

ภาคผนวก ง

ใบรับรองผลการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม

ทิศทางและความเร็วลม



Meteorological Monitoring Results : Wind Rose MTR-PTTGC-LDPE Plant

Location : East Fence of Project Site

Monitor period : 11-18 Mar 2025

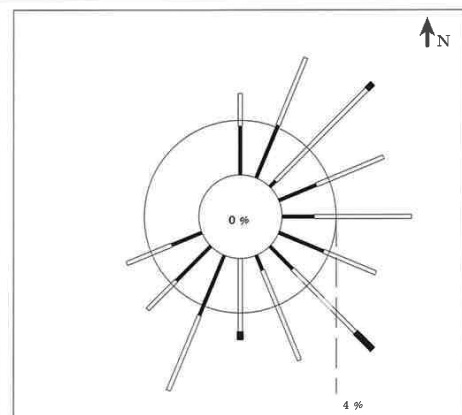
Wind Speed Model : Novalynx WS-25

Serial No : A5086

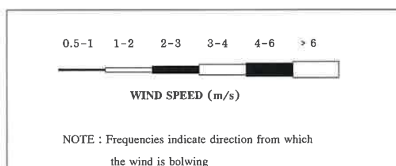
Wind Direction Model : Novalynx WS-25

Serial No : A5086

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0357	0.0238	0.0000	0.0000	0.0000	0.0000	0.0595
NNE	0.0417	0.0536	0.0000	0.0000	0.0000	0.0000	0.0952
NE	0.0060	0.0952	0.0060	0.0000	0.0000	0.0000	0.1071
ENE	0.0298	0.0536	0.0000	0.0000	0.0000	0.0000	0.0833
E	0.0238	0.0714	0.0000	0.0000	0.0000	0.0000	0.0952
ESE	0.0357	0.0417	0.0000	0.0000	0.0000	0.0000	0.0774
SE	0.0238	0.0655	0.0179	0.0000	0.0000	0.0000	0.1071
SSE	0.0119	0.0714	0.0000	0.0000	0.0000	0.0000	0.0833
S	0.0000	0.0536	0.0060	0.0000	0.0000	0.0000	0.0595
SSW	0.0476	0.0595	0.0000	0.0000	0.0000	0.0000	0.1071
SW	0.0357	0.0298	0.0000	0.0000	0.0000	0.0000	0.0655
WSW	0.0238	0.0357	0.0000	0.0000	0.0000	0.0000	0.0595
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



Application : WindPro Ver.1.0

Control : 16 Direction Calculation With
Calm Wind < 0.5 m/sData Unit : Direction in Deg.
Wind Speed in m/s

File Control : R:\Database\Windrose\FileControl\Win-225106-East Fence of Project Site 11-18 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

Meteorological Monitoring Results : Wind Rose MTR-PTTGC-LDPE Plant

Location : East Fence of Project Site

Monitor period : 11-18 Mar 2025

Wind Speed Model : Novalynx WS-25

Serial No : A5086

Wind Direction Model : Novalynx WS-25

Serial No : A5086

Time	11-12 Mar 2025		12-13 Mar 2025		13-14 Mar 2025		14-15 Mar 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
14:00 - 15:00	1.6	E	1.3	ENE	0.6	N	0.6	SSW
15:00 - 16:00	1.3	SSE	0.9	SSW	1.1	SW	0.7	ENE
16:00 - 17:00	0.7	NE	0.8	ESE	1.8	SSE	1.5	N
17:00 - 18:00	1.4	SE	1.9	SSW	0.5	NNE	1.1	NE
18:00 - 19:00	0.7	N	1.6	NE	0.8	ENE	1.1	E
19:00 - 20:00	1.8	SSE	0.8	NNE	0.8	ENE	1.6	E
20:00 - 21:00	1.7	NNE	1.4	ENE	1.5	NE	0.7	SW
21:00 - 22:00	1.9	SSW	1.0	ESE	1.4	SSW	1.7	SE
22:00 - 23:00	1.3	SW	1.2	NE	1.1	E	1.1	WSW
23:00 - 24:00	1.5	S	0.6	N	1.2	NE	1.3	SW
00:00 - 01:00	0.9	WSW	1.3	SE	0.5	SW	1.1	S
01:00 - 02:00	1.4	N	2.0	SE	0.8	E	1.8	NNE
02:00 - 03:00	1.6	ENE	1.2	NE	1.7	E	1.8	SE
03:00 - 04:00	1.4	S	1.5	WSW	1.0	SSW	1.8	S
04:00 - 05:00	1.3	SSE	1.5	SSE	0.9	SE	1.7	N
05:00 - 06:00	0.7	ESE	0.7	WSW	1.7	NNE	0.9	WSW
06:00 - 07:00	1.8	WSW	1.6	SE	1.2	SE	0.5	ESE
07:00 - 08:00	1.5	ENE	1.0	ENE	1.9	ESE	1.4	E
08:00 - 09:00	1.4	ESE	1.9	NE	1.3	WSW	1.3	WSW
09:00 - 10:00	1.0	NNE	1.2	NNE	0.7	SSW	1.7	NE
10:00 - 11:00	0.6	ESE	1.1	SSE	1.0	SSE	0.8	ENE
11:00 - 12:00	0.6	SE	1.5	SSE	1.3	NE	1.1	S
12:00 - 13:00	1.2	ESE	1.9	S	0.5	SW	1.0	NNE
13:00 - 14:00	1.9	SSW	1.7	S	1.0	SSE	0.5	SE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225106-East Fence of Project Site 11-18 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-PTTGC-LDPE Plant

Location : East Fence of Project Site

Monitor period : 11-18 Mar 2025

Wind Speed Model : Novalynx WS-25

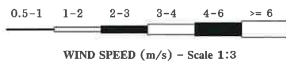
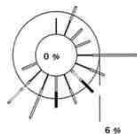
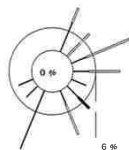
Serial No : A5086

Wind Direction Model : Novalynx WS-25

Serial No : A5086

Time	15-16 Mar 2025		16-17 Mar 2025		17-18 Mar 2025		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
14:00 - 15:00	0.8	N	0.8	SSW	1.1	WSW	
15:00 - 16:00	0.7	N	0.8	ENE	0.8	ESE	
16:00 - 17:00	0.6	E	0.5	SSW	1.8	E	
17:00 - 18:00	1.0	N	1.4	NE	1.9	SSE	
18:00 - 19:00	1.5	ESE	1.6	E	1.4	ENE	
19:00 - 20:00	1.3	SE	0.6	WSW	0.6	SW	
20:00 - 21:00	1.2	NE	1.5	ENE	1.7	E	
21:00 - 22:00	1.6	ESE	1.0	E	1.0	SE	
22:00 - 23:00	0.8	NNE	1.8	SSE	1.7	SW	
23:00 - 24:00	0.6	SW	1.4	ENE	1.0	NE	
00:00 - 01:00	1.1	S	0.6	NNE	1.1	SSW	
01:00 - 02:00	2.0	NE	1.1	SSE	1.1	SSW	
02:00 - 03:00	1.7	SE	1.1	NE	1.8	SW	
03:00 - 04:00	1.0	SSW	0.6	NNE	0.7	NNE	
04:00 - 05:00	1.5	NE	1.2	ENE	0.7	SSE	
05:00 - 06:00	1.6	E	1.3	NNE	1.2	ESE	
06:00 - 07:00	1.7	SE	0.7	E	0.6	N	
07:00 - 08:00	1.4	NNE	0.7	SSW	0.9	E	
08:00 - 09:00	1.9	SSW	0.8	ESE	1.4	E	
09:00 - 10:00	1.1	SE	0.9	SE	1.0	S	
10:00 - 11:00	0.9	NNE	0.9	SSW	1.1	NNE	
11:00 - 12:00	1.7	SSW	2.0	SE	2.0	SE	
12:00 - 13:00	1.5	NE	0.7	SW	2.0	S	
13:00 - 14:00	1.4	NE	0.8	SSE	0.8	SSW	

Wind Rose



WIND SPEED (m/s) - Scale 1:3

File Control : R:\Database\Windrose\FileControl\Win-225106-East Fence of Project Site 11-18 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

SECOT CO., LTD

239 Rinklongrupa Rd.

Bangue, Bangkok 10800

Tel: 66(0)2959-3600 Fax: 66(0)2959-3535



Meteorological Monitoring Results : Wind Rose MTR-PTTGC-LDPE Plant

Location : Wat Nong Feab

Monitor period : 11-18 Mar 2025

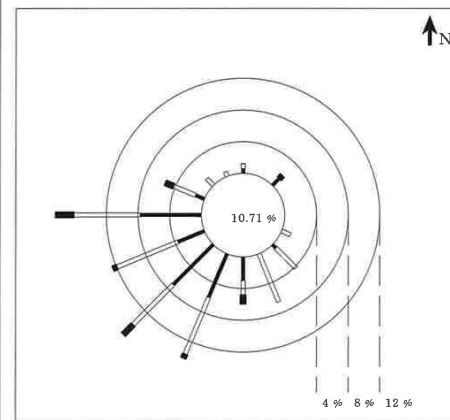
Wind Speed Model : Novalynx WS-25

Serial No : A5091

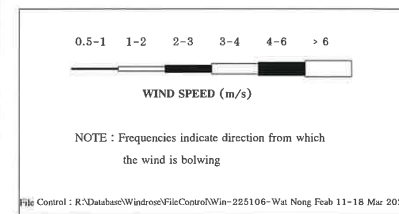
Wind Direction Model : Novalynx WS-25

Serial No : A5091

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0119	0.0000	0.0060	0.0000	0.0000	0.0000	0.0179
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
SE	0.0060	0.0357	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0655	0.0000	0.0000	0.0000	0.0000	0.0655
S	0.0298	0.0179	0.0119	0.0000	0.0000	0.0000	0.0595
SSW	0.0595	0.0774	0.0060	0.0000	0.0000	0.0000	0.1429
SW	0.0714	0.0714	0.0179	0.0000	0.0000	0.0000	0.1607
WSW	0.0357	0.0833	0.0060	0.0000	0.0000	0.0000	0.1250
W	0.0774	0.0833	0.0238	0.0000	0.0000	0.0000	0.1845
WNW	0.0119	0.0298	0.0119	0.0000	0.0000	0.0000	0.0536
NW	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
NNW	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
CALM	0.1071						



Application : WindPro Ver.1.0

Control : 16 Direction Calculation With
Calm Wind < 0.5 m/sData Unit : Direction in Deg.
Wind Speed in m/sNOTE : Frequencies indicate direction from which
the wind is blowing

File Control : R:\Database\Windrose\FileControl\Win-225106-Wat Nong Feab 11-18 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

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Meteorological Monitoring Results : Wind Rose MTR-PTTGC-LDPE Plant

Location : Wat Nong Feab

Monitor period : 11-18 Mar 2025

Wind Speed Model : Novalynx WS-25

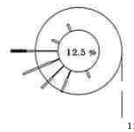
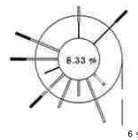
Serial No : A5091

