

ภาคผนวก ง

## ใบรับรองผลการตรวจวัดและวิเคราะห์คุณภาพสิ่งแวดล้อม

---

## ใบรับรองผลการตรวจวัดคุณภาพอากาศในบรรยากาศ

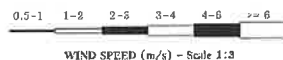
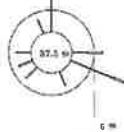
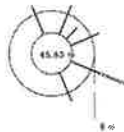
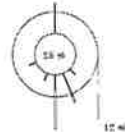
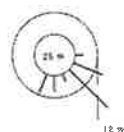


## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 18-25 May 2024  
Wind Speed Model : NRG Symphonie Serial No : 309019737  
Wind Direction Model : NRG Symphonie Serial No : 309019737

Time	18-19 May 2024		19-20 May 2024		20-21 May 2024		21-22 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
14:00 - 15:00	1.0	SSE	1.0	S	0.2	N	0.7	ESE
15:00 - 16:00	0.8	SE	1.0	S	0.4	NNE	0.7	ESE
16:00 - 17:00	0.4	ESE	1.3	SSE	0.5	ENE	0.3	E
17:00 - 18:00	0.2	ESE	0.7	SSE	0.5	NE	0.8	W
18:00 - 19:00	0.8	SE	0.3	SE	0.5	ENE	0.2	E
19:00 - 20:00	0.7	SE	0.8	SSE	0.4	ESE	0.0	NE
20:00 - 21:00	0.5	ESE	0.9	S	0.3	SSE	1.0	WSW
21:00 - 22:00	0.3	ESE	0.6	SSW	0.2	SSE	1.1	SW
22:00 - 23:00	0.6	ESE	0.5	S	0.4	S	0.2	SE
23:00 - 24:00	0.6	SE	0.3	SSW	0.7	SSE	0.6	SSE
00:00 - 01:00	0.5	ESE	0.8	WSW	0.1	ENE	0.5	ESE
01:00 - 02:00	0.7	SE	0.4	NW	0.5	NNE	0.7	N
02:00 - 03:00	0.9	SSW	0.6	N	0.6	NNW	0.5	N
03:00 - 04:00	0.5	ESE	0.7	N	0.6	NNW	0.3	N
04:00 - 05:00	0.8	E	0.5	N	0.5	NNE	0.4	N
05:00 - 06:00	0.4	E	0.6	N	0.4	NNE	0.4	NNW
06:00 - 07:00	0.3	ESE	0.4	N	0.5	SSE	0.7	N
07:00 - 08:00	0.2	SE	0.3	NNE	0.9	ESE	0.6	NNW
08:00 - 09:00	0.6	SE	0.8	SE	0.3	ESE	0.5	N
09:00 - 10:00	0.6	SE	1.0	S	0.3	E	0.4	E
10:00 - 11:00	0.9	SSW	1.3	S	0.3	ESE	0.4	E
11:00 - 12:00	1.1	S	1.0	S	0.8	ESE	0.5	E
12:00 - 13:00	1.7	SSW	0.6	SSE	1.5	ESE	1.1	ESE
13:00 - 14:00	1.7	S	0.3	SSE	1.4	ESE	1.1	E

Wind Rose



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

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)  
Technical Management Team

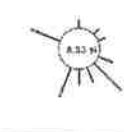
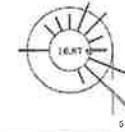
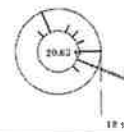


## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 18-25 May 2024  
Wind Speed Model : NRG Symphonie Serial No : 309019737  
Wind Direction Model : NRG Symphonie Serial No : 309019737

Time	22-23 May 2024		23-24 May 2024		24-25 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
14:00 - 15:00	1.4	ESE	0.9	ESE	1.6	SE
15:00 - 16:00	1.6	ESE	0.8	ESE	1.3	SE
16:00 - 17:00	1.4	ESE	1.0	SE	0.9	SE
17:00 - 18:00	1.2	ESE	0.9	SE	0.5	SE
18:00 - 19:00	0.5	ESE	0.4	ESE	0.5	SSE
19:00 - 20:00	0.7	E	0.9	SSE	0.8	SSE
20:00 - 21:00	0.4	ESE	0.9	SE	0.7	S
21:00 - 22:00	0.2	ESE	0.9	NE	0.5	S
22:00 - 23:00	0.3	ESE	0.9	NE	0.4	SSW
23:00 - 24:00	0.2	ESE	0.8	N	0.5	SSW
00:00 - 01:00	0.5	SE	0.6	NNW	0.5	SSW
01:00 - 02:00	0.2	SSE	0.3	N	0.5	SSW
02:00 - 03:00	0.5	NNW	0.2	N	0.4	SSW
03:00 - 04:00	0.7	NNE	0.6	ENE	0.9	N
04:00 - 05:00	0.9	ENE	0.7	NNE	0.6	ENE
05:00 - 06:00	0.8	NNW	1.3	W	0.7	NE
06:00 - 07:00	0.6	NW	0.5	W	0.8	WNW
07:00 - 08:00	0.7	NNW	0.8	NW	0.8	WNW
08:00 - 09:00	0.9	NE	0.9	NNE	0.5	WNW
09:00 - 10:00	0.6	E	1.0	E	1.2	WNW
10:00 - 11:00	0.9	E	0.2	E	1.3	ESE
11:00 - 12:00	1.4	ESE	0.8	ESE	0.9	ESE
12:00 - 13:00	2.5	ESE	1.2	SE	1.1	SE
13:00 - 14:00	0.9	ESE	1.4	ESE	1.1	SSW

Wind Rose



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

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)  
Technical Management Team



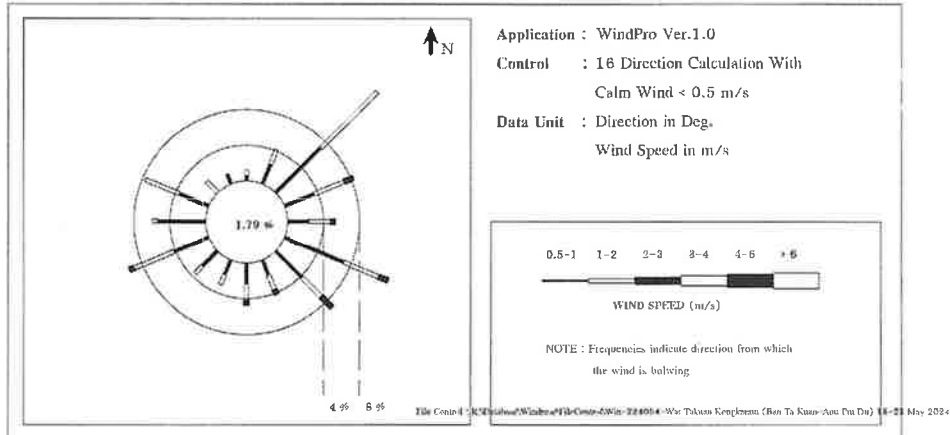
## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 18-25 May 2024

Wind Speed Model : Novalynx WS-25 Serial No : A5090

Wind Direction Model : Novalynx WS-25 Serial No : A5090

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	0.0238	0.0179	0.0000	0.0000	0.0000	0.0000	0.0417
NE	0.0714	0.0893	0.0000	0.0000	0.0000	0.0000	0.1607
ENE	0.0357	0.0357	0.0119	0.0000	0.0000	0.0000	0.0833
E	0.0238	0.0238	0.0060	0.0000	0.0000	0.0000	0.0536
ESE	0.0714	0.0417	0.0119	0.0000	0.0000	0.0000	0.1250
SE	0.0417	0.0298	0.0179	0.0000	0.0000	0.0000	0.0893
SSE	0.0179	0.0179	0.0060	0.0000	0.0000	0.0000	0.0417
S	0.0238	0.0179	0.0060	0.0000	0.0000	0.0000	0.0476
SSW	0.0179	0.0119	0.0000	0.0000	0.0000	0.0000	0.0298
SW	0.0238	0.0119	0.0000	0.0000	0.0000	0.0000	0.0357
WSW	0.0417	0.0476	0.0060	0.0000	0.0000	0.0000	0.0952
W	0.0536	0.0060	0.0000	0.0000	0.0000	0.0000	0.0595
WNW	0.0357	0.0417	0.0000	0.0000	0.0000	0.0000	0.0774
NW	0.0000	0.0179	0.0000	0.0000	0.0000	0.0000	0.0179
NNW	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
CALM	0.0179						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



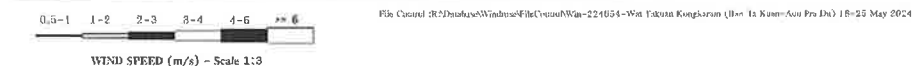
## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 18-25 May 2024

Wind Speed Model : Novalynx WS-25 Serial No : A5090

Wind Direction Model : Novalynx WS-25 Serial No : A5090

Time	18-19 May 2024		19-20 May 2024		20-21 May 2024		21-22 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
12:00 - 13:00	1.1	SSE	1.0	SW	1.1	WSW	1.1	NE
13:00 - 14:00	1.3	S	0.7	SSW	1.1	WNW	2.0	ESE
14:00 - 15:00	1.0	WSW	0.8	W	1.2	NE	1.3	NNE
15:00 - 16:00	0.5	WSW	1.0	S	1.6	NE	1.1	ESE
16:00 - 17:00	0.5	SSW	1.2	WNW	1.3	NE	1.0	NE
17:00 - 18:00	0.6	S	0.5	E	1.0	NE	0.7	N
18:00 - 19:00	0.5	ESE	0.5	ESE	0.7	ESE	0.5	NE
19:00 - 20:00	0.7	NNW	0.6	W	0.9	SW	0.8	NE
20:00 - 21:00	0.8	SE	0.6	SSW	1.0	SSW	1.2	WNW
21:00 - 22:00	0.5	SE	0.5	S	1.0	N	0.9	ESE
22:00 - 23:00	0.5	ESE	0.7	WSW	0.7	SSE	0.5	S
23:00 - 24:00	0.5	SE	0.6	W	0.5	ENE	0.4	SSW
00:00 - 01:00	0.5	E	1.4	WNW	0.5	W	1.0	WSW
01:00 - 02:00	0.5	SSE	1.4	NE	0.5	W	0.5	WSW
02:00 - 03:00	0.5	WNW	0.5	NNE	0.8	WSW	0.7	WSW
03:00 - 04:00	0.5	ENE	0.8	NE	0.6	SW	0.8	W
04:00 - 05:00	0.5	SW	0.5	NNE	1.0	NE	0.4	W
05:00 - 06:00	0.5	NNW	0.5	NNE	0.9	NE	0.5	W
06:00 - 07:00	1.0	SW	0.5	NE	0.7	NE	0.4	W
07:00 - 08:00	0.8	SE	0.9	ESE	0.6	ENE	1.3	NE
08:00 - 09:00	1.0	SE	1.7	W	1.0	ENE	1.5	NW
09:00 - 10:00	0.7	ESE	1.3	WSW	1.7	ENE	1.0	NW
10:00 - 11:00	1.1	WSW	1.5	WSW	1.3	NNE	1.0	NW
11:00 - 12:00	1.0	WSW	1.8	SE	1.5	SSE	1.3	NE



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team





## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 18-25 May 2024

Wind Speed Model : NRG Symphonie

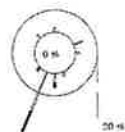
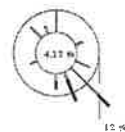
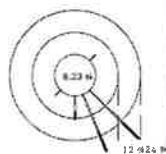
Serial No : 30909366

Wind Direction Model : NRG Symphonie

Serial No : 30909366

Time	22-23 May 2024		23-24 May 2024		24-25 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
14:00 - 15:00	2.3	SE	2.3	SSE	2.5	S
15:00 - 16:00	2.7	SSE	2.0	SE	2.2	SSW
16:00 - 17:00	2.8	SSE	2.4	SSE	1.9	SSW
17:00 - 18:00	2.3	S	2.1	SSE	1.7	SSW
18:00 - 19:00	1.3	S	1.7	SSE	1.0	S
19:00 - 20:00	0.7	S	1.5	S	1.1	SSW
20:00 - 21:00	0.8	SSE	0.6	SE	0.8	SSW
21:00 - 22:00	1.1	SSE	0.6	SE	0.8	S
22:00 - 23:00	1.0	SSE	0.5	ESE	1.1	SSW
23:00 - 24:00	1.5	SSE	1.1	ENE	0.9	SSW
00:00 - 01:00	1.7	SSE	0.7	N	0.9	SSW
01:00 - 02:00	0.7	NE	0.5	N	1.0	SSW
02:00 - 03:00	0.5	SW	0.6	ESE	0.7	SSW
03:00 - 04:00	0.7	SE	0.4	SE	0.5	NW
04:00 - 05:00	0.6	SE	0.5	SE	0.6	ENE
05:00 - 06:00	0.4	ESE	1.3	NW	0.5	ENE
06:00 - 07:00	0.5	SE	1.3	NW	1.1	N
07:00 - 08:00	0.4	SW	1.6	NNW	1.0	E
08:00 - 09:00	0.6	SE	0.6	N	1.6	SSE
09:00 - 10:00	1.6	SE	0.7	WSW	2.3	SW
10:00 - 11:00	2.2	SE	1.3	SE	2.5	SSW
11:00 - 12:00	2.5	SE	1.6	SE	2.5	SSW
12:00 - 13:00	1.8	SE	2.3	SE	2.0	SSW
13:00 - 14:00	2.2	SSE	2.5	S	2.2	SSW

Wind Rose



File Control : R:\Data\Win\Windrose\Windrose\224004-King Mongkut's University of Technology North Bangkok 18-25 May 2024



## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : Soi Ruam Pattana

Monitor period : 18-25 May 2024

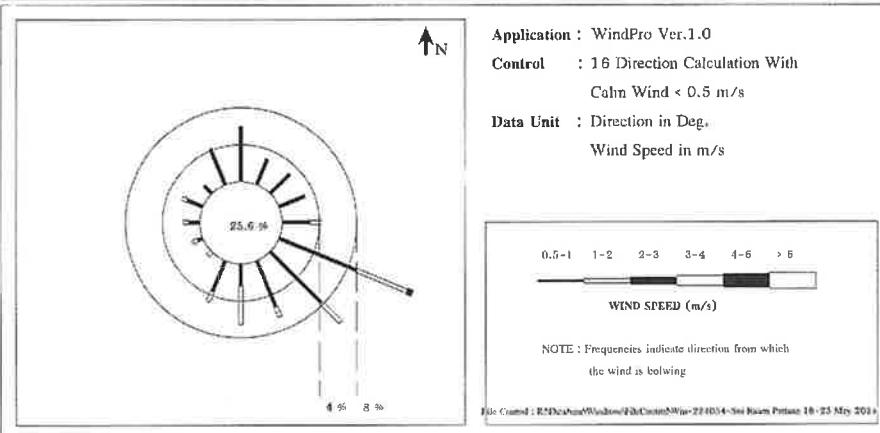
Wind Speed Model : NRG Symphonie

Serial No : 309019737

Wind Direction Model : NRG Symphonie

Serial No : 309019737

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0595	0.0000	0.0000	0.0000	0.0000	0.0000	0.0595
NNE	0.0298	0.0000	0.0000	0.0000	0.0000	0.0000	0.0298
NE	0.0298	0.0000	0.0000	0.0000	0.0000	0.0000	0.0298
ENE	0.0298	0.0000	0.0000	0.0000	0.0000	0.0000	0.0298
E	0.0298	0.0119	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0893	0.0595	0.0060	0.0000	0.0000	0.0000	0.1548
SE	0.0774	0.0298	0.0000	0.0000	0.0000	0.0000	0.1071
SSE	0.0536	0.0119	0.0000	0.0000	0.0000	0.0000	0.0655
S	0.0238	0.0417	0.0000	0.0000	0.0000	0.0000	0.0655
SSW	0.0357	0.0119	0.0000	0.0000	0.0000	0.0000	0.0476
SW	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
WSW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
W	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
WNW	0.0179	0.0060	0.0000	0.0000	0.0000	0.0000	0.0238
NW	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
NNW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
CALM	0.2560						



*(Signature)*

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Signature)*

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

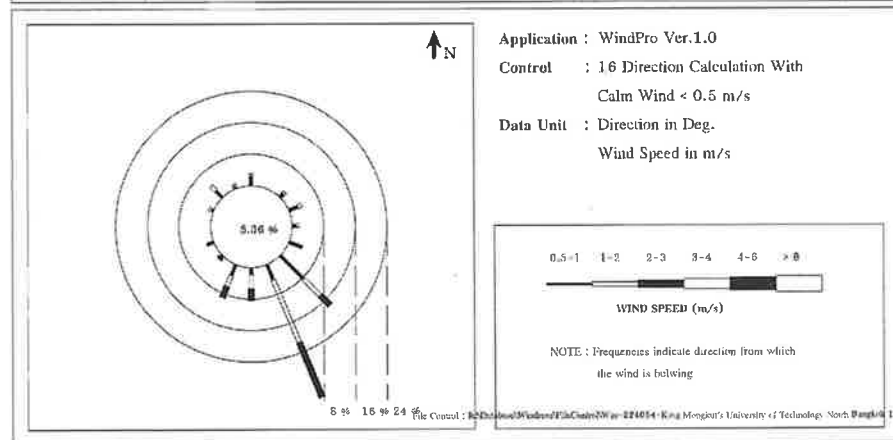
### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 18-25 May 2024

Wind Speed Model : NRG Symphonie Serial No : 30909366

Wind Direction Model : NRG Symphonie Serial No : 30909366

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	0.0238	0.0060	0.0000	0.0000	0.0000	0.0000	0.0298
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
ENE	0.0238	0.0119	0.0000	0.0000	0.0000	0.0000	0.0357
E	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
ESE	0.0357	0.0000	0.0000	0.0000	0.0000	0.0000	0.0357
SE	0.0833	0.0595	0.0357	0.0000	0.0000	0.0000	0.1786
SSE	0.0417	0.1726	0.1488	0.0000	0.0000	0.0000	0.3631
S	0.0179	0.0357	0.0298	0.0000	0.0000	0.0000	0.0833
SSW	0.0298	0.0298	0.0298	0.0000	0.0000	0.0000	0.0893
SW	0.0060	0.0000	0.0060	0.0000	0.0000	0.0000	0.0119
WSW	0.0179	0.0000	0.0000	0.0000	0.0000	0.0000	0.0179
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
NW	0.0238	0.0179	0.0000	0.0000	0.0000	0.0000	0.0417
NNW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
CALM	0.0536						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 18-25 May 2024

Wind Speed Model : NRG Symphonie Serial No : 30909366

Wind Direction Model : NRG Symphonie Serial No : 30909366

Time	18-19 May 2024		19-20 May 2024		20-21 May 2024		21-22 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
14:00 - 15:00	2.0	SSE	2.1	SSE	0.4	NW	2.2	SSE
15:00 - 16:00	1.5	SSE	2.4	SSE	0.5	ESE	2.0	SSE
16:00 - 17:00	1.6	SSE	2.2	SSE	0.7	SE	1.2	SE
17:00 - 18:00	1.6	SSE	2.0	SSE	0.8	SE	0.9	NW
18:00 - 19:00	1.0	SSE	1.8	SSE	0.6	SE	0.7	E
19:00 - 20:00	0.7	SE	1.7	SSE	1.6	SSE	0.5	ESE
20:00 - 21:00	0.8	SSE	2.3	SSE	1.9	SSE	1.1	NW
21:00 - 22:00	0.7	SSE	1.1	SSE	2.0	SSE	1.0	WNW
22:00 - 23:00	1.0	SSE	1.0	SSE	2.0	SSE	0.9	SSE
23:00 - 24:00	1.4	SSE	0.9	S	1.4	S	0.5	WSW
00:00 - 01:00	2.1	SSE	0.9	NW	0.7	SE	0.5	SSE
01:00 - 02:00	2.2	SSE	0.5	WNW	0.5	SSE	0.5	WSW
02:00 - 03:00	1.5	S	0.5	NW	0.4	WNW	0.7	SSW
03:00 - 04:00	1.5	SE	0.4	NE	0.5	N	0.7	ESE
04:00 - 05:00	0.7	SSE	0.4	ENE	0.9	NNW	1.0	ENE
05:00 - 06:00	1.5	SSE	0.4	ENE	0.7	ESE	0.5	ENE
06:00 - 07:00	1.5	SSE	0.4	ENE	0.8	SE	0.7	ENE
07:00 - 08:00	1.9	SSE	0.6	E	1.9	SSE	0.6	NE
08:00 - 09:00	2.2	SSE	1.7	SSE	0.9	SE	1.1	NE
09:00 - 10:00	1.7	SSE	1.8	SSE	1.5	SE	1.2	SE
10:00 - 11:00	1.3	S	2.2	S	1.6	SSE	1.4	SSE
11:00 - 12:00	2.1	SSE	2.1	SSE	2.4	SSE	1.3	SE
12:00 - 13:00	2.4	S	1.9	SSE	2.9	SSE	1.8	SE
13:00 - 14:00	2.7	SSE	1.4	SSE	2.7	SSE	2.2	SE



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

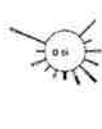
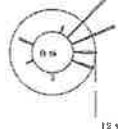
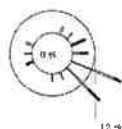
Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 18-25 May 2024

Wind Speed Model : Novalynx WS-25 Serial No : A5090

Wind Direction Model : Novalynx WS-25 Serial No : A5090

Time	22-23 May 2024		23-24 May 2024		24-25 May 2024		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
12:00 - 13:00	2.4	SE	1.7	E	2.0	SSE	
13:00 - 14:00	2.3	ENE	0.9	ESE	2.4	SE	
14:00 - 15:00	2.0	E	1.2	ESE	2.0	S	
15:00 - 16:00	2.5	ENE	1.4	ENE	1.7	SSE	
16:00 - 17:00	2.2	ESE	0.5	WSW	1.5	SSW	
17:00 - 18:00	1.6	SE	0.9	ENE	0.9	ESE	
18:00 - 19:00	1.0	ESE	1.0	ESE	0.9	WNW	
19:00 - 20:00	1.1	NE	1.0	WNW	0.7	WNW	
20:00 - 21:00	1.4	E	1.8	ENE	1.0	WNW	
21:00 - 22:00	1.5	NNE	1.1	NE	0.5	W	
22:00 - 23:00	0.9	S	1.0	E	0.5	E	
23:00 - 24:00	1.9	ESE	1.3	NE	0.5	WNW	
00:00 - 01:00	1.1	WNW	0.5	NNE	0.5	WNW	
01:00 - 02:00	0.5	W	0.5	E	0.5	WSW	
02:00 - 03:00	0.5	SE	0.5	NE	0.5	SE	
03:00 - 04:00	0.5	SSE	0.5	ENE	0.5	ENE	
04:00 - 05:00	0.5	SE	0.8	NE	0.6	NE	
05:00 - 06:00	0.5	ESE	0.6	WNW	1.0	NE	
06:00 - 07:00	0.5	ESE	0.7	NE	0.8	NE	
07:00 - 08:00	0.8	ESE	0.5	NE	1.3	ESE	
08:00 - 09:00	1.7	ESE	1.0	NE	1.0	E	
09:00 - 10:00	1.0	SE	1.6	ENE	1.0	SE	
10:00 - 11:00	2.0	SE	1.1	ENE	0.9	SW	
11:00 - 12:00	2.3	WSW	1.8	S	1.7	WSW	

Wind Rose



File Control: R:\Database\Windrose\Flic\Control\Win-224034-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 18-25 May 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Boundary at SW of Plant (I-7)

Monitor period : 18-25 May 2024

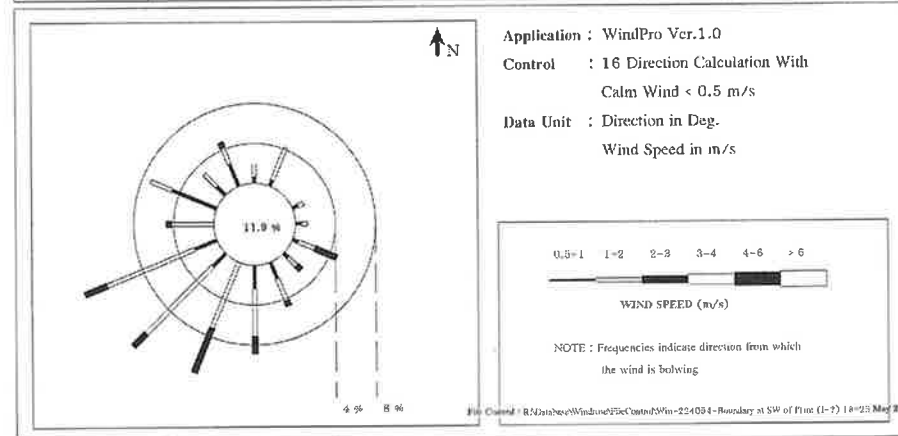
Wind Speed Model : Novalynx NL-32

Serial No : 1208

Wind Direction Model : Novalynx NL-32

Serial No : 1208

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	0.0119	0.0000	0.0000	0.0000	0.0000	0.0179
NNE	0.0060	0.0357	0.0000	0.0000	0.0000	0.0000	0.0417
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
E	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
ESE	0.0060	0.0179	0.0238	0.0000	0.0000	0.0000	0.0476
SE	0.0060	0.0119	0.0060	0.0000	0.0000	0.0000	0.0238
SSE	0.0179	0.0238	0.0060	0.0000	0.0000	0.0000	0.0476
S	0.0238	0.0476	0.0179	0.0000	0.0000	0.0000	0.0893
SSW	0.0000	0.0714	0.0476	0.0000	0.0000	0.0000	0.1190
SW	0.0179	0.0952	0.0179	0.0000	0.0000	0.0000	0.1310
WSW	0.0238	0.0952	0.0238	0.0000	0.0000	0.0000	0.1429
W	0.0000	0.0417	0.0060	0.0000	0.0000	0.0000	0.0476
WNW	0.0476	0.0238	0.0000	0.0000	0.0000	0.0000	0.0714
NW	0.0119	0.0179	0.0000	0.0000	0.0000	0.0000	0.0298
NNW	0.0238	0.0179	0.0060	0.0000	0.0000	0.0000	0.0476
CALM	0.1190						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Boundary at SW of Plant (1-7)

Monitor period : 18-25 May 2024

Wind Speed Model : Novalynx NL-32

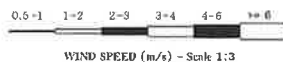
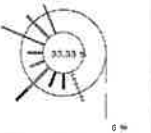
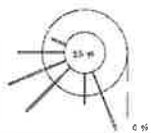
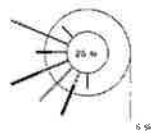
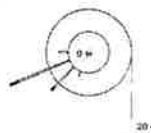
Serial No : 1208

Wind Direction Model : Novalynx NL-32

Serial No : 1208

Time	18-19 May 2024		19-20 May 2024		20-21 May 2024		21-22 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.4	WSW	1.8	SSW	1.9	SW	1.2	SSE
12:00 - 13:00	1.5	SW	2.1	SSW	1.6	WSW	2.3	S
13:00 - 14:00	1.4	WSW	2.1	SSW	1.0	SW	2.8	SSW
14:00 - 15:00	1.1	WSW	1.8	SW	0.2	WSW	2.0	SW
15:00 - 16:00	0.6	WSW	1.8	W	0.1	WSW	1.8	SW
16:00 - 17:00	0.6	WSW	2.2	WSW	0.5	SW	1.8	WSW
17:00 - 18:00	0.6	SW	1.5	SW	1.0	SW	0.8	WNW
18:00 - 19:00	0.7	SW	1.5	SW	1.1	WSW	0.2	SSW
19:00 - 20:00	0.7	WSW	1.6	WSW	1.3	W	0.1	S
20:00 - 21:00	1.5	SW	2.1	W	1.6	W	1.5	NW
21:00 - 22:00	2.2	SW	1.4	WNW	1.4	W	1.5	NW
22:00 - 23:00	1.9	WSW	0.8	WNW	1.2	WNW	1.0	W
23:00 - 24:00	2.1	WSW	0.6	WNW	1.3	WSW	0.1	WNW
00:00 - 01:00	2.0	WSW	0.8	WNW	0.9	SSE	0.1	W
01:00 - 02:00	1.9	W	0.6	NW	0.4	S	0.9	WNW
02:00 - 03:00	1.5	W	0.1	WNW	0.1	W	0.4	WNW
03:00 - 04:00	1.1	SW	0.1	WSW	0.3	SW	0.9	NNW
04:00 - 05:00	1.2	SW	0.0	WSW	0.7	WSW	0.4	NW
05:00 - 06:00	1.0	WSW	0.0	WSW	0.2	SW	0.4	N
06:00 - 07:00	1.2	WSW	0.0	S	0.7	S	0.4	NW
07:00 - 08:00	1.1	WSW	0.1	S	0.9	SSE	0.5	NNW
08:00 - 09:00	1.6	WSW	0.7	S	0.5	S	0.8	WNW
09:00 - 10:00	1.2	WSW	1.2	WSW	1.4	SSE	1.4	SW
10:00 - 11:00	1.2	SSW	2.0	WSW	0.5	SSE	1.8	SSE

Wind Rose



File Content: R:\Data\env\Win\env\Win-224054-Boundary at SW of Plant (1-7) 18-25 May 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Boundary at SW of Plant (1-7)

Monitor period : 18-25 May 2024

Wind Speed Model : Novalynx NL-32

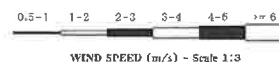
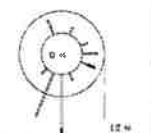
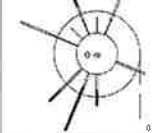
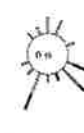
Serial No : 1208

