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

**Sampled By** : Siriwit Ruangsom

**Remark :**

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Scientist (4)



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**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 21148779**

Date Received : Feb 07, 2022  
Date Reported : Feb 15, 2022  
Report Number : 2183029-1

Page 1 of 1

**Sample Number** : 21148779-1  
**Sampled Date** : Feb 07, 2022  
**Sample Description** : Air Quality  
**Location** : Vent Canister Truckload  
**Date Analysis Commenced** : Feb 09, 2022  
**Condition of Sample** : Drawn into two sorbent tubes, refrigerated  
**Barometric Pressure** : 757 mmHg  
**Atmospheric Temperature** : 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Toluene	01:00 PM - 01:15 PM	ppm	-	0.05	<0.05	95	Based on NIOSH (2003), 1501	EIA	Bangkok

**Guideline :**

EIA : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermtamrong  
Scientist (4)

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2220427**

Date Received : Mar 07, 2022  
Date Reported : Mar 15, 2022  
Report Number : 2233746-1

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**Sample Number** : 2220427-1  
**Sampled Date** : Mar 07, 2022  
**Sample Description** : Air Quality  
**Location** : Vent Canister Truckload  
**Date Analysis Commenced** : Mar 08, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 757 mmHg  
**Atmospheric Temperature** : 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Toluene	01:15 PM - 01:30 PM	ppm	-	0.05	<0.05	95	Based on NIOSH (2003), 1501	EIA	Bangkok

**Guideline :**

EIA : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

**Sampled By** : Siriwit Ruangsom

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** :

**Lot ID: 2228287**

Date Received : Apr 04, 2022  
Date Reported : Apr 11, 2022  
Report Number : 2248474-1

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**Sample Number** : 2228287-1  
**Sampled Date** : Apr 04, 2022  
**Sample Description** : Air Quality  
**Location** : Vent Canister Truckload  
**Date Analysis Commenced** : Apr 06, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 759 mmHg  
**Atmospheric Temperature** : 29.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Toluene	01:00 PM - 01:15 PM	ppm	-	0.05	<0.05	95	Based on NIOSH (2003), 1501	EIA	Bangkok

**Guideline :**

EIA : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

**Sampled By** : Nantawat Sarin

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2249763**

Date Received : May 03, 2022  
Date Reported : May 11, 2022  
Report Number : 2294101-1

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**Sample Number** : 2249763-1  
**Sampled Date** : May 03, 2022  
**Sample Description** : Air Quality  
**Location** : Vent Canister Truckload  
**Date Analysis Commenced** : May 04, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 759 mmHg  
**Atmospheric Temperature** : 30.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Toluene	03:15 PM - 03:30 PM	ppm	-	0.05	0.08	95	Based on NIOSH (2003), 1501	EIA	Bangkok

**Guideline :**

EIA : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

**Sampled By** : Norranon Tathongkham

**Remark :**

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Approved by

Sararat Mongkonjirawut  
Supervisor



## Analysis / Test Report

**Client** : Rayong Olefins Co., Ltd.  
271, Sukhumvit Rd., Map Ta Phut, Muang District, Rayong Thailand 21150  
**P/O** : PMM-SCGCH-2019-345  
**Project Name** : Environmental Monitoring  
**Project Location** : ROC

**Lot ID: 2253335**

Date Received : Jun 13, 2022  
Date Reported : Jun 21, 2022  
Report Number : 2302692-1

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**Sample Number** : 2253335-1  
**Sampled Date** : Jun 13, 2022  
**Sample Description** : Air Quality  
**Location** : Vent Canister Truckload  
**Date Analysis Commenced** : Jun 14, 2022  
**Condition of Sample** : Drawn into one sorbent tube, refrigerated  
**Barometric Pressure** : 767 mmHg  
**Atmospheric Temperature** : 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
<b>Air Testing</b>									
Toluene	01:00 PM - 01:15 PM	ppm	-	0.05	<0.05	95	Based on NIOSH (2003), 1501	EIA	Bangkok

**Guideline :**

EIA : Environmental Impact Assessment Report of Rayong Olefins Co., Ltd.

**Sampled By** : Apichart Wilars

**Remark :**

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

Approved by

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

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