Wind Direction Model : Novalynx WS-25

Serial No : A5091

Time	11-12 Mar 2025		12-13 Mar 2025		13-14 Mar 2025		14-15 Mar 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	2.2	WNW	0.7	SSW	1.2	SSW	1.1	SW
11:00 - 12:00	0.5	WNW	1.2	WSW	1.0	SSE	1.8	SW
12:00 - 13:00	2.7	SW	1.8	SSW	1.6	SSE	0.4	SW
13:00 - 14:00	0.4	WSW	2.8	SSW	1.7	S	0.6	WSW
14:00 - 15:00	1.3	W	2.9	S	1.6	SSW	1.2	W
15:00 - 16:00	2.2	S	0.9	SSW	0.6	WSW	2.0	W
16:00 - 17:00	0.7	SW	0.3	WNW	2.0	W	1.4	WSW
17:00 - 18:00	1.2	SW	1.2	WSW	2.0	NE	1.3	NNW
18:00 - 19:00	1.2	S	0.2	SW	0.5	N	0.4	WSW
19:00 - 20:00	1.2	S	0.5	SSW	0.6	NE	0.8	W
20:00 - 21:00	0.8	S	0.6	SW	1.5	W	1.2	WSW
21:00 - 22:00	0.8	S	0.7	SW	1.1	W	0.9	SW
22:00 - 23:00	0.4	WSW	0.8	W	1.5	WNW	0.5	SSW
23:00 - 24:00	0.7	SSW	0.6	SW	1.6	WNW	1.6	SSW
00:00 - 01:00	1.6	SSW	0.5	W	2.0	WNW	1.6	WSW
01:00 - 02:00	0.3	SSW	0.3	SW	1.9	SW	1.2	WSW
02:00 - 03:00	1.1	WSW	0.1	WSW	1.3	SW	0.4	WSW
03:00 - 04:00	0.7	W	1.2	SE	0.5	NE	0.7	W
04:00 - 05:00	0.4	W	0.4	S	1.8	SSE	1.8	WNW
05:00 - 06:00	0.7	WSW	1.2	WNW	1.2	SE	0.5	W
06:00 - 07:00	0.3	WSW	0.7	WNW	0.4	W	1.6	SSW
07:00 - 08:00	1.1	SSW	1.0	SE	0.4	SSW	0.9	SW
08:00 - 09:00	0.5	WSW	1.2	W	1.8	N	1.3	SSE
09:00 - 10:00	0.5	SW	2.0	SW	2.0	SW	2.0	W

Wind Rose



WIND SPEED (m/s) - Scale 1:3

File Control :R:\Database\Windrose\FileControl\Win-225106-Wat Nong Feab 11-18 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-PTTGC-LDPE Plant

Location : Wat Nong Feab

Monitor period : 11-18 Mar 2025

Wind Speed Model : Novalynx WS-25

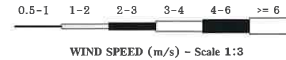
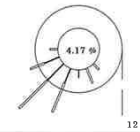
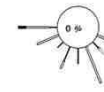
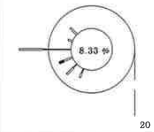
Serial No : A5091

Wind Direction Model : Novalynx WS-25

Serial No : A5091

Time	15-16 Mar 2025		16-17 Mar 2025		17-18 Mar 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	1.3	SSW	1.5	W	1.2	SW
11:00 - 12:00	1.4	W	0.9	SSW	1.9	WSW
12:00 - 13:00	1.7	W	1.7	W	1.9	W
13:00 - 14:00	1.2	NW	1.8	W	0.5	SSW
14:00 - 15:00	1.3	WSW	0.7	SSW	1.0	WSW
15:00 - 16:00	0.8	W	1.6	WSW	1.9	SE
16:00 - 17:00	0.4	WSW	2.0	W	1.3	SSE
17:00 - 18:00	0.7	W	0.8	W	0.8	SW
18:00 - 19:00	0.7	W	1.3	WSW	1.1	SSE
19:00 - 20:00	1.6	WNW	1.7	SSE	0.4	SSE
20:00 - 21:00	0.7	W	1.0	SSE	1.5	SSW
21:00 - 22:00	0.5	SSW	1.0	SSE	1.2	SW
22:00 - 23:00	1.1	W	1.4	ESE	0.5	S
23:00 - 24:00	1.1	SW	1.8	ESE	1.0	SSW
00:00 - 01:00	1.4	W	1.0	WSW	1.1	SW
01:00 - 02:00	0.9	SW	1.1	SSE	0.9	SW
02:00 - 03:00	0.4	WSW	1.2	SE	0.7	WSW
03:00 - 04:00	1.4	W	0.5	S	1.3	SW
04:00 - 05:00	2.0	WSW	0.5	SE	0.7	SW
05:00 - 06:00	0.8	W	1.6	SE	0.8	SSW
06:00 - 07:00	1.6	NW	0.5	S	1.0	SSW
07:00 - 08:00	1.2	SW	1.3	SSE	1.9	SSW
08:00 - 09:00	0.5	W	0.7	SW	1.1	SW
09:00 - 10:00	1.9	WSW	1.8	SSW	0.6	WSW

Wind Rose



WIND SPEED (m/s) - Scale 1:3

File Control :R:\Database\Windrose\FileControl\Win-225106-Wat Nong Feab 11-18 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

คุณภาพอากาศในบรรยากาศ



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225106_Ambient/Ethylene/Mar
(Branch 11 : LDPE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 12-18/03/2025
RECEIVED DATE : 22/03/2025 ANALYTICAL DATE : 28/03/2025
REPORT DATE : 03/04/2025 SAMPLE CONDITION : Normal
INSTUMENT : Sampling Bag SITE OPERATOR : Mr. Phuwadech Kaewjirakulsri
LOCATION DESCRIPTION : 1. East Fence of Project Site
2. Wat Nong Feab

PARAMETER	SAMPLING DATE	UNIT	ND (Non-detectable)	RESULT		STANDARD	REFERENCE METHOD
				1	2		
Ethylene	12/03/2025	ppm	<0.01	ND	ND	-	Intersociety
	13/03/2025	ppm	<0.01	ND	ND		Committee Method 101
	14/03/2025	ppm	<0.01	ND	ND		
	15/03/2025	ppm	<0.01	ND	ND		
	16/03/2025	ppm	<0.01	ND	ND		
	17/03/2025	ppm	<0.01	ND	ND		
	18/03/2025	ppm	<0.01	ND	ND		

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maina Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. - No Standard.

4. The natural condition was normal during sampling period.



Ambient Air Monitoring Results : Nitrogen dioxide
MTR-PTTGC-LDPE Plant

Location : East Fence of Project Site Monitor Period : 11-18 Mar 2025
Analyzer Model : API 200A Station No : Mobile 10
Serial No : 2385 Site Operator : Mr. Phuwadech Kaewjirakulsri

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326
Certified Date : 08 Jan 2025 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2026

Time	NO2 Concentration (ppb)						
	11-12 Mar 2025	12-13 Mar 2025	13-14 Mar 2025	14-15 Mar 2025	15-16 Mar 2025	16-17 Mar 2025	17-18 Mar 2025
14:00 - 15:00	4.9	5.0	6.9	5.3	6.1	6.3	6.0
15:00 - 16:00	7.0	5.4	6.8	5.7	5.9	7.2	4.7
16:00 - 17:00	6.0	5.3	4.3	4.5	6.5	5.1	4.7
17:00 - 18:00	4.5	4.6	4.6	6.2	6.5	5.0	5.2
18:00 - 19:00	6.4	4.7	7.0	4.3	4.6	6.8	5.6
19:00 - 20:00	6.8	5.5	4.4	6.4	6.1	4.6	4.5
20:00 - 21:00	6.3	5.6	4.6	5.6	4.6	4.8	7.0
21:00 - 22:00	5.7	4.5	6.6	6.9	6.9	6.9	7.2
22:00 - 23:00	5.2	4.6	6.6	6.5	7.2	5.7	6.6
23:00 - 00:00	6.8	5.0	5.3	6.1	6.8	7.1	6.0
00:00 - 01:00	7.2	4.3	4.2	6.8	5.3	4.9	6.2
01:00 - 02:00	4.9	6.3	5.2	5.1	4.3	5.3	4.3
02:00 - 03:00	5.5	4.9	4.4	5.1	5.7	6.6	4.9
03:00 - 04:00	7.0	6.7	4.5	6.9	5.1	5.7	6.8
04:00 - 05:00	6.2	6.8	6.7	6.1	5.9	6.1	5.4
05:00 - 06:00	7.0	4.9	7.0	6.3	6.3	7.0	7.1
06:00 - 07:00	6.0	6.2	7.3	6.2	5.9	6.9	4.8
07:00 - 08:00	7.2	6.5	4.7	4.6	6.4	5.7	4.6
08:00 - 09:00	4.8	5.2	7.3	7.0	5.2	6.5	6.5
09:00 - 10:00	7.2	6.2	6.2	6.1	5.2	5.7	5.0
10:00 - 11:00	4.5	5.1	7.3	5.7	4.3	6.7	4.8
11:00 - 12:00	6.3	6.4	4.5	6.3	5.3	5.1	6.7
12:00 - 13:00	6.5	5.8	4.6	5.2	5.9	6.4	6.2
13:00 - 14:00	6.6	6.4	5.5	6.5	7.1	5.4	4.3

Average-24Hr*	6.1	5.5	5.7	5.9	5.8	6.0	5.6
Max-1Hr	7.2	6.8	7.3	7.0	7.2	7.2	7.2
Min-1Hr	4.5	4.3	4.2	4.3	4.3	4.6	4.3

Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

Remark : * Average time between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide
MTR-PTTGC-LDPE Plant

Location : Wat Nong Feab	Monitor Period : 11-18 Mar 2025
Analyzer Model : Teledyne T200	Station No : SS2-07
Serial No : 110	Site Operator : Mr. Phuwadech Kaewjirakulsri

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 08 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2026	