Wind Direction Model : Novalynx NL-32

Serial No : 1208

Time	22-23 May 2024		23-24 May 2024		24-25 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	2.4	ESE	1.6	S	2.0	ESE
12:00 - 13:00	2.6	ESE	2.4	SSW	1.6	S
13:00 - 14:00	2.5	SSE	2.6	S	1.7	SSE
14:00 - 15:00	2.3	SE	2.1	SW	1.8	S
15:00 - 16:00	1.0	SE	1.9	SW	1.9	SSW
16:00 - 17:00	0.9	SE	1.0	SSW	1.8	S
17:00 - 18:00	0.9	S	2.2	SSW	1.5	S
18:00 - 19:00	1.5	SSW	2.1	SSW	1.0	SSW
19:00 - 20:00	1.5	SW	1.1	SW	1.1	SSW
20:00 - 21:00	1.7	SSW	0.9	N	1.0	SSW
21:00 - 22:00	2.1	SSW	0.9	NNE	1.1	SSW
22:00 - 23:00	2.0	SSW	1.8	NNE	1.7	S
23:00 - 24:00	1.5	SSW	2.1	NNW	2.0	S
00:00 - 01:00	1.0	WSW	1.7	NNW	1.8	SSW
01:00 - 02:00	0.9	NW	1.7	NNE	1.7	SW
02:00 - 03:00	1.0	NNW	1.3	NNE	1.7	NNW
03:00 - 04:00	1.0	N	0.8	NNW	1.3	NNE
04:00 - 05:00	1.0	ESE	0.5	WNW	0.8	E
05:00 - 06:00	1.4	N	0.7	WNW	0.5	NNW
06:00 - 07:00	1.5	ENE	1.1	WNW	0.7	ENE
07:00 - 08:00	1.6	NNE	1.6	NW	1.1	E
08:00 - 09:00	1.5	N	1.4	WNW	0.6	ESE
09:00 - 10:00	2.1	ESE	1.6	ESE	1.1	S
10:00 - 11:00	1.5	SE	1.5	ESE	1.3	S

Wind Rose



File Content: R:\Data\env\Win\env\Win-224054-Boundary at SW of Plant (1-7) 18-25 May 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team

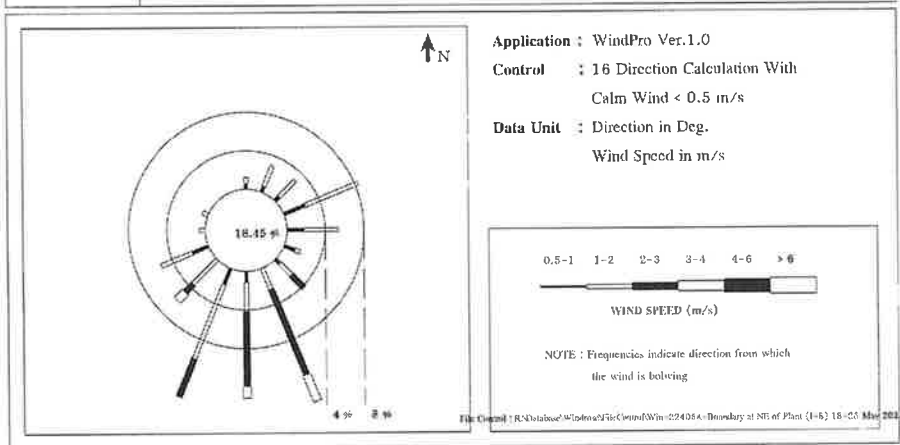


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Boundary at NE of Plant (1-6) Monitor period : 18-25 May 2024  
 Wind Speed Model : Novalynx NL-32 Serial No : 1201  
 Wind Direction Model : Novalynx NL-32 Serial No : 1201

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	0.0060	0.0238	0.0000	0.0000	0.0000	0.0000	0.0298
NE	0.0060	0.0238	0.0000	0.0000	0.0000	0.0000	0.0298
ENE	0.0238	0.0595	0.0000	0.0000	0.0000	0.0000	0.0833
E	0.0179	0.0357	0.0000	0.0000	0.0000	0.0000	0.0536
ESE	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
SE	0.0060	0.0179	0.0179	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0238	0.0952	0.0298	0.0000	0.0000	0.1488
S	0.0119	0.0298	0.0774	0.0119	0.0000	0.0000	0.1310
SSW	0.0179	0.0833	0.0417	0.0000	0.0000	0.0000	0.1429
SW	0.0000	0.0357	0.0119	0.0119	0.0000	0.0000	0.0595
WSW	0.0179	0.0357	0.0000	0.0000	0.0000	0.0000	0.0536
W	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
WNW	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
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	0.1845						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Sonjai)  
Technical Management Team

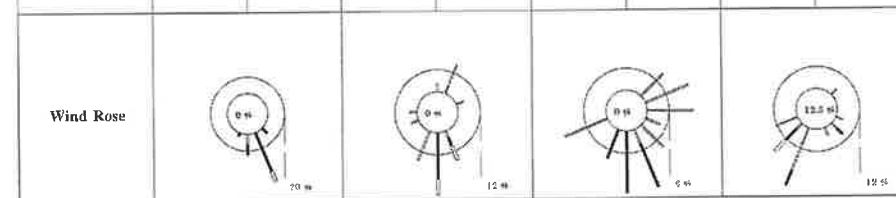


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Boundary at NE of Plant (1-6) Monitor period : 18-25 May 2024  
 Wind Speed Model : Novalynx NL-32 Serial No : 1201  
 Wind Direction Model : Novalynx NL-32 Serial No : 1201

Time	18-19 May 2024		19-20 May 2024		20-21 May 2024		21-22 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	3.0	SSE	1.6	SSW	2.4	S	1.3	SE
11:00 - 12:00	2.3	S	2.1	S	2.1	SSW	1.9	SSE
12:00 - 13:00	3.1	SSE	3.0	S	2.3	S	2.5	SE
13:00 - 14:00	2.7	SSE	2.7	S	2.1	S	0.9	ESE
14:00 - 15:00	1.8	S	2.3	S	1.4	NE	1.4	WSW
15:00 - 16:00	1.7	S	2.1	S	1.3	NE	1.5	SW
16:00 - 17:00	1.7	S	3.2	S	1.1	E	2.1	SW
17:00 - 18:00	2.5	SSE	3.2	SSE	1.3	SSE	2.9	SW
18:00 - 19:00	2.1	SSE	2.8	SSE	1.4	ESE	3.2	SW
19:00 - 20:00	2.4	SSE	3.1	SSE	2.7	SSE	3.0	SW
20:00 - 21:00	2.0	SSE	2.9	S	2.9	SSE	1.5	SSW
21:00 - 22:00	2.4	SE	2.0	S	2.7	SSE	1.2	SSW
22:00 - 23:00	2.2	SE	1.5	SSW	2.8	S	0.6	SSW
23:00 - 24:00	2.6	SSE	1.3	SSW	2.3	SSW	1.1	SSW
00:00 - 01:00	2.9	SSE	1.5	WSW	1.4	E	2.4	SSW
01:00 - 02:00	3.1	SSE	1.2	W	1.0	SE	2.2	SSW
02:00 - 03:00	2.8	SSW	1.2	NNE	1.4	WSW	0.7	NE
03:00 - 04:00	2.0	S	1.1	NNE	1.5	WSW	0.5	SSW
04:00 - 05:00	2.1	SSE	1.4	NNE	1.4	WSW	0.1	SW
05:00 - 06:00	2.3	SSE	1.1	N	1.5	ENE	0.1	WSW
06:00 - 07:00	2.5	SSE	0.7	NNE	1.3	ENE	0.1	WSW
07:00 - 08:00	2.3	S	0.8	ENE	1.7	ENE	0.5	WSW
08:00 - 09:00	2.4	SSE	1.9	SSE	1.1	SE	0.9	WSW
09:00 - 10:00	2.8	SSE	1.8	SSW	0.9	E	1.5	SSW



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Sonjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Boundary at NE of Plant (I-8)

Monitor period : 18-25 May 2024

Wind Speed Model : Novalynx NL-32

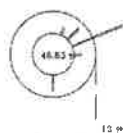
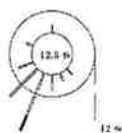
Serial No : 1201

Wind Direction Model : Novalynx NL-32

Serial No : 1201

Time	22-23 May 2024		23-24 May 2024		24-25 May 2024	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	1.5	SSW	1.1	S	0.9	E
11:00 - 12:00	0.9	N	0.7	ENE	1.0	SSW
12:00 - 13:00	1.2	S	1.0	NE	0.8	ESE
13:00 - 14:00	1.0	SSE	1.1	ENE	1.2	ENE
14:00 - 15:00	0.8	SE	0.9	ENE	1.1	E
15:00 - 16:00	1.6	SSW	1.0	ENE	1.0	ENE
16:00 - 17:00	1.7	SSW	1.1	E	1.1	E
17:00 - 18:00	1.4	SSW	1.1	ENE	1.1	ENE
18:00 - 19:00	2.7	SSW	1.1	ENE	0.4	ENE
19:00 - 20:00	1.9	WNW	1.3	NE	0.0	NE
20:00 - 21:00	2.0	SSW	1.6	NNE	0.4	NNE
21:00 - 22:00	0.4	SSW	0.4	WNW	0.3	SSW
22:00 - 23:00	0.3	SSW	0.2	SSW	0.2	SSE
23:00 - 24:00	1.0	SSW	0.4	SSW	0.3	WSW
00:00 - 01:00	0.7	SSW	0.0	SW	0.3	NNE
01:00 - 02:00	1.3	SW	0.2	SSW	0.3	SW
02:00 - 03:00	1.5	SW	0.0	SSW	0.1	WSW
03:00 - 04:00	1.4	SW	0.3	SSW	0.3	NNE
04:00 - 05:00	1.4	SW	0.4	SSW	0.3	N
05:00 - 06:00	1.4	SW	0.1	SSW	0.2	NE
06:00 - 07:00	0.5	WSW	0.0	ENE	0.3	NE
07:00 - 08:00	0.2	W	0.3	S	0.3	ENE
08:00 - 09:00	1.2	WSW	0.5	S	0.7	E
09:00 - 10:00	0.6	S	0.7	ENE	1.0	E

Wind Rose



File Control R:\Database\Windrose\SiteControl\Win-224054-Boundary at NE of Plant (I-8) 18-25 May 2024

*(Signature)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Signature)*  
(Miss Preeda Somjai)  
Technical Management Team



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางจ้อ เขตบางจ้อ 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 : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 224004 Amb (Cer.)/THC/May 2024  
 SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18-24/05/2024  
 RECEIVED DATE : 27/05/2024 ANALYTICAL DATE : 29/05/2024  
 REPORT DATE : 12/06/2024 SAMPLE CONDITION : Normal  
 SITE OPERATOR : Mr. Suphanat Intharanaret  
 LOCATION DESCRIPTION : 1. King Mongkut's University of Technology North Bangkok (Rayong)  
 2. Soi Ruam Paitana

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	REFERENCE	
				1	2
Total Hydrocarbon	18/05/2024	ppm	<0.10	2.68	2.58
(THC)	19/05/2024	ppm	<0.10	2.58	2.60
	20/05/2024	ppm	<0.10	2.62	3.15
	21/05/2024	ppm	<0.10	2.51	2.65
	22/05/2024	ppm	<0.10	2.96	2.54
	23/05/2024	ppm	<0.10	2.54	2.57
	24/05/2024	ppm	<0.10	2.70	2.55

*(Signature)*  
Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

*(Signature)*  
Narisra 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.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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 : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 224004 Amb (Cert.)/MTBE/May 2024  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18-24/05/2024  
RECEIVED DATE : 27/05/2024 ANALYTICAL DATE : 27/05/2024  
REPORT DATE : 12/06/2024 SAMPLE CONDITION : Normal  
SITE OPERATOR : Mr. Suphanut Intharanaret  
LOCATION DESCRIPTION : 1. Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)  
2. Boundary at NE of Plant (1-8)  
3. Boundary at SW of Plant (1-7)

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	RESULTS			REFERENCE METHOD
				1	2	3	
Methyl Tertiary	18/05/2024	ppm	<0.01	ND	ND	ND	Method ENIOSH 1615/
Butyl Ether	19/05/2024	ppm	<0.01	ND	ND	ND	GC FID
(MTBE)	20/05/2024	ppm	<0.01	ND	ND	ND	
	21/05/2024	ppm	<0.01	ND	ND	ND	
	22/05/2024	ppm	<0.01	ND	ND	ND	
	23/05/2024	ppm	<0.01	ND	ND	ND	
	24/05/2024	ppm	<0.01	ND	ND	ND	

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

Maia Poowasanpeteh  
(Miss Narisa Poowasanpeteh)

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.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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 : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 224004 Amb (Cert.)/NMHC/May 2024  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18-24/05/2024  
RECEIVED DATE : 27/05/2024 ANALYTICAL DATE : 29/05/2024  
REPORT DATE : 12/06/2024 SAMPLE CONDITION : Normal  
SITE OPERATOR : Mr. Suphanut Intharanaret  
LOCATION DESCRIPTION : 1. Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)  
2. Boundary at NE of Plant (1-8)  
3. Boundary at SW of Plant (1-7)

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	RESULTS			REFERENCE METHOD
				1	2	3	
Non-methane	18/05/2024	ppm	<0.05	0.76	0.94	1.05	Flame Ionization
Hydrocarbon	19/05/2024	ppm	<0.05	0.86	0.86	1.24	Detection Method
(NMHC)	20/05/2024	ppm	<0.05	0.67	1.05	1.41	
	21/05/2024	ppm	<0.05	0.65	1.03	1.05	
	22/05/2024	ppm	<0.05	0.75	1.06	1.22	
	23/05/2024	ppm	<0.05	0.82	1.05	1.06	
	24/05/2024	ppm	<0.05	0.97	0.81	0.92	

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

Maia Poowasanpeteh  
(Miss Narisa Poowasanpeteh)

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.



## Ambient Air Monitoring Results : Oxides of Nitrogen MTR-BST Site 1

Location : War Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor Period : 18-25 May 2024  
Analyzer Model : API 200A Station No : Shelter 15  
Serial No : 2384 Site Operator : Mr.Suphanut Intraranaret

Calibrator Model : Teledyne 700E Serial No : 587  
Calibration Gas Cylinder I.D. : EB0102326  
Certified Date : 05 Jan 2024 Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 04 Jan 2025

Time	NOx Concentration (ppm)						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
12:00 - 13:00	0.0185	0.0227	0.0134	0.0139	0.0088	0.0192	0.0283
13:00 - 14:00	0.0127	0.0096	0.0113	0.0084	0.0115	0.0179	0.0278
14:00 - 15:00	0.0188	0.0281	0.0082	0.0170	0.0082	0.0242	0.0216
15:00 - 16:00	0.0129	0.0060	0.0273	0.0210	0.0247	0.0294	0.0179
16:00 - 17:00	0.0123	0.0241	0.0328	0.0266	0.0216	0.0225	0.0331
17:00 - 18:00	0.0285	0.0115	0.0237	0.0196	0.0290	0.0285	0.0294
18:00 - 19:00	0.0270	0.0326	0.0307	0.0203	0.0328	0.0132	0.0307
19:00 - 20:00	0.0213	0.0173	0.0329	0.0248	0.0188	0.0287	0.0245
20:00 - 21:00	0.0322	0.0213	0.0214	0.0142	0.0228	0.0249	0.0278
21:00 - 22:00	0.0103	0.0283	0.0270	0.0216	0.0296	0.0063	0.0288
22:00 - 23:00	0.0204	0.0257	0.0277	0.0320	0.0266	0.0197	0.0237
23:00 - 00:00	0.0298	0.0223	0.0097	0.0128	0.0198	0.0121	0.0315
00:00 - 01:00	0.0199	0.0068	0.0106	0.0101	0.0065	0.0082	0.0088
01:00 - 02:00	0.0221	0.0081	0.0174	0.0089	0.0115	0.0237	0.0286
02:00 - 03:00	0.0116	0.0281	0.0081	0.0103	0.0054	0.0182	0.0207
03:00 - 04:00	0.0186	0.0239	0.0035	0.0159	0.0094	0.0215	0.0185
04:00 - 05:00	0.0106	0.0257	0.0272	0.0106	0.0214	0.0086	0.0180
05:00 - 06:00	0.0190	0.0294	0.0240	0.0094	0.0175	0.0088	0.0103
06:00 - 07:00	0.0212	0.0304	0.0319	0.0256	0.0249	0.0188	0.0095
07:00 - 08:00	0.0132	0.0306	0.0304	0.0282	0.0328	0.0220	0.0118
08:00 - 09:00	0.0173	0.0245	0.0301	0.0272	0.0235	0.0220	0.0205
09:00 - 10:00	0.0194	0.0199	0.0270	0.0191	0.0272	0.0089	0.0089
10:00 - 11:00	0.0163	0.0224	0.0253	0.0173	0.0282	0.0118	0.0203
11:00 - 12:00	0.0131	0.0177	0.0168	0.0090	0.0043	0.0157	0.0140
Average-24Hr*	0.0186	0.0213	0.0215	0.0172	0.0195	0.0169	0.0212
Max-1Hr	0.0322	0.0326	0.0329	0.0272	0.0326	0.0294	0.0331
Min-1Hr	0.0108	0.0058	0.0035	0.0084	0.0043	0.0063	0.0088
Standard-1Hr							
Standard-24Hr							

Remark : \* Average time between 12:00-12:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Oxides of Nitrogen MTR-BST Site 1

Location : Boundary at SW of Plant (1-7) Monitor Period : 18-25 May 2024  
Analyzer Model : Thermo 42C Station No : Shelter 17  
Serial No : 0426708263 Site Operator : Mr.Suphanut Intraranaret

Calibrator Model : Teledyne 700E Serial No : 587  
Calibration Gas Cylinder I.D. : EB0102326  
Certified Date : 05 Jan 2024 Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 04 Jan 2025

Time	NOx Concentration (ppm)						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
11:00 - 12:00	0.0182	0.0228	0.0238	0.0100	0.0176	0.0022	0.0215
12:00 - 13:00	0.0189	0.0218	0.0224	0.0204	0.0071	0.0233	0.0220
13:00 - 14:00	0.0191	0.0168	0.0205	0.0075	0.0230	0.0085	0.0286
14:00 - 15:00	0.0126	0.0086	0.0092	0.0088	0.0099	0.0288	0.0256
15:00 - 16:00	0.0115	0.0080	0.0195	0.0281	0.0298	0.0271	0.0243
16:00 - 17:00		0.0284	0.0334	0.0270	0.0260	0.0213	0.0324
17:00 - 18:00	0.0225	0.0219	0.0240	0.0255	0.0208	0.0266	0.0296
18:00 - 19:00	0.0272	0.0220	0.0310	0.0195	0.0177	0.0206	0.0370
19:00 - 20:00	0.0195	0.0276	0.0316	0.0237	0.0278	0.0229	0.0193
20:00 - 21:00	0.0268	0.0244	0.0260	0.0221	0.0295	0.0305	0.0240
21:00 - 22:00	0.0225	0.0201	0.0270	0.0179	0.0289	0.0104	0.0292
22:00 - 23:00	0.0210	0.0286	0.0222	0.0135	0.0238	0.0098	0.0224
23:00 - 00:00	0.0191	0.0281	0.0115	0.0029	0.0219	0.0143	0.0307
00:00 - 01:00	0.0084	0.0103	0.0109	0.0101	0.0078	0.0035	0.0069
01:00 - 02:00	0.0197	0.0104	0.0208	0.0053	0.0112	0.0230	0.0261
02:00 - 03:00	0.0181	0.0177	0.0105	0.0099	0.0045	0.0131	0.0097
03:00 - 04:00	0.0218	0.0183	0.0160	0.0120	0.0093	0.0137	0.0138
04:00 - 05:00	0.0222	0.0230	0.0204	0.0106	0.0080	0.0102	0.0124
05:00 - 06:00	0.0192	0.0235	0.0349	0.0114	0.0180	0.0229	0.0199
06:00 - 07:00	0.0087	0.0199	0.0209	0.0240	0.0245	0.0066	0.0114
07:00 - 08:00	0.0201	0.0287	0.0337	0.0236	0.0337	0.0240	0.0213
08:00 - 09:00	0.0115	0.0267	0.0295	0.0213	0.0234	0.0243	0.0128
09:00 - 10:00	0.0093	0.0175	0.0282	0.0203	0.0287	0.0260	0.0120
10:00 - 11:00	0.0208	0.0314	0.0278	0.0189	0.0316	0.0073	0.0172
Average-24Hr*	0.0178	0.0211	0.0232	0.0164	0.0201	0.0178	0.0213
Max-1Hr	0.0272	0.0314	0.0349	0.0281	0.0337	0.0305	0.0370
Min-1Hr	0.0084	0.0080	0.0092	0.0029	0.0045	0.0022	0.0069
Standard-1Hr							
Standard-24Hr							

Remark : \* Average time between 11:00-11:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team





## Ambient Air Monitoring Results : Oxides of Nitrogen MTR-BST Site 1

Location : Boundary at NE of Plant (I-8) Monitor Period : 18-25 May 2024  
Analyzer Model : API 200A Station No : Shelter 16  
Serial No : 2365 Site Operator : Mr.Suphanut Intraranaret

Calibrator Model : Teledyne 700E Serial No : 587  
Calibration Gas Cylinder I.D. : EB0102326  
Certified Date : 05 Jan 2024 Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 04 Jan 2025

Time	NOx Concentration (ppm)						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
10:00 - 11:00	0.0184	0.0126	0.0299	0.0263	0.0115	0.0285	0.0066
11:00 - 12:00	0.0096	0.0179	0.0259	0.0090	0.0227	0.0301	0.0193
12:00 - 13:00	0.0123	0.0080	0.0173	0.0179	0.0217	0.0210	0.0210
13:00 - 14:00	0.0212	0.0190	0.0225	0.0070	0.0216	0.0197	0.0272
14:00 - 15:00	0.0155	0.0121	0.0107	0.0194	0.0205	0.0180	0.0256
15:00 - 16:00	0.0117	0.0132	0.0265	0.0291	0.0234	0.0241	0.0262
16:00 - 17:00	0.0044	0.0266	0.0366	0.0280	0.0221	0.0242	0.0306
17:00 - 18:00	0.0200	0.0204	0.0238	0.0267	0.0232	0.0288	0.0216
18:00 - 19:00	0.0221	0.0253	0.0361	0.0179	0.0236	0.0232	0.0308
19:00 - 20:00	0.0317	0.0275	0.0332	0.0291	0.0283	0.0202	0.0265
20:00 - 21:00	0.0273	0.0225	0.0255	0.0214	0.0278	0.0224	0.0220
21:00 - 22:00	0.0248	0.0285	0.0219	0.0186	0.0319	0.0188	0.0291
22:00 - 23:00	0.0280	0.0203	0.0290	0.0199	0.0217	0.0214	0.0300
23:00 - 00:00	0.0310	0.0155	0.0193	0.0035	0.0201	0.0064	0.0188
00:00 - 01:00	0.0079	0.0098	0.0149	0.0044	0.0054	0.0119	0.0087
01:00 - 02:00	0.0174	0.0209	0.0255	0.0062	0.0193	0.0258	0.0255
02:00 - 03:00	0.0222	0.0257	0.0066	0.0067	0.0062	0.0119	0.0092
03:00 - 04:00	0.0180	0.0256	0.0078	0.0172	0.0065	0.0093	0.0202
04:00 - 05:00	0.0185	0.0249	0.0273	0.0173	0.0175	0.0129	0.0108
05:00 - 06:00	0.0181	0.0274	0.0231	0.0177	0.0085	0.0094	0.0129
06:00 - 07:00	0.0232	0.0203	0.0264	0.0268	0.0223	0.0211	0.0186
07:00 - 08:00	0.0192	0.0271	0.0234	0.0247	0.0350	0.0264	0.0301
08:00 - 09:00	0.0212	0.0296	0.0236	0.0267	0.0219	0.0225	0.0187
09:00 - 10:00	0.0079	0.0080	0.0251	0.0262	0.0217	0.0266	0.0195
Average-24Hr*	0.0187	0.0204	0.0234	0.0187	0.0198	0.0199	0.0207
Max-1Hr	0.0317	0.0296	0.0366	0.0291	0.0350	0.0288	0.0308
Min-1Hr	0.0044	0.0080	0.0066	0.0035	0.0054	0.0064	0.0088
Standard-1Hr	-						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor Period : 18-25 May 2024  
Analyzer Model : API 200A Station No : Shelter 15  
Serial No : 2384 Site Operator : Mr.Suphanut Intraranaret

Calibrator Model : Teledyne 700E Serial No : 587  
Calibration Gas Cylinder I.D. : EB0102326  
Certified Date : 05 Jan 2024 Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 04 Jan 2025

Time	NO2 Concentration (ppm)						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
12:00 - 13:00	0.0114	0.0142	0.0089	0.0091	0.0050	0.0103	0.0161
13:00 - 14:00	0.0083	0.0074	0.0083	0.0085	0.0077	0.0114	0.0184
14:00 - 15:00	0.0109	0.0158	0.0052	0.0106	0.0059	0.0179	0.0148
15:00 - 16:00	0.0090	0.0042	0.0197	0.0153	0.0179	0.0202	0.0118
16:00 - 17:00	0.0074	0.0182	0.0264	0.0187	0.0134	0.0150	0.0263
17:00 - 18:00	0.0204	0.0097	0.0153	0.0132	0.0207	0.0225	0.0239
18:00 - 19:00	0.0184	0.0238	0.0227	0.0123	0.0229	0.0098	0.0236
19:00 - 20:00	0.0134	0.0118	0.0244	0.0186	0.0134	0.0228	0.0177
20:00 - 21:00	0.0246	0.0132	0.0164	0.0092	0.0177	0.0157	0.0179
21:00 - 22:00	0.0086	0.0229	0.0203	0.0141	0.0210	0.0052	0.0210
22:00 - 23:00	0.0151	0.0198	0.0200	0.0127	0.0212	0.0127	0.0163
23:00 - 00:00	0.0209	0.0147	0.0084	0.0086	0.0118	0.0086	0.0217
00:00 - 01:00	0.0121	0.0017	0.0060	0.0053	0.0023	0.0044	0.0078
01:00 - 02:00	0.0137	0.0062	0.0119	0.0072	0.0069	0.0185	0.0190
02:00 - 03:00	0.0060	0.0196	0.0088	0.0070	0.0037	0.0102	0.0108
03:00 - 04:00	0.0103	0.0153	0.0018	0.0103	0.0074	0.0126	0.0132
04:00 - 05:00	0.0090	0.0180	0.0176	0.0077	0.0120	0.0059	0.0106
05:00 - 06:00	0.0123	0.0215	0.0179	0.0070	0.0107	0.0082	0.0075
06:00 - 07:00	0.0120	0.0228	0.0245	0.0185	0.0162	0.0129	0.0084
07:00 - 08:00	0.0092	0.0213	0.0207	0.0167	0.0262	0.0163	0.0085
08:00 - 09:00	0.0123	0.0175	0.0204	0.0215	0.0165	0.0138	0.0111
09:00 - 10:00	0.0125	0.0102	0.0211	0.0133	0.0191	0.0203	0.0057
10:00 - 11:00	0.0110	0.0167	0.0184	0.0108	0.0217	0.0068	0.0115
11:00 - 12:00	0.0095	0.0119	0.0103	0.0054	0.0031	0.0101	0.0099
Average-24Hr*	0.0125	0.0148	0.0156	0.0117	0.0135	0.0129	0.0147
Max-1Hr	0.0246	0.0233	0.0264	0.0215	0.0262	0.0226	0.0263
Min-1Hr	0.0074	0.0017	0.0018	0.0053	0.0023	0.0044	0.0057
Standard-1Hr	0.17 ppm(820 ug/cu.m)						
Standard-24Hr	-						

Remark : \* Average time between 12:00-12:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide MTR-BST Site 1

Location : Boundary at SW of Plant (1-7)	Monitor Period : 18-25 May 2024
Analyzer Model : Thermo 42C	Station No : Shelter 17
Serial No : 0426708263	Site Operator : Mr.Suphanut Intraranaret
Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D. : EB0102326	
Certified Date : 05 Jan 2024	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 04 Jan 2025	