Time	NO2 Concentration (ppb)						
	11-12 Mar 2025	12-13 Mar 2025	13-14 Mar 2025	14-15 Mar 2025	15-16 Mar 2025	16-17 Mar 2025	17-18 Mar 2025
10:00 - 11:00	7.1	4.9	4.8	6.1	4.7	5.2	4.4
11:00 - 12:00	4.3	5.4	5.5	5.9	7.6	6.6	6.3
12:00 - 13:00	3.8	3.6	4.8	5.0	8.2	5.2	3.6
13:00 - 14:00	7.4	8.2	5.7	5.7	7.5	3.9	8.2
14:00 - 15:00	4.4	6.8	7.1	7.5	5.6	4.5	6.5
15:00 - 16:00	3.6	8.2	5.4	5.2	8.2	3.6	3.6
16:00 - 17:00	7.8	5.5	7.5	4.0	7.4	7.3	6.4
17:00 - 18:00	5.3	4.3	3.4	5.8	6.6	8.1	7.0
18:00 - 19:00	6.3	3.7	6.1	6.4	3.3	5.1	8.4
19:00 - 20:00	8.1	3.3	7.1	5.4	5.5	4.7	3.2
20:00 - 21:00	5.4	5.6	5.3	5.8	3.4	8.3	5.9
21:00 - 22:00	5.1	3.5	4.3	8.0	7.6	5.9	5.1
22:00 - 23:00	6.9	3.4	4.1	5.1	6.6	3.6	6.3
23:00 - 00:00	4.7	4.0	7.2	3.7	4.2	5.1	7.1
00:00 - 01:00	5.1	5.8	5.4	3.6	4.0	6.6	4.5
01:00 - 02:00	4.5	4.3	4.9	8.4	5.8	4.8	6.7
02:00 - 03:00	5.1	4.1	3.4	7.3	4.1	4.4	4.2
03:00 - 04:00	4.2	3.2	7.0	6.7	4.1	4.4	7.6
04:00 - 05:00	3.3	6.0	4.6	8.5	7.3	3.3	4.8
05:00 - 06:00	3.9	4.1	3.6	3.8	8.1	7.1	6.6
06:00 - 07:00	8.0	7.6	6.1	6.3	7.9	4.8	7.2
07:00 - 08:00	7.3	6.8	8.1	5.9	4.7	7.9	4.9
08:00 - 09:00	3.5	7.4	4.8	8.4	6.2	3.7	4.9
09:00 - 10:00	5.5	6.1	4.2	4.0	5.0	3.2	3.7
Average-24Hr*	5.4	5.2	5.4	5.9	6.0	5.3	5.7
Max-1Hr	8.1	8.2	8.1	8.5	8.2	8.3	8.4
Min-1Hr	3.3	3.2	3.4	3.6	3.3	3.2	3.2
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

Remark : * Average time between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

คุณภาพอากาศจากแหล่งกำเนิด



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225106_Stack_RTO_Ethylene_Mar
(Branch 11 : LDPE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 14/03/2025
RECEIVED DATE : 15/03/2025 ANALYTICAL DATE : 20/03/2025
REPORT DATE : 24/03/2025 SAMPLE CONDITION : Good
STACK LOCATION : RTO SITE OPERATOR : Mr.Apiwat Meksuwan
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 35.0 m Gas Velocity : 15.0 m/s
Diameter : 1.10 m Flow rate* : 588 Ncu.m/min
Temperature : 114.7 °C Excess Oxygen : 20.1 %
Moisture : 10.2 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT		STANDARD ^{1/}		REFERENCE METHOD
			20.1%O ₂	g/s	20.1%O ₂	g/s	
Ethylene	ppm	<0.01	ND	<0.0001	25	0.28	US. EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maing Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. *At standard pressure of 760 mm.Hg and temperature of 25 °C, dry basis.

4. ^{1/}The value was assigned in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225106_Stack_RTO_NOx_Mar
(Branch 11 : LDPE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 14/03/2025
RECEIVED DATE : 17/03/2025 ANALYTICAL DATE : 20-26/03/2025
REPORT DATE : 26/03/2025 SAMPLE CONDITION : Good
STACK LOCATION : RTO SITE OPERATOR : Mr. Song Hengchwankul
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 35.0 m Gas Velocity : 15.0 m/s
Diameter : 1.10 m Flow rate* : 588 Ncu.m/min
Temperature : 114.7 °C Excess Oxygen : 20.1 %
Moisture : 10.2 %

PARAMETER	UNIT	RESULT		STANDARD ^{1/}		REFERENCE METHOD
		20.1%O ₂	g/s	20.1%O ₂	g/s	
Oxides of Nitrogen	ppm	0.16	0.003	200 ^{2/} / 20 ^{3/}	0.37 ^{3/}	US.EPA. Method 7E

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG. NO. 2-239-ท-0006

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

REG. NO. 2-239-ท-0006

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. *At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ^{1/} Air emission with fuel combustion is open system, reported as concentrations at the reference condition of 1 atm
(or 760 mmHg), 25°C, dry basis and actual percent oxygen.

5. ^{2/} Notification of Ministry of Industry B.E.2549(2006) and Notification of Ministry of Natural Resources
and Environment B.E.2549(2006).

6. ^{3/} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration
RTO
PTT Global Chemical Public Co., Ltd. (LDPE)
March 14, 2025

Run Number	Oxygen content (%by Vol)		Oxide of Nitrogen (ppmvd)	
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2
1	20.18	19.87	0.20	0.15
2	20.25	20.10	0.20	0.16
3	20.25	20.26	0.20	0.17
Average	20.23	20.08	0.20	0.16

PTT Global Chemical Public Co., Ltd. (LDPE)
EMISSION TEST RESULT

Date: March 14, 2025
 Start time: 10:50 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 Fuel Type : Natural Gas

Run # : 1
 Location : RTO
 Finish time : 11:10 AM
 Serial No.: 071023-47
 Serial No.: 435
 Test Operator : Song H.

Time, min	O ₂ (%by Vol)	NOx (ppmvd@ActualO ₂)
10:50 AM	20.22	0.24
10:51 AM	20.10	0.23
10:52 AM	20.09	0.21
10:53 AM	20.06	0.23
10:54 AM	20.15	0.22
10:55 AM	20.12	0.21
10:56 AM	20.11	0.21
10:57 AM	20.15	0.20
10:58 AM	20.19	0.20
10:59 AM	20.15	0.21
11:00 AM	20.18	0.21
11:01 AM	20.22	0.21
11:02 AM	20.18	0.19
11:03 AM	20.21	0.20
11:04 AM	20.24	0.20
11:05 AM	20.20	0.19
11:06 AM	20.24	0.17
11:07 AM	20.27	0.17
11:08 AM	20.22	0.18
11:09 AM	20.25	0.18
11:10 AM	20.27	0.19
Average	20.18	0.20

Signature 
 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist

PTT Global Chemical Public Co., Ltd. (LDPE)
EMISSION TEST RESULT

Date: March 14, 2025
Start time: 11:11 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
Fuel Type : Natural Gas

Run # : 2
Location : RTO
Finish time : 11:31 AM
Serial No.: 071023-47
Serial No.: 435
Test Operator : Song H.

Time, min	O ₂ (%by Vol)	NO _x (ppmvd@ActualO ₂)
11:11 AM	20.23	0.21
11:12 AM	20.25	0.20
11:13 AM	20.28	0.22
11:14 AM	20.23	0.21
11:15 AM	20.26	0.20
11:16 AM	20.28	0.19
11:17 AM	20.23	0.20
11:18 AM	20.26	0.20
11:19 AM	20.28	0.19
11:20 AM	20.23	0.21
11:21 AM	20.25	0.22
11:22 AM	20.27	0.21
11:23 AM	20.22	0.22
11:24 AM	20.24	0.21
11:25 AM	20.26	0.20
11:26 AM	20.22	0.19
11:27 AM	20.24	0.19
11:28 AM	20.26	0.18
11:29 AM	20.23	0.17
11:30 AM	20.24	0.18
11:31 AM	20.27	0.20
Average	20.25	0.20

Signature 
 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist

PTT Global Chemical Public Co., Ltd. (LDPE)
EMISSION TEST RESULT

Date: March 14, 2025
Start time: 11:32 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
Fuel Type : Natural Gas

Run # : 3
Location : RTO
Finish time : 11:52 AM
Serial No.: 071023-47
Serial No.: 435
Test Operator : Song H.

Time, min	O ₂ (%by Vol)	NO _x (ppmvd@ActualO ₂)
11:32 AM	20.22	0.20
11:33 AM	20.25	0.20
11:34 AM	20.27	0.20
11:35 AM	20.23	0.20
11:36 AM	20.25	0.18
11:37 AM	20.27	0.19
11:38 AM	20.23	0.21
11:39 AM	20.24	0.21
11:40 AM	20.27	0.21
11:41 AM	20.22	0.23
11:42 AM	20.24	0.23
11:43 AM	20.27	0.22
11:44 AM	20.23	0.21
11:45 AM	20.25	0.22
11:46 AM	20.27	0.19
11:47 AM	20.23	0.18
11:48 AM	20.25	0.19
11:49 AM	20.28	0.17
11:50 AM	20.23	0.18
11:51 AM	20.26	0.20
11:52 AM	20.28	0.19
Average	20.25	0.20

Signature 
 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist

คุณภาพน้ำทิ้ง



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd (LDPE)	REQUEST SERVICE No.	: 0011
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/01/2025	SAMPLING TIME	: 14:02
RECEIVED DATE	: 04/01/2025	ANALYTICAL DATE	: 04-10/01/2025
REPORT DATE	: 10/01/2025	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 225106_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บริเวณบ่อพักน้ำเสียของโรงงาน	STANDARD ^{1/}
Temperature	°C	2550 B	< 0.5	35.4	≤ 40
pH	-	4500-H ⁺ B	< 0.10	6.76	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	137	≤ 40,340 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 2.5	4.0	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	4.7	≤ 20
COD	mg/l	5220 C	< 15.00	24.06	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA APHA WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-๓-0005

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-๓-0004

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of Ministry of Industry, B.E.2560 (2017).

^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value in the last month add 5,000 mg/l from klongbangburd = 35,340 mg/l).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd (LDPE)	REQUEST SERVICE No.	: 0252/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 10/02/2025	SAMPLING TIME	: 10:30
RECEIVED DATE	: 11/02/2025	ANALYTICAL DATE	: 11-19/02/2025
REPORT DATE	: 19/02/2025	SITE OPERATOR	: Mr.Chanapon Oakkharaplon
SAMPLE CONDITION	: Normal	FILE CODE	: 225106_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บริเวณบ่อพักน้ำเสียของโรงงาน	STANDARD ^{1/}
Temperature	°C	2550 B	< 0.5	33.5	≤ 40
pH	-	4500-H ⁺ B	< 0.10	6.80	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	160	≤ 42,520 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 2.5	3.2	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.5	≤ 20
COD	mg/l	5220 C	< 15.00	18.88	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA APHA WEF)

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๓-0018

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-๓-0004

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of Ministry of Industry, B.E.2560 (2017).

^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value in the last month add 5,000 mg/l from klongbangburd = 37,520 mg/l).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd (LDPE)	REQUEST SERVICE No.	: 0406/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 06/03/2025	SAMPLING TIME	: 14:08
RECEIVED DATE	: 07/03/2025	ANALYTICAL DATE	: 07-13/03/2025
REPORT DATE	: 14/03/2025	SITE OPERATOR	: Mr.Natthachai Chaiyakhot
SAMPLE CONDITION	: Normal	FILE CODE	: 225106_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บริเวณบ่อพักน้ำเสียของโรงงาน	STANDARD ^{1/}
Temperature	°C	2550 B	< 0.5	38.9	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.44	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	122	≤ 34,060 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 2.5	5.2	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	3.6	≤ 20
COD	mg/l	5220 C	< 15.00	29.89	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

NR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of Ministry of Industry, B.E.2560 (2017).

^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value in the last month add 5,000 mg/l from klongbangburd = 29,060 mg/l).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd (LDPE)	REQUEST SERVICE No.	: 0606/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/04/2025	SAMPLING TIME	: 15:12
RECEIVED DATE	: 04/04/2025	ANALYTICAL DATE	: 04-10/04/2025
REPORT DATE	: 10/04/2025	SITE OPERATOR	: Mr.Tanachot Changlor
SAMPLE CONDITION	: Normal	FILE CODE	: 225106_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บริเวณบ่อพักน้ำเสียของโรงงาน	STANDARD ^{1/}
Temperature	°C	2550 B	< 0.5	36.6	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.05	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	68	≤ 39,680 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 2.5	5.0	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	4.2	≤ 20
COD	mg/l	5220 C	< 15.00	25.11	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

NR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of Ministry of Industry, B.E.2560 (2017).

^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value in the last month add 5,000 mg/l from klongbangburd = 34,680 mg/l).

4. - Not available.



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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd (LDPE)	REQUEST SERVICE No.	: 0826/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 08/05/2025	SAMPLING TIME	: 14:10
RECEIVED DATE	: 09/05/2025	ANALYTICAL DATE	: 09-19/05/2025
REPORT DATE	: 19/05/2025	SITE OPERATOR	: Mr. Chitpon Somprasong
SAMPLE CONDITION	: Normal	FILE CODE	: 225106_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				บริเวณบ่อพักน้ำเสียของโรงงาน	
Temperature	°C	2550 B	< 0.5	38.2	≤ 40
pH	-	4500-H B	< 0.10	7.57	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	188	≤ 40,040 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 2.5	< 2.5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	< 15.00	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED., 2017 (AWWA, APHA, WEF)

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-ก-0004

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3. ^{1/} Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of Ministry of Industry, B.E.2560 (2017).

^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value in the last month add 5,000 mg/l from klongbangburd = 35,040 mg/l).

4. - Not available.



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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd (LDPE)	REQUEST SERVICE No.	: 1102/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 13/06/2025	SAMPLING TIME	: 09:16
RECEIVED DATE	: 14/06/2025	ANALYTICAL DATE	: 14-21/06/2025
REPORT DATE	: 21/06/2025	SITE OPERATOR	: Mr. Chitpon Somprasong
SAMPLE CONDITION	: Normal	FILE CODE	: 225106_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				บริเวณบ่อพักน้ำเสียของโรงงาน	
Temperature	°C	2550 B	< 0.5	37.3	≤ 40
pH	-	4500-H B	< 0.10	7.09	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	204	≤ 43,660 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 2.5	< 2.5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.5	≤ 20
COD	mg/l	5220 C	< 15.00	22.57	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED., 2017 (AWWA, APHA, WEF)

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-ก-0004

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3. ^{1/} Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of Ministry of Industry, B.E.2560 (2017).

^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value in the last month add 5,000 mg/l from klongbangburd = 38,660 mg/l).

4. - Not available.

คุณภาพน้ำใต้ดิน



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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No	: 0561/68
	(Branch 11 : LDPE)	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 10:00-10:28
SAMPLING DATE	: 24/03/2025	ANALYTICAL DATE	: 28-31/03/2025
RECEIVED DATE	: 27/03/2025	SITE OPERATOR	: Mr.Natthachai Chaiyakhot
REPORT DATE	: 05/04/2025	FILE CODE	: 224106_GW_March
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-03	STANDARD ^{1/}
Total Petroleum Hydrocarbons					
- TPH (C ₃ - C ₉)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₈ - C ₁₆)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₆ - C ₃₅)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-8-0001

NR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-8-0004

- Remark :**
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 2. This report shall not be reproduced, except in full, without official approval.
 3. ^{1/} Notification of the Ministry of Industry, B.E.2559 (2016).



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0561/68
	(Branch 11 : LDPE)	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 11:27-11:40
SAMPLING DATE	: 24/03/2025	ANALYTICAL DATE	: 28-31/03/2025
RECEIVED DATE	: 27/03/2025	SITE OPERATOR	: Mr.Natthachai Chaiyakhot
REPORT DATE	: 05/04/2025	FILE CODE	: 224106_GW_March
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-08	STANDARD ^{1/}
Total Petroleum Hydrocarbons					
- TPH (C ₃ - C ₉)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₈ - C ₁₆)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₆ - C ₃₅)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-8-0001

NR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-8-0004

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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE)	REQUEST SERVICE No	: 0561/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 24/03/2025	SAMPLING TIME	: 10:47-10:59
RECEIVED DATE	: 27/03/2025	ANALYTICAL DATE	: 28-31/03/2025
REPORT DATE	: 05/04/2025	SITE OPERATOR	: Mr.Natthachai Chaiyakhrot
SAMPLE CONDITION	: Normal	FILE CODE	: 224106_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD ^{1/}
Total Petroleum Hydrocarbons					
- TPH (C ₅ - C ₈)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₈ - C ₁₀)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₄ - C ₃₅)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetratriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3rd ED., 2020

Sudaporn S.
(Miss Sudaporn Soonthorn)
Analyst

REG. NO. 2-239-9-0001

Araya
(Mrs. Araya Tipparuk)
Technical Management Team

REG. NO. 2-239-9-0004

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ระดับเสียง



Noise Monitoring Result : Community Noise MTR-PTTGC-LDPE Plant

Location : South of Fence Monitor Period : 11-18 Mar 2025
SLM Model : Cirrus CR162B Serial No : G300769
Site Operator : Mr. Phuwadech Kaewjirakulsri

Calibrator Model : Cirrus CR:515 Serial No : 97097
Calibration Ref dB(A) : 94.0 Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-066

Time	Equivalent Sound Pressure Level (dB(A))						
	11-12 Mar 2025	12-13 Mar 2025	13-14 Mar 2025	14-15 Mar 2025	15-16 Mar 2025	16-17 Mar 2025	17-18 Mar 2025
17:00 - 18:00	69.2	68.1	67.7	68.3	67.8	65.7	68.8
18:00 - 19:00	67.8	68.2	66.8	68.5	67.5	67.4	68.7
19:00 - 20:00	71.5	67.3	66.7	67.2	66.5	65.8	66.7
20:00 - 21:00	65.2	64.7	65.3	65.3	66.3	64.8	66.0
21:00 - 22:00	63.6	65.1	64.5	64.9	65.5	64.4	65.7
22:00 - 23:00	63.7	65.8	63.7	64.6	67.3	63.5	64.0
23:00 - 00:00	63.8	65.8	64.1	64.3	69.9	63.9	63.9
00:00 - 01:00	63.4	64.5	64.2	63.9	67.9	63.8	64.0
01:00 - 02:00	62.5	63.8	63.2	64.3	64.7	62.8	63.1
02:00 - 03:00	62.5	63.4	62.5	65.2	63.1	62.8	62.9
03:00 - 04:00	62.3	64.2	62.9	65.0	62.8	63.1	62.7
04:00 - 05:00	62.5	63.5	63.3	63.4	63.3	64.5	63.1
05:00 - 06:00	63.1	63.8	64.0	63.9	63.5	63.8	63.6
06:00 - 07:00	68.7	68.5	68.6	68.3	67.3	68.2	68.3
07:00 - 08:00	70.1	70.0	70.2	69.4	68.2	69.5	69.7
08:00 - 09:00	67.6	68.5	67.8	67.6	67.0	68.0	67.9
09:00 - 10:00	65.8	66.1	65.8	65.2	66.0	65.8	66.9
10:00 - 11:00	66.3	66.2	66.2	66.0	65.8	65.9	66.9
11:00 - 12:00	67.3	66.2	66.7	65.7	66.2	67.6	67.7
12:00 - 13:00	66.7	66.1	65.9	67.3	64.9	65.5	66.1
13:00 - 14:00	65.7	65.9	65.6	66.0	65.8	65.6	65.6
14:00 - 15:00	65.6	65.9	65.2	65.0	66.4	66.4	65.8
15:00 - 16:00	66.1	66.2	66.3	65.8	66.5	67.8	66.6
16:00 - 17:00	67.3	66.6	67.0	66.4	66.6	67.7	66.6
Leq(24)*	66.5	66.4	66.0	66.2	66.4	66.0	66.4
Ldn	71.2	71.9	71.3	71.7	72.7	71.2	71.3
Lmax **	101.8	90.2	96.0	92.9	90.2	97.6	92.9
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 17:00-17:00

** Maximum Sound Pressure Level between 17:00-17:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise MTR-PTTGC-LDPE Plant

Location : South of Fence Monitor Period : 11-18 Mar 2025
SLM Model : Cirrus CR162B Serial No : G300769
Site Operator : Mr. Phuwadech Kaewjirakulsri

Calibrator Model : Cirrus CR:515 Serial No : 97097
Calibration Ref dB(A) : 94.0 Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-066

Time	L90 (dB(A))						
	11-12 Mar 2025	12-13 Mar 2025	13-14 Mar 2025	14-15 Mar 2025	15-16 Mar 2025	16-17 Mar 2025	17-18 Mar 2025
17:00 - 18:00	63.3	63.3	63.2	63.7	62.4	61.6	63.6
18:00 - 19:00	62.7	63.2	63.2	63.9	63.2	62.7	63.7
19:00 - 20:00	61.6	62.1	62.5	63.0	62.9	61.9	62.0
20:00 - 21:00	61.3	62.0	62.3	62.5	62.3	62.1	62.1
21:00 - 22:00	61.5	62.2	62.4	62.5	62.5	62.4	62.3
22:00 - 23:00	61.6	62.2	62.1	62.5	62.4	62.4	62.4
23:00 - 00:00	61.5	62.2	62.2	62.5	63.1	62.3	62.4
00:00 - 01:00	61.6	62.3	62.8	62.5	62.5	62.1	62.4
01:00 - 02:00	61.7	62.3	62.1	62.6	62.4	61.9	62.4
02:00 - 03:00	61.7	62.5	62.1	62.5	62.3	62.1	62.3
03:00 - 04:00	61.7	62.7	62.2	62.5	62.2	62.3	62.3
04:00 - 05:00	61.5	62.9	62.6	62.5	62.3	62.3	62.4
05:00 - 06:00	60.6	61.4	61.6	61.8	61.8	61.7	61.7
06:00 - 07:00	63.1	63.8	63.8	62.9	63.1	63.4	63.5
07:00 - 08:00	65.6	66.1	65.1	63.7	63.4	65.5	65.9
08:00 - 09:00	62.2	63.7	62.9	62.3	62.5	63.0	63.1
09:00 - 10:00	61.8	63.2	62.3	62.4	62.6	62.4	62.8
10:00 - 11:00	62.4	61.8	62.3	62.2	62.3	62.3	62.7
11:00 - 12:00	62.5	62.2	61.9	62.2	62.2	62.3	62.9
12:00 - 13:00	61.7	62.0	61.8	62.0	61.9	61.8	62.1
13:00 - 14:00	61.7	61.6	61.8	62.1	62.1	61.8	61.7
14:00 - 15:00	62.0	61.8	61.7	62.0	62.2	62.3	61.5
15:00 - 16:00	62.0	61.8	62.2	62.2	62.1	63.1	62.0
16:00 - 17:00	62.7	62.4	62.7	62.7	62.2	63.4	62.2
L90(avg)*	62.2	62.7	62.6	62.6	62.5	62.5	62.7

Remark : * Average time between 17:00-17:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

คุณภาพอากาศในพื้นที่ปฏิบัติงาน



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0268/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 10/02/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 13/02/2025
		Test Date	: 15/02/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Report Date	: 21/02/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sampling Bag
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
Compressor area	10/02/2025	Ethylene	Modif. Intersociety Committee 101/GC FID	< 0.01	ND	200
	11:20-11:35					
Eruder and pellet dryer	10/02/2025	Ethylene	Modif. Intersociety Committee 101/GC FID	< 0.01	ND	200
	10:55-11:10					
Bagging Area (Silo)	10/02/2025	Ethylene	Modif. Intersociety Committee 101/GC FID	< 0.01	ND	200
	10:35-10:50					

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Mairisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. Standard of the American Conference of Governmental Industrial Hygienists 2025 : ACGIH 2025.
4. ND = non-detectable.