Time	NO2 Concentration (ppm)						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
11:00 - 12:00	0.0105	0.0133	0.0181	0.0071	0.0112	0.0010	0.0162
12:00 - 13:00	0.0126	0.0129	0.0127	0.0128	0.0029	0.0176	0.0129
13:00 - 14:00	0.0106	0.0114	0.0143	0.0037	0.0143	0.0070	0.0189
14:00 - 15:00	0.0095	0.0075	0.0047	0.0058	0.0077	0.0202	0.0174
15:00 - 16:00	0.0078	0.0055	0.0139	0.0190	0.0229	0.0182	0.0151
16:00 - 17:00	0.0070	0.0198	0.0276	0.0214	0.0199	0.0133	0.0243
17:00 - 18:00	0.0131	0.0127	0.0179	0.0176	0.0145	0.0172	0.0209
18:00 - 19:00	0.0204	0.0120	0.0224	0.0136	0.0122	0.0125	0.0284
19:00 - 20:00	0.0125	0.0180	0.0252	0.0187	0.0192	0.0134	0.0118
20:00 - 21:00	0.0196	0.0184	0.0192	0.0125	0.0226	0.0219	0.0178
21:00 - 22:00	0.0145	0.0137	0.0175	0.0114	0.0237	0.0070	0.0212
22:00 - 23:00	0.0150	0.0207	0.0182	0.0066	0.0176	0.0075	0.0159
23:00 - 00:00	0.0130	0.0216	0.0098	0.0008	0.0160	0.0099	0.0310
00:00 - 01:00	0.0052	0.0080	0.0083	0.0070	0.0056	0.0042	0.0042
01:00 - 02:00	0.0103	0.0091	0.0118	0.0012	0.0091	0.0186	0.0185
02:00 - 03:00	0.0126	0.0100	0.0087	0.0051	0.0028	0.0089	0.0078
03:00 - 04:00	0.0131	0.0133	0.0106	0.0081	0.0069	0.0090	0.0096
04:00 - 05:00	0.0183	0.0142	0.0136	0.0058	0.0055	0.0085	0.0085
05:00 - 06:00	0.0106	0.0184	0.0250	0.0065	0.0113	0.0139	0.0121
06:00 - 07:00	0.0054	0.0146	0.0135	0.0170	0.0174	0.0053	0.0082
07:00 - 08:00	0.0115	0.0189	0.0239	0.0156	0.0250	0.0161	0.0124
08:00 - 09:00	0.0093	0.0205	0.0216	0.0159	0.0151	0.0089	0.0089
09:00 - 10:00	0.0069	0.0121	0.0186	0.0124	0.0208	0.0192	0.0080
10:00 - 11:00	0.0119	0.0241	0.0178	0.0105	0.0222	0.0026	0.0115
Average-24Hr*	0.0116	0.0146	0.0164	0.0107	0.0144	0.0118	0.0146
Max-1Hr	0.0204	0.0241	0.0276	0.0214	0.0250	0.0219	0.0284
Min-1Hr	0.0052	0.0055	0.0047	0.0008	0.0026	0.0010	0.0042
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr							

Remark : \* Average time between 11:00-11:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide MTR-BST Site 1

Location : Boundary at NE of Plant (1-8)	Monitor Period : 18-25 May 2024
Analyzer Model : API 200A	Station No : Shelter 16
Serial No : 2365	Site Operator : Mr.Suphanut Intraranaret
Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D. : EB0102326	
Certified Date : 05 Jan 2024	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 04 Jan 2025	

Time	NO2 Concentration (ppm)						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
10:00 - 11:00	0.0120	0.0099	0.0206	0.0204	0.0065	0.0206	0.0054
11:00 - 12:00	0.0051	0.0108	0.0165	0.0068	0.0146	0.0113	0.0125
12:00 - 13:00	0.0096	0.0062	0.0107	0.0116	0.0067	0.0155	0.0150
13:00 - 14:00	0.0119	0.0103	0.0137	0.0042	0.0145	0.0125	0.0174
14:00 - 15:00	0.0104	0.0082	0.0067	0.0122	0.0125	0.0122	0.0170
15:00 - 16:00	0.0178	0.0084	0.0189	0.0204	0.0178	0.0159	0.0177
16:00 - 17:00	0.0024	0.0198	0.0295	0.0182	0.0166	0.0189	0.0230
17:00 - 18:00	0.0138	0.0134	0.0175	0.0193	0.0160	0.0233	0.0155
18:00 - 19:00	0.0160	0.0196	0.0274	0.0117	0.0174	0.0150	0.0217
19:00 - 20:00	0.0261	0.0180	0.0264	0.0203	0.0193	0.0129	0.0206
20:00 - 21:00	0.0201	0.0153	0.0157	0.0151	0.0200	0.0125	0.0157
21:00 - 22:00	0.0161	0.0190	0.0135	0.0118	0.0237	0.0124	0.0207
22:00 - 23:00	0.0184	0.0104	0.0214	0.0134	0.0135	0.0122	0.0230
23:00 - 00:00	0.0211	0.0103	0.0113	0.0021	0.0142	0.0046	0.0100
00:00 - 01:00	0.0038	0.0065	0.0099	0.0025	0.0029	0.0090	0.0054
01:00 - 02:00	0.0120	0.0132	0.0159	0.0049	0.0135	0.0204	0.0191
02:00 - 03:00	0.0131	0.0135	0.0050	0.0041	0.0051	0.0085	0.0070
03:00 - 04:00	0.0109	0.0178	0.0052	0.0121	0.0045	0.0052	0.0131
04:00 - 05:00	0.0118	0.0181	0.0186	0.0104	0.0104	0.0084	0.0090
05:00 - 06:00	0.0127	0.0184	0.0181	0.0109	0.0047	0.0046	0.0082
06:00 - 07:00	0.0138	0.0148	0.0199	0.0198	0.0187	0.0129	0.0133
07:00 - 08:00	0.0135	0.0206	0.0181	0.0180	0.0265	0.0194	0.0121
08:00 - 09:00	0.0122	0.0213	0.0174	0.0186	0.0125	0.0163	0.0124
09:00 - 10:00	0.0052	0.0065	0.0190	0.0195	0.0142	0.0182	0.0100
Average-24Hr*	0.0126	0.0140	0.0165	0.0129	0.0135	0.0134	0.0144
Max-1Hr	0.0261	0.0218	0.0295	0.0204	0.0265	0.0233	0.0230
Min-1Hr	0.0024	0.0062	0.0050	0.0021	0.0029	0.0046	0.0054
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr							

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team

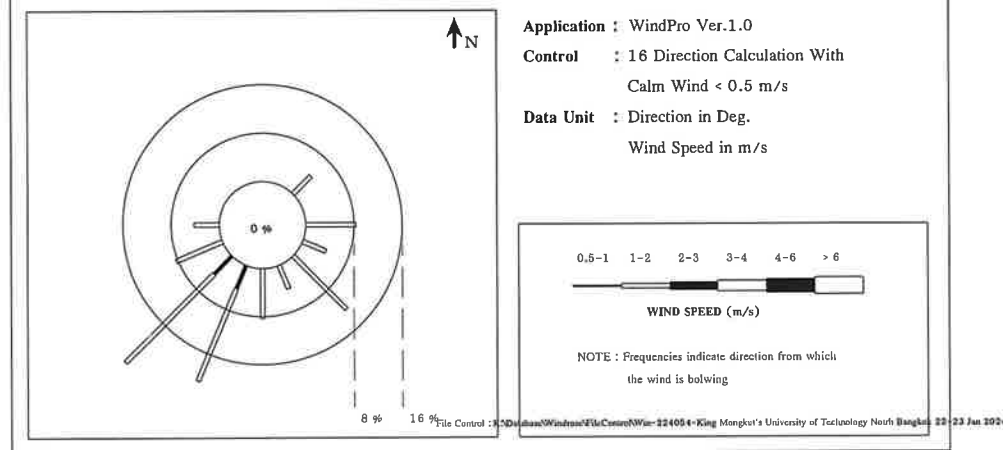


## Meteorological Monitoring Results : Wind Rose


### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok    Monitor period : 22-23 Jan 2024  
 Wind Speed Model : NRG Symphonie    Serial No : 309013914  
 Wind Direction Model : NRG Symphonie    Serial No : 309013914

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
ESE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0417	0.1667	0.0000	0.0000	0.0000	0.0000	0.2083
SW	0.0417	0.2083	0.0000	0.0000	0.0000	0.0000	0.2500
WSW	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
W	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
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						



  
 (Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

  
 (Miss Preeda Somjai)  
 Technical Management Team



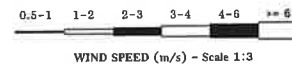
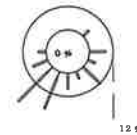
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok    Monitor period : 22-23 Jan 2024  
 Wind Speed Model : NRG Symphonie    Serial No : 309013914  
 Wind Direction Model : NRG Symphonie    Serial No : 309013914

Time	22-23 Jan 2024	
	WS(m/s)	WD
10:00 - 11:00	1.0	SSW
11:00 - 12:00	1.1	SSW
12:00 - 13:00	1.0	SSW
13:00 - 14:00	0.8	SSW
14:00 - 15:00	1.1	SW
15:00 - 16:00	1.0	SW
16:00 - 17:00	1.1	SW
17:00 - 18:00	1.2	SW
18:00 - 19:00	0.8	SW
19:00 - 20:00	1.3	WSW
20:00 - 21:00	1.1	SSW
21:00 - 22:00	1.0	SE
22:00 - 23:00	1.0	S
23:00 - 24:00	1.0	WSW
00:00 - 01:00	1.2	S
01:00 - 02:00	1.2	W
02:00 - 03:00	1.3	SW
03:00 - 04:00	1.1	NE
04:00 - 05:00	1.2	E
05:00 - 06:00	1.0	SE
06:00 - 07:00	1.2	E
07:00 - 08:00	1.0	ESE
08:00 - 09:00	1.1	SE
09:00 - 10:00	1.0	SSE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-King Mongkut's University of Technology North Bangkok 22-23 Jan 2024

  
 (Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

  
 (Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana

Monitor period : 22-23 Jan 2024

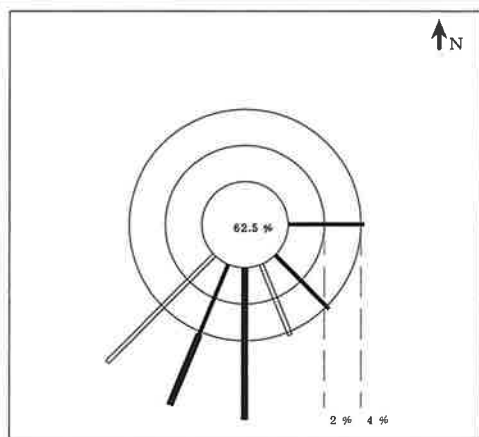
Wind Speed Model : NRG Symphonie

Serial No : 3090548

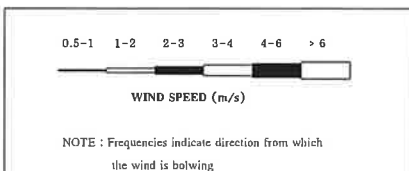
Wind Direction Model : NRG Symphonie

Serial No : 3090548

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.0000	0.0833	0.0000	0.0000	0.0000	0.0833
SSW	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
SW	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.6250						



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-224054-Soi Ruam Pattana 22-23 Jan 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana

Monitor period : 22-23 Jan 2024

Wind Speed Model : NRG Symphonie

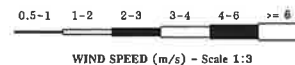
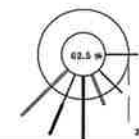
Serial No : 3090548

Wind Direction Model : NRG Symphonie

Serial No : 3090548

Time	22-23 Jan 2024	
	WS(m/s)	WD
10:00 - 11:00	0.4	N
11:00 - 12:00	1.8	SSE
12:00 - 13:00	2.2	S
13:00 - 14:00	2.1	S
14:00 - 15:00	2.0	SSW
15:00 - 16:00	1.7	SW
16:00 - 17:00	1.6	SW
17:00 - 18:00	0.7	SSW
18:00 - 19:00	0.4	SW
19:00 - 20:00	0.4	W
20:00 - 21:00	0.4	NNE
21:00 - 22:00	0.4	NNE
22:00 - 23:00	0.4	NE
23:00 - 24:00	0.4	NE
00:00 - 01:00	0.4	NE
01:00 - 02:00	0.4	NE
02:00 - 03:00	0.4	NNE
03:00 - 04:00	0.4	NNE
04:00 - 05:00	0.4	ENE
05:00 - 06:00	0.4	NE
06:00 - 07:00	0.4	NE
07:00 - 08:00	0.4	NE
08:00 - 09:00	0.5	E
09:00 - 10:00	0.8	SE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-Soi Ruam Pattana 22-23 Jan 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team

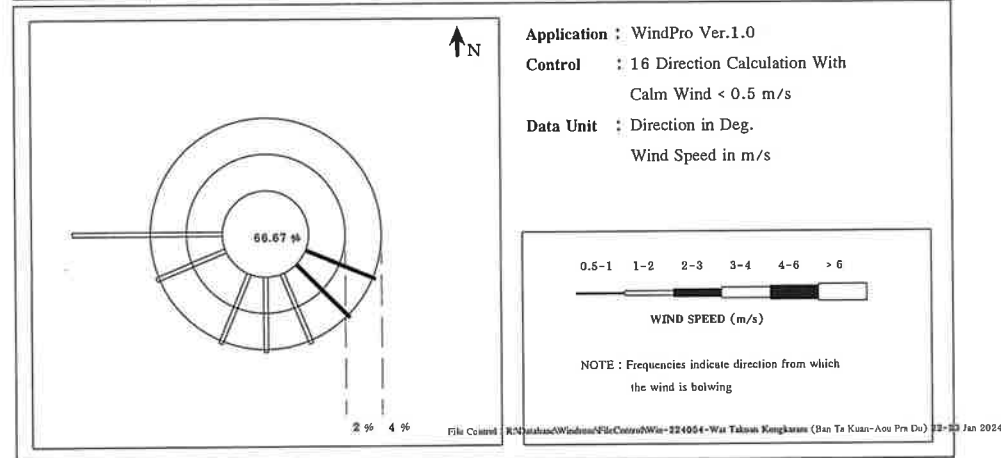


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 22-23 Jan 2024  
 Wind Speed Model : NRG Symphonie Serial No : 30909366  
 Wind Direction Model : NRG Symphonie Serial No : 30909366

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
W	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
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	0.6667						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



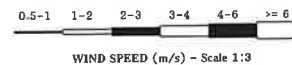
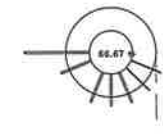
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 22-23 Jan 2024  
 Wind Speed Model : NRG Symphonie Serial No : 30909366  
 Wind Direction Model : NRG Symphonie Serial No : 30909366

Time	22-23 Jan 2024	
	WS(m/s)	WD
10:00 - 11:00	0.4	N
11:00 - 12:00	1.2	SSE
12:00 - 13:00	1.4	SSW
13:00 - 14:00	1.3	S
14:00 - 15:00	1.3	WSW
15:00 - 16:00	1.1	W
16:00 - 17:00	1.0	W
17:00 - 18:00	0.4	W
18:00 - 19:00	0.4	SSW
19:00 - 20:00	0.4	SSW
20:00 - 21:00	0.4	SSW
21:00 - 22:00	0.4	E
22:00 - 23:00	0.4	E
23:00 - 24:00	0.4	E
00:00 - 01:00	0.4	E
01:00 - 02:00	0.4	E
02:00 - 03:00	0.4	E
03:00 - 04:00	0.4	E
04:00 - 05:00	0.4	E
05:00 - 06:00	0.4	E
06:00 - 07:00	0.4	E
07:00 - 08:00	0.5	ESE
08:00 - 09:00	0.4	ESE
09:00 - 10:00	0.7	SE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 22-23 Jan 2024

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0125/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 22-23/01/2024	ANALYTICAL DATE	: 26, 29/01/2024
SAMPLING TIME	: 12:25-11:53	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 24/01/2024	FILE CODE	: 224054_TO-15_January
REPORT DATE	: 30/01/2024		

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		King Mongkut's University of Technology North Bangkok (KMUTNB (Rayong))		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	0.40	0.89	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15,1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

Araya Tipparuk

( Mrs. Araya Tipparuk )

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0125/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 22-23/01/2024	ANALYTICAL DATE	: 26, 29/01/2024
SAMPLING TIME	: 12:09-11:45	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 24/01/2024	FILE CODE	: 224054_TO-15_January
REPORT DATE	: 30/01/2024		

Compound	SAMPLING LOCATION				STANDARD* ( $\mu\text{g}/\text{m}^3$ )
	Non Detection		Soi Ruam Pattana		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15,1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

Araya Tipparuk

( Mrs. Araya Tipparuk )

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0125/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 22-23/01/2024	ANALYTICAL DATE	: 26, 29/01/2024
SAMPLING TIME	: 11:48-11:28	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 24/01/2024	FILE CODE	: 224054_TO-15_January
REPORT DATE	: 30/01/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m <sup>3</sup> )
			Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Method for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15, 1999

Sirivan Chimsa-nga  
(Miss Sirivan Chimsa-nga)

Analyst

(Mrs. Anya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 01-02 Feb 2024

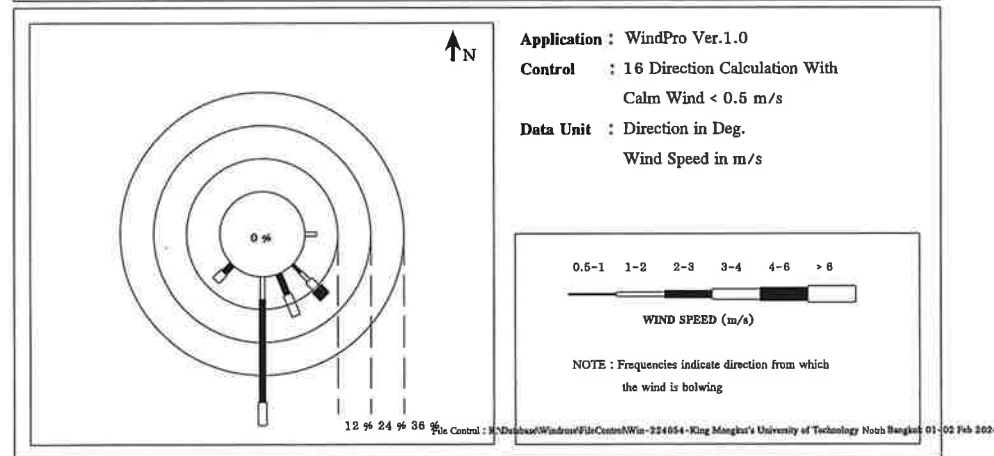
Wind Speed Model : Campbell CR510

Serial No : 10695

Wind Direction Model : Campbell CR510

Serial No : 10695

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0417	0.0417	0.0000	0.0417	0.0417	0.0000	0.1667
SSE	0.0000	0.0000	0.0833	0.0833	0.0000	0.0000	0.1667
S	0.0000	0.0833	0.3750	0.0833	0.0000	0.0000	0.5417
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.0000	0.0417	0.0417	0.0000	0.0000	0.0833
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 01-02 Feb 2024

Wind Speed Model : Campbell CR510

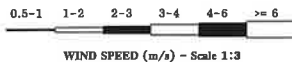
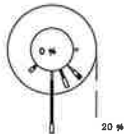
Serial No : 10695

Wind Direction Model : Campbell CR510

Serial No : 10695

Time	01-02 Feb 2024	
	WS(m/s)	WD
14:00 - 15:00	3.2	SW
15:00 - 16:00	4.0	SE
16:00 - 17:00	3.8	S
17:00 - 18:00	3.5	SSE
18:00 - 19:00	3.3	S
19:00 - 20:00	2.6	S
20:00 - 21:00	2.9	S
21:00 - 22:00	2.9	S
22:00 - 23:00	2.7	S
23:00 - 24:00	2.8	SW
00:00 - 01:00	2.5	S
01:00 - 02:00	2.7	SSE
02:00 - 03:00	2.4	S
03:00 - 04:00	2.7	S
04:00 - 05:00	2.7	S
05:00 - 06:00	2.1	S
06:00 - 07:00	1.9	SE
07:00 - 08:00	1.5	E
08:00 - 09:00	0.7	SE
09:00 - 10:00	1.6	S
10:00 - 11:00	3.0	SE
11:00 - 12:00	3.4	SSE
12:00 - 13:00	2.1	SSE
13:00 - 14:00	1.8	S

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-King Mongkut's University of Technology North Bangkok 01-02 Feb 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana

Monitor period : 01-02 Feb 2024

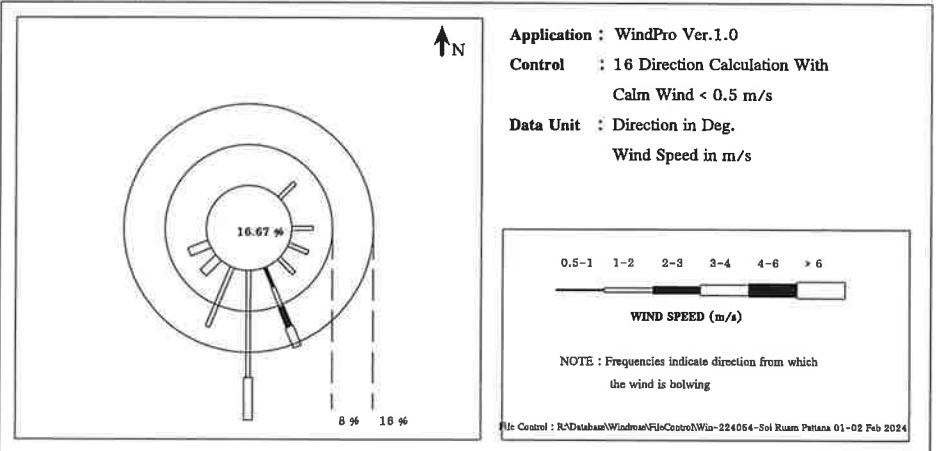
Wind Speed Model : Campbell CR510

Serial No : 10851

Wind Direction Model : Campbell CR510

Serial No : 10851

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0417	0.0417	0.0417	0.0417	0.0000	0.0000	0.1667
S	0.0000	0.2083	0.0000	0.0833	0.0000	0.0000	0.2917
SSW	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
SW	0.0000	0.0000	0.0000	0.0417	0.0000	0.0000	0.0417
WSW	0.0000	0.0000	0.0000	0.0417	0.0000	0.0000	0.0417
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	0.1667						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team





## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana

Monitor period : 01-02 Feb 2024

Wind Speed Model : Campbell CR510

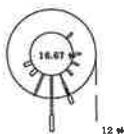
Serial No : 10851

Wind Direction Model : Campbell CR510

Serial No : 10851

Time	01-02 Feb 2024	
	WS(m/s)	WD
09:00 - 10:00	0.0	SSE
10:00 - 11:00	0.0	SSE
11:00 - 12:00	0.0	SE
12:00 - 13:00	0.0	S
13:00 - 14:00	3.1	S
14:00 - 15:00	3.7	S
15:00 - 16:00	3.7	SSE
16:00 - 17:00	3.7	WSW
17:00 - 18:00	3.1	SW
18:00 - 19:00	2.4	SSE
19:00 - 20:00	1.3	SSW
20:00 - 21:00	0.7	SSE
21:00 - 22:00	1.2	S
22:00 - 23:00	1.7	SSW
23:00 - 24:00	1.3	S
00:00 - 01:00	1.4	SE
01:00 - 02:00	1.3	SSE
02:00 - 03:00	1.0	S
03:00 - 04:00	1.5	SSW
04:00 - 05:00	1.1	S
05:00 - 06:00	1.5	S
06:00 - 07:00	1.0	E
07:00 - 08:00	1.4	NE
08:00 - 09:00	1.5	ESE

Wind Rose



File Control R:\Database\Windrose\FileControl\Win-224054-Soi Ruam Pattana 01-02 Feb 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)

Monitor period : 01-02 Feb 2024

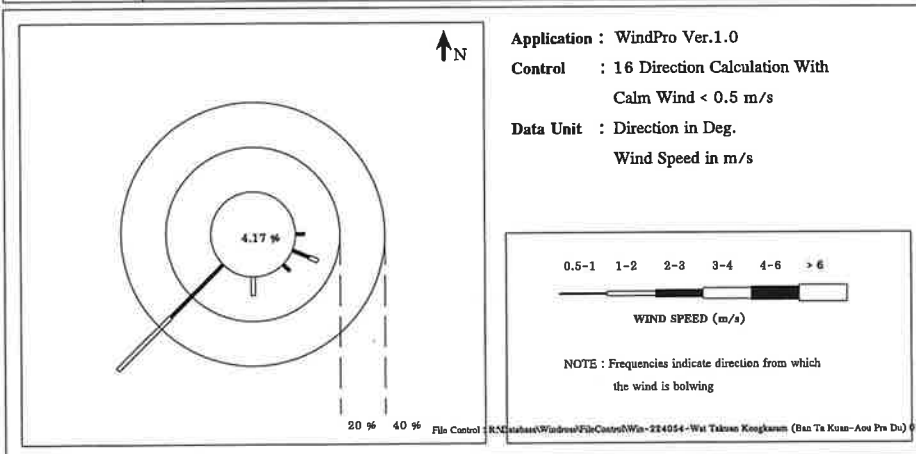
Wind Speed Model : Novalynx WS-25

Serial No : A4907

Wind Direction Model : Novalynx WS-25

Serial No : A4907

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
SE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.3333	0.3333	0.0000	0.0000	0.0000	0.0000	0.6667
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0417						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 01-02 Feb 2024  
Wind Speed Model : Novalynx WS-25 Serial No : A4907  
Wind Direction Model : Novalynx WS-25 Serial No : A4907

Time	01-02 Feb 2024	
	WS(m/s)	WD
10:00 - 11:00	0.5	SW
11:00 - 12:00	0.6	E
12:00 - 13:00	0.6	SE
13:00 - 14:00	1.3	S
14:00 - 15:00	0.1	SE
15:00 - 16:00	1.2	S
16:00 - 17:00	1.3	SW
17:00 - 18:00	0.5	SW
18:00 - 19:00	1.2	SW
19:00 - 20:00	0.9	SW
20:00 - 21:00	1.1	SW
21:00 - 22:00	0.6	SW
22:00 - 23:00	1.2	SW
23:00 - 24:00	1.3	SW
00:00 - 01:00	1.0	SW
01:00 - 02:00	0.7	SW
02:00 - 03:00	1.0	SW
03:00 - 04:00	1.0	SW
04:00 - 05:00	0.5	SW
05:00 - 06:00	0.5	SW
06:00 - 07:00	0.8	SW
07:00 - 08:00	0.9	ESE
08:00 - 09:00	1.1	ESE
09:00 - 10:00	0.9	ESE

Wind Rose



File Control : R:\Database\Windrose\FireControl\Win-224054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 01-02 Feb 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

239 ถนนวิมลคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0204/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Subatmospheric Pressure Sampling  
SAMPLING DATE : 01-02/02/2024 ANALYTICAL DATE : 21/02/2024  
SAMPLING TIME : 14:30-14:31 SAMPLE CONDITION : Normal  
RECEIVED DATE : 03/02/2024 FILE CODE : 224054\_TO-15\_February  
REPORT DATE : 22/02/2024

Compound	SAMPLING LOCATION				STANDARD* ( $\mu\text{g}/\text{m}^3$ )
	Non Detection		King Mongkut's University of Technology North Bangkok		
			(KMUTNB (Rayong))		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15, 1999

Sirivan Chimsanga  
(Miss Sirivan Chimsanga)

Analyst

Araya Tipparuk  
(Mrs. Araya Tipparuk)

Technical Management Team

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduce, except in full, without official approval.  
3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0204/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/02/2024	ANALYTICAL DATE	: 21/02/2024
SAMPLING TIME	: 13:07-13:16	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/02/2024	FILE CODE	: 224054_TO-15_February
REPORT DATE	: 22/02/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m <sup>3</sup> )
			Soi Ruam Pattana		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air 2<sup>nd</sup> : EPA Methods TO-15,1999

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Analyst

Araya Tippiak

(Mrs. Araya Tippiak)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0204/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/02/2024	ANALYTICAL DATE	: 21/02/2024
SAMPLING TIME	: 10:40-10:45	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/02/2024	FILE CODE	: 224054_TO-15_February
REPORT DATE	: 22/02/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m <sup>3</sup> )
			Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air 2<sup>nd</sup> : EPA Methods TO-15,1999

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Analyst

Araya Tippiak

(Mrs. Araya Tippiak)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

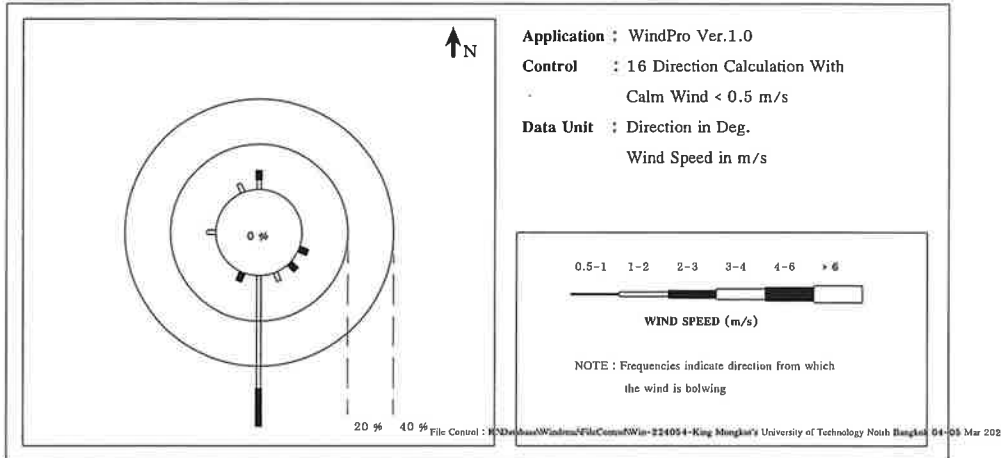


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 04-05 Mar 2024  
 Wind Speed Model : NRG Symphonie Serial No : 30909366  
 Wind Direction Model : NRG Symphonie Serial No : 30909366

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0417	0.0417	0.0000	0.0000	0.0000	0.0833
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
SE	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.5000	0.1667	0.0000	0.0000	0.0000	0.6667
SSW	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



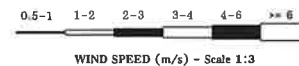
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 04-05 Mar 2024  
 Wind Speed Model : NRG Symphonie Serial No : 30909366  
 Wind Direction Model : NRG Symphonie Serial No : 30909366