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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0268/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 10/02/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 13/02/2025
		Test Date	: 18/02/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Report Date	: 21/02/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
บริเวณถังกักเก็บ	10/02/2025	Propionic aldehyde	NIOSH 2539/GC FID	< 0.03	ND	20
	10:10-13:10					
บริเวณส่วนการผลิต	10/02/2025	Propionic aldehyde	NIOSH 2539/GC FID	< 0.03	ND	20
	11:40-14:40					

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Mairisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0268/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 10/02/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 13/02/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 19/02/2025
		Report Date	: 21/02/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Filtration
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
บริเวณถังเก็บ	10/02/2025 10:10-14:10	Organic peroxide as Hydrogen peroxide	HPLC	< 0.007	ND	-
บริเวณส่วนการผลิต	10/02/2025 11:40-15:40	Organic peroxide as Hydrogen peroxide	HPLC	< 0.007	ND	-

Analyst By : Jutarat Jaemruen
(Miss Jutarat Jaemruen)

Approved By : Maia Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0268/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 10/02/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 13/02/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 15/02/2025
		Report Date	: 21/02/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
บริเวณถังเก็บ	10/02/2025 10:10-13:10	Isododecane	NIOSH 1500/GC FID	< 0.01	ND	-
บริเวณส่วนการผลิต	10/02/2025 11:40-14:40	Isododecane	NIOSH 1500/GC FID	< 0.01	ND	-

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Maia Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0268/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 10/02/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 13/02/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 19/02/2025
		Report Date	: 21/02/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sampling Bag
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
บริเวณถังเก็บ	10/02/2025	Total Hydrocarbon	THC Analyzer / FID	< 0.10	5.26	-
	10:10-10:25	NMHC	THC Analyzer / FID	< 0.05	0.29	-
บริเวณส่วนการผลิต	10/02/2025	Total Hydrocarbon	THC Analyzer / FID	< 0.10	5.39	-
	11:40-11:55	NMHC	THC Analyzer / FID	< 0.05	0.21	-

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Mairin Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0955/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 23/05/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 26/05/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 04/06/2025
		Report Date	: 05/06/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sampling Bag
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
Compressor area	23/05/2025	Ethylene	Modif. Intersociety	< 0.01	ND	200
	12:00-12:15		Committee 101/GC FID			
Extruder and pellet dryer	23/05/2025	Ethylene	Modif. Intersociety	< 0.01	ND	200
	11:40-11:55		Committee 101/GC FID			
Bagging area (Silo)	23/05/2025	Ethylene	Modif. Intersociety	< 0.01	ND	200
	11:20-11:35		Committee 101/GC FID			

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Mairin Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0955/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 23/05/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 26/05/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 28/05/2025
		Report Date	: 05/06/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
บริเวณถังกักเก็บ	23/05/2025 10:30-14:30	Propionic aldehyde	NIOSH 2539/GC FID	< 0.03	ND	20
บริเวณส่วนการผลิต	23/05/2025 11:00-15:00	Propionic aldehyde	NIOSH 2539/GC FID	< 0.03	ND	20

Analyst By: Sudaporn S.
(Miss Sudaporn Soonthom)

Approved By: Mairisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0955/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 23/05/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 26/05/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 29/05/2025
		Report Date	: 05/06/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Filtration
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
บริเวณถังกักเก็บ	23/05/2025 10:30-14:30	Organic peroxide as Hydrogen peroxide	HPLC	< 0.007	ND	-
บริเวณส่วนการผลิต	23/05/2025 11:00-15:00	Organic peroxide as Hydrogen peroxide	HPLC	< 0.007	ND	-

Analyst By: Jutarat Jaemruen
(Miss Jutarat Jaemruen)

Approved By: Mairisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0955/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 23/05/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 26/05/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 02/06/2025
		Report Date	: 05/06/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
บริเวณถังกักเก็บ	23/05/2025	Isododecane	NIOSH 1500/GC FID	< 0.01	ND	-
	10:30-14:30					
บริเวณส่วนการผลิต	23/05/2025	Isododecane	NIOSH 1500/GC FID	< 0.01	ND	-
	11:00-15:00					

Analyst By: Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By: Mairisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0955/68
For	: PTT Global Chemical Public Co., Ltd. (Branch 11 : LDPE Plant)	Sampling Date	: 23/05/2025
Address	: 8 Padang Road , Padang Industrial Estate , Tambon Mab Ta Phut , Amphoe Muang, Rayong 21150	Received Date	: 26/05/2025
Tel/Fax	: 0-3868-7123 ext. 6666 / 0-3868-7128	Test Date	: 27/05/2025
		Report Date	: 05/06/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sampling Bag
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
บริเวณถังกักเก็บ	23/05/2025	Total Hydrocarbon	THC Analyzer / FID	< 0.10	9.37	*
	10:30-10:45	NMHC	THC Analyzer / FID	< 0.05	2.15	*
บริเวณส่วนการผลิต	23/05/2025	Total Hydrocarbon	THC Analyzer / FID	< 0.10	8.15	*
	11:00-11:15	NMHC	THC Analyzer / FID	< 0.05	2.02	*

Analyst By: Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By: Mairisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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ระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน



Noise Monitoring Result : Working Noise

MTR-LDPE

LOCATION	: Control room	MEASUREMENT DATE	: 25-02-2025
SLM MODEL	: Cirrus CR162C	SERIAL No.	: G300832
SITE OPERATOR	: Miss Salisa Ainree		


CALIBRATOR MODEL	: Cirrus CR:515	SERIAL No.	: 97097
CALIBRATION REF/EFF dB(A)	: 94.0/93.7	CERTIFIED DATE	: 02-10-2024
SLM READING/ADJUST dB(A)	: 93.7/0.0	EXPIRE DATE	: 01-10-2025
CAL SHEET No.	: CAL-2502-0033-01		

TIME	EQUIVALENT SOUND PRESSURE LEVEL (dB(A))
	25-02-2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	55.7
08:00 - 09:00	55.6
09:00 - 10:00	57.9
10:00 - 11:00	54.9
11:00 - 12:00	57.4
12:00 - 13:00	53.1
13:00 - 14:00	53.5
14:00 - 15:00	55.9
15:00 - 16:00	56.9
16:00 - 17:00	56.8
17:00 - 18:00	56.0
18:00 - 19:00	57.1
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 00:00	

Leq(12)	56.1
Lmax	74.7
Standard*	87 dB(A)
Standard-Max	140 dB(A)

Remark : * Notification of Ministry of Industry, B.E.2546


(Miss Katesarin Vorradetwitaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-LDPE

LOCATION	: Compressor area	MEASUREMENT DATE	: 25-02-2025
SLM MODEL	: SCARLET TECH ST-21D	SERIAL No.	: 820722
SITE OPERATOR	: Miss Salisa Ainree		


CALIBRATOR MODEL	: Cirrus CR:515	SERIAL No.	: 97097
CALIBRATION REF/EFF dB(A)	: 94.0/93.8	CERTIFIED DATE	: 02-10-2024
SLM READING/ADJUST dB(A)	: 93.8/0.0	EXPIRE DATE	: 01-10-2025
CAL SHEET No.	: CAL-2502-0033-01		

TIME	EQUIVALENT SOUND PRESSURE LEVEL (dB(A))
	25-02-2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	84.7
08:00 - 09:00	84.8
09:00 - 10:00	84.9
10:00 - 11:00	84.9
11:00 - 12:00	85.0
12:00 - 13:00	84.7
13:00 - 14:00	84.9
14:00 - 15:00	84.9
15:00 - 16:00	84.8
16:00 - 17:00	84.8
17:00 - 18:00	84.6
18:00 - 19:00	84.7
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 00:00	

Leq(12)	84.8
Lmax	88.4
Standard*	87 dB(A)
Standard-Max	140 dB(A)

Remark : * Notification of Ministry of Industry, B.E.2546


(Miss Katesarin Vorradetwitaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-LDPE

LOCATION	: Extruder and pellet dryer	MEASUREMENT DATE	: 25-02-2025
SLM MODEL	: SCARLET TECH ST-21D	SERIAL No.	: 820728
SITE OPERATOR	: Miss Salisa Ainree		

CALIBRATOR MODEL	: Cirrus CR:515	SERIAL No.	: 97097
CALIBRATION REF/EFF dB(A)	: 94.0/93.8	CERTIFIED DATE	: 02-10-2024
SLM READING/ADJUST dB(A)	: 93.8/0.0	EXPIRE DATE	: 01-10-2025
CAL SHEET No.	: CAL-2502-0033-01		

TIME	EQUIVALENT SOUND PRESSURE LEVEL (dB(A))	
	25-02-2025	
00:00 - 01:00		
01:00 - 02:00		
02:00 - 03:00		
03:00 - 04:00		
04:00 - 05:00		
05:00 - 06:00		
06:00 - 07:00		
07:00 - 08:00	84.5	
08:00 - 09:00	84.6	
09:00 - 10:00	84.5	
10:00 - 11:00	84.7	
11:00 - 12:00	84.6	
12:00 - 13:00	84.3	
13:00 - 14:00	84.9	
14:00 - 15:00	84.8	
15:00 - 16:00	84.7	
16:00 - 17:00	84.5	
17:00 - 18:00	84.4	
18:00 - 19:00	84.5	
19:00 - 20:00		
20:00 - 21:00		
21:00 - 22:00		
22:00 - 23:00		
23:00 - 00:00		
Leq(12)	84.6	
Lmax	89.5	
Standard*	87 dB(A)	
Standard-Max	140 dB(A)	

Remark : * Notification of Ministry of Industry, B.E.2546



(Miss Katesarin Vorradetwittaya)
Environmental Scientist



(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-LDPE

LOCATION	: Admin Building	MEASUREMENT DATE	: 25-02-2025
SLM MODEL	: SCARLET TECH ST-21D	SERIAL No.	: 820726
SITE OPERATOR	: Miss Salisa Ainree		

CALIBRATOR MODEL	: Cirrus CR:515	SERIAL No.	: 97097
CALIBRATION REF/EFF dB(A)	: 94.0/93.8	CERTIFIED DATE	: 02-10-2024
SLM READING/ADJUST dB(A)	: 93.8/0.0	EXPIRE DATE	: 01-10-2025
CAL SHEET No.	: CAL-2502-0033-01		

TIME	EQUIVALENT SOUND PRESSURE LEVEL (dB(A))	
	25-02-2025	
00:00 - 01:00		
01:00 - 02:00		
02:00 - 03:00		
03:00 - 04:00		
04:00 - 05:00		
05:00 - 06:00		
06:00 - 07:00		
07:00 - 08:00	53.1	
08:00 - 09:00	52.7	
09:00 - 10:00	52.3	
10:00 - 11:00	53.1	
11:00 - 12:00	52.1	
12:00 - 13:00	52.7	
13:00 - 14:00	53.4	
14:00 - 15:00	52.7	
15:00 - 16:00		
16:00 - 17:00		
17:00 - 18:00		
18:00 - 19:00		
19:00 - 20:00		
20:00 - 21:00		
21:00 - 22:00		
22:00 - 23:00		
23:00 - 00:00		
Leq(8)	52.8	
Lmax	80.4	
Standard*	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : * Notification of Ministry of Industry, B.E.2546



(Miss Katesarin Vorradetwittaya)
Environmental Scientist



(Miss Sununta Sirawuttinanon)
Technical Management Team

ระดับเสียงสะสมที่ถูกจ้างได้รับเฉลี่ยตลอดระยะเวลา
การทำงานในแต่ละวัน (TWA)



บริษัท ซีคอต จำกัด

SECOT CO.,LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND


TEL : +66(0) 2959-3600 FAX : +66(0) 2595-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225106/MON1H/Noise Dose
	(Branch 11 : LDPE)		
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 25-02-2025	CALIBRATOR TYPE	: Pulsar Model 22R
MEASUREMENT LOCATION	: LDPE Plant	SERIAL NO.	: 79781
SITE OPERATOR	: Miss Salisa Ainree	CALIBRATOR REF.	: 114 dB @ 1kHz

OPERATION ID	AREA/PLANT	TIME	SOUND PRESSURE LEVEL (dB(A))		
			%Dose	TWA (12-hr)	STANDARD*
ID : 26006639	Compressor	7:20-19:00	88.9	82.7	83.0
ID : 26003647	Extruder and Pellet Dryer	7:20-19:00	55.5	80.7	83.0


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Department of Labour Protection and Welfare B.E.2561 (2018).
 4. TWA means Time Weighted Average.

ความร้อนภายในสถานที่ทำงาน



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

TEL : (662) 959-3600 FAX : (662) 959-3535 E-mail : envserv@secot.co.th

HEAT STRESS MEASUREMENT REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225106_Heat/Apr
(Branch 11 : LDPE)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Area Heat Stress Monitor
MEASUREMENT DATE : 21/04/2025 MODEL NO. : JT2011-E2A
MEASUREMENT LOCATION : Pellet Dryer SERIAL NO. : 3522210175
SITE OPERATOR : Miss Salisa Ainree

LOCATION	TIME	MEASURED TEMPERATURE (°C)					STANDARD (°C) *
		NWB	DB	GT	WBGT _{In}	WBGT _{Avg}	WBGT
Pellet Dryer	10:26-10:56	28.6	33.3	34.3	30.3	31.0	34.0
	10:56-11:26	29.3	33.9	34.1	30.7		
	11:26-11:56	30.1	33.9	34.2	31.3		
	11:56-12:26	30.5	34.0	34.2	31.6		

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. *WBGT Standard was notified by the Ministerial of Labor B.E.2559 (2016).

NWB = Natural Wet Bulb Temperature

DB = Dry Bulb Temperature

GT = Globe Temperature

WBGT = Wet Bulb Globe Temperature

Work Load : Light work load = 34.0 °C, Moderate work load = 32.0 °C and Heavy work load = 30.0 °C

ภาคผนวก จ

ใบแสดงการตรวจเทียบเครื่องมือ

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number: E04NI99E15AC084 Reference Number: 82-401409170-1
Cylinder Number: EB0102326 Cylinder Volume: 144.4 CF
Laboratory: 124 - Riverton (SAP) - NJ Cylinder Pressure: 2015 PSIG
PGVP Number: B52019 Valve Outlet: 660
Gas Code: CO,NO,NOX,SO2,BALN Certification Date: Feb 05, 2019

Expiration Date: Feb 05, 2027

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS					
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	50.00 PPM	51.01 PPM	G1	+/- 0.9% NIST Traceable	01/28/2019, 02/05/2019
NITRIC OXIDE	50.00 PPM	50.86 PPM	G1	+/- 0.9% NIST Traceable	01/28/2019, 02/05/2019
SULFUR DIOXIDE	50.00 PPM	50.87 PPM	G1	+/- 1.0% NIST Traceable	01/28/2019, 02/05/2019
CARBON MONOXIDE	0.5000 %	0.5050 %	G1	+/- 0.7% NIST Traceable	01/31/2019
NITROGEN	Balance				

CALIBRATION STANDARDS					
Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	13060206	CC401947	4950 PPM CARBON MONOXIDE/NITROGEN	+/- 0.4%	Feb 15, 2019
PRM	12367	APEX1099237	9.82 PPM NITROGEN DIOXIDE/AIR	+/- 2.0%	Jun 02, 2017
NTRM	12010724	KAL004497	50.03 PPM NITRIC OXIDE/NITROGEN	+/- 0.8%	Mar 12, 2024
GMIS	1114201601	CC506710	4.971 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.0%	Nov 14, 2019
NTRM	14010327	KAL004376	49.08 PPM SULFUR DIOXIDE/NITROGEN	+/- 1.0%	Apr 17, 2024

The SRM, PRM or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Siemens Ultramat 6 J3-599 COHIGH	NDIR	Jan 18, 2019
Nicolet 6700 APW1100391 NO	FTIR	Jan 10, 2019
Nicolet 6700 APW1100391 NO2	FTIR	Jan 10, 2019
Nicolet 6700 APW1100391 SO2	FTIR	Jan 10, 2019

Triad Data Available Upon Request

PERMANENT NOTES: PRODUCED IN ACCORDANCE WITH ISO17025 REQUIREMENTS

NOTES:

Gross Weight: 27806.3 grams

Net Weight: 4733.2 grams

This calibration std. has been certified in accordance with the May 2012 EPA Traceability Protocol, Document EPA-600/R-12/531. All testing processes and measurements conform to the requirements of ISO/IEC 17025 and to Airgas ISO 9001:2008 and relate only to items identified on this certificate. All items are certified to be NIST Traceable with total uncertainty as detailed under Analytical Uncertainty. This document shall not be reproduced in full without written approval of the issuer.

ACCREDITED

TESTING CERT No. 3082.05

[Signature]
Approved for Release



CONTROL UNIT CALIBRATION

(Metric units, mm)

Date 9 Jan 25

Initial Final Average

Barometric press, Pb 758 758 758 mmHg

Dry Gas Meter Data

Reference Dry Gas Meter Data

Console No. M50-09

Serial No. 358794

Metering System ID

Model S110

DGM Number 333249

Correction factor (Yr) 1.0077

DGM Model ES-110

Last Calibration Date 25 Oct 24

Calibrated by : Montri P.

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V _r Liters	DGM Volume V _m Liters	Temperature (°C)				Time Θ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T _r	Dry Gas Meter					
				Inlet T _i	Outlet T _o	Avg T _m			
12.5	100.1	101.3	25	25	24	24.5	8.57	0.9926	41.6238
25.0	100.2	100.4	25	25	24	24.5	6.23	1.0012	44.0131
50.0	100.1	100.5	25	25	24	24.5	4.42	0.9965	44.2732
76.0	100.2	99.7	25	25	24	24.5	3.58	1.0037	44.1905
100.0	100.3	99.6	25	25	24	24.5	3.58	1.0034	45.3098
150.0	100.3	99.2	25	25	24	24.5	2.60	1.0029	45.7895

Average 1.0000 44.2000

Approved by : *[Signature]*



PITOT TUBE CALIBRATION REPORT

Calibration Location: SECOT

Calibration Date : 04-01-2025

Calibration Duct No.: CD-0123

Calibration Standard Pitot tube data

Pitot No. : Std-02

Coefficient (Cp) : 0.99

Type S Pitot No. : LL10-01

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔP_{std} (mm H ₂ O)	ΔP_s (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	15.0	21.0	0.8367	-0.0068
2	15.0	20.5	0.8468	0.0034
3	15.0	20.5	0.8468	0.0034

$C_{P(A),avg}$ 0.8435

B Side Calibration

Run No.	ΔP_{std} (mm H ₂ O)	ΔP_s (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	15.0	20.5	0.8468	0.0034
2	15.0	21.0	0.8367	-0.0068
3	15.0	20.5	0.8468	0.0034

$C_{P(B),avg}$ 0.8435

$|CP(A) - CP(B)| = 0.0000$

$C_{P(Avg)} = 0.8435$

Approved by :

*** δ must be ≤ 0.01 for the test to be acceptable ***
 *** $|Cp(A) - Cp(B)|$ must also be < 0.01 if average of Cp(A) and Cp(B) is to be used ***



Certificate Of Analysis Special Gases Mixture

Customer Details

Name:
Secot Co., Ltd.

Address:
239 Rimklongpropa Rd. Bangsue Khet Bangsue
Bangkok 10800

Customer Tag No.:

Certificate Details

Number:	0483/23	Date of Issue:	22-Feb-2023	Expiry date:	21-Feb-2027
Material Details					
Production Order:	90176403	Material Code:	478100-J-62	Cylinder No.:	51108
Gas content:	6.520 M ³ (nominal)	Filling pressure:	145 bar (g)	Valve:	CGA 590 BRASS
Cylinder Owner:	LINDE	Cylinder Material:	STEEL	Cylinder Size:	47 L

Laboratory Report

Component	Normal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³
Oxygen	8.00%	7.93%	$\pm 2\%$ relative	(1) SG-O-01
In Nitrogen				

Recommend usage condition

Minimum utilization: 5% of actual content or before expire date whichever comes first.
 Storage condition: Keep in well ventilation and secure area.