Time	04-05 Mar 2024	
	WS(m/s)	WD
08:00 - 09:00	1.2	NNW
09:00 - 10:00	1.7	W
10:00 - 11:00	1.9	N
11:00 - 12:00	2.4	SE
12:00 - 13:00	2.3	S
13:00 - 14:00	2.5	S
14:00 - 15:00	2.6	S
15:00 - 16:00	2.5	SSW
16:00 - 17:00	2.4	S
17:00 - 18:00	1.9	S
18:00 - 19:00	1.7	S
19:00 - 20:00	1.8	S
20:00 - 21:00	1.9	S
21:00 - 22:00	1.9	S
22:00 - 23:00	1.9	S
23:00 - 24:00	1.8	S
00:00 - 01:00	1.9	S
01:00 - 02:00	1.9	S
02:00 - 03:00	1.9	S
03:00 - 04:00	1.7	S
04:00 - 05:00	1.6	S
05:00 - 06:00	1.7	SSE
06:00 - 07:00	2.0	ESE
07:00 - 08:00	2.2	N

Wind Rose



File Control : R:\Database\Windrose\FileControlWin-224054-King Mongkut's University of Technology North Bangkok 04-05 Mar 2024

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team

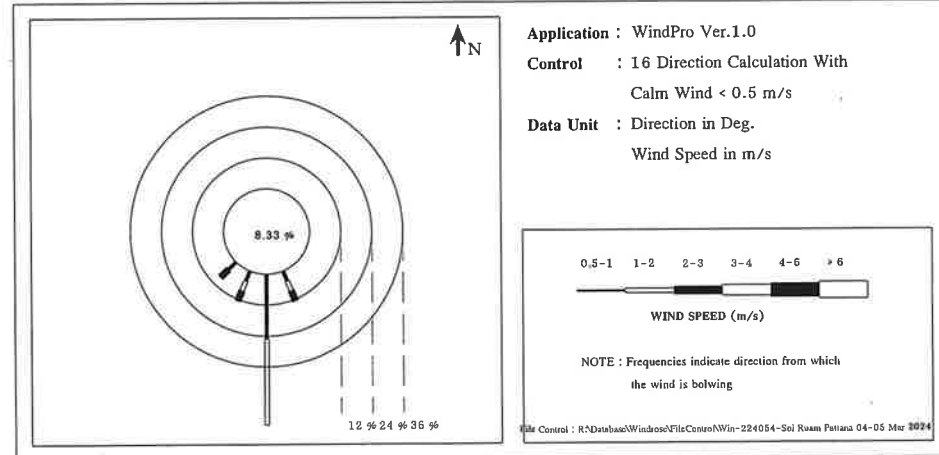


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 04-05 Mar 2024  
 Wind Speed Model : NRG Symphonie Serial No : 309016789  
 Wind Direction Model : NRG Symphonie Serial No : 309016789

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0417	0.0417	0.0417	0.0000	0.0000	0.0000	0.1250
S	0.2500	0.3333	0.0000	0.0000	0.0000	0.0000	0.5833
SSW	0.0417	0.0417	0.0417	0.0000	0.0000	0.0000	0.1250
SW	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0833						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 04-05 Mar 2024  
 Wind Speed Model : NRG Symphonie Serial No : 309016789  
 Wind Direction Model : NRG Symphonie Serial No : 309016789

Time	04-05 Mar 2024	
	WS(m/s)	WD
13:00 - 14:00	2.2	SSW
14:00 - 15:00	2.1	SW
15:00 - 16:00	1.5	S
16:00 - 17:00	1.3	S
17:00 - 18:00	0.9	S
18:00 - 19:00	0.7	S
19:00 - 20:00	0.6	SSE
20:00 - 21:00	0.7	S
21:00 - 22:00	0.9	S
22:00 - 23:00	1.2	S
23:00 - 24:00	1.2	S
00:00 - 01:00	1.1	S
01:00 - 02:00	0.7	S
02:00 - 03:00	0.9	SW
03:00 - 04:00	0.5	SSW
04:00 - 05:00	0.4	SSW
05:00 - 06:00	0.2	SSW
06:00 - 07:00	0.8	S
07:00 - 08:00	1.3	SSE
08:00 - 09:00	1.3	S
09:00 - 10:00	1.4	S
10:00 - 11:00	1.5	SSW
11:00 - 12:00	2.0	SSE
12:00 - 13:00	1.6	S



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team

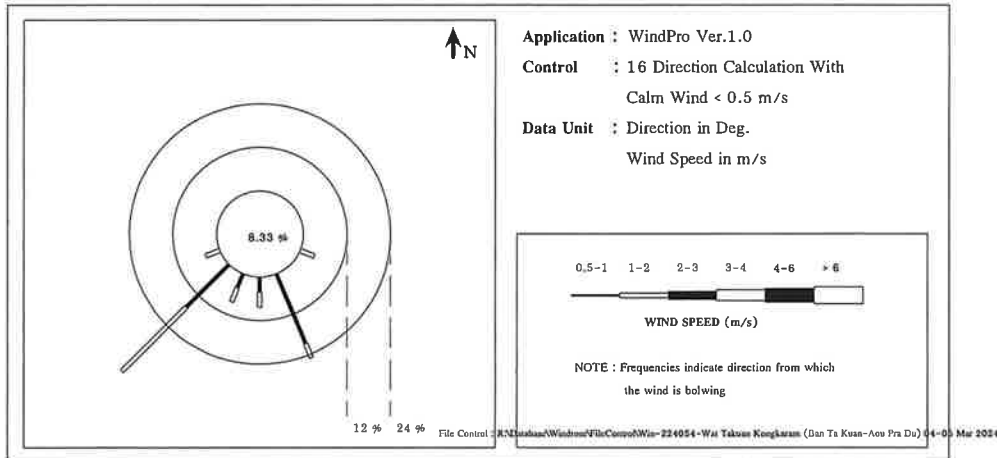


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 04-05 Mar 2024  
 Wind Speed Model : Campbell CR510 Serial No : 10693  
 Wind Direction Model : Campbell CR510 Serial No : 10693

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.2083	0.0417	0.0000	0.0000	0.0000	0.0000	0.2500
S	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SW	0.1667	0.2500	0.0000	0.0000	0.0000	0.0000	0.4167
WSW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
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	0.0833						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



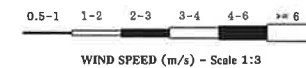
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 04-05 Mar 2024  
 Wind Speed Model : Campbell CR510 Serial No : 10693  
 Wind Direction Model : Campbell CR510 Serial No : 10693

Time	04-05 Mar 2024	
	WS(m/s)	WD
10:00 - 11:00	1.4	SW
11:00 - 12:00	1.7	SW
12:00 - 13:00	1.7	SW
13:00 - 14:00	1.7	WSW
14:00 - 15:00	1.4	S
15:00 - 16:00	1.1	SSW
16:00 - 17:00	1.0	SW
17:00 - 18:00	1.0	ESE
18:00 - 19:00	1.3	SSE
19:00 - 20:00	0.8	SSE
20:00 - 21:00	0.6	SSE
21:00 - 22:00	0.7	SSE
22:00 - 23:00	0.7	SW
23:00 - 24:00	0.9	SSE
00:00 - 01:00	1.0	SW
01:00 - 02:00	0.8	SW
02:00 - 03:00	0.8	SSW
03:00 - 04:00	0.9	SW
04:00 - 05:00	0.7	SSE
05:00 - 06:00	0.4	SW
06:00 - 07:00	0.3	WNW
07:00 - 08:00	0.5	S
08:00 - 09:00	0.8	SW
09:00 - 10:00	1.1	SW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 04-05 Mar 2024

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0407/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/03/2024	ANALYTICAL DATE	: 07/03/2024
SAMPLING TIME	: 14:00-14:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/03/2024	FILE CODE	: 224054_TO-15_March
REPORT DATE	: 20/03/2024		

Compound	SAMPLING LOCATION				STANDARD* ( $\mu\text{g}/\text{m}^3$ )
	Non Detection		King Mongkut's University of Technology North Bangkok (KMUTNB (Rayong))		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0407/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/03/2024	ANALYTICAL DATE	: 07/03/2024
SAMPLING TIME	: 13:30-14:00	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/03/2024	FILE CODE	: 224054_TO-15_March
REPORT DATE	: 20/03/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ( $\mu\text{g}/\text{m}^3$ )
			Sol Ruam Pattana		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0407/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/03/2024	ANALYTICAL DATE	: 07/03/2024
SAMPLING TIME	: 10:28-10:28	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/03/2024	FILE CODE	: 224054_TO-15_March
REPORT DATE	: 20/03/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*  (µg/m <sup>3</sup> )
	Wat Takuan Kongkaram (Ban Tu Kuan-Aou Pra Du)				
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

Amaya Tipparuk  
(Mrs. Amaya Tipparuk)

Technical Management Team

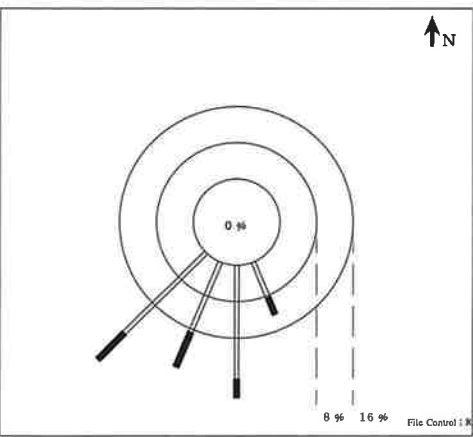
Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduce, except in full, without official approval.  
3. \* Notification of the Pollution Control Department, dated December 18, B.E. 2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



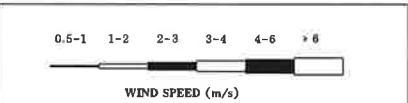
Meteorological Monitoring Results : Wind Rose  
MTR-BST Site 1

Location	: King Mongkut's University of Technology North Bangkok	Monitor period	: 22-23 Apr 2024
Wind Speed Model	: NRG Symphonie	Serial No	: 309016178
Wind Direction Model	: NRG Symphonie	Serial No	: 309016178

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0833	0.0417	0.0000	0.0000	0.0000	0.1250
S	0.0000	0.2500	0.0417	0.0000	0.0000	0.0000	0.2917
SSW	0.0000	0.1667	0.0833	0.0000	0.0000	0.0000	0.2500
SW	0.0000	0.2500	0.0833	0.0000	0.0000	0.0000	0.3333
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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/s  
Data Unit : Direction in Deg.  
Wind Speed in m/s



NOTE : Frequencies indicate direction from which the wind is blowing

Katesarin Vorradetwittaya  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team





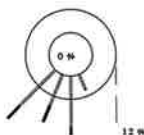
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok      Monitor period : 22-23 Apr 2024  
 Wind Speed Model : NRG Symphonie      Serial No : 309016178  
 Wind Direction Model : NRG Symphonie      Serial No : 309016178

Time	22-23 Apr 2024	
	WS(m/s)	WD
12:00 - 13:00	1.6	SSW
13:00 - 14:00	2.2	SW
14:00 - 15:00	1.8	S
15:00 - 16:00	1.6	S
16:00 - 17:00	2.3	SSW
17:00 - 18:00	2.1	SSW
18:00 - 19:00	1.4	SW
19:00 - 20:00	1.4	S
20:00 - 21:00	1.4	S
21:00 - 22:00	1.7	SSE
22:00 - 23:00	1.7	S
23:00 - 24:00	1.7	SW
00:00 - 01:00	1.5	S
01:00 - 02:00	1.5	SW
02:00 - 03:00	1.5	SW
03:00 - 04:00	1.9	SSW
04:00 - 05:00	2.1	S
05:00 - 06:00	1.4	SSW
06:00 - 07:00	1.5	SW
07:00 - 08:00	2.1	SW
08:00 - 09:00	1.6	SSE
09:00 - 10:00	1.5	SSW
10:00 - 11:00	1.4	SW
11:00 - 12:00	2.3	SSE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-King Mongkut's University of Technology North Bangkok 22-23 Apr 2024

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team

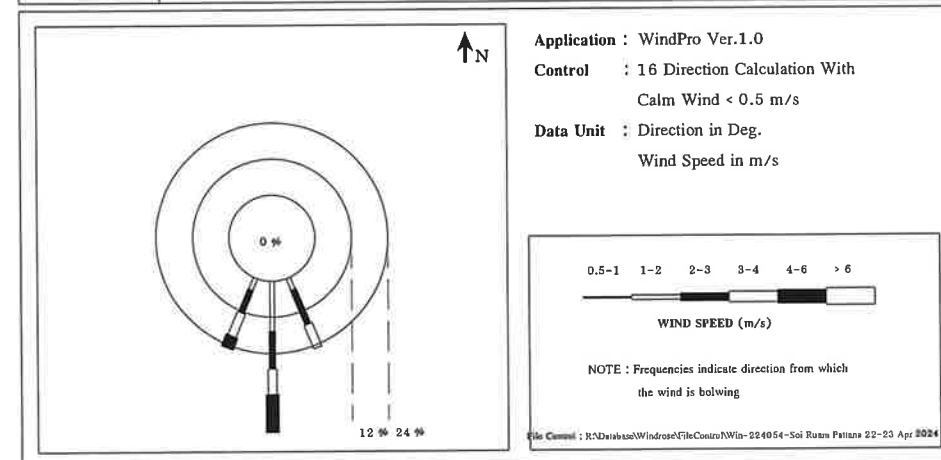


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana      Monitor period : 22-23 Apr 2024  
 Wind Speed Model : NRG Symphonie      Serial No : 309090548  
 Wind Direction Model : NRG Symphonie      Serial No : 309090548

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0417	0.1250	0.0833	0.0000	0.0000	0.2500
S	0.0000	0.1667	0.1250	0.0833	0.1250	0.0000	0.5000
SSW	0.0000	0.0417	0.0833	0.0833	0.0417	0.0000	0.2500
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



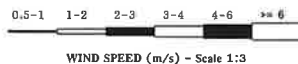
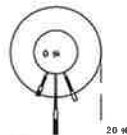
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 22-23 Apr 2024  
 Wind Speed Model : NRG Symphonie Serial No : 309090548  
 Wind Direction Model : NRG Symphonie Serial No : 309090548

Time	22-23 Apr 2024	
	WS(m/s)	WD
14:00 - 15:00	4.6	S
15:00 - 16:00	3.8	SSE
16:00 - 17:00	2.8	SSE
17:00 - 18:00	3.0	SSE
18:00 - 19:00	2.8	SSE
19:00 - 20:00	2.6	SSE
20:00 - 21:00	2.1	S
21:00 - 22:00	1.7	S
22:00 - 23:00	1.3	SSE
23:00 - 24:00	1.2	S
00:00 - 01:00	1.8	S
01:00 - 02:00	3.0	SSW
02:00 - 03:00	2.4	SSW
03:00 - 04:00	1.4	SSW
04:00 - 05:00	2.3	S
05:00 - 06:00	1.4	S
06:00 - 07:00	2.0	SSW
07:00 - 08:00	3.5	S
08:00 - 09:00	3.4	S
09:00 - 10:00	4.3	SSW
10:00 - 11:00	4.2	S
11:00 - 12:00	5.4	S
12:00 - 13:00	2.8	S
13:00 - 14:00	3.0	SSW

Wind Rose



File Control : R:\Database\Windrose\FileControlWin-224054-Soi Ruam Pattana 22-23 Apr 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team

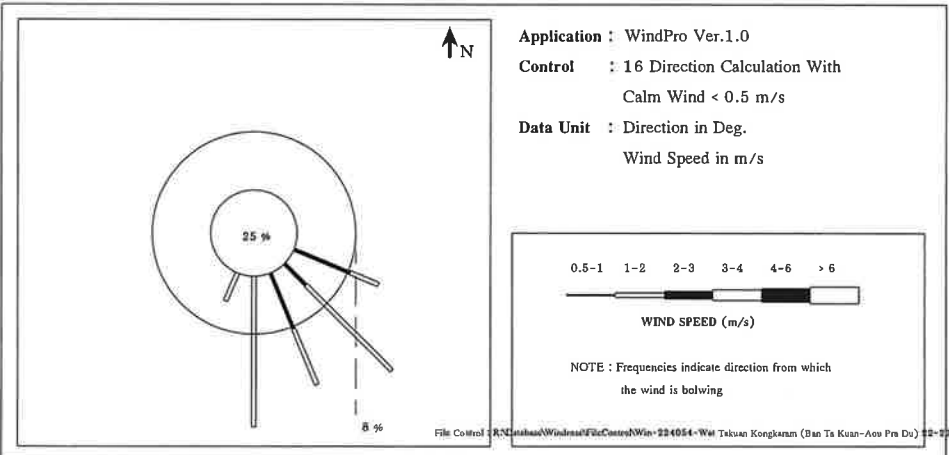


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 22-23 Apr 2024  
 Wind Speed Model : NRG Symphonie Serial No : 309016789  
 Wind Direction Model : NRG Symphonie Serial No : 309016789

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
SE	0.0417	0.1667	0.0000	0.0000	0.0000	0.0000	0.2083
SSE	0.0833	0.0833	0.0000	0.0000	0.0000	0.0000	0.1667
S	0.0000	0.2083	0.0000	0.0000	0.0000	0.0000	0.2083
SSW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.2500						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 22-23 Apr 2024

Wind Speed Model : NRG Symphonie Serial No : 309016789

Wind Direction Model : NRG Symphonie Serial No : 309016789

Time	22-23 Apr 2024	
	WS(m/s)	WD
13:00 - 14:00	1.3	SE
14:00 - 15:00	1.1	ESE
15:00 - 16:00	0.6	ESE
16:00 - 17:00	0.3	ESE
17:00 - 18:00	0.3	SSW
18:00 - 19:00	0.2	SE
19:00 - 20:00	0.4	SSE
20:00 - 21:00	0.1	ENE
21:00 - 22:00	0.3	SE
22:00 - 23:00	0.6	SSE
23:00 - 24:00	1.8	S
00:00 - 01:00	1.6	SSW
01:00 - 02:00	1.1	SSE
02:00 - 03:00	0.6	SSE
03:00 - 04:00	1.0	SSE
04:00 - 05:00	1.1	S
05:00 - 06:00	1.1	S
06:00 - 07:00	1.1	S
07:00 - 08:00	1.5	S
08:00 - 09:00	1.3	SE
09:00 - 10:00	1.2	SE
10:00 - 11:00	0.8	ESE
11:00 - 12:00	1.5	SE
12:00 - 13:00	0.9	SE

Wind Rose



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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0786/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 22-23/04/2024	ANALYTICAL DATE	: 25-26/04/2024
SAMPLING TIME	: 12:35-13:00	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 24/04/2024	FILE CODE	: 224054_TO-15_April
REPORT DATE	: 30/04/2024		

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		King Mongkut's University of Technology North Bangkok (KMUTNB (Rayong))		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1992

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tippanuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0786/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 22-23/04/2024	ANALYTICAL DATE	: 25-26/04/2024
SAMPLING TIME	: 12:48-13:10	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 24/04/2024	FILE CODE	: 224054_TO-15_April
REPORT DATE	: 30/04/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ( $\mu\text{g}/\text{m}^3$ )
			Sol Ruam Pattana		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup>: EPA Methods TO-15,1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

NR  
(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0786/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 22-23/04/2024	ANALYTICAL DATE	: 25-26/04/2024
SAMPLING TIME	: 13:15-13:20	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 24/04/2024	FILE CODE	: 224054_TO-15_April
REPORT DATE	: 30/04/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m <sup>3</sup> )
			Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup>: EPA Methods TO-15,1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

NR  
(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 27-28 May 2024

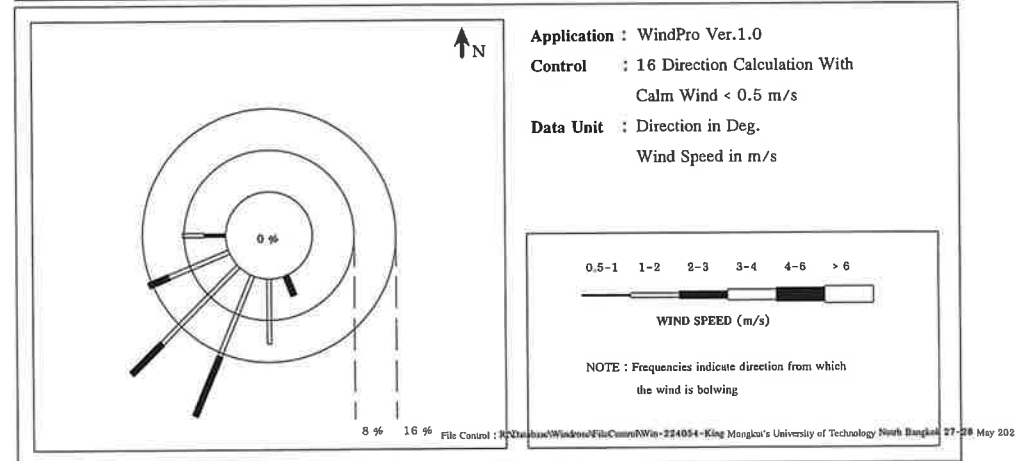
Wind Speed Model : NRG Symphonie

Serial No : 30909366

Wind Direction Model : NRG Symphonie

Serial No : 30909366

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
SSW	0.0000	0.1667	0.1250	0.0000	0.0000	0.0000	0.2917
SW	0.0000	0.2083	0.0833	0.0000	0.0000	0.0000	0.2917
WSW	0.0000	0.1250	0.0417	0.0000	0.0000	0.0000	0.1667
W	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
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						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 27-28 May 2024

Wind Speed Model : NRG Symphonie

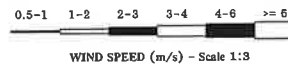
Serial No : 30909366

Wind Direction Model : NRG Symphonie

Serial No : 30909366

Time	27-28 May 2024	
	WS(m/s)	WD
16:00 - 17:00	2.5	SW
17:00 - 18:00	2.5	SSW
18:00 - 19:00	1.7	WSW
19:00 - 20:00	1.9	WSW
20:00 - 21:00	1.1	SW
21:00 - 22:00	0.8	W
22:00 - 23:00	1.0	SSW
23:00 - 24:00	1.1	WSW
00:00 - 01:00	1.2	SSW
01:00 - 02:00	1.8	SW
02:00 - 03:00	1.1	SSW
03:00 - 04:00	1.4	SW
04:00 - 05:00	1.5	SW
05:00 - 06:00	1.1	S
06:00 - 07:00	1.6	S
07:00 - 08:00	1.3	W
08:00 - 09:00	1.5	S
09:00 - 10:00	1.4	SSW
10:00 - 11:00	2.0	SSW
11:00 - 12:00	2.2	SW
12:00 - 13:00	2.4	SSW
13:00 - 14:00	2.1	WSW
14:00 - 15:00	1.4	SW
15:00 - 16:00	2.4	SSE

Wind Rose



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team

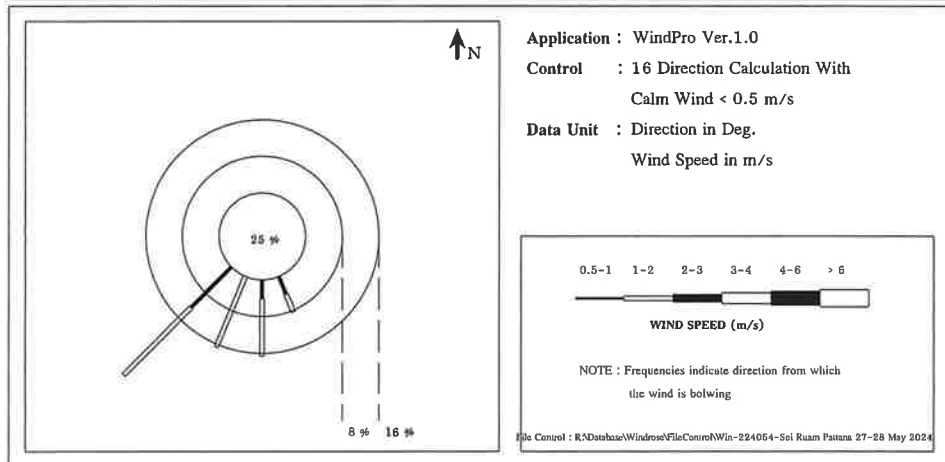


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 27-28 May 2024  
 Wind Speed Model : NRG Symphonie Serial No : 309019737  
 Wind Direction Model : NRG Symphonie Serial No : 309019737

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
S	0.0417	0.1250	0.0000	0.0000	0.0000	0.0000	0.1667
SSW	0.0000	0.1667	0.0000	0.0000	0.0000	0.0000	0.1667
SW	0.1250	0.2083	0.0000	0.0000	0.0000	0.0000	0.3333
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.2500						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 27-28 May 2024  
 Wind Speed Model : NRG Symphonie Serial No : 309019737  
 Wind Direction Model : NRG Symphonie Serial No : 309019737

Time	27-28 May 2024	
	WS(m/s)	WD
07:00 - 08:00	1.1	SSE
08:00 - 09:00	1.2	SSW
09:00 - 10:00	1.3	SSW
10:00 - 11:00	1.4	S
11:00 - 12:00	1.7	SSW
12:00 - 13:00	1.7	S
13:00 - 14:00	1.7	SSW
14:00 - 15:00	1.2	S
15:00 - 16:00	0.8	S
16:00 - 17:00	0.6	SSE
17:00 - 18:00	0.1	SSE
18:00 - 19:00	0.0	S
19:00 - 20:00	0.0	ESE
20:00 - 21:00	0.1	SE
21:00 - 22:00	0.4	S
22:00 - 23:00	0.2	S
23:00 - 24:00	0.6	SW
00:00 - 01:00	1.1	SW
01:00 - 02:00	0.7	SW
02:00 - 03:00	0.7	SW
03:00 - 04:00	1.0	SW
04:00 - 05:00	1.0	SW
05:00 - 06:00	1.0	SW
06:00 - 07:00	1.2	SW



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team

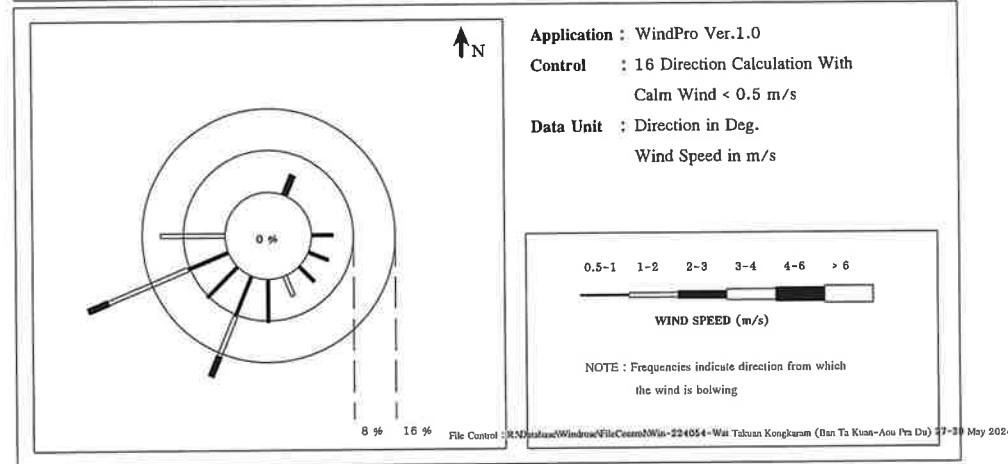


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 27-28 May 2024  
 Wind Speed Model : Novalynx WS-25 Serial No : A5090  
 Wind Direction Model : Novalynx WS-25 Serial No : A5090

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0833	0.0833	0.0417	0.0000	0.0000	0.0000	0.2083
SW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
WSW	0.0833	0.1667	0.0417	0.0000	0.0000	0.0000	0.2917
W	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
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						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



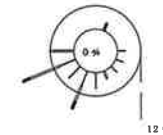
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 27-28 May 2024  
 Wind Speed Model : Novalynx WS-25 Serial No : A5090  
 Wind Direction Model : Novalynx WS-25 Serial No : A5090

Time	27-28 May 2024	
	WS(m/s)	WD
16:00 - 17:00	1.1	WSW
17:00 - 18:00	1.0	WSW
18:00 - 19:00	0.6	S
19:00 - 20:00	0.5	SE
20:00 - 21:00	0.7	E
21:00 - 22:00	1.3	W
22:00 - 23:00	1.0	W
23:00 - 24:00	0.7	SW
00:00 - 01:00	0.8	SSW
01:00 - 02:00	0.5	WSW
02:00 - 03:00	1.0	WSW
03:00 - 04:00	0.7	S
04:00 - 05:00	1.2	WSW
05:00 - 06:00	0.5	WSW
06:00 - 07:00	2.3	NNE
07:00 - 08:00	2.0	SSW
08:00 - 09:00	1.2	SSW
09:00 - 10:00	1.1	W
10:00 - 11:00	0.9	SW
11:00 - 12:00	1.7	SSW
12:00 - 13:00	2.2	WSW
13:00 - 14:00	1.0	SSE
14:00 - 15:00	0.9	SSW
15:00 - 16:00	0.7	ESE

Wind Rose



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

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1062/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 27-28/05/2024	ANALYTICAL DATE	: 30/05/2024
SAMPLING TIME	: 17:40-18:35	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 29/05/2024	FILE CODE	: 224054_TO-15_May
REPORT DATE	: 31/05/2024		

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		King Mongkut's University of Technology North Bangkok (KMUTNB (Rayong))		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	1.21	2.68	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1062/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 27-28/05/2024	ANALYTICAL DATE	: 30/05/2024
SAMPLING TIME	: 17:34-18:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 29/05/2024	FILE CODE	: 224054_TO-15_May
REPORT DATE	: 31/05/2024		

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		Soi Ruam Pattana		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	0.46	1.02	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).