Comments

Note:

- All results expressed in this report are on mole/mole basis, unless otherwise specified.
- The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
- (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Sukanya Parinyasontorn

Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Page 1 of 1

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PB-002/F004

Iss:K/2, 15 Oct 2021

บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)

เลขทะเบียนการค้า: 0107337000785

ชั้น 15 อาคารทาวเวอร์ เอ 2/3 หมู่ 14 ถนนพหลโยธิน-ประชาคม กม. 6.5 แขวงจตุจักร

เขตจตุจักร กรุงเทพมหานคร 10540 โทรศัพท์ (66) 2338-6100 โทรสาร (66) 2338-6333

โรงงานผลิต: 105 หมู่ 5 ตำบลบึงนาราง อำเภอเมือง จังหวัดพิจิตร 34180

โทรศัพท์ (66) 38.570-479-93

โทรสาร (66) 38.570-323

Linde (Thailand) Public Company Limited

PLC Registration no. 0107337000785

15th Floor, Bangna Tower A, 2/3 Moo 14, Bangna Road, Bangnae

Bangplee, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

Wellgrow Plant: 105 Moo 5, T.Bangsamak, A.Bangplee, Chachoengsao 24180

Thailand, Tel (66) 38.570-479-93

Fax (66) 38.570-323

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Secot Co., Ltd. Address: 239, Rimklongprapa Rd., Bangsue, Bangkok 10800 Customer Tag No.:

Certificate Details

Number: 0527/23 Date of Issue: 8-Mar-2023 Expiry date: 8-Mar-2026
Material Details
Production Order: 90176406 Material Code: 511600-SK-34 Cylinder No.: A00878SK
Gas content: 5.20 M³ Filling pressure: 137.0 bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 40 L

Laboratory Report

Analytical Result

Component	Nominal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Nitric Oxide	40.0 ppm	39.8 ppm	± 1% relative	(6) I-PB-352	1-Mar & 8-Mar-23
Other NOx impurity		Less than 1.9 ppm			
Carbon Monoxide	40.0 ppm	42.0 ppm	± 1% relative	(6) I-PB-352	1-Mar-2023
In Nitrogen					

Reference Standard used in Assay

Reference Standard	Cylinder number	Concentration	Expiry date:
Nitric Oxide	1332615G	25.61 ± 0.13 ppm	6-May-2023
Carbon Monoxide	NDS2320	25.03 ± 0.13 ppm	7-Oct-2023
In Nitrogen			

Analytical Instruments used in Assay

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
FTIR Spectrometers Nicolet iS50	FTIR-NO	28-Feb-2023
FTIR Spectrometers Nicolet iS50	FTIR-CO	25-Feb-2023

Recommend usage condition

Minimum utilization: 5% of actual content or before expiry date whichever comes first.
Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/R-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Sukanya Parinyasoontorn
Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Page 1 of 1

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บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)

เลขที่ใบแจ้งหนี้: 0107537000785

ตั้ง 15 อาคารทาวเวอร์ 2/3 หมู่ 14 ถนนบางนา-ตราด กม. 6.5 แขวงบางนา

เขตคลองเตย กรุงเทพมหานคร 10540 โทรศัพท์ (66) 2338-6100 โทรสาร (66) 2338-6333

โรงงานเวลลิงโกรว์: 105 หมู่ 5 ตำบลมีนบุรี อำเภอเมือง จังหวัดสมุทรปราการ 24180

โทรศัพท์ (66) 38.570-479-93 โทรสาร (66) 38.570-323

Linde (Thailand) Public Company Limited Iss.K/2, 15 Oct 2021

P.L.E. Registration no. 0107537000785

15th Floor, Bangna Tower A, 2/3 Moo 14, Bangna Trad KM. 6.5 Road, Bangkok

Bangplee, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

Wellgrow Plant: 105 Moo 5, T.Bangsamak, A.Bangpakong, Chachoengsao 24180

Thailand, Tel (66) 38.570-479-93 Fax (66) 38.570-323

Making our world more productive

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Secot Co., Ltd. Address: 239, Rimklongprapa Rd., Bangsue, Bangkok 10800 Customer Tag No.:

Certificate Details

Number: 1393/24 Date of Issue: 24-May-2024 Expiry date: 24-May-2027
Material Details
Production Order: 90183672 Material Code: 436700-SK-34 Cylinder No.: A00987SK
Gas content: 6.900 M³ Filling pressure: 145 bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 40 L

Laboratory Report

Analytical Result

Component	Nominal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Nitric Oxide	80.0 ppm	79.0 ppm	± 1% relative	(6) I-PB-352	15 & 23-May-2024
Other NOx impurity		Less Than 3.9 ppm			
Carbon Monoxide	80.0 ppm	81.7 ppm	± 1% relative	(6) I-PB-352	15 & 23-May-2024
In Nitrogen					

Reference Standard used in Assay

Reference Standard	Cylinder number	Concentration	Expiry date:
Carbon Monoxide	D619725	70.6 ± 0.2 ppm	20-Sep-2026
Nitric Oxide	D619725	70.6 ± 0.2 ppm	20-Sep-2026
In Nitrogen			

Analytical Instruments used in Assay

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
FTIR Spectrometers Nicolet iS50	FTIR-CO	7-May-2024
FTIR Spectrometers Nicolet iS50	FTIR-NO	7-May-2024

Recommend usage condition

Minimum utilization: 5% of actual content or before expiry date whichever comes first.
Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/R-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Page 1 of 1

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Sukanya Parinyasoontorn
Signatory for and on behalf of Linde (Thailand) Co., Ltd.

PB-002/F006

Iss.M/1, 01 December 2023

บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)

เลขที่ใบแจ้งหนี้: 0107537000785

ตั้ง 15 อาคารทาวเวอร์ 2/3 หมู่ 14 ถนนบางนา-ตราด กม. 6.5 แขวงบางนา

เขตคลองเตย กรุงเทพมหานคร 10540 โทรศัพท์ (66) 2338-6100 โทรสาร (66) 2338-6333

โรงงานเวลลิงโกรว์: 105 หมู่ 5 ตำบลมีนบุรี อำเภอเมือง จังหวัดสมุทรปราการ 24180

โทรศัพท์ (66) 38.570-479-93 โทรสาร (66) 38.570-323

Linde (Thailand) Public Company Limited

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Thailand, Tel (66) 38.570-479-93 Fax (66) 38.570-323



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Mar 11, 25

ACOUSTIC CALIBRATOR

Brand	Model	Serial No.	Frequency (Hz)	Ref. Calibrated (dB)	Eff. Calibrated (dB)
Cirrus	CR:515	97097	1000.00	94.0	93.7

No.	Brand	Model	Serial No.	Reading (dB)	dB Adjust
15	Cirrus	CR162B	G300769	93.7	0.0

Calibrated by :

Approved by :

Preeda S.



THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-67/0303

MTC.No.23-67/0303-02

Number of page(s) 2

CALIBRATION CERTIFICATE

Nomenclature : DRYCAL

Manufacturer : Mesa Labs

Serial No.: 160100

Model : Defender 520-L

Scale range : 5 ml/min to 500 ml/min

Subdivision : (0.001, 0.01) ml/min

Submitted by : SECOT CO.,LTD.

239, Rimklongprapa Road, Bangsue,

Bangkok 10800, Thailand.

Received date : 13 February 2024 Condition of measured item : Normal

Calibration date : 6 March 2024

Standard :

Standard	Certificate No.	Date due	Traceability
RTD Thermometer	PSL-T 643/65	1-Jun-24	TISTR
Molbox/Pressure Transducer/UpStream	MP-0076-23	2-Apr-25	NIMT
Primary Flow Calibrator S/N 117982	MW-0034-23	11-Jun-25	NIMT

Calibrated by : Terasak Panna

(Mr.Terasak Panna)

Approved by :

(Ms.Kirana Luanghirun)

Director

Mechanical Engineering Standards Laboratory

Ref. 2013267021300639002

Issued Date 11 March 2024

The results relate only to the items tested/calibrated or value assigned.

Advertising the Report/Certificate and publicity of the results except in full are prohibited unless written permission is obtained from the governor of TISTR.

Head Office

35 Mu 3 Tambon Khlong Ha, Amphoe Khlong Luang,
Changwat Pathumthani 12120, Thailand
Tel. (66) 0 2577 9000
Fax. (66) 0 2577 9009
E-mail : rumpai@tistr.or.th Website:www.tistr.or.th

Office/Laboratory

Soi 1C, Bangpoo Industrial Estate, Sukhumvit Road,
Amphoe Muang, Changwat Samutprakan 10280, Thailand
Tel. (66) 0 2323 1672-80 ext. 115, 116
Fax. (66) 0 2323 9165
E-mail : mtc@tistr.or.th

Office

196 Phahonyothin Road, Chatuchak, Bangkok 10900,
Thailand
Tel. (66) 0 2579 1121-30 ext. 5219, 5225, 5217
Fax. (66) 0 2579 8592
E-mail : sumalee@tistr.or.th



THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-67/0303

2/2

MTC.No.23-67/0303-02

Calibration point : (20, 50, 100, 200, 400) ml/min

Ambient condition : Temperature (23 ± 3) °C , Relative humidity (55 ± 15) %

Atmospheric pressure (1010 ± 13) hPa

Calibration method : The flowmeter (UUC) was calibrated by comparison method with standard flowmeter according to CP-370.01.

The reported value is the value that converted to value at reference condition within pressure and temperature of the actual gas entering the UUC

Measurement data :

UUC Value (ml/min)	Standard Value (ml/min)	Temperature (°C)	Pressure (hPa)	Deviation (%)	Uncertainty (%)
19.854*	19.920	25.169	1006.69	-0.33	1.1
49.990	50.384	25.058	1006.80	-0.78	1.1
99.770	99.036	25.047	1006.89	+0.74	0.99
199.87	192.51	24.984	1007.03	+3.82	1.0
401.92	384.44	24.959	1007.30	+4.55	0.99

The reported expanded uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, which provides a level of confidence of approximately 95%.

* : The calibration point is not the scope of accreditation.

The end of calibration certificate.

The results relate only to the items tested/calibrated or value assigned.
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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-67/0383

MTC.No.23-67/0383

Number of page(s) 2

CALIBRATION CERTIFICATE

Nomenclature : DRYCAL

Manufacturer : Mesa Labs

Serial No.: 114069

Model : Defender 520-H

Scale range : 300 ml/min to 30,000 ml/min

Subdivision : (0.0001, 0.001) L/min

Submitted by : SECOT CO.,LTD.

239, Rimklongprapa Road, Bangsue,

Bangkok 10800, Thailand.

Received date : 2 April 2024

Condition of measured item : Normal

Calibration date : 7 May 2024

Standard :

Standard	Certificate No.	Date due	Traceability
RTD Thermometer	PSL-T 643/65	1-Jun-24	TISTR
Molbox/Pressure Transducer/UpStream	MP-0076-23	2-Apr-25	NIMT
Primary Flow Calibrator S/N 119216	MW-0035-23	31-May-25	NIMT

Calibrated by : Terasak Panna
(Mr.Terasak Panna)

Approved by : Ms. Kirana Luanghirun
(Ms.Kirana Luanghirun)
Director
Mechanical Engineering Standards Laboratory

Ref. 20132670420197001

Issued Date : 13 May 2024

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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-67/0383

2/2

MTC.No.23-67/0383

Calibration point : (1.5, 5.0, 10, 15, 25) L/min

Ambient condition : Temperature (23 ± 3) °C , Relative humidity (55 ± 15) %

Atmospheric pressure (1010±13) hPa

Calibration method : The flowmeter (UUC) was calibrated by comparison method with standard flowmeter according to CP-370.01.