# บริษัท ซีคอต จำกัด SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1062/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 27-28/05/2024	ANALYTICAL DATE	: 30/05/2024
SAMPLING TIME	: 16:00-17:15	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 29/05/2024	FILE CODE	: 224054_TO-15_May
REPORT DATE	: 31/05/2024		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m <sup>3</sup>	Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

*Sirwan Chimsa-nga*  
(Miss Sirwan Chimsa-nga)

Analyst

*Mrs. Araya Tippenuk*  
(Mrs. Araya Tippenuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 24-25 Jun 2024

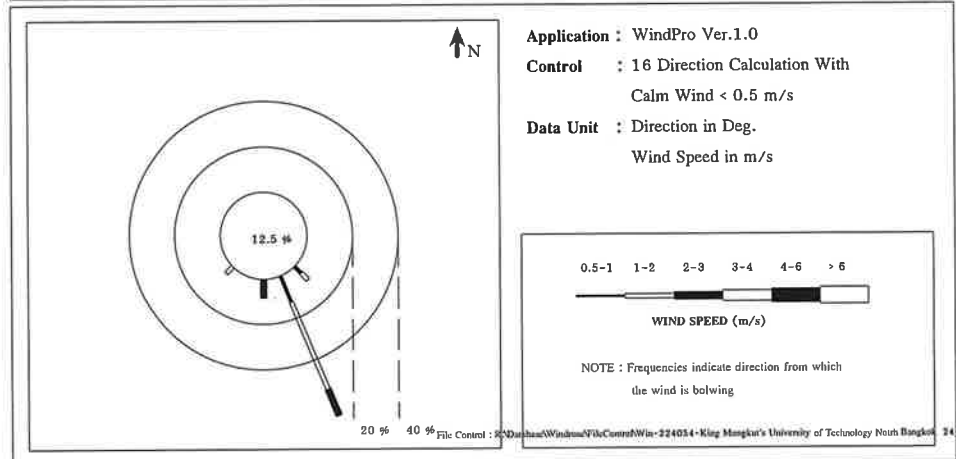
Wind Speed Model : Novalynx NL-32

Serial No : 17112001

Wind Direction Model : Novalynx NL-32

Serial No : 17112001

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SSE	0.1250	0.4167	0.1250	0.0000	0.0000	0.0000	0.6667
S	0.0000	0.0000	0.0833	0.0000	0.0000	0.0000	0.0833
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.1250						



*(Miss Katesarin Vorradetwittaya)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Miss Preeda Somjai)*  
(Miss Preeda Somjai)  
Technical Management Team



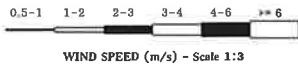
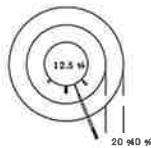
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 24-25 Jun 2024  
 Wind Speed Model : Novalynx NL-32 Serial No : 17112001  
 Wind Direction Model : Novalynx NL-32 Serial No : 17112001

Time	24-25 Jun 2024	
	WS(m/s)	WD
14:00 - 15:00	1.6	SE
15:00 - 16:00	2.3	SSE
16:00 - 17:00	2.5	SSE
17:00 - 18:00	1.3	SSE
18:00 - 19:00	1.2	SSE
19:00 - 20:00	1.5	SSE
20:00 - 21:00	0.7	SSE
21:00 - 22:00	0.3	SSE
22:00 - 23:00	2.1	SSE
23:00 - 24:00	1.3	SSE
00:00 - 01:00	1.6	SSE
01:00 - 02:00	0.6	SE
02:00 - 03:00	0.3	SE
03:00 - 04:00	2.4	S
04:00 - 05:00	1.2	SW
05:00 - 06:00	2.5	S
06:00 - 07:00	1.3	SSE
07:00 - 08:00	1.5	SSE
08:00 - 09:00	1.3	SSE
09:00 - 10:00	0.9	SSE
10:00 - 11:00	0.3	SSE
11:00 - 12:00	0.5	SSE
12:00 - 13:00	1.1	SSE
13:00 - 14:00	1.3	SSE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-King Mongkut's University of Technology North Bangkok 24-25 Jun 2024

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team

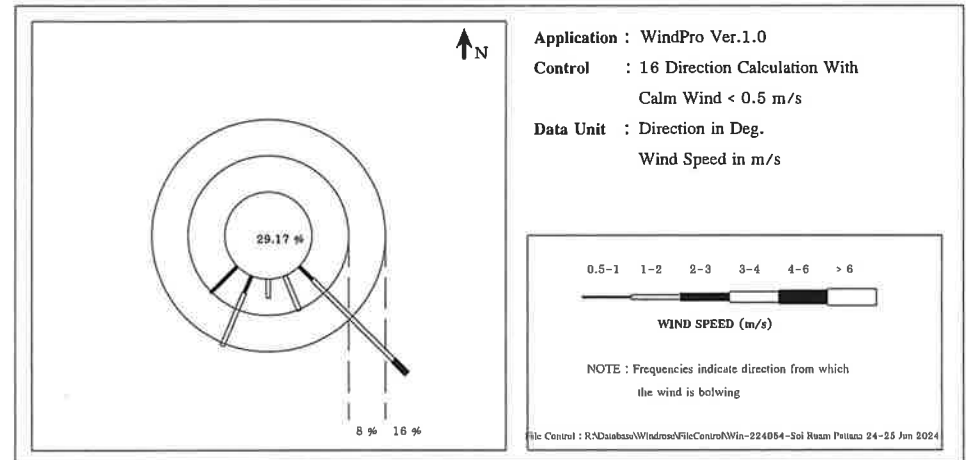


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 24-25 Jun 2024  
 Wind Speed Model : Novalynx NL-32 Serial No : 15102801  
 Wind Direction Model : Novalynx NL-32 Serial No : 15102801

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0417	0.2500	0.0417	0.0000	0.0000	0.0000	0.3333
SSE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
S	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0417	0.1250	0.0000	0.0000	0.0000	0.0000	0.1667
SW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.2917						



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



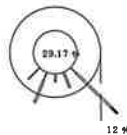
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 24-25 Jun 2024  
 Wind Speed Model : Novalynx NL-32 Serial No : 15102801  
 Wind Direction Model : Novalynx NL-32 Serial No : 15102801

Time	24-25 Jun 2024	
	WS(m/s)	WD
14:00 - 15:00	1.7	SE
15:00 - 16:00	1.4	SSE
16:00 - 17:00	1.2	SE
17:00 - 18:00	0.4	SE
18:00 - 19:00	2.1	SE
19:00 - 20:00	1.4	SE
20:00 - 21:00	1.6	SE
21:00 - 22:00	0.2	SE
22:00 - 23:00	0.4	SE
23:00 - 24:00	1.1	SSE
00:00 - 01:00	1.3	SE
01:00 - 02:00	0.9	SE
02:00 - 03:00	0.4	SE
03:00 - 04:00	1.2	SE
04:00 - 05:00	1.4	S
05:00 - 06:00	0.4	SSW
06:00 - 07:00	1.7	SSW
07:00 - 08:00	0.6	SSW
08:00 - 09:00	0.2	SSW
09:00 - 10:00	0.1	SSW
10:00 - 11:00	0.6	SW
11:00 - 12:00	1.2	SSW
12:00 - 13:00	0.5	SW
13:00 - 14:00	1.8	SSW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-Soi Ruam Pattana 24-25 Jun 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team

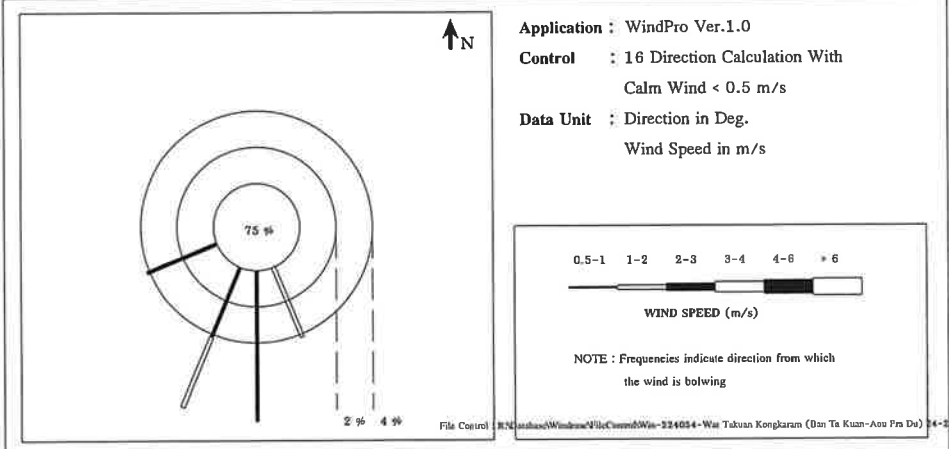


## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 24-25 Jun 2024  
 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						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
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	0.7500						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



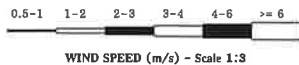
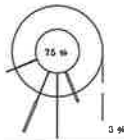
## Meteorological Monitoring Results : Wind Rose

### MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 24-25 Jun 2024  
 Wind Speed Model : Novalynx WS-25 Serial No : A5086  
 Wind Direction Model : Novalynx WS-25 Serial No : A5086

Time	24-25 Jun 2024	
	WS(m/s)	WD
14:00 - 15:00	0.2	N
15:00 - 16:00	0.1	N
16:00 - 17:00	0.2	N
17:00 - 18:00	0.3	NNW
18:00 - 19:00	0.5	WSW
19:00 - 20:00	0.7	S
20:00 - 21:00	0.3	S
21:00 - 22:00	1.1	SSW
22:00 - 23:00	0.3	SW
23:00 - 24:00	0.8	SSW
00:00 - 01:00	0.2	SW
01:00 - 02:00	0.1	SSW
02:00 - 03:00	0.2	S
03:00 - 04:00	0.2	S
04:00 - 05:00	0.1	S
05:00 - 06:00	0.4	S
06:00 - 07:00	0.3	S
07:00 - 08:00	0.2	SSE
08:00 - 09:00	0.5	S
09:00 - 10:00	1.2	SSE
10:00 - 11:00	0.2	SW
11:00 - 12:00	0.1	SSW
12:00 - 13:00	0.4	S
13:00 - 14:00	0.2	S

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-224054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 24-25 Jun 2024

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
 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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1300/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 24-25/06/2024	ANALYTICAL DATE	: 27-28/06/2024
SAMPLING TIME	: 14:20-14:20	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 26/06/2024	FILE CODE	: 224054_TO-15_June
REPORT DATE	: 05/07/2024		

Compound	SAMPLING LOCATION				STANDARD* ( $\mu\text{g}/\text{m}^3$ )
	Non Detection		King Mongkut's University of Technology North Bangkok (KMUTNB (Rayong))		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	2.12	4.69	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air 2<sup>nd</sup> : EPA Methods TO-15.1999

Siriwan Chimsa-nga  
(Miss Siriwan Chimsa-nga)  
Analyst

(Mrs. Araya Tipparuk)  
Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

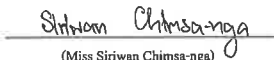
239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND  
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th


AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1300/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 24-25/06/2024	ANALYTICAL DATE	: 27-28/06/2024
SAMPLING TIME	: 14:25-14:25	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 26/06/2024	FILE CODE	: 224054_TO-15_June
REPORT DATE	: 05/07/2024		

Compound	SAMPLING LOCATION				STANDARD*
	Non Detection		Sol Ruam Pattana		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	(µg/m <sup>3</sup> )
1,3-butadiene	0.003	0.007	1.77	3.92	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

  
(Miss Siriwan Chimsa-nga)  
Analyst

  
(Mrs. Araya Tipparuk)  
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduce, except in full, without official approval.  
3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.


239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1300/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 24-25/06/2024	ANALYTICAL DATE	: 27-28/06/2024
SAMPLING TIME	: 14:40-14:40	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 26/06/2024	FILE CODE	: 224054_TO-15_June
REPORT DATE	: 05/07/2024		

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
1,3-butadiene	0.003	0.007	ND	ND	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

  
(Miss Siriwan Chimsa-nga)  
Analyst

  
(Mrs. Araya Tipparuk)  
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduce, except in full, without official approval.  
3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

---

## ใบรับรองผลการตรวจวัดคุณภาพอากาศจากปล่องระบายอากาศ



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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/1,3 BD (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18/05/2024  
RECEIVED DATE : 20/05/2024 ANALYTICAL DATE : 30-31/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

#### STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.58 m/s  
Diameter : 1.30 m Flow Rate\* : 77.07 Ncu.m/min  
Temperature : 962.7 °C Moisture : 12.0 %  
Excess Oxygen : 11.7 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		11.7%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maia 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/1,3 BD (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 19/05/2024  
RECEIVED DATE : 20/05/2024 ANALYTICAL DATE : 30-31/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

#### STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.40 m/s  
Diameter : 1.30 m Flow Rate\* : 74.20 Ncu.m/min  
Temperature : 960.7 °C Moisture : 11.8 %  
Excess Oxygen : 10.4 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.4%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.01)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maia 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REF. NO.	: 224054 Cert-Stack/1,3 BD (May)
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 20/05/2024
RECEIVED DATE	: 21/05/2024	ANALYTICAL DATE	: 30-31/05/2024
REPORT DATE	: 05/06/2024	SAMPLE CONDITION	: Normal
STACK LOCATION	: BD Destruction Unit (Outlet)	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: C4-LPG

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.82	m/s
Diameter	: 1.30	m	Flow Rate*	: 80.88	Ncu.m/min
Temperature	: 961.7	°C	Moisture	: 12.1	%
Excess Oxygen	: 10.3	%			

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.3%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.01)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maia 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REF. NO.	: 224054 Cert-Stack/1,3 BD (May)
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 21/05/2024
RECEIVED DATE	: 24/05/2024	ANALYTICAL DATE	: 30-31/05/2024
REPORT DATE	: 05/06/2024	SAMPLE CONDITION	: Normal
STACK LOCATION	: BD Destruction Unit (Outlet)	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: C4-LPG

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 5.01	m/s
Diameter	: 1.30	m	Flow Rate*	: 83.80	Ncu.m/min
Temperature	: 968.5	°C	Moisture	: 12.0	%
Excess Oxygen	: 10.6	%			

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.6%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.01)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maia 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.





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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/1,3 BD (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 22/05/2024  
RECEIVED DATE : 24/05/2024 ANALYTICAL DATE : 30-31/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

#### STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.54 m/s  
Diameter : 1.30 m Flow Rate\* : 76.04 Ncu.m/min  
Temperature : 972.2 °C Moisture : 11.7 %  
Excess Oxygen : 11.7 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		11.7%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Mairisa 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/1,3 BD (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 23/05/2024  
RECEIVED DATE : 24/05/2024 ANALYTICAL DATE : 30-31/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

#### STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 5.18 m/s  
Diameter : 1.30 m Flow Rate\* : 87.66 Ncu.m/min  
Temperature : 961.8 °C Moisture : 11.5 %  
Excess Oxygen : 10.2 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.2%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.01)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Mairisa 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REF. NO.	: 224054 Cert-Stack/1,3 BD (May)
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 24/05/2024
RECEIVED DATE	: 25/05/2024	ANALYTICAL DATE	: 30-31/05/2024
REPORT DATE	: 05/06/2024	SAMPLE CONDITION	: Normal
STACK LOCATION	: BD Destruction Unit (Outlet)	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: C4-LPG

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.96	m/s
Diameter	: 1.30	m	Flow Rate*	: 83.71	Ncu.m/min
Temperature	: 962.7	°C	Moisture	: 11.7	%
Excess Oxygen	: 11.3	%			

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		11.3%O <sub>2</sub>	7%O <sub>2</sub>		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.01)	0.24 <sup>1/</sup>	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Naissa 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 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REF. NO.	: 224054 Cert-Stack/NO <sub>x</sub> (May)
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 18/05/2024
RECEIVED DATE	: 20/05/2024	ANALYTICAL DATE	: 27/05/2024
REPORT DATE	: 05/06/2024	SAMPLE CONDITION	: Normal
STACK LOCATION	: BD Destruction Unit (Outlet)	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: C4-LPG

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.58	m/s
Diameter	: 1.30	m	Flow Rate*	: 77.07	Ncu.m/min
Temperature	: 962.7	°C	Moisture	: 12.0	%
Excess Oxygen	: 11.7	%			

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		11.7%O <sub>2</sub>	7%O <sub>2</sub>		
Oxide of Nitrogen	ppm	31.81	48.01	200 <sup>1/</sup> /80 <sup>2/</sup>	US.EPA Method 7

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 7-239-ท-0021

Naissa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 7-239-ท-0010

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. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>2/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/NO<sub>x</sub> (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 19/05/2024  
RECEIVED DATE : 20/05/2024 ANALYTICAL DATE : 27/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

#### STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.40 m/s  
Diameter : 1.30 m Flow Rate\* : 74.20 Ncu.m/min  
Temperature : 960.7 °C Moisture : 11.8 %  
Excess Oxygen : 10.4 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.4%O <sub>2</sub>	7%O <sub>2</sub>		
Oxide of Nitrogen	ppm	38.74	51.33	200 <sup>1/</sup> /80 <sup>2/</sup>	US.EPA Method 7

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO.7-239-ท-0021

Maissa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-ท-0010

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. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>2/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/NO<sub>x</sub> (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 20/05/2024  
RECEIVED DATE : 21/05/2024 ANALYTICAL DATE : 27/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

#### STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.82 m/s  
Diameter : 1.30 m Flow Rate\* : 80.88 Ncu.m/min  
Temperature : 961.7 °C Moisture : 12.1 %  
Excess Oxygen : 10.3 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.3%O <sub>2</sub>	7%O <sub>2</sub>		
Oxide of Nitrogen	ppm	43.57	57.13	200 <sup>1/</sup> /80 <sup>2/</sup>	US.EPA Method 7

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO.7-239-ท-0021

Maissa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-ท-0010

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. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>2/</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/NO<sub>x</sub> (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 21/05/2024  
RECEIVED DATE : 24/05/2024 ANALYTICAL DATE : 27/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 5.01 m/s  
Diameter : 1.30 m Flow Rate\* : 83.80 Ncu.m/min  
Temperature : 968.5 °C Moisture : 12.0 %  
Excess Oxygen : 10.6 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		10.6%O <sub>2</sub>	7%O <sub>2</sub>		
Oxide of Nitrogen	ppm	40.91	55.42	200 <sup>U</sup> /80 <sup>2U</sup>	US.EPA Method 7

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-9-0021

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 2-239-9-0010

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. <sup>U</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>2U</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REF. NO. : 224054 Cert-Stack/NO<sub>x</sub> (May)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 22/05/2024  
RECEIVED DATE : 24/05/2024 ANALYTICAL DATE : 27/05/2024  
REPORT DATE : 05/06/2024 SAMPLE CONDITION : Normal  
STACK LOCATION : BD Destruction Unit (Outlet) OPERATOR : Mr. Supakit Tamooka  
SOURCE DESCRIPTION : Combustion FUEL TYPE : C4-LPG

STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.54 m/s  
Diameter : 1.30 m Flow Rate\* : 76.04 Ncu.m/min  
Temperature : 972.2 °C Moisture : 11.7 %  
Excess Oxygen : 11.7 %

PARAMETER	UNITS	RESULTS*		STANDARD	REFERENCE METHOD
		11.7%O <sub>2</sub>	7%O <sub>2</sub>		
Oxide of Nitrogen	ppm	37.71	57.16	200 <sup>U</sup> /80 <sup>2U</sup>	US.EPA Method 7

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-9-0021

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 2-239-9-0010

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. <sup>U</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>2U</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



บริษัท ซีอีเอ็ม จำกัด  
SECOT CO., LTD.  
239 รามคำแหงพลาซ่า ถนนสุขุมวิท แขวงคลองเตย เขตคลองเตย กรุงเทพมหานคร 10800  
TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REF. NO.	: 224054 Cert-Stack/NO <sub>x</sub> (May)
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 23/05/2024
RECEIVED DATE	: 24/05/2024	ANALYTICAL DATE	: 27/05/2024
REPORT DATE	: 05/06/2024	SAMPLE CONDITION	: Normal
STACK LOCATION	: BD Destruction Unit (Outlet)	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: C4-LPG

STACK DESCRIPTION					
Height	: 30.0	m	Gas Velocity	: 5.18	m/s
Diameter	: 1.30	m	Flow Rate*	: 87.66	Ncu.m/min
Temperature	: 961.8	°C	Moisture	: 11.5	%
Excess Oxygen	: 10.2	%			
PARAMETER	UNITS		RESULTS*		REFERENCE
			10.2%O <sub>2</sub>	7%O <sub>2</sub>	METHOD
Oxide of Nitrogen	ppm		41.60	54.24	200 <sup>u</sup> /80 <sup>u</sup> US.EPA Method 7

Phatchaya Samanchan  
(Miss Phachara Samanchan)  
Analyst  
REG.NO.7-239-ท-0021  
Technical Management Team  
REG.NO.7-239-ท-0010  
(Miss Nattisa Poowasanpetch)

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. <sup>u</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural

Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>u</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.



บริษัท ซีอีเอ็ม จำกัด  
SECOT CO., LTD.  
239 รามคำแหงพลาซ่า ถนนสุขุมวิท แขวงคลองเตย เขตคลองเตย กรุงเทพมหานคร 10800  
TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REF. NO.	: 224054 Cert-Stack/NO <sub>x</sub> (May)
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 24/05/2024
RECEIVED DATE	: 25/05/2024	ANALYTICAL DATE	: 27/05/2024
REPORT DATE	: 05/06/2024	SAMPLE CONDITION	: Normal
STACK LOCATION	: BD Destruction Unit (Outlet)	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: C4-LPG

STACK DESCRIPTION					
Height	: 30.0	m	Gas Velocity	: 4.96	m/s
Diameter	: 1.30	m	Flow Rate*	: 83.71	Ncu/m/min
Temperature	: 962.7	°C	Moisture	: 11.7	%
Excess Oxygen	: 11.3	%			
PARAMETER	UNITS		RESULTS*		REFERENCE
			11.3%O <sub>2</sub>	7%O <sub>2</sub>	METHOD
Oxide of Nitrogen	ppm		43.80	63.16	200 <sup>u</sup> /80 <sup>u</sup> US.EPA Method 7

Phachara Samanchan  
(Miss Phachara Samanchan)  
Analyst  
REG.NO.7-239-ท-0021  
Technical Management Team  
REG.NO.7-239-ท-0010  
(Miss Nattisa Poowasanpetch)

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. <sup>u</sup> Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural

Resources and Environment, B.E.2549 (2006) @ 7%O<sub>2</sub>.

5. <sup>u</sup> Emission standard @ 7%O<sub>2</sub> according to EIA report.

---

## ใบรับรองผลการตรวจวัดระดับเสียงทั่วไป



## Noise Monitoring Result : Community Noise

### MTR-BST Site 1

Location : Boundary-N Monitor Period : 18-25 May 2024

SLM Model : Cirrus CR162B

Serial No : G301014

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 04 Sep 2023

SLM Reading / Adjust dB(A) : 93.7/0.0

Expire Date : 03 Sep 2024

Cal Sheet No. : CR-515-2024-145

Time	Equivalent Sound Pressure Level (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
08:00 - 09:00	64.6	65.4	64.3	66.1	64.8	65.8	66.1
09:00 - 10:00	64.1	64.8	64.1	65.2	64.5	65.4	65.6
10:00 - 11:00	63.6	64.0	64.6	65.1	64.7	64.8	65.3
11:00 - 12:00	64.6	63.9	64.9	64.7	64.8	64.3	64.8
12:00 - 13:00	63.9	66.1	64.2	64.1	64.9	64.2	64.7
13:00 - 14:00	64.3	67.9	65.2	64.1	65.1	64.1	64.1
14:00 - 15:00	64.2	68.9	65.3	64.0	64.8	65.2	63.9
15:00 - 16:00	64.6	64.4	65.4	64.1	64.4	65.0	64.0
16:00 - 17:00	64.4	64.3	65.3	64.2	64.3	64.5	64.1
17:00 - 18:00	64.6	64.2	65.1	64.5	64.4	64.6	64.3
18:00 - 19:00	64.4	64.3	64.9	64.3	64.5	64.6	64.3
19:00 - 20:00	65.3	64.5	64.6	64.3	64.5	64.6	64.6
20:00 - 21:00	64.5	64.7	64.7	64.5	64.4	64.5	64.5
21:00 - 22:00	64.4	64.6	64.3	66.7	64.4	64.9	64.6
22:00 - 23:00	64.4	64.5	64.2	65.6	64.9	64.8	64.7
23:00 - 00:00	64.5	64.8	64.4	65.5	64.9	65.3	64.7
00:00 - 01:00	64.7	64.7	64.6	65.6	64.8	65.4	64.7
01:00 - 02:00	64.8	64.7	64.6	65.4	64.8	65.2	64.6
02:00 - 03:00	65.0	64.5	64.5	65.7	64.7	65.0	64.7
03:00 - 04:00	64.9	64.5	64.7	66.2	65.7	65.1	64.8
04:00 - 05:00	64.8	64.4	64.7	65.6	66.3	65.6	64.7
05:00 - 06:00	64.6	64.5	64.8	65.4	65.8	65.2	64.8
06:00 - 07:00	64.8	64.5	65.1	65.4	65.7	65.2	65.0
07:00 - 08:00	64.7	64.6	67.5	65.1	65.7	66.2	65.1
Leq(24)*	64.5	65.1	64.9	65.3	64.9	65.0	64.7
Ldn	71.1	71.1	71.1	71.9	71.6	71.6	71.1
Lmax **	83.6	80.4	84.8	98.2	80.0	84.8	87.6
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : \* Average time between 08:00-08:00

\*\* Maximum Sound Pressure Level between 08:00-08:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Background Noise

### MTR-BST Site 1

Location : Boundary-N

Monitor Period : 18-25 May 2024

SLM Model : Cirrus CR162B

Serial No : G301014

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 04 Sep 2023

SLM Reading / Adjust dB(A) : 93.7/0.0

Expire Date : 03 Sep 2024

Cal Sheet No. : CR-515-2024-145

Time	L90 (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
08:00 - 09:00	63.4	63.9	63.7	65.6	64.4	65.3	65.6
09:00 - 10:00	63.6	63.9	63.6	64.8	64.2	64.7	65.2
10:00 - 11:00	63.2	63.6	63.6	64.6	64.4	64.2	64.6
11:00 - 12:00	63.4	63.4	63.7	64.1	64.4	63.8	64.2
12:00 - 13:00	63.4	63.5	63.4	63.5	64.5	63.7	64.1
13:00 - 14:00	63.6	64.2	64.3	63.5	64.2	63.6	63.4
14:00 - 15:00	63.7	66.7	64.6	63.6	64.1	64.0	63.4
15:00 - 16:00	64.0	63.8	64.8	63.7	64.0	64.4	63.5
16:00 - 17:00	64.1	63.8	64.5	63.8	63.9	64.0	63.5
17:00 - 18:00	64.1	63.8	64.1	63.8	64.0	64.2	63.8
18:00 - 19:00	64.1	63.8	64.2	63.9	64.1	64.2	63.9
19:00 - 20:00	63.9	64.1	64.2	64.0	64.1	64.1	64.1
20:00 - 21:00	64.1	64.2	64.3	64.1	64.1	64.1	64.1
21:00 - 22:00	64.0	64.2	63.9	64.6	64.1	64.2	64.3
22:00 - 23:00	64.0	64.2	63.8	65.2	64.4	64.3	64.3
23:00 - 00:00	64.2	64.3	63.8	65.1	64.5	64.7	64.4
00:00 - 01:00	64.4	64.4	64.2	65.2	64.5	64.9	64.3
01:00 - 02:00	64.4	64.4	64.2	65.0	64.2	64.8	64.2
02:00 - 03:00	64.7	64.2	64.2	64.9	64.4	64.7	64.3
03:00 - 04:00	64.7	64.2	64.4	65.5	64.7	64.7	64.2
04:00 - 05:00	64.5	64.1	64.2	65.2	64.8	65.0	64.4
05:00 - 06:00	64.2	64.2	64.3	65.1	65.3	64.7	64.3
06:00 - 07:00	64.2	64.2	64.4	65.1	65.3	64.8	64.6
07:00 - 08:00	64.1	64.2	65.7	64.7	65.3	64.9	64.8
L90(avg)*	64.0	64.4	64.2	64.6	64.4	64.4	64.3

Remark : \* Average time between 08:00-08:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Community Noise MTR-BST Site 1

Location : Boundary-S Monitor Period : 18-25 May 2024  
SLM Model : Cirrus CR162C Serial No : G300841  
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515 Serial No : 97097  
Calibration Ref dB(A) : 94.0 Certified Date : 04 Sep 2023  
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 03 Sep 2024  
Cal Sheet No. : CR-515-2024-145

Time	Equivalent Sound Pressure Level (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
08:00 - 09:00	74.6	71.6	72.2	70.6	52.8	73.6	72.8
09:00 - 10:00	72.4	71.5	72.2	69.7	53.1	69.7	69.2
10:00 - 11:00	70.7	71.3	71.8	69.9	43.5	82.3	69.1
11:00 - 12:00	74.0	71.3	71.3	69.8	37.8	79.4	69.4
12:00 - 13:00	74.7	71.3	71.5	70.1	86.0	75.3	70.3
13:00 - 14:00	73.9	71.2	71.5	70.3	81.2	75.1	70.5
14:00 - 15:00	73.0	71.6	71.9	70.7	72.3	71.3	70.6
15:00 - 16:00	72.0	72.0	71.7	70.4	76.7	69.7	70.6
16:00 - 17:00	71.2	71.2	71.6	70.6	58.8	70.1	70.6
17:00 - 18:00	71.4	71.4	71.5	70.9	56.0	70.4	70.6
18:00 - 19:00	71.6	71.6	71.6	70.5	79.6	70.9	71.0
19:00 - 20:00	71.5	71.5	71.8	70.5	83.4	70.5	70.8
20:00 - 21:00	69.9	71.4	71.5	70.7	77.0	74.4	70.7
21:00 - 22:00	69.9	71.3	71.7	74.8	70.5	70.6	70.8
22:00 - 23:00	69.7	71.3	71.6	69.9	77.6	69.9	70.9
23:00 - 00:00	69.9	71.3	71.3	69.9	75.7	70.0	71.0
00:00 - 01:00	70.3	71.2	71.3	69.7	77.5	70.4	70.9
01:00 - 02:00	70.2	71.5	71.3	69.9	70.6	70.4	71.0
02:00 - 03:00	65.8	71.5	71.4	70.3	72.1	70.4	71.0
03:00 - 04:00	70.3	71.6	71.3	70.2	70.5	70.4	71.0
04:00 - 05:00	71.0	71.7	71.5	65.8	76.8	70.6	70.9
05:00 - 06:00	72.8	71.5	71.7	39.4	77.1	70.4	71.5
06:00 - 07:00	69.2	71.5	72.1	35.3	69.7	70.3	71.3
07:00 - 08:00	69.1	71.5	73.3	40.5	72.4	71.0	71.3
Leq(24)*	71.7	71.5	71.7	69.9	77.3	73.8	70.8
Ldn	77.0	77.9	78.0	75.3	82.2	77.8	77.4
Lmax **	105.8	99.3	94.6	104.9	108.2	108.2	105.8
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : \* Average time between 08:00-08:00

\*\* Maximum Sound Pressure Level between 08:00-08:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Background Noise MTR-BST Site 1

Location : Boundary-S Monitor Period : 18-25 May 2024  
SLM Model : Cirrus CR162C Serial No : G300841  
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515 Serial No : 97097  
Calibration Ref dB(A) : 94.0 Certified Date : 04 Sep 2023  
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 03 Sep 2024  
Cal Sheet No. : CR-515-2024-145

Time	L90 (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
08:00 - 09:00	70.3	71.1	70.8	69.7	35.1	69.1	69.1
09:00 - 10:00	70.3	71.0	70.8	69.3	35.2	69.3	68.7
10:00 - 11:00	70.1	70.9	70.9	69.6	35.2	69.0	68.7
11:00 - 12:00	70.2	70.8	70.8	69.4	35.2	69.6	69.0
12:00 - 13:00	70.4	70.7	71.0	69.8	35.2	70.1	69.8
13:00 - 14:00	70.3	70.7	71.1	69.9	35.3	70.0	70.0
14:00 - 15:00	70.6	70.8	71.3	70.1	35.3	69.9	70.2
15:00 - 16:00	70.8	70.8	71.3	70.0	35.5	69.0	70.2
16:00 - 17:00	70.8	70.8	71.2	70.2	35.4	69.4	70.2
17:00 - 18:00	71.0	71.0	71.2	70.4	35.5	69.7	70.1
18:00 - 19:00	71.2	71.2	71.2	70.0	35.5	69.9	70.5
19:00 - 20:00	71.1	71.1	71.3	70.0	35.4	69.9	70.4
20:00 - 21:00	69.5	70.9	71.1	70.3	35.4	70.0	70.4
21:00 - 22:00	69.5	70.9	71.2	69.8	35.4	69.6	70.4
22:00 - 23:00	69.5	71.0	71.1	69.5	35.5	69.4	70.5
23:00 - 00:00	69.5	70.9	70.7	69.5	70.5	69.4	70.5
00:00 - 01:00	70.0	70.9	70.9	69.5	70.2	69.9	70.5
01:00 - 02:00	69.5	71.2	70.9	69.5	35.3	70.0	70.6
02:00 - 03:00	35.1	71.2	71.1	70.0	70.6	69.9	70.7
03:00 - 04:00	69.9	71.2	70.9	69.6	69.3	70.0	70.7
04:00 - 05:00	69.6	71.3	70.9	35.1	69.6	69.9	70.6
05:00 - 06:00	69.1	71.2	71.3	35.1	69.5	70.0	71.2
06:00 - 07:00	68.7	71.2	71.0	35.1	69.3	69.9	70.8
07:00 - 08:00	66.7	71.0	70.8	35.1	69.2	69.6	70.9
L90(avg)*	69.9	71.0	71.0	69.0	65.0	69.7	70.2

Remark : \* Average time between 08:00-08:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team





## Noise Monitoring Result : Community Noise

### MTR-BST Site 1

Location : Boundary-E Monitor Period : 18-25 May 2024  
SLM Model : Cirrus CR162B Serial No : G302740  
Site Operator : Mr. Siwanon Kulawong

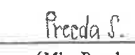
Calibrator Model : Cirrus CR:515 Serial No : 97097  
Calibration Ref dB(A) : 94.0 Certified Date : 04 Sep 2023  
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 03 Sep 2024  
Cal Sheet No. : CR-515-2024-145

Time	Equivalent Sound Pressure Level (dB(A))							
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024	
09:00 - 10:00	59.6	57.5	59.1	59.5	62.6	53.1	52.5	
10:00 - 11:00	54.7	57.9	58.8	56.1	60.5	57.8	55.9	
11:00 - 12:00	56.4	56.8	59.0	54.7	56.8	58.0	59.6	
12:00 - 13:00	60.6	56.4	59.4	56.4	63.5	57.7	54.4	
13:00 - 14:00	60.5	62.0	59.1	60.6	61.8	56.0	56.2	
14:00 - 15:00	57.9	59.7	58.4	60.5	61.6	57.4	59.5	
15:00 - 16:00	63.4	57.7	58.0	57.9	53.6	53.6	51.3	
16:00 - 17:00	57.0	56.6	58.4	63.4	54.1	55.4	50.3	
17:00 - 18:00	57.7	56.3	57.6	57.0	56.1	65.2	50.9	
18:00 - 19:00	55.6	57.9	57.0	57.7	62.7	58.1	51.9	
19:00 - 20:00	51.3	50.9	54.7	55.6	59.7	57.4	51.0	
20:00 - 21:00	53.9	51.7	59.7	51.3	56.4	57.3	59.8	
21:00 - 22:00	49.7	48.5	50.4	53.3	59.8	66.1	50.3	
22:00 - 23:00	50.9	49.3	50.7	49.7	68.7	54.1	58.4	
23:00 - 00:00	52.6	50.7	50.9	50.9	48.1	58.7	59.1	
00:00 - 01:00	50.2	48.1	49.4	52.6	57.5	48.2	58.3	
01:00 - 02:00	56.3	49.2	50.3	50.2	51.2	52.6	58.9	
02:00 - 03:00	61.6	52.9	48.3	56.3	67.7	49.5	59.0	
03:00 - 04:00	58.9	53.4	46.4	61.6	61.4	51.2	46.8	
04:00 - 05:00	60.9	61.9	47.0	58.9	60.8	53.8	55.8	
05:00 - 06:00	57.1	60.6	51.8	60.9	59.1	58.5	55.6	
06:00 - 07:00	59.7	58.1	55.9	57.1	54.0	59.7	53.0	
07:00 - 08:00	54.5	55.9	68.8	59.7	59.1	57.0	56.4	
08:00 - 09:00	59.6	57.6	55.3	54.5	53.8	62.6	53.6	
Leq(24)*	58.1	57.0	58.6	58.0	60.9	57.9	56.3	
Ldn	64.5	63.1	60.6	63.9	68.4	62.7	63.4	
Lmax **	91.1	91.7	89.2	89.4	94.4	92.7	83.5	
Standard-24Hr	70 dB(A)							
Standard-Max	115 dB(A)							

Remark : \* Average time between 09:00-09:00

\*\* Maximum Sound Pressure Level between 09:00-09:00

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Background Noise

### MTR-BST Site 1

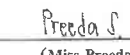
Location : Boundary-E Monitor Period : 18-25 May 2024  
SLM Model : Cirrus CR162B Serial No : G302740  
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515 Serial No : 97097  
Calibration Ref dB(A) : 94.0 Certified Date : 04 Sep 2023  
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 03 Sep 2024  
Cal Sheet No. : CR-515-2024-145

Time	L90 (dB(A))							
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024	
09:00 - 10:00	49.4	50.7	51.0	49.4	47.6	44.3	44.7	
10:00 - 11:00	47.2	50.6	50.5	48.6	50.2	44.2	48.0	
11:00 - 12:00	50.1	49.9	50.4	47.2	54.8	46.3	49.4	
12:00 - 13:00	48.9	48.5	61.7	50.1	50.2	46.5	42.6	
13:00 - 14:00	50.8	49.8	51.6	48.9	54.8	46.1	42.2	
14:00 - 15:00	48.9	50.9	50.5	50.8	46.5	48.4	43.4	
15:00 - 16:00	49.3	51.4	49.7	48.9	47.0	46.6	42.0	
16:00 - 17:00	47.0	49.6	52.3	49.3	46.8	48.5	42.5	
17:00 - 18:00	46.1	48.6	49.7	47.0	48.1	48.0	43.5	
18:00 - 19:00	45.8	47.4	49.0	46.1	49.2	48.9	43.7	
19:00 - 20:00	44.8	46.2	47.7	45.6	47.7	49.6	46.2	
20:00 - 21:00	45.9	45.9	48.1	44.8	46.7	49.0	48.5	
21:00 - 22:00	45.7	45.5	45.1	45.9	45.9	47.8	48.0	
22:00 - 23:00	45.1	45.9	46.2	45.7	45.6	47.4	46.8	
23:00 - 00:00	43.6	46.1	46.7	45.1	45.6	46.9	48.4	
00:00 - 01:00	41.9	46.9	46.7	43.8	45.5	46.3	47.3	
01:00 - 02:00	42.3	47.1	46.1	41.9	44.8	46.4	47.0	
02:00 - 03:00	47.0	50.7	43.8	42.3	44.8	45.9	45.7	
03:00 - 04:00	46.2	49.6	43.2	47.0	42.9	47.4	45.2	
04:00 - 05:00	46.6	52.1	43.6	45.2	43.4	46.3	43.8	
05:00 - 06:00	48.0	53.2	45.5	46.6	45.9	45.1	48.3	
06:00 - 07:00	47.0	51.5	48.8	48.0	46.9	48.6	44.4	
07:00 - 08:00	45.7	50.9	51.4	47.0	48.1	49.5	46.5	
08:00 - 09:00	47.6	50.7	49.7	45.7	46.7	46.8	44.8	
L90(avg)*	47.2	49.7	49.0	47.3	48.5	47.4	45.9	

Remark : \* Average time between 09:00-09:00

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Community Noise MTR-BST Site 1

Location : Boundary-W Monitor Period : 18-25 May 2024  
SLM Model : Cirrus CR162B Serial No : G302737  
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515 Serial No : 97097  
Calibration Ref dB(A) : 94.0 Certified Date : 04 Sep 2023  
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 03 Sep 2024  
Cal Sheet No. : CR-515-2024-145

Time	Equivalent Sound Pressure Level (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
10:00 - 11:00	62.9	61.1	66.2	65.8	64.1	63.6	64.6
11:00 - 12:00	66.0	60.7	63.8	64.7	64.4	64.9	63.0
12:00 - 13:00	65.1	60.9	61.9	64.0	62.0	68.5	63.9
13:00 - 14:00	63.5	61.9	65.1	64.3	65.8	63.3	63.0
14:00 - 15:00	64.9	62.0	65.2	65.0	65.8	64.4	66.3
15:00 - 16:00	66.8	65.5	65.4	65.8	67.7	66.8	70.7
16:00 - 17:00	63.0	64.8	65.7	65.8	65.1	69.2	66.8
17:00 - 18:00	63.4	61.7	64.6	67.4	66.0	65.0	65.8
18:00 - 19:00	62.4	62.5	63.3	64.9	63.1	65.1	64.8
19:00 - 20:00	57.2	61.6	66.6	64.0	62.6	66.7	67.1
20:00 - 21:00	57.3	59.2	61.8	71.5	64.5	64.7	65.3
21:00 - 22:00	58.5	59.3	61.0	74.8	61.7	60.6	61.3
22:00 - 23:00	57.9	58.2	67.4	59.8	60.7	56.8	60.2
23:00 - 00:00	58.6	60.6	60.6	62.3	64.7	60.4	58.6
00:00 - 01:00	58.9	58.5	59.2	61.8	60.3	59.2	58.1
01:00 - 02:00	56.8	59.4	60.9	59.0	65.7	58.3	58.5
02:00 - 03:00	56.3	59.4	60.0	59.5	64.3	62.6	56.4
03:00 - 04:00	59.3	57.1	60.4	58.5	68.4	60.2	57.3
04:00 - 05:00	66.1	60.6	60.5	61.6	61.6	57.9	56.2
05:00 - 06:00	65.5	63.3	60.9	60.0	58.2	65.4	59.6
06:00 - 07:00	62.5	67.6	67.4	61.9	64.6	64.2	60.8
07:00 - 08:00	61.6	65.4	73.5	65.5	66.3	66.8	66.8
08:00 - 09:00	59.2	64.6	66.5	64.1	65.5	66.9	65.8
09:00 - 10:00	62.5	65.1	65.9	65.9	63.5	65.1	64.8
Leq(24)*	62.7	62.6	65.4	66.1	64.6	64.7	64.3
Ldn	66.4	68.4	70.2	69.1	70.7	68.9	67.2
Lmax **	90.2	91.6	95.1	97.1	91.2	95.2	97.0
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

\*\* Maximum Sound Pressure Level between 10:00-10:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Background Noise MTR-BST Site 1

Location : Boundary-W Monitor Period : 18-25 May 2024  
SLM Model : Cirrus CR162B Serial No : G302737  
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515 Serial No : 97097  
Calibration Ref dB(A) : 94.0 Certified Date : 04 Sep 2023  
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 03 Sep 2024  
Cal Sheet No. : CR-515-2024-145

Time	L90 (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
10:00 - 11:00	53.1	52.9	56.9	52.6	58.9	54.3	55.7
11:00 - 12:00	55.2	53.2	53.4	54.3	58.0	55.6	53.7
12:00 - 13:00	60.7	54.1	53.8	53.0	57.9	54.5	54.8
13:00 - 14:00	58.1	54.6	59.1	54.9	58.9	54.5	54.2
14:00 - 15:00	57.7	54.6	59.0	57.7	60.8	56.3	57.9
15:00 - 16:00	56.8	58.0	59.0	59.9	61.3	55.6	61.0
16:00 - 17:00	52.6	53.9	59.1	60.5	60.2	55.3	59.7
17:00 - 18:00	52.8	53.2	54.9	60.6	58.4	54.3	59.7
18:00 - 19:00	53.3	53.9	54.2	56.7	57.9	53.9	57.6
19:00 - 20:00	53.3	55.1	56.9	56.2	58.0	54.4	55.7
20:00 - 21:00	53.7	54.4	55.8	59.6	58.2	57.0	54.9
21:00 - 22:00	54.3	54.3	53.9	56.3	57.7	55.7	53.4
22:00 - 23:00	55.0	53.6	54.6	57.5	57.9	56.4	53.2
23:00 - 00:00	55.5	54.1	54.8	58.2	57.5	56.2	53.2
00:00 - 01:00	55.9	54.7	56.6	58.8	57.3	55.8	53.2
01:00 - 02:00	54.8	54.4	58.2	58.3	56.9	55.1	53.1
02:00 - 03:00	54.0	53.8	54.8	58.0	56.6	55.7	53.1
03:00 - 04:00	55.1	54.1	54.8	57.2	56.7	56.0	53.4
04:00 - 05:00	56.4	54.2	53.6	56.7	56.9	55.6	53.7
05:00 - 06:00	56.8	53.8	53.3	56.0	55.5	54.5	56.6
06:00 - 07:00	53.9	58.0	54.9	56.4	58.6	56.9	56.4
07:00 - 08:00	55.1	58.0	66.0	58.9	59.3	59.7	59.7
08:00 - 09:00	54.4	58.3	58.2	58.5	56.0	56.8	59.7
09:00 - 10:00	57.8	59.4	54.9	59.3	54.9	57.4	57.6
L90(avg)*	55.8	55.4	57.6	57.9	58.2	55.9	56.7

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Community Noise MTR-BST Site 1

Location : Wat Takuan Kongkaram				Monitor Period : 18-25 May 2024			
SLM Model : Cirrus CR162B				Serial No : G302741			
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 04 Sep 2023			
SLM Reading / Adjust dB(A) : 93.7/0.0				Expire Date : 03 Sep 2024			
Cal Sheet No. : CR-515-2024-145							
Time	Equivalent Sound Pressure Level (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
10:00 - 11:00	46.7	46.3	57.1	54.6	54.6	43.3	56.1
11:00 - 12:00	49.1	47.6	66.0	57.1	53.8	44.0	52.8
12:00 - 13:00	46.2	52.1	64.9	62.5	57.5	45.0	52.2
13:00 - 14:00	51.1	52.5	52.9	67.4	54.7	56.1	51.1
14:00 - 15:00	49.0	46.9	48.4	61.7	47.9	54.7	46.4
15:00 - 16:00	46.6	46.3	48.0	60.3	42.8	66.0	52.9
16:00 - 17:00	51.8	48.1	45.7	60.6	46.2	64.9	47.0
17:00 - 18:00	46.3	58.8	53.0	71.2	48.2	52.9	50.3
18:00 - 19:00	41.0	43.4	52.8	63.5	51.4	48.4	55.2
19:00 - 20:00	41.7	44.4	48.0	58.9	52.8	48.0	45.9
20:00 - 21:00	41.8	43.0	46.0	76.0	48.0	45.7	46.0
21:00 - 22:00	41.5	42.3	46.2	69.6	46.0	53.0	49.8
22:00 - 23:00	41.7	40.7	47.4	61.8	46.2	56.5	49.9
23:00 - 00:00	42.7	40.8	51.4	59.3	47.4	56.1	49.4
00:00 - 01:00	41.9	40.3	54.7	57.9	51.4	54.2	48.5
01:00 - 02:00	59.4	40.9	54.0	57.4	54.7	52.4	47.1
02:00 - 03:00	43.1	42.4	54.7	57.5	54.0	54.7	47.4
03:00 - 04:00	54.0	41.5	47.6	58.4	54.7	55.8	51.4
04:00 - 05:00	50.8	54.1	56.3	59.0	47.6	60.3	54.7
05:00 - 06:00	50.4	54.6	49.9	58.5	56.3	63.8	54.0
06:00 - 07:00	49.0	54.6	56.1	56.1	49.9	56.8	54.7
07:00 - 08:00	50.0	51.5	52.8	54.7	49.9	54.8	47.6
08:00 - 09:00	48.5	52.5	52.2	55.0	48.3	66.8	56.3
09:00 - 10:00	50.4	52.1	54.4	54.4	48.6	59.4	49.9
Leq(24) *	50.1	50.7	56.7	65.5	52.1	59.9	51.9
Ldn	58.2	56.6	60.9	67.8	58.9	66.4	58.2
Lmax **	80.4	84.5	81.4	98.7	81.7	96.3	81.4
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

\*\* Maximum Sound Pressure Level between 10:00-10:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Background Noise MTR-BST Site 1

Location : Wat Takuan Kongkaram				Monitor Period : 18-25 May 2024			
SLM Model : Cirrus CR162B				Serial No : G302741			
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 04 Sep 2023			
SLM Reading / Adjust dB(A) : 93.7/0.0				Expire Date : 03 Sep 2024			
Cal Sheet No. : CR-515-2024-145							
Time	L90 (dB(A))						
	18-19 May 2024	19-20 May 2024	20-21 May 2024	21-22 May 2024	22-23 May 2024	23-24 May 2024	24-25 May 2024
10:00 - 11:00	42.1	41.3	53.6	52.2	52.2	38.3	49.0
11:00 - 12:00	41.7	41.9	49.2	53.6	51.1	38.4	44.8
12:00 - 13:00	40.7	42.6	49.7	57.2	53.3	38.3	44.9
13:00 - 14:00	42.4	41.3	46.7	58.3	37.6	49.0	43.8
14:00 - 15:00	41.2	42.2	41.1	58.2	37.5	48.2	39.3
15:00 - 16:00	39.2	42.5	41.2	58.0	36.9	49.2	44.8
16:00 - 17:00	38.0	41.9	40.1	57.5	38.7	49.7	41.7
17:00 - 18:00	37.6	39.9	41.0	59.2	38.4	46.7	42.9
18:00 - 19:00	38.9	40.4	38.7	57.6	39.1	41.1	44.4
19:00 - 20:00	39.7	41.3	41.0	56.0	36.7	41.2	39.9
20:00 - 21:00	40.3	40.6	41.6	61.4	41.0	40.1	39.2
21:00 - 22:00	39.3	40.3	42.2	58.1	41.6	41.0	40.2
22:00 - 23:00	39.2	38.4	44.6	54.7	42.2	46.5	44.6
23:00 - 00:00	40.5	38.4	46.8	57.3	44.8	53.0	46.6
00:00 - 01:00	39.1	37.6	52.1	55.9	46.8	51.8	45.3
01:00 - 02:00	41.2	38.5	51.2	55.9	52.1	50.2	44.4
02:00 - 03:00	37.4	38.8	48.2	56.0	51.2	51.6	44.8
03:00 - 04:00	37.1	38.9	43.1	56.2	48.2	54.4	46.8
04:00 - 05:00	42.6	42.1	42.5	57.4	43.1	52.3	52.1
05:00 - 06:00	42.6	43.4	41.1	54.8	42.5	56.6	51.2
06:00 - 07:00	42.9	43.0	49.0	54.0	41.1	53.2	48.2
07:00 - 08:00	43.4	45.7	44.8	52.0	41.1	49.8	43.1
08:00 - 09:00	44.9	46.5	44.9	49.5	40.2	49.1	42.5
09:00 - 10:00	43.5	46.8	50.1	50.1	38.4	54.6	41.1
L90(avg)*	41.1	42.2	47.3	56.7	46.7	50.4	45.8

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



---

## ใบรับรองผลการตรวจวัดคุณภาพดิน



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0731/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 14:22-14:34
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 19-23/04/2024
REPORT DATE	: 24/04/2024	SITE OPERATOR	: Mr. Aniwai Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054 SOIL April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MWI	STANDARD <sup>1/</sup>
1,3-Butadiene	mg/kg	SW 846 S035A /8260D	< 0.001	ND	*
Methyl tert-butyl ether	mg/kg	SW 846 S035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 S035A /8260D	< 0.00025	ND	≤ 520

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 7<sup>th</sup> Ed., 2002

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0731/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 11/04/2024	SAMPLING TIME	: 11:13-11:24
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 19-23/04/2024
REPORT DATE	: 24/04/2024	SITE OPERATOR	: Mr. Aniwai Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054 SOIL April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MWI	STANDARD <sup>1/</sup>
1,3-Butadiene	mg/kg	SW 846 S035A /8260D	< 0.001	ND	*
Methyl tert-butyl ether	mg/kg	SW 846 S035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 S035A /8260D	< 0.00025	ND	≤ 520

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 7<sup>th</sup> Ed., 2002

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลทองประไพ แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No : 0731/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump  
SAMPLING DATE : 11/04/2024 SAMPLING TIME : 10:37-10:47  
RECEIVED DATE : 12/04/2024 ANALYTICAL DATE : 19-23/04/2024  
REPORT DATE : 24/04/2024 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 224054\_SOIL\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW3	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/kg	SW 846 5035A /8260D	< 0.001	ND	•
Methyl tert-butyl ether	mg/kg	SW 846 5035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 5035A /8260D	< 0.00025	ND	≤ 520

REFERENCE : U.S.EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020.

Jutarat Jaemruen  
(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

Araya Tippasuk  
(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลทองประไพ แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No : 0731/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump  
SAMPLING DATE : 10/04/2024 SAMPLING TIME : 17:02-17:11  
RECEIVED DATE : 12/04/2024 ANALYTICAL DATE : 19-23/04/2024  
REPORT DATE : 24/04/2024 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 224054\_SOIL\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW4	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/kg	SW 846 5035A /8260D	< 0.001	ND	•
Methyl tert-butyl ether	mg/kg	SW 846 5035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 5035A /8260D	< 0.00025	ND	≤ 520

REFERENCE : U.S.EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020.

Jutarat Jaemruen  
(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

Araya Tippasuk  
(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0731/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 14:54-15:01
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 19-23/04/2024
REPORT DATE	: 24/04/2024	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_SOIL_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW5	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/kg	SW 846 5035A /8260D	< 0.001	ND	
Methyl tert-butyl ether	mg/kg	SW 846 5035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 5035A /8260D	< 0.00025	ND	≤ 520

REFERENCE: U.S. EPA SW 846 TEST METHODS FOR EVALUATING AIR AND SOIL WASTE, 8<sup>th</sup> ED., 2008.

Jularat Jaemruen  
(Miss Jularat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0731/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 16:29-16:37
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 19-23/04/2024
REPORT DATE	: 24/04/2024	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_SOIL_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW6	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/kg	SW 846 5035A /8260D	< 0.001	ND	
Methyl tert-butyl ether	mg/kg	SW 846 5035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 5035A /8260D	< 0.00025	ND	≤ 520

REFERENCE: U.S. EPA SW 846 TEST METHODS FOR EVALUATING AIR AND SOIL WASTE, 8<sup>th</sup> ED., 2008.

Jularat Jaemruen  
(Miss Jularat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).





บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No : 0731/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump  
SAMPLING DATE : 10/04/2024 SAMPLING TIME : 15:57-16:05  
RECEIVED DATE : 12/04/2024 ANALYTICAL DATE : 19-23/04/2024  
REPORT DATE : 24/04/2024 SITE OPERATOR : Mr. Anuwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 224054 SOIL April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>U</sup>
				MW7	
1,3-Butadiene	mg/kg	SW 846 5035A /8260D	< 0.001	ND	-
Methyl tert-butyl ether	mg/kg	SW 846 5035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 5035A /8260D	< 0.00025	ND	≤ 520

REFERENCE : EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2003.

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

Araya Tippuruk

(Mrs. Araya Tippuruk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No : 0731/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump  
SAMPLING DATE : 10/04/2024 SAMPLING TIME : 15:24-15:34  
RECEIVED DATE : 12/04/2024 ANALYTICAL DATE : 19-23/04/2024  
REPORT DATE : 24/04/2024 SITE OPERATOR : Mr. Anuwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 224054 SOIL April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>U</sup>
				MW8	
1,3-Butadiene	mg/kg	SW 846 5035A /8260D	< 0.001	ND	-
Methyl tert-butyl ether	mg/kg	SW 846 5035A /8260D	< 0.001	ND	≤ 1,000
Methanol	mg/kg	SW 846 3550C /8015D	< 0.32	ND	≤ 1,000
Toluene	mg/kg	SW 846 5035A /8260D	< 0.00025	ND	≤ 520

REFERENCE : EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2003.

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

Araya Tippuruk

(Mrs. Araya Tippuruk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

---

## ใบรับรองผลการตรวจวัดคุณภาพน้ำใต้ดิน



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0728/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 14:22-14:34
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 12, 17-18/04/2024
REPORT DATE	: 19/04/2024	SITE OPERATOR	: Mr. Anawat Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_GW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW1	STANDARD <sup>U</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 21<sup>ST</sup> ED., APHA, AWWA, WEF

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 5<sup>TH</sup> ED., 2020.

Jutarat Jaemruen  
(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-ก-0022

(Mrs. Araya Tippiaruk)

Technical Management Team

REG. NO. 7-239-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. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0728/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 11/04/2024	SAMPLING TIME	: 11:13-11:24
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 12, 17-18/04/2024
REPORT DATE	: 19/04/2024	SITE OPERATOR	: Mr. Anawat Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_GW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW2	STANDARD <sup>U</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 21<sup>ST</sup> ED., APHA, AWWA, WEF

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 5<sup>TH</sup> ED., 2020.

Jutarat Jaemruen  
(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-ก-0022

(Mrs. Araya Tippiaruk)

Technical Management Team

REG. NO. 7-239-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. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No : 0728/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump  
SAMPLING DATE : 11/04/2024 SAMPLING TIME : 10:37-10:47  
RECEIVED DATE : 12/04/2024 ANALYTICAL DATE : 12, 17-18/04/2024  
REPORT DATE : 19/04/2024 SITE OPERATOR : Mr. Aniwat Pinwanna  
SAMPLE CONDITION : Normal FILE CODE : 224054\_GW\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW3	STANDARD <sup>1/</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 21<sup>st</sup> ED., 2012 (AWWA, WEF)

REFERENCE: U.S. EPA 846.1-846.150 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2005

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 1-239-0-0022

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 1-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).  
4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No : 0728/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump  
SAMPLING DATE : 10/04/2024 SAMPLING TIME : 17:02-17:11  
RECEIVED DATE : 12/04/2024 ANALYTICAL DATE : 12, 17-18/04/2024  
REPORT DATE : 19/04/2024 SITE OPERATOR : Mr. Aniwat Pinwanna  
SAMPLE CONDITION : Normal FILE CODE : 224054\_GW\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW4	STANDARD <sup>1/</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 21<sup>st</sup> ED., 2012 (AWWA, WEF)

REFERENCE: U.S. EPA 846.1-846.150 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2005

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 1-239-0-0022

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 1-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).  
4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0728/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 14:54-15:01
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 12. 17-18/04/2024
REPORT DATE	: 19/04/2024	SITE OPERATOR	: Mr. Anawat Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_GW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW5	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2022 (APHA, AWWA, WEF)

REFERENCE: USEPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

MR

(Mrs. Anya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0728/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 16:29-16:37
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 12. 17-18/04/2024
REPORT DATE	: 19/04/2024	SITE OPERATOR	: Mr. Anawat Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_GW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW6	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2022 (APHA, AWWA, WEF)

REFERENCE: USEPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

MR

(Mrs. Anya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0728/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 15:57-16:05
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 12, 17-18/04/2024
REPORT DATE	: 19/04/2024	SITE OPERATOR	: Mr. Anawat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_GW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW1	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 22<sup>nd</sup> ED., 2017, APHA, AWWA, WEF

REFERENCE USE EPA'S 816 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2000

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 0728/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 10/04/2024	SAMPLING TIME	: 15:24-15:34
RECEIVED DATE	: 12/04/2024	ANALYTICAL DATE	: 12, 17-18/04/2024
REPORT DATE	: 19/04/2024	SITE OPERATOR	: Mr. Anawat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_GW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW1	STANDARD <sup>1)</sup>
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-
Methyl tert-butyl ether	mg/l	6200 B	< 0.0005	ND	≤ 24
Methanol	mg/l	6200 B	< 0.50	ND	≤ 60
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 22<sup>nd</sup> ED., 2017, APHA, AWWA, WEF

REFERENCE USE EPA'S 816 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2000

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. - Not available.