The reported value is the value that converted to value at reference condition within pressure and temperature of the actual gas entering the UUC

Measurement data :

UUC Value (L/min)	Standard Value (L/min)	Temperature (°C)	Pressure (hPa)	Deviation (%)	Uncertainty (%)
1.5116	1.4904	25.492	1007.32	+1.42	0.93
5.0284	4.9847	25.446	1007.65	+0.88	0.92
10.072	10.027	25.442	1008.43	+0.45	0.92
15.109	15.087	25.457	1009.62	+0.15	0.91
25.206	25.160	25.520	1013.18	+0.18	0.91

The reported expanded uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, which provides a level of confidence of approximately 95%.

The end of calibration certificate.

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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-68/0279

MTC.No.23-68/0279-01

Number of page(s) 2

CALIBRATION CERTIFICATE

Nomenclature : DRYCAL

Manufacturer : Mesa Labs

Serial No.: 160100

Model : Defender 520-L

Scale range : 5 ml/min to 500 ml/min

Subdivision : (0.001, 0.01) ml/min

Submitted by : SECOT CO.,LTD.

239, Rimklongprapa Road, Bangsue,

Bangkok 10800, Thailand.

Received date : 13 February 2025 **Condition of measured item :** Normal

Calibration date : 24 February 2025

Standard	Certificate No.	Date due	Traceability
RTD Thermometer	PSL-T 0811/67	3-Jul-26	TISTR
Molbox/PressureTransducer/UpStream	MP-0076-23	2-Apr-25	NIMT
Primary Flow Calibrator S/N 117982	MW-0034-23	11-Jun-25	NIMT

Calibrated by : Terasak Panna

(Mr.Terasak Panna)

Approved by : Kirana Luanghirun

(Ms.Kirana Luanghirun)

Director

Mechanical Engineering Standards Laboratory

Ref. 2013268021300656001

Issued Date 28 February 2025

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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-68/0279

2/2

MTC.No.23-68/0279-01

Calibration point : (20, 50, 100, 200, 400) ml/min

Ambient condition : Temperature (23 ± 3) °C , Relative humidity (55 ± 15) %

Atmospheric pressure (1010±13) hPa

Calibration method : The flowmeter (UUC) was calibrated by comparison method with standard flowmeter according to CP-370.01.

The reported value is the value that converted to value at reference condition within pressure and temperature of the actual gas entering the UUC

Measurement data :

UUC Value (ml/min)	Standard Value (ml/min)	Temperature (°C)	Pressure (hPa)	Deviation (%)	Uncertainty (%)
20.473*	20.340	24.275	1011.42	+0.65	0.94
49.952	50.732	24.057	1011.52	-1.54	0.95
99.449	99.622	24.102	1011.62	-0.17	0.93
200.34	199.94	24.133	1011.77	+0.20	0.93
401.89	397.98	24.140	1012.07	+0.98	0.93

The reported expanded uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, which provides a level of confidence of approximately 95%.

* : The calibration point is not the scope of accreditation.

The end of calibration certificate.

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Request No.23-68/0279

MTC.No.23-68/0279-02

Number of page(s) 2

CALIBRATION CERTIFICATE

Nomenclature : DRYCAL

Manufacturer : Mesa Labs

Serial No.: 114069

Model : Defender 520-H

Scale range : 300 ml/min to 30,000 ml/min

Subdivision : (0.0001, 0.001) L/min

Submitted by : SECOT CO.,LTD.

239, Rimklongprapa Road, Bangsue,

Bangkok 10800, Thailand.

Received date : 13 February 2025 **Condition of measured item :** Normal

Calibration date : 25 February 2025

Standard :

Standard	Certificate No.	Date due	Traceability
RTD Thermometer	PSL-T 0811/67	3-Jul-26	TISTR
Molbox/PressureTransducer/UpStream	MP-0076-23	2-Apr-25	NIMT
Primary Flow Calibrator S/N 119216	MW-0035-23	31-May-25	NIMT

Calibrated by : *Terasak Panna*

(Mr.Terasak Panna)

Approved by : *Kirana Luanghirun*

(Ms.Kirana Luanghirun)

Director

Mechanical Engineering Standards Laboratory

Ref. 2013268021300656002

Issued Date 28 February 2025

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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Soi 1, Bangpoo Industrial Estate, Muang, Samutprakan 10280, Thailand.

Request No.23-68/0279

2/2

MTC.No.23-68/0279-02

Calibration point : (1.5, 5.0, 10, 15, 25) l/min

Ambient condition : Temperature (23 ± 3) °C , Relative humidity (55 ± 15) %

Atmospheric pressure (1010±13) hPa

Calibration method : The flowmeter (UUC) was calibrated by comparison method with standard flowmeter according to CP-370.01.

The reported value is the value that converted to value at reference condition within pressure and temperature of the actual gas entering the UUC

Measurement data :

UUC Value	Standard Value	Temperature	Pressure	Deviation	Uncertainty
(L/min)	(L/min)	(°C)	(hPa)	(%)	(%)
1.5010	1.4862	24.354	1011.40	+0.99	0.91
5.0202	4.9882	24.364	1013.95	+0.64	0.89
9.9989	9.9228	24.319	1020.22	+0.77	0.89
15.033	14.819	24.342	1030.37	+1.44	0.89
25.136	24.152	24.331	1061.30	+4.08	0.89

The reported expanded uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, which provides a level of confidence of approximately 95%.

The end of calibration certificate.

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Sheet No. : CAL-2502-0033-01



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: 25-02-2025

ACOUSTIC CALIBRATOR

Brand	Model	Serial No.	Frequency (Hz)	Ref.Calibrated (dB)	Eff.Calibrated (dB)
Cirrus	CR:515	97097	1000.00	94.0	93.7

No.	Brand	Model	Serial No.	Reading (dB)	dB Adjust
1	Cirrus	CR162C	G300832	93.7	0.0

Calibrated by :

Approved by :



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: 25-02-2025

ACOUSTIC CALIBRATOR

Brand	Model	Serial No.	Frequency (Hz)	Ref.Calibrated (dB)	Eff.Calibrated (dB)
Cirrus	CR:515	97097	1000.00	94.0	93.8

No.	Brand	Model	Serial No.	Reading (dB)	dB Adjust
2	SCARLET TECH	ST-21D	820722	93.8	0.0
3	SCARLET TECH	ST-21D	820728	93.8	0.0
4	SCARLET TECH	ST-21D	820726	93.8	0.0

Calibrated by :

Approved by :

CERTIFICATE OF CALIBRATION

ISSUED BY Noisemeters

DATE OF ISSUE 29 April 2024

CERTIFICATE NUMBER 213338

NoiseMeters

NoiseMeters
Acoustic House
Bridlington Road
Hunmanby
YO14 0PH
United Kingdom
www.noisemeters.com

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

doseBadge Reader : IEC 60942:2003

Instrument information

Manufacturer: Pulsar Instruments

Notes:

Model: Model 22R

Serial number: 79781

Class: 2

Test summary

Date of calibration: 29 April 2024

The doseBadge reader detailed above has been calibrated to the published data as described in the operating manual and in the half-inch configuration. The procedures and techniques used are as described in IEC60942_2003 Annex B – Periodic Tests and three determinations of the sound pressure level, frequency and total distortion were made.

The sound pressure level was measured using a WS2F condenser microphone type MK:224 manufactured by Cirrus Research plc.

The results have been corrected to the reference pressure of 101.33 kPa using the manufacturer's data.

The doseBadge Reader has been shown to conform to the Class 2 requirements for periodic testing, described in Annex B of IEC 60942:2003 for the sound pressure level(s) and frequency(ies) stated, for the environmental conditions under which the tests were performed.

However, as public evidence was not available, from a testing organisation responsible for pattern approval, to demonstrate that the model of doseBadge Reader conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, no general statement or conclusion can be made about conformance of the doseBadge Reader to the requirements of IEC 60942:2003.

Notes:

This certificate provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. The results within this certificate relate only to the items calibrated. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%.

CERTIFICATE OF CALIBRATION

Certificate Number:

213338

Page 2 of 2

Environmental conditions

The following conditions were recorded at the time of the test:

Before Pressure: 100.34 kPa Temperature: 22.4 °C Humidity: 38.5 %
After Pressure: 100.34 kPa Temperature: 22.7 °C Humidity: 36.3 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Distortion Meter	Keithley	2015	0839263
Acoustic Calibrator	Bruel and Kjaer	4231	2610257
Environmental Monitor	Comet	T7510	21962628

Initial Acoustic Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Tolerance	Uncertainty
Level (dB)	114.00	113.94	113.93	113.94	113.94	-0.06	±0.75	0.11 dB
Distortion (%)	< 4.00	0.49	0.49	0.49	0.49	0.49	+4.00	0.13 %
Frequency (Hz)	1000.0	998.9	998.9	998.9	998.9	-1.1	±20.0	0.1 Hz

The measured quantities or deviations (as applicable), extended by the expanded combined uncertainty of measurement, must not exceed the corresponding tolerance.

Adjusted Acoustic Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Tolerance	Uncertainty
Level (dB)	114.00	114.01	113.98	113.98	113.99	-0.01	±0.75	0.11 dB
Distortion (%)	< 4.00	0.49	0.49	0.49	0.49	0.49	+4.00	0.13 %
Frequency (Hz)	1000.0	998.9	999.0	998.9	998.9	-1.1	±20.0	0.1 Hz

Functionality Results

Function	Result
Keypad	Pass
Battery Power	Pass
Display	Pass
Communication	Pass
2 way IR link	Pass
Clock	Pass

End of results

Calibration Certificate

BEIJING J.T TECHNOLOGY CO., LTD.
www.jttech.com
www.jttech.com

Instrument information

Name	WET BULB GLOBE TEMPERATURE (WBGT)METER
Series No	3522210175
Type	JT2011-E2A
Customer	SECOT CO., LTD.
Address	239 Rim Klong Prapa Road, Bang Sue, Bang Sue, Bangkok 10800

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison test with standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (±°C)
WET	25.0	25.1	-0.1	0.2
	30.0	30.1	-0.1	0.2
	35.0	34.8	0.2	0.2
	40.0	39.9	0.1	0.2
	45.0	44.8	0.2	0.2
DRY	25.0	25.1	-0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	34.9	0.1	0.2
	40.0	39.8	0.2	0.2
	45.0	45.1	-0.1	0.2
GLOBE	25.0	24.9	0.1	0.2
	30.0	30.1	-0.1	0.2
	35.0	34.9	0.1	0.2
	40.0	40.1	-0.1	0.2
	45.0	45.1	-0.1	0.2

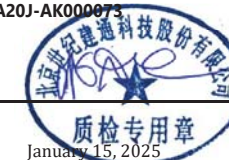
Environmental conditions: temperature: 26 °C ±2°C, relative humidity: 30% RH ± 10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN : 2-56,
Calibrated Date : 20 February 2023, Calibration Certificate No. : RA21H-AB1000009

This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK000073

Calibration Engineer :

Date :



January 15, 2025