---

ใบรับรองผลการตรวจวัดคุณภาพน้ำระบายทิ้ง  
จากระบบผลิตน้ำหล่อเย็น



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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 : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0064/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab  
SAMPLING DATE : 11/01/2024 SAMPLING TIME : 14:00  
RECEIVED DATE : 12/01/2024 ANALYTICAL DATE : 12-17/01/2024  
REPORT DATE : 19/01/2024 SITE OPERATOR : Miss Thipsuda Wannakran  
SAMPLE CONDITION : Normal FILE CODE : 224056\_WW\_January

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD
			(non-detectable)	CW Return (Cooling tower)	
Total Organic Carbon*	mg/l	5310 B	< 0.01	14.94	-

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

(Miss Khemchuda Insorn)

(Mrs. Araya Tippasuk)

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. \*Total Organic Carbon analysis was performed by Faculty of Public Health, Mahidol University.  
4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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 : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0300/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab  
SAMPLING DATE : 15/02/2024 SAMPLING TIME : 10:15  
RECEIVED DATE : 16/02/2024 ANALYTICAL DATE : 16-20/02/2024  
REPORT DATE : 22/02/2024 SITE OPERATOR : Miss Thipsuda Wannakran  
SAMPLE CONDITION : Normal FILE CODE : 224054\_WW\_February

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD
			(non-detectable)	CW Return (Cooling tower)	
Total Organic Carbon*	mg/l	5310 B	< 0.01	16.77	-

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

(Miss Khemchuda Insorn)

(Mrs. Araya Tippasuk)

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. \*Total Organic Carbon analysis was performed by Faculty of Public Health, Mahidol University.  
4. - Not available.





บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND  
TEL. (662) 959-3600 FAX (662) 959-3333 Website: secot.co.th E-mail: envserv@secot.co.th

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0505/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab  
SAMPLING DATE : 14/03/2024 SAMPLING TIME : 11:34  
RECEIVED DATE : 15/03/2024 ANALYTICAL DATE : 15-18/03/2024  
REPORT DATE : 20/03/2024 SITE OPERATOR : Miss Thipsuda Wannakran  
SAMPLE CONDITION : Normal FILE CODE : 224054\_WW\_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	15.34	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 21<sup>ST</sup> ED. 2017 (AWWA, APHA, WEF)

(Miss Khemchuda Insorn)

(Mrs. Araya Tipparuk)

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. \*Total Organic Carbon analysis was performed by Faculty of Public Health, Mahidol University.
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND  
TEL. (662) 959-3600 FAX (662) 959-3333 Website: secot.co.th E-mail: envserv@secot.co.th

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0740/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab  
SAMPLING DATE : 12/04/2024 SAMPLING TIME : 10:20  
RECEIVED DATE : 13/04/2024 ANALYTICAL DATE : 17-19/04/2024  
REPORT DATE : 24/04/2024 SITE OPERATOR : Miss Thipsuda Wannakran  
SAMPLE CONDITION : Normal FILE CODE : 224054\_WW\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	19.12	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 21<sup>ST</sup> ED. 2017 (AWWA, APHA, WEF)

(Miss Khemchuda Insorn)

(Mrs. Araya Tipparuk)

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. \*Total Organic Carbon analysis was performed by Faculty of Public Health, Mahidol University.
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

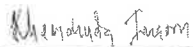
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th


WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0965/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab  
SAMPLING DATE : 17/05/2024 SAMPLING TIME : 09:25  
RECEIVED DATE : 18/05/2024 ANALYTICAL DATE : 20-24/05/2024  
REPORT DATE : 29/05/2024 SITE OPERATOR : Miss Thipsuda Wannakran  
SAMPLE CONDITION : Normal FILE CODE : 224054\_WW\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD
			(non-detectable)	CW Return (Cooling tower)	
Total Organic Carbon*	mg/l	5310 B	< 0.01	16.87	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2012 (AWWA, APHA, WEF)

  
(Miss Khemchuda Insom)

  
(Mrs. Araya Tippanuk)

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. \*Total Organic Carbon analysis was performed by Faculty of Public Health, Mahidol University.
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

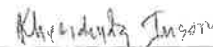
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

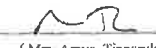
WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 1270/67  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab  
SAMPLING DATE : 21/06/2024 SAMPLING TIME : 10:35  
RECEIVED DATE : 22/06/2024 ANALYTICAL DATE : 24/06/2024  
REPORT DATE : 03/07/2024 SITE OPERATOR : Miss Wiraya Patchimboon  
SAMPLE CONDITION : Normal FILE CODE : 224054\_WW\_June

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD
			(non-detectable)	CW Return (Cooling tower)	
Total Organic Carbon*	mg/l	5310 B	< 0.01	17.97	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2012 (AWWA, APHA, WEF)

  
(Miss Khemchuda Insom)

  
(Mrs. Araya Tippanuk)

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. \*Total Organic Carbon analysis was performed by Faculty of Public Health, Mahidol University.
  4. - Not available.

---

## ใบรับรองผลการตรวจวัดระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน



## Noise Monitoring Result : Working Noise MTR-BST Site 1

Location : BDU-DMF Compressor	Monitor Period : May 17, 2024
SLM Model : Cirrus CR162C	Serial No : G301029
Site Operator : Mr.Suphanut Intraranarert	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Sep 04, 2023
SLM Reading / Adjust dB(A) : 93.7/0.0	Expire Date : Sep 03, 2024
Cal Sheet No. : CR-515-2024-126	

Time	Equivalent Sound Pressure Level (dB(A))	
	May 17, 2024	
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		
08:00 - 09:00	80.9	
09:00 - 10:00	81.2	
10:00 - 11:00	81.4	
11:00 - 12:00	81.1	
12:00 - 13:00	81.1	
13:00 - 14:00	80.7	
14:00 - 15:00	80.8	
15:00 - 16:00	81.1	
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 - 24:00		
Leq(8)*	81.0	
Lmax **	87.0	
Standard-8Hr	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : \* Average time between 08:00-16:00

\*\* Maximum Sound Pressure Level between 08:00-16:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-BST Site 1

Location : BDU-DMF Heat Exchanger	Monitor Period : Apr 17, 2024
SLM Model : SCARLET ST-21D	Serial No : 820726
Site Operator : Miss Mareeyanee Hawae	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Sep 04, 2023
SLM Reading / Adjust dB(A) : 93.7/0.1	Expire Date : Sep 03, 2024
Cal Sheet No. : CR-515-2024-089	

Time	Equivalent Sound Pressure Level (dB(A))	
	Apr 17, 2024	
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		
08:00 - 09:00		
09:00 - 10:00	81.2	
10:00 - 11:00	81.6	
11:00 - 12:00	82.0	
12:00 - 13:00	82.1	
13:00 - 14:00	82.1	
14:00 - 15:00	82.1	
15:00 - 16:00	81.8	
16:00 - 17:00	81.7	
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 - 24:00		
Leq(8)*	81.8	
Lmax **	97.6	
Standard-8Hr	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : \* Average time between 09:00-17:00

\*\* Maximum Sound Pressure Level between 09:00-17:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-BST Site 1


Location : BDU-DMF Steam Line	Monitor Period : Apr 17, 2024
SLM Model : SCARLET ST-21D	Serial No : 820727
Site Operator : Miss Marecyanee Hawae	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Sep 04, 2023
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Sep 03, 2024
Cal Sheet No. : CR-515-2024-089	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 17, 2024
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	
08:00 - 09:00	
09:00 - 10:00	83.0
10:00 - 11:00	83.2
11:00 - 12:00	83.2
12:00 - 13:00	84.0
13:00 - 14:00	82.7
14:00 - 15:00	82.8
15:00 - 16:00	82.8
16:00 - 17:00	83.3
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 - 24:00	

Leq(8)*	83.1
Lmax**	101.1
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : \* Average time between 09:00-17:00

\*\* Maximum Sound Pressure Level between 09:00-17:00

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-BST Site 1


Location : BDU-NMP Compressor	Monitor Period : Apr 17, 2024
SLM Model : SCARLET ST-21D	Serial No : 820723
Site Operator : Miss Marecyanee Hawae	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Sep 04, 2023
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Sep 03, 2024
Cal Sheet No. : CR-515-2024-089	


Time	Equivalent Sound Pressure Level (dB(A))
	Apr 17, 2024
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	
08:00 - 09:00	
09:00 - 10:00	89.3
10:00 - 11:00	88.5
11:00 - 12:00	88.2
12:00 - 13:00	86.6
13:00 - 14:00	85.9
14:00 - 15:00	85.6
15:00 - 16:00	86.9
16:00 - 17:00	88.8
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 - 24:00	

Leq(8)*	87.7
Lmax**	106.8
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : \* Average time between 09:00-17:00

\*\* Maximum Sound Pressure Level between 09:00-17:00

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-BST Site 1

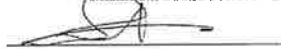
Location : BDU-NMP Heat Exchanger      Monitor Period : Apr 17, 2024  
SLM Model : SCARLET ST-21D      Serial No : 820725  
Site Operator : Miss Marceyance Hawac


Calibrator Model : Citrus CR:515      Serial No : 97097  
Calibration Ref dB(A) : 94.0      Certified Date : Sep 04, 2023  
SLM Reading / Adjust dB(A) : 93.8/0.0      Expire Date : Sep 03, 2024  
Cal Sheet No. : CR-515-2024-089

Time	Equivalent Sound Pressure Level (dB(A))	
	Apr 17, 2024	
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		
08:00 - 09:00		
09:00 - 10:00	84.6	
10:00 - 11:00	84.5	
11:00 - 12:00	84.9	
12:00 - 13:00	84.9	
13:00 - 14:00	84.6	
14:00 - 15:00	84.6	
15:00 - 16:00	84.6	
16:00 - 17:00	84.6	
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 - 24:00		
Leq(8)*	84.7	
Lmax **	101.3	
Standard-8Hr	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : \* Average time between 09:00-17:00

\*\* Maximum Sound Pressure Level between 09:00-17:00

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-BST Site 1


Location : BDU-NMP Steam Line      Monitor Period : Apr 17, 2024  
SLM Model : SCARLET ST-21D      Serial No : 820722  
Site Operator : Miss Marceyance Hawac


Calibrator Model : Citrus CR:515      Serial No : 97097  
Calibration Ref dB(A) : 94.0      Certified Date : Sep 04, 2023  
SLM Reading / Adjust dB(A) : 93.8/0.0      Expire Date : Sep 03, 2024  
Cal Sheet No. : CR-515-2024-089

Time	Equivalent Sound Pressure Level (dB(A))	
	Apr 17, 2024	
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		
08:00 - 09:00		
09:00 - 10:00	78.7	
10:00 - 11:00	78.8	
11:00 - 12:00	79.1	
12:00 - 13:00	78.7	
13:00 - 14:00	78.8	
14:00 - 15:00	78.9	
15:00 - 16:00	78.5	
16:00 - 17:00	78.4	
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 - 24:00		
Leq(8)*	78.7	
Lmax **	93.9	
Standard-8Hr	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : \* Average time between 09:00-17:00

\*\* Maximum Sound Pressure Level between 09:00-17:00

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Sununta Sirawuttinanon)  
Technical Management Team

---

ใบรับรองผลการตรวจวัดระดับเสียงที่พนักงานได้รับ  
เฉลี่ยตลอดเวลาการทำงาน  
(Time Weighted Average-TWA)



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Salisa Ainree CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift D				
ID 54814	07.39-19.39	44.5	79.7	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : 22R  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
SD1 : Day				
ID 51676	07.07-15.07	86.1	84.4	85.0

(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.





บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
EPM1 : Day				
ID 48619	07.28-15.28	1.1	65.3	85.0

(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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : 22R  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
EPM1 : Day				
ID 49643	07.54-15.54	29.5	79.7	85.0

(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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : 22R  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
EPM1 : Day				
ID 651411	08.02-16.02	0.7	63.7	85.0

  
 (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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MFS : Day				
ID 651446	07.51-15.51	8.6	74.4	85.0

  
 (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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift A				
ID 52731	07.35-19.56	10.0	73.3	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 611203	08.14-16.14	13.0	76.2	85.0

(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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 621238	08.14-16.14	32.9	80.2	85.0

(Miss Katesarin Vorradevitwittaya)

Environmental Scientist

(Miss Sununta Sirawutinanon)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Mar24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/03/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 651421	08.14-16.14	2.7	69.4	85.0

(Miss Katesarin Vorradevitwittaya)

Environmental Scientist

(Miss Sununta Sirawutinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NeDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

Operator ID	Time	Results		Standard*
		% Dose	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MFS : Shift B				
ID 39118	07.06-19.06	1.2	63.9	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NeDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 39142	06.27-18.27	2.9	68.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิเศษทองประปา 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : 22R  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
 SITE OPERATOR : Miss Marceyane Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 40209	07.21-19.21	34.2	78.6	83.0

(Miss Katesarin Vorradevitwittaya)

Environmental Scientist

(Miss Sununta Sirawutinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิเศษทองประปา 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Marceyane Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 41265	07.14-19.14	26.4	77.5	83.0

(Miss Katesarin Vorradevitwittaya)

Environmental Scientist

(Miss Sununta Sirawutinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 52737	07.07-19.07	23.4	77.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 621242	07.12-19.12	24.6	77.2	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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 621248	07.00-19.00	14.6	74.9	83.0

(Miss Katesarin Vorradetwitaya)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 621258	07.02-19.02	38.3	79.1	83.0

(Miss Katesarin Vorradetwitaya)

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.





บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : 22R  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
SITE OPERATOR : Miss Marceyance Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MFS : Shift B				
ID 631316	07.08-19.08	10.5	73.5	83.0

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Suminta 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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 01/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyance Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 661475	07.35-19.35	13.3	74.5	83.0

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(Miss Suminta 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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 02/04/2024	CALIBRATOR TYPE	: 22R
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 79781
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 39127	07.41-19.36	5.4	70.6	83.0

(Miss Katesarin Vorradeelwittaya)

Environmental Scientist

(Miss Sumanta Sirawutinanon)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 02/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 39134	07.23-19.23	27.2	77.6	83.0

(Miss Katesarin Vorradeelwittaya)

Environmental Scientist

(Miss Sumanta Sirawutinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 02/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 41264	07.29-19.29	9.6	73.1	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 02/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 621247	06.55-18.55	60.5	81.1	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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 02/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 621252	07.18-19.18	11.8	74.0	83.0

(Miss Katesarin Vorradevitayaya)

Environmental Scientist

(Miss Sumanta 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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 02/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 661457	07.26-19.26	41.5	79.4	83.0

(Miss Katesarin Vorradevitayaya)

Environmental Scientist

(Miss Sumanta 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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 02/04/2024	CALIBRATOR TYPE	: 22R
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 79781
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 641320	07.43-19.34	94.2	83.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 02/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 621256	07.49-19.34	8.9	72.8	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 03/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift C				
ID 48615	07.17-19.17	15.3	75.1	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 03/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift C				
ID 52727	07.16-19.16	90.1	82.8	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 03/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 39115	07.53-15.53	8.6	74.4	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Siravuttinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 03/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 40160	08.40-16.40	58.2	82.7	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Siravuttinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 03/04/2024 CALIBRATOR TYPE : 22R  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 40204	07.55-15.55	23.5	78.7	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawultinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 03/04/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 43436	08.49-16.49	10.8	75.4	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawultinanon)

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.





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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 03/04/2024	CALIBRATOR TYPE	: 22R
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 79781
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 42438	08.43-16.43	14.5	76.7	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawutinanon)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 03/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 52728	09.01-17.01	13.1	76.2	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawutinanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RJMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift A				
ID 51716	07.03-19.03	64.5	81.3	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RJMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 571062	07.57-15.57	8.2	74.2	85.0

(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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 611205	08.21-16.21	27.9	79.5	85.0

(Miss Katesarin Vorradetwitaya)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 621239	08.22-16.22	46.7	81.7	85.0

(Miss Katesarin Vorradetwitaya)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @ 1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift A				
ID 631292	07.07-19.07	47.7	80.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @ 1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 631300	08.28-16.28	29.5	79.7	85.0

(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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 04/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 43454	07.55-15.55	21.4	78.3	85.0

(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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 05/04/2024 CALIBRATOR TYPE : 22R  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 561002	07.09-19.09	57.2	80.8	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 05/04/2024 CALIBRATOR TYPE : 22R  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 79781  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 621259	07,11-19,11	52.5	80,5	83,0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sumunta 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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 05/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
MF5 : ID 621269	07.10-19.10	52.7	80.5	83.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sumunta 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.



บริษัท ซีคोट จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 05/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
MF5 : ID 661460	07.16-19.16	29.1	77.9	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.



บริษัท ซีคोट จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 10/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift B				
ID 43453	07.06-19.06	63.4	81.3	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 10/04/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift B				
ID 561025	07.09-19.09	86.2	82.6	83.0

(Miss Katesarin Vorradeetwittaya)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

#### NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
 MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
 MEASUREMENT DATE : 10/04/2024 CALIBRATOR TYPE : RC 110A  
 MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
 SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MP3 : Shift B				
ID 651412	07.06-19.06	14.1	74.8	83.0

(Miss Katesarin Vorradeetwittaya)

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.





บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 10/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 621245	07.18-19.18	32.1	78.3	83.0

(Miss Katesarin Vorradehwitaya)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: BST (Site 1)-224054-Cert-NsDose/Apr24
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 10/04/2024	CALIBRATOR TYPE	: RC 110A
MEASUREMENT LOCATION	: BST Site 1	SERIAL NO.	: 95167
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 621244	07.16-19.16	69.0	81.6	83.0

(Miss Katesarin Vorradehwitaya)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลคงประปา 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 22/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyane Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 571053	07.15-19.15	19.0	76.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลคงประปา 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 22/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyane Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 661463	07.12-19.12	11.5	73.9	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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 22/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawac CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 47586	07.46-15.46	71.4	83.5	85.0

(Miss Katesarin Vorradetwitaya)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 22/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawac CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
EPM1 : Day				
ID 641372	07.27-15.27	0.3	59.6	85.0

(Miss Katesarin Vorradetwitaya)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 24/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marecyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 39133	07.39-19.30	14.7	74.9	83.0

  
(Miss Katesarin Vorradetwittaya)

Environmental Scientist

  
(Miss Sunonta Sirawutlitanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 24/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marecyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 40198	07.29-19.29	8.2	72.4	83.0

  
(Miss Katesarin Vorradetwittaya)

Environmental Scientist

  
(Miss Sunonta Sirawutlitanon)

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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 24/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyance Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 41272	07.26-19.26	45.3	79.8	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 24/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyance Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 621253	07.47-19.30	90.0	82.8	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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 24/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MFS : Shift A				
ID 621255	07.25-19.25	51.9	80.4	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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 24/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (8 hr) (dBA)	TWA (8 hr) (dBA)
MF3 : Day				
ID 661477	07.21-15.21	18.2	77.6	85.0

  
(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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceynee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 39112	07.15-19.10	17.0	75.6	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceynee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 41255	07.12-19.12	39.3	79.2	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marecyance Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 41262	07.09-19.09	47.5	80.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marecyance Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 54812	07.25-19.12	26.9	77.6	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.





บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 571061	07.18-19.12	82.7	82.4	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 621243	07.41-19.09	65.5	81.4	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนรัตนทองประไพ 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 621250	07.23-19.08	82.6	82.4	83.0

(Miss Katesarin Vorraderwitaya)

Environmental Scientist

(Miss Sunuata 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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนรัตนทองประไพ 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25-26/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 621272	19.18-07.18	11.4	73.8	83.0

(Miss Katesarin Vorraderwitaya)

Environmental Scientist

(Miss Sunuata 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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 641321	07.40-19.11	88.9	82.7	83.0

(Miss Katesarin Vorradeetwittaya)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Mareeyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift D				
ID 641323	07.13-19.09	78.4	82.2	83.0

(Miss Katesarin Vorradeetwittaya)

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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF3 : Shift D				
ID 51708	07.11-19.11	24.9	77.2	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.



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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 25-26/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Marceyanee Hawae CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift C				
ID 42431	19.19-07.19	3.5	68.7	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 26/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift A				
ID 37077	07.09-19.09	4.7	70.0	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.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

NOISE MEASUREMENT RESULT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : BST (Site 1)-224054-Cert-NsDose/Apr24  
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter  
MEASUREMENT DATE : 29/04/2024 CALIBRATOR TYPE : RC 110A  
MEASUREMENT LOCATION : BST Site 1 SERIAL NO. : 95167  
SITE OPERATOR : Miss Wiraya Patchimboon CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	TIME	RESULTS		STANDARD*
		% DOSE	TWA (12 hr) (dBA)	TWA (12 hr) (dBA)
MF5 : Shift B				
ID 621257	07.24-19.22	71.7	81.8	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.

---

## ใบรับรองผลการตรวจวัดคุณภาพอากาศในสถานประกอบการ



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0265/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 08/02/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 12/02/2024
		Test Date	: 13/02/2024
Tel/Fax	: 038-949200	Report Date	: 19/02/2024

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
Lab (BST) : R-110	08/02/2024 08:30-16:30	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By: Sudaporn S.  
(Miss Sudaporn Soonthom)

Approved By: Narisa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0604/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 27/03/2024
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 29/03/2024
		Test Date	: 01/04/2024
Tel/Fax	: 0-3869-8698	Report Date	: 06/04/2024

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
C-1401 : BD Plant	27/03/2024 09:04-17:04	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	0.13	1

Analyst By: Sudaporn S.  
(Miss Sudaporn Soonthom)

Approved By: Narisa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0191/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 01/02/2024
Address	: Map Ta Phut Industrial Estate, Muang District , Rayong Province	Received Date	: 02/02/2024
Tel/Fax	: 038-949200	Test Date	: 03/02/2024
		Report Date	: 07/02/2024

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
Tar Loading	31/01/2024 08:40-16:40	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	I

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Maunee Poowasanpeich  
( Miss Narisa Poowasanpeich )  
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.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0140/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 26/01/2024
Address	: Map Ta Phut Industrial Estate, Muang District , Rayong Province	Received Date	: 29/01/2024
Tel/Fax	: 038-949200	Test Date	: 29/01/2024
		Report Date	: 05/02/2024

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
BDU-NMP : Extractive Distillation : C-2241	26/01/2024 08:32-16:32	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	0.12	I
BDU-NMP : BD Purification : C-2245	26/01/2024 08:28-16:28	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	I

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Maunee Poowasanpeich  
( Miss Narisa Poowasanpeich )  
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.2560 (2017).
4. ND = non-detectable.





บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

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.	: 0265/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 08/02/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 12/02/2024
		Test Date	: 19/02/2024
Tel/Fax	: 038-949200	Report Date	: 19/02/2024

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
Lab (BST) : R-110	08/02/2024 08:30-16:30	Methyl tert-butyl ether	NIOSH 1615/GC FID	< 0.02	ND	50

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Naissa Poowasanpetch  
( Miss Naissa 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. American Conference of Governmental Industrial Hygienists 2022 (ACGIH 2022).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

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.	: 0191/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 31/01/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 02/02/2024
		Test Date	: 06/02/2024
Tel/Fax	: 038-949200	Report Date	: 07/02/2024

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
C-3001	31/01/2024 08:15-16:15	Methyl tert-butyl ether	NIOSH 1615/GC FID	< 0.02	0.51	50

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Naissa Poowasanpetch  
( Miss Naissa 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. American Conference of Governmental Industrial Hygienists 2022 (ACGIH 2022).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0140/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 26/01/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 29/01/2024
		Test Date	: 31/01/2024
Tel/Fax	: 038-949200	Report Date	: 05/02/2024

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
Lab (BST) : R-110	26/01/2024 07:52-17:12	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Narisa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0191/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 31/01/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 02/02/2024
		Test Date	: 06/02/2024
Tel/Fax	: 038-949200	Report Date	: 07/02/2024

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
T-3001 : Slop Tank	31/01/2024 08:20-16:20	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Narisa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0140/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 26/01/2024
Address	: Map Ta Phut Industrial Estate, Muang District , Rayong Province	Received Date	: 29/01/2024
		Test Date	: 29/01/2024
Tel/Fax	: 038-949200	Report Date	: 05/02/2024

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
Lab (BST) : R-110	26/01/2024 07:52-17:52	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Naissa Poowasanpetch  
( Miss Naissa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).

4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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.	: 0191/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 31/01/2024
Address	: Map Ta Phut Industrial Estate, Muang District , Rayong Province	Received Date	: 02/02/2024
		Test Date	: 03/02/2024
Tel/Fax	: 038-949200	Report Date	: 07/02/2024

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
T-1504 : ตั้งเก็บ Toluene	31/01/2024 08:35-16:25	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Naissa Poowasanpetch  
( Miss Naissa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).

4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0956/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 14/05/2024
Address	: No.5/1, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 17/05/2024
		Test Date	: 20/05/2024
Tel/Fax	: 0-3869-8698	Report Date	: 28/05/2024

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
Lab (BST) : R-110	14/05/2024 07:30-13:30	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By: Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By: Maia 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).

4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0973/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 17/05/2024
Address	: No.5/1, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 18/05/2024
		Test Date	: 20/05/2024
Tel/Fax	: 0-3869-8698	Report Date	: 28/05/2024

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
Tar Loading	17/05/2024 08:50-16:50	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
C-1401 : BD Plant	17/05/2024 08:50-16:50	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By: Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By: Maia 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).

4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0910/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 08/05/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 10/05/2024
Tel/Fax	: 038-949200	Test Date	: 13/05/2024
		Report Date	: 16/05/2024

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
BDU-NMP : Extractive Distillation : C-2241	08/05/2024 09:40-17:40	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
BDU-NMP : BD Purification : C-2245	08/05/2024 09:45-17:45	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	0.08	1

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Maia 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0956/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 14/05/2024
Address	: No.5/1, 1-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 17/05/2024
Tel/Fax	: 0-3869-8698	Test Date	: 27/05/2024
		Report Date	: 28/05/2024

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
Lab (BST) : R-110	14/05/2024 07:30-15:30	Methyl tert-butyl ether	NIOSH 1613/GC FID	< 0.02	ND	50

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : Maia 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0910/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 08/05/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 10/05/2024
Tel/Fax	: 038-949200	Test Date	: 15/05/2024
		Report Date	: 16/05/2024

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
C-3001	08/05/2024 09:35-17:35	Methyl tert-butyl ether	NIOSH 161 S/GC FID	< 0.02	ND	50

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpeteli  
(Miss Narisa Poowasanpeteli)  
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. American Conference of Governmental Industrial Hygienists 2022 (ACGIH 2022).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0956/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 14/05/2024
Address	: No.5/1, 1-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 17/05/2024
Tel/Fax	: 0-3869-8698	Test Date	: 23/05/2024
		Report Date	: 28/05/2024

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
Lab (BST) : R-110	14/05/2024 07:30-15:30	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpeteli  
(Miss Narisa Poowasanpeteli)  
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.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0910/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 08/05/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 10/05/2024
		Test Date	: 15/05/2024
Tel/Fax	: 038-949200	Report Date	: 16/05/2024

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
T-3001: Slop Tank	08/05/2024 09:30-17:30	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : Maissa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
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	: EED/SECOT Co., Ltd.	Request Service No.	: 0972/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 17/05/2024
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 18/05/2024
		Test Date	: 20/05/2024
Tel/Fax	: 038-949200	Report Date	: 01/06/2024

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
Lab (BST) : R-110	17/05/2024 09:10-17:12	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : Maissa 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

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	: EED/SECOT Co., Ltd.	Request Service No.	: 0973/67
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 17/05/2024
Address	: No.5/1, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 18/05/2024
		Test Date	: 20/05/2024
Tel/Fax	: 0-3869-8698	Report Date	: 28/05/2024

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
T-1504 : ถังเก็บ Toluene	17/05/2024 09:00-17:02	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : Na-Na Poo-Asanperch  
(Miss Narisa Poo-Asanperch)

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.2560 (2017).

4. ND = non-detectable.



ภาคผนวก จ

ใบแสดงการตรวจเทียบเครื่องมือ



## Agilent CrossLab Start Up Services Agilent 7890 Gas Chromatograph Preventive Maintenance Checklist



### Agilent 7890 GC Preventive Maintenance Checklist

#### Introduction

#### Customer Information

- Customers should provide all necessary operating supplies upon request of the engineer.
- A customer representative should be available to the engineer while performing the preventive maintenance procedures.
- Any parts, not included in the Parts Lists section of this document, are not part of the recommended Preventive Maintenance service, nor are they included in the price of this service.
- If a system requires the use of extra or special procedures and/or parts for the maintenance service, then these must be ordered separately and charged as a repair, which may incur additional costs.

#### Important Customer Web Links

- For more information about Agilent Technologies services, please visit our website using the following URL: <http://www.agilent.com/en-us/products/crosslab-instrument-services/service-repair>
- The Agilent Community is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>.
- To access Agilent University, visit <http://www.agilent.com/crosslab/university/> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- A useful Agilent Resource Center web page is available, which includes short videos on maintenance, quick lists of consumables for new instruments, and other valuable information. Check out the Resource Page here: <https://www.agilent.com/en-us/agilentresources>.
- Need technical support, FAQs, supplies? – visit our **Support Home page** <http://www.agilent.com/search/support>.
- Videos about specific preparation requirements for your instrument can be found by searching the **Agilent YouTube channel** at <https://www.youtube.com/user/agilent>.
- **7890B Manuals** are also available on Agilent.com:
  - o **Safety**  
[https://www.agilent.com/cs/library/usermanuals/public/7890B\\_Safety.pdf](https://www.agilent.com/cs/library/usermanuals/public/7890B_Safety.pdf)
  - o **Installation and First Startup**  
[https://www.agilent.com/cs/library/usermanuals/Public/7890B\\_Installation.pdf](https://www.agilent.com/cs/library/usermanuals/Public/7890B_Installation.pdf)
  - o **Operation Manual**  
[https://www.agilent.com/cs/library/usermanuals/Public/7890B\\_Operation.pdf](https://www.agilent.com/cs/library/usermanuals/Public/7890B_Operation.pdf)
  - o **Maintaining Your GC**  
[https://www.agilent.com/cs/library/usermanuals/public/C3430-90052%207890B\\_Maintaining%20GCuide.pdf](https://www.agilent.com/cs/library/usermanuals/public/C3430-90052%207890B_Maintaining%20GCuide.pdf)

Agilent Preventive Maintenance provides factory recommended service for your analytical instruments to assure reliable operation and the accuracy of your results.

Delivered by highly trained and certified service engineers using genuine Agilent parts and supplies, Agilent Preventive Maintenance provides everything you need to reduce unplanned downtime and keep your systems operating at their peak. This checklist will be completed at the end of the service and provided to you as a record of the preventive maintenance activities.



## Service Engineer's Responsibilities

- Contact the customer and ensure that all necessary supplies are available before the preventive maintenance visit.
- Only select those pages that relate to the system or module being serviced.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using either a "X" or tick mark "✓".
- Check "Section not applicable" check boxes to indicate services/tasks not delivered, as appropriate.
- Complete the Preventive Maintenance service in the order of the tasks listed.
- Complete the Service Review section together with the customer.
- Complete the fields for page numbers at the foot of each selected page
- Complete the total number of pages field in the Service Completion section
- Ask the customer to sign the Service Completion section including the customer's and your signature.

## Additional Instruction Notes

- Check for any active service notes for this unit. If there are any applicable "Safety" or "Modification Recommended" Service notes, plan to implement the changes on this unit before doing any qualification service.
- Do not implement firmware updates, unless you get approval from the customer and are sure that they are compatible with the instrument control software.

## System Information

- ☒ Check this box if an instrument configuration report is attached instead of completing the table below.

Instrument System Name and ID

GC7890A US10943001

Instrument System Site and Location

Secot Co, Ltd. Instrument room.

List System Component Product Numbers

List the Serial Numbers of each Component

1. B3440A  
 2. B4513A  
 3. B4514A  
 4.  
 5.  
 6.  
 7.  
 8.  
 9.  
 10.

US10943001  
 CN11350193  
 CN9301235

## Preparation

- ☒ Discuss any specific issues with the customer before starting.
- ☒ Review the instrument logbook for recorded problems and comments.
- ☒ Save instrument control settings before starting the procedure.
- ☒ Perform a general inspection of the system for cleanliness.
- ☒ Check for proper installation of parts, assemblies, sensors etc.
- ☒ Check system for required installation of components, settings as defined by current Service Notes.
- ☒ Check for required firmware updates and verify with customers if they would like them installed.
- ☒ Before starting the following procedures, record the Detector Signal Output(s) in the results table. If the GC is turned OFF or in a service mode, comparing the detector outputs before and after the service is not possible.

## Preventive Maintenance Procedure

### Clean and inspect GC

- ☒ Unplug power cord from the power source.
- ☒ Open GC covers and vacuum/remove any dust/debris. Pay particular attention to cooling fans.
- ☒ Inspect internal connectors for proper contact and placement.
- ☒ Reconnect Power to the GC. Power the GC on and verify the power on self-test passed.
- ☒ Verify oven motor spins freely and turns on with the oven door closed; off when the door is opened.
- ☒ Verify operation of all other fans - the inlet and EPC cooling fans.
- ☒ Verify oven intake/outlet flap assembly is operating smoothly while heating and cooling the oven.

### Inlet and detector consumable replacement

- ☒ For the inlets installed, perform inlet maintenance as defined in the 7890 manual – "Maintaining Your GC" - for the inlet(s) installed.
- ☒ Replace the split vent trap cartridge filter on units with these inlets: Split/Splitless Capillary (SSL), Multi-Mode Inlet (MMI), Programmed Temperature Vaporizer (PTV), Volatiles Interface (VI).
- ☒ If the inlet system is used in Split Mode with viscous samples, inspect and clean the split vent tube on the inlet and flush or replace the tubing between the inlet and the split vent trap.
- ☒ If the GC includes a Flame Ionization Detector (FID), replace the jet. If the Ignitor shows any buildup of sample or corrosion, replace the ignitor. Examine the FID collector and castle assemblies for contamination – clean as necessary.

### Zero Sensors and Leak test

- ☒ Zero all pressure sensors per the procedure in the 7890 "Advanced User Guide".
- ☒ Perform inlet pressure decay test(s) as defined in the 7890 "Troubleshooting Manual".  
If the PM is done in preparation for an Operational Qualification, then the pressure decay test defined within that protocol can be used for the PM.
- ☒ Record if test passed or failed in the results table.

## ALS Maintenance

- ☐ Section NOT applicable
- ☒ Check all cabling and configuration settings between GC, tray, and injectors.
- ☒ Vacuum or remove any dust, especially around fans.
- ☒ Check operation of all fans.
- ☒ Check syringe for smooth plunger operation.
- ☒ Check for smooth operation of the needle support – clean if necessary

## Restore Instrument

- ☒ Restore the normal operating conditions or customer method using the Data System.
- ☒ Purge the system with carrier flow for 15 minutes.
- ☒ Bake out the system, then restore the normal operating conditions.
- ☒ After equilibration, check and record the post PM detector signal output values.  
Results should be similar or lower than the detector outputs recorded prior to PM.
- ☒ Perform a chemical checkout. If this is a routine PM, inject the customer's sample using the ALS if applicable. This will act as a final checkout of both the ALS and the GC.

Note: If the PM Service is performed prior to a qualification service, then use the qualification procedure as a guide for final instrument set up and checkout.

## Signature Page

## Service Review

- ☐ Attach available reports/printouts of all tests to this documentation.
- ☒ Record the Preventive Maintenance service activity in the customer's records/logbook.
- ☒ Update/reset instrument maintenance counters as appropriate.
- ☒ Affix the PM sticker to the system or instrument logbook based on the customer's request.
- ☒ Complete the Service Engineer Comments section if there are additional comments.
- ☒ Review with the customer this service, parts replaced, and test results obtained.
- ☐ If the instrument firmware was updated, record the details of the change in the Service Engineer's Comments box or if necessary, in the customer's IQ records.
- ☐ Supply the customer with a copy of the Smart Alerts flyer.
- ☐ Describe Smart Alerts to the customer.
- ☐ Install Smart Alerts if requested.

## 7890 GC Test Results Table

Detector Signal Outputs	Before PM Service	After PM Service
Front detector output	N/A	17.4
Back detector output	N/A	34.2
AUX detector output	N/A	N/A
Pressure decay test	Expected test result	Actual test result
Front Inlet pressure decay test	Pass	Pass
Back Inlet pressure decay test	Pass	Pass

## 7890 Parts List Table

The following kits are recommended for capillary and purged packed inlets. If this is a general PM and the customer has a preferred set of consumables, you may use the customer's consumables.

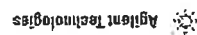
Part description	Part number	Product or model# where used	Quantity consumed
SSL Capillary Inlet PM kit, Splitless	5188-6497	7890A/B	1
SSL Capillary Inlet PM kit, split	5188-6496	7890A/B	1
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Low Pressure Drop Split Liner - with Glass Wool	5190-2295	7890A/B	N/A
PP Inlet PM kit	5188-6498	7890A/B	N/A
Split vent trap PM kit, single cartridge (for MMI, PTV & V)	5188-6495	7890A/B	N/A
MMI Cleaning Kit	G3510-60820	7890A/B	N/A
PTV Septumless Head Rebuild Kit	5102-9747	7890A/B	N/A
PTV Septumless Head Teflon Guide	5182-9748	7890A/B	N/A
Ignitor (glow plug) assembly with O-ring	19231-60680	7890A/B	1
FID Collector Rebuild/Cleaning Kit	G1531-67000	7890A/B	N/A
Standard .011-inch FID Jet for capillary FID base	G1531-80560	7890A/B	1
High Temperature .018-inch FID Jet for capillary FID base	G1531-80620	7890A/B	N/A
Standard .018-inch FID Jet for packed column with packed FID base	18710-20119	7890A/B	N/A
Standard .011-inch FID Jet for capillary column with packed/adaptable FID base	19244-80560	7890A/B	N/A
High Temperature .018-inch FID Jet for capillary column with packed/adaptable FID base	19244-80620	7890A/B	N/A
NPD Jet, universal fit, .011-inch ID	G1534-80580	7890A/B	N/A
NPD Jet, universal fit, .011-inch ID Extended tip	G1534-80590	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	7890A/B	N/A
**FID Collector Replacement Kit, if needed	G1531-67001	7890A/B	N/A

## Service Engineer Comments

If there are any specific points you wish to note as part of performing the service or other items of interest for the customer, please write include them in this box.

## Service Completion

Service request number 6060041153 Date service completed 29 May 2023  
 Agilent signature [Signature] Customer signature [Signature]  
 Total number of pages in this document 9 pages



## Certificate of Completion

Learner Name: Saengwuthi Saeng Tark  
 Title Of Course: AN-ASP/CE/CSB-GC-1-001-M: 7890/7820 GC and OL GC Standalone Chromstation I&F/Service  
 Completion Date: November 23, 2014  
 Certified By Company: Learning at Agilent

All Service and Support training certificates have the following specific limitations.

A certificate for Service and Support training is only valid while employed by Agilent Technologies or while working as an Agilent-authorized service provider, through which the service employee has ongoing access to Agilent's Safety Alerts, Service News, internal technical updates, update training, current documentation, technical support, current parts, and parts updates. Completion of training alone, without being employed by Agilent Technologies, does not qualify an individual to safely install, service or maintain Agilent products.

## Agilent CrossLab Start Up Services Agilent 7890 Gas Chromatograph Preventive Maintenance Checklist

Agilent Preventive Maintenance provides factory recommended service for your analytical instruments to assure reliable operation and the accuracy of your results.

Delivered by highly trained and certified service engineers using genuine Agilent parts and supplies, Agilent Preventive Maintenance provides everything you need to reduce unplanned downtime and keep your systems operating at their peak. This checklist will be completed at the end of the service and provided to you as a record of the preventive maintenance activities.

### Introduction

#### Customer Information

- Customers should provide all necessary operating supplies upon request of the engineer.
- A customer representative should be available to the engineer while performing the preventive maintenance procedures.
- Any parts, not included in the Parts Lists section of this document, are not part of the recommended Preventive Maintenance service, nor are they included in the price of this service.
- If a system requires the use of extra or special procedures and/or parts for the maintenance service, then these must be ordered separately and charged as a repair, which may incur additional costs.

#### Important Customer Web Links

- For more information about Agilent Technologies services, please visit our website using the following URL: <http://www.agilent.com/en-us/products/crosslab-instrument-services/service-repair>
- The Agilent Community is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>.
- To access Agilent University, visit <http://www.agilent.com/crosslab/university/> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- A useful Agilent Resource Center web page is available, which includes short videos on maintenance, quick lists of consumables for new instruments, and other valuable information. Check out the Resource Page here: <https://www.agilent.com/en-us/agilentresources>.
- Need technical support, FAQs, supplies? – visit our Support Home page <http://www.agilent.com/search/support>.
- Videos about specific preparation requirements for your instrument can be found by searching the Agilent YouTube channel at <https://www.youtube.com/user/agilent>.
- 7890B Manuals are also available on Agilent.com:
  - o Safety  
[https://www.agilent.com/cs/library/usermanuals/public/7890B\\_Safety.pdf](https://www.agilent.com/cs/library/usermanuals/public/7890B_Safety.pdf)
  - o Installation and First Startup  
[https://www.agilent.com/cs/library/usermanuals/public/7890B\\_Installation.pdf](https://www.agilent.com/cs/library/usermanuals/public/7890B_Installation.pdf)
  - o Operation Manual  
[https://www.agilent.com/cs/library/usermanuals/public/7890B\\_Operation.pdf](https://www.agilent.com/cs/library/usermanuals/public/7890B_Operation.pdf)
  - o Maintaining Your GC  
[https://www.agilent.com/cs/library/usermanuals/public/G3430-90052%207890B\\_Maintaining%20Guide.pdf](https://www.agilent.com/cs/library/usermanuals/public/G3430-90052%207890B_Maintaining%20Guide.pdf)

## Service Engineer's Responsibilities

- Contact the customer and ensure that all necessary supplies are available before the preventive maintenance visit.
- Only select those pages that relate to the system or module being serviced.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using either a "X" or tick mark "✓".
- Check "Section not applicable" check boxes to indicate services/tasks not delivered, as appropriate.
- Complete the Preventive Maintenance service in the order of the tasks listed.
- Complete the Service Review section together with the customer.
- Complete the fields for page numbers at the foot of each selected page
- Complete the total number of pages field in the Service Completion section
- Ask the customer to sign the Service Completion section including the customer's and your signature.

## Additional Instruction Notes

- Check for any active service notes for this unit. If there are any applicable "Safety" or "Modification Recommended" Service notes, plan to implement the changes on this unit before doing any qualification service.
- Do not implement firmware updates, unless you get approval from the customer and are sure that they are compatible with the instrument control software.

## System Information

- ☐ Check this box if an Instrument configuration report is attached instead of completing the table below.

Instrument System Name and ID	7890A GC System / GCMS
Instrument System Site and Location	SECOT Co., Ltd.

List System Component Product Numbers	List the Serial Numbers of each Component
1. G3440A	CN10750035
2. N/A	N/A
3. N/A	N/A
4. N/A	N/A
5. N/A	N/A
6. N/A	N/A
7. N/A	N/A
8. N/A	N/A
9. N/A	N/A
10. N/A	N/A

## Preparation

- ☒ Discuss any specific issues with the customer before starting.
- ☒ Review the instrument logbook for recorded problems and comments.
- ☒ Save instrument control settings before starting the procedure.
- ☒ Perform a general inspection of the system for cleanliness.
- ☒ Check for proper installation of parts, assemblies, sensors etc.
- ☒ Check system for required installation of components, settings as defined by current Service Notes.
- ☒ Check for required firmware updates and verify with customers if they would like them installed.
- ☐ Before starting the following procedures, record the Detector Signal Output(s) in the results table. If the GC is turned OFF or in a service mode, comparing the detector outputs before and after the service is not possible.



## Preventive Maintenance Procedure

### Clean and inspect GC

- ☒ Unplug power cord from the power source.
- ☒ Open GC covers and vacuum/remove any dust/debris. Pay particular attention to cooling fans.
- ☒ Inspect internal connectors for proper contact and placement.
- ☒ Reconnect Power to the GC. Power the GC on and verify the power on self-test passed.
- ☒ Verify oven motor spins freely and turns on with the oven door closed; off when the door is opened.
- ☒ Verify operation of all other fans – the inlet and EPC cooling fans.
- ☒ Verify oven intake/outlet flap assembly is operating smoothly while heating and cooling the oven

### Inlet and detector consumable replacement

- ☒ For the Inlets installed, perform Inlet maintenance as defined in the 7890 manual – “Maintaining Your GC” – for the inlet(s) installed.
- ☒ Replace the split vent trap cartridge filter on units with these Inlets: Split/Splitless Capillary (SSL), Multi-Mode Inlet (MMI), Programmed Temperature Vaporizer (PTV), Volatiles Interface (VI).
- ☒ If the inlet system is used in Split Mode with viscous samples, inspect and clean the split vent tube on the inlet and flush or replace the tubing between the Inlet and the split vent trap.
- ☐ If the GC includes a Flame Ionization Detector (FID), replace the Jet. If the Ignitor shows any buildup of sample or corrosion, replace the Ignitor. Examine the FID collector and castle assemblies for contamination – clean as necessary.

### Zero Sensors and Leak test

- ☒ Zero all pressure sensors per the procedure in the 7890 “Advanced User Guide”.
- ☒ Perform inlet pressure decay test(s) as defined in the 7890 “Troubleshooting Manual”.  
If the PM is done in preparation for an Operational Qualification, then the pressure decay test defined within that protocol can be used for the PM.
- ☒ Record if test passed or failed in the results table.

## ALS Maintenance

- ☒ Section NOT applicable
- ☐ Check all cabling and configuration settings between GC, tray, and Injectors.
- ☐ Vacuum or remove any dust, especially around fans.
- ☐ Check operation of all fans.
- ☐ Check syringe for smooth plunger operation.
- ☐ Check for smooth operation of the needle support – clean if necessary

## Restore Instrument

- ☒ Restore the normal operating conditions or customer method using the Data System.
- ☒ Purge the system with carrier flow for 15 minutes
- ☒ Bake out the system, then restore the normal operating conditions
- ☒ After equilibration, check and record the post PM detector signal output values.  
Results should be similar or lower than the detector outputs recorded prior to PM.
- ☐ Perform a chemical checkout. If this is a routine PM, inject the customer's sample using the ALS if applicable. This will act as a final checkout of both the ALS and the GC.

Note: If the PM Service is performed prior to a qualification service, then use the qualification procedure as a guide for final instrument set up and checkout.

## Signature Page

### Service Review

- ☒ Attach available reports/printouts of all tests to this documentation.
- ☒ Record the Preventive Maintenance service activity in the customer's records/logbook.
- ☒ Update/reset instrument maintenance counters as appropriate.
- ☒ Affix the PM sticker to the system or instrument logbook based on the customer's request.
- ☒ Complete the Service Engineer Comments section if there are additional comments.
- ☒ Review with the customer this service, parts replaced, and test results obtained.
- ☐ If the instrument firmware was updated, record the details of the change in the Service Engineer's Comments box or if necessary, in the customer's IQ records.
- ☐ Supply the customer with a copy of the Smart Alerts flyer.
- ☐ Describe Smart Alerts to the customer.
- ☐ Install Smart Alerts if requested.

### 7890 GC Test Results Table

Detector/Signal Outputs	Before PM Service	After PM Service
Front detector output	N/A	N/A
Back detector output	N/A	N/A
AUX detector output	N/A	N/A
Pressure decay test	Expected test result	Actual test result
Front inlet pressure decay test	Pass	Pass
Back inlet pressure decay test	Pass	Pass

## 7890 Parts List Table

The following kits are recommended for capillary and purged packed inlets. If this is a general PM and the customer has a preferred set of consumables, you may use the customer's consumables.

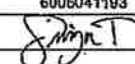
Part description	Part number	Product or model # where used	Quantity consumed
SSL Capillary Inlet PM kit, Splitless	5188-6497	7890A/B	1
SSL Capillary Inlet PM kit, split	5188-6496	7890A/B	1
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Low Pressure Drop Split Liner - with Glass Wool	5190-2295	7890A/B	N/A
FP Inlet PM kit	5188-6498	7890A/B	N/A
Split vent trap PM kit, single cartridge (for MMI, PTV & VI)	5188-6495	7890A/B	N/A
MMI Cleaning Kit	G3510-60820	7890A/B	N/A
PTV Septumless Head Rebuild Kit	5182-9747	7890A/B	N/A
PTV Septumless Head Teflon Gulse	5182-9748	7890A/B	N/A
Ignitor (glow plug) assembly with O-ring	19231-60680	7890A/B	N/A
FID Collector Rebuild/Cleaning Kit	G1531-67000	7890A/B	N/A
Standard .011-inch FID Jet for capillary FID base	G1531-80560	7890A/B	N/A
High Temperature .018-inch FID Jet for capillary FID base	G1531-80620	7890A/B	N/A
Standard .018-inch FID Jet for packed column with packed FID base	18710-20119	7890A/B	N/A
Standard .011-inch FID Jet for capillary column with packed/adaptable FID base	19244-80560	7890A/B	N/A
High Temperature .018-inch FID Jet for capillary column with packed/adaptable FID base	19244-80620	7890A/B	N/A
NPD Jet, universal fit, .011-inch ID	G1534-80580	7890A/B	N/A
NPD Jet, universal fit, .011-inch ID Extended tip	G1534-80590	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	7890A/B	N/A
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	7890A/B	N/A
**FID Collector Replacement Kit, if needed	G1531-67001	7890A/B	N/A

## Service Engineer Comments

If there are any specific points you wish to note as part of performing the service or other items of interest for the customer, please write include them in this box.

N/A

## Service Completion

Service request number 6006041193 Date service completed 15 Jun, 2023  
 Agilent signature  Customer signature SHIHAN C.  
 Total number of pages in this document 10

Do not include this section/page in the published, customer-facing PDF version.

This page is only relevant for Agilent source documents for document control purposes and is NOT intended for customer viewing. Refer to the SPIFPM checklist Authoring Guide for more information.

## Document Control Logs

## Revision Log

Revision	Date	Author	Reason for update
Revision of document	Date of Issuance	Author of document	Author to describe main features/changes made for this specific revision
1.0 Draft	4-Mar-2011	Dave Park	Migrated the content of revision A.01.05 to the new Agilent template. Reviewed by subject matter expert, Dave Park.
1.1 Draft	20-Jan-2015	Dave Park	Added Split Vent trap to MMI, PTV and VE - also PTV and FID PM Parts
1.2 Draft	31-March-2015	Dave Park	Added Ultra Inert Gold Seal and Liner to SS * Consumables
A.01.11	10-Dec-2015	Dave Park	Added step to perform maintenance on the Split Vent Tube and .018" FID Jet part numbers - Fixed broken web links
2.00	30-Dec-2020	Gary Boardman	Updated New Template and terminology change: Familiarization to Introduction. Create New Agile Document Number: D0007063

## Approval Log

Revision	Approver	Title of approver
Add revision number	Add approver name here	Add approver's function or title here
A.01.06	Don Gage	Product support manager
A.01.09	Kal Meng	Product support manager
A.01.10	Suneetha Tippireddy	Product support manager
A.01.11	Suneetha Tippireddy	Product support manager
2.00	Josh Roark	GC Product Support Manager

## Designated Evaluation Log

Revision	Designated Evaluator (DE)	Title of DE	DE Number
Add revision number	Add name	Add function or title	Add DE number here
2.00	Michael Zumwalt	CrossLab Start Up Services Application Consulting Lead	44166.7597222222



## Agilent CrossLab Start Up Services

### Agilent GCMS Preventive Maintenance Checklist



Agilent Preventive Maintenance provides factory recommended service for your analytical instruments to assure reliable operation and the accuracy of your results.

Delivered by highly trained and certified service engineers using genuine Agilent parts and supplies, Agilent Preventive Maintenance provides everything you need to reduce unplanned downtime and keep your systems operating at their peak. This checklist will be completed at the end of the service and provided to you as a record of the preventive maintenance activities.



### Agilent GCMS Preventive Maintenance Checklist

#### Introduction

Select the appropriate PM to be done and then perform the checklist under that section

- ☐ Interim Preventive Maintenance 6 months  
☒ Major Preventive Maintenance Yearly

This checklist covers the following model(s):

Type	Model
SQ	5973 Series MSD
SQ	5975 Series MSD
SQ	5977 Series MSD
TQ	7000 Series MS/MS
TQ	7010 Series MS/MS
QTOF	7200 Series QTOF
QTOF	7250 Series QTOF

#### Customer Information

- Customers should provide all necessary operating supplies upon request of the engineer.
- A customer representative should be available to the engineer while performing the preventive maintenance procedures. Customers are responsible for regular maintenance and are encouraged to observe the service representative.
- Any parts not included in the Parts Lists section of this document are not part of the recommended Preventive Maintenance service nor are they included in the price of this service.
- If a system requires the use of extra or special procedures and/or parts for the maintenance service, then these must be ordered separately and charged as a repair, which may incur additional costs.



### Important Customer Web Links

- For more information about Agilent Technologies services, please visit our website using the following URL: <http://www.agilent.com/en-us/products/crosslab-instrument-services/service-repair>
- To access Agilent University, visit <http://www.agilent.com/crosslab/university> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- A useful Agilent Resource Center web page is available, which includes short videos on maintenance, quick lists of consumables for new instruments, and other valuable information. Check out the Resource Page here: <https://www.agilent.com/en-us/agilentresources>
- Need technical support, FAQs, supplies? – visit our Support Home page at <http://www.agilent.com/search/support>
- Get answers. Share insights. Build connections:  
Join the Agilent Community at <https://community.agilent.com/welcome>

### Service Engineer's Responsibilities

- Contact the customer and ensure that all necessary supplies are available before the preventive maintenance visit.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using either a "X" or tick mark "✓".
- Check "Section not applicable" check boxes to indicate services/tasks not delivered, as appropriate.
- Complete the Preventive Maintenance services in the most logical order relevant to the individual system service in the order of the tasks listed.
- Complete the Service Review section together with the customer.
- Ask the customer to sign the Service Completion section including the customer's and your signature.

### Additional Instruction Notes

- Preventive maintenance is a factory recommended procedure designed to reduce the likelihood of electromechanical failures. Failure to perform preventive maintenance may reduce the long-term reliability of certain instruments and systems. Two preventative maintenances (PMs) per year are recommended, the Major PM Service will be performed annually with an Interim PM performed 6 months after the Major PM.

### System Information

- ☐ Check this box if an instrument configuration report is attached instead of completing the table.

Instrument System Name and ID	5975C MSD
Instrument System Site and Location	SECOT Co., Ltd.

List System Component Product Numbers	List the Serial Numbers of each Component
1. G3172A	US74838080
2. N/A	N/A
3. N/A	N/A
4. N/A	N/A
5. N/A	N/A
6. N/A	N/A
7. N/A	N/A
8. N/A	N/A

### Preparation

- ☒ Discuss any specific issues with the customer before starting.
- ☒ Review the instrument logbook for recorded problems and comments.
- ☒ Save instrument control settings before starting the procedure.
- ☒ Perform a general inspection of the system for cleanliness.
- ☒ Check for proper installation of parts, assemblies, sensors etc.
- ☒ Check system for required installation of components and settings as defined by current Service Notes
- ☒ Check for firmware updates and verify with customers if they would like them installed. Firmware update(s) are strongly recommended.

### Customer Responsibilities

Customers should ensure that all necessary operating supplies, consumables, and usage-dependent items such as gases, vials, syringes, calibrant solution and solvents required for successful preventive maintenance are available. A customer representative should be available while the preventive maintenance is being performed.

### Important notice for customers

The customer should complete the following before the Support Provider arrives on site:

- ☒ Perform an autotune and retain the printed tune report just prior to the start of the PM to verify performance of the equipment.

**Note:** it is recommended to have the customer run the autotune and tune evaluation prior to the PM and then start the vent cycle so that the instrument will be ready for the service representative.

### Definition of the Task/Recommended items within the document

Task	Recommended	
Yes	No	Interim / Major / As needed
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Yes selected means that the task was done or the part was required.

No selected means that the task was not done or the part was not required.

Interim selected means that this task is recommended to be done at 6-month intervals.

Major selected means that this task is recommended to be done yearly; if the customer would like a service to be done at the 6-month interval then the service could be purchased.

As needed selected means that the task was done or the part was used as needed. For example, there could be two types of filters that could be used and this was the one selected.

### Preventive Maintenance Procedures

Yes/No	Interim/Major	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perform general inspection of system for cleanliness
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Discuss any problems the customer is having with the instrument
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Review customer maintenance records and exclude maintenance on recently serviced items
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Review the most recent autotune report. This will give a starting point for evaluating spectral peaks, baseline noise, peak shape, mass assignments and resolution.

Yes/No	Interim/Major	GCMS	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Record instrument model no.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Record instrument serial no.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Record Rough Vacuum
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Record Manifold Vacuum
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type of Column Installed

Yes/No	Interim/Major	System Checks
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Verify that calibration peaks were seen prior to starting the PM
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vent the instrument
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Inspect vacuum hoses, pump, exhaust tubing, and power cords for excessive wear.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Visually inspect calibrant levels – PFIBA/PFDTB (if appl.), IRM (if appl.). Refill if available.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Look for any obvious external damage or problems.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Clean air intake(s). Cosmetic cover(s) may need to be removed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Verify system line voltage meets instrument specifications: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Yes/No	Interim/Major	Wet Mechanical vacuum pumps
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Check for evidence of oil leakage. Check pump gasket for leakage.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drain and replace mechanical pump oil.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replace Oil Mist Filter if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Discuss with customer the need for more frequent oil changes if the oil is dirty.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Don't use mist filters with Chemical Ionization.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perform anti-suckback valve test. Power on until slide plate is held closed, power off and check that slide plate holds closed. Visually confirm that no oil returns up vacuum hose.

Yes/No	Interim/Major	Dry Mechanical vacuum pumps - Diaphragm
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Check for evidence of poor vacuum – Turbo power demand, poor manifold vacuum, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Clear air flow paths of dust.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	If vacuum is poor, then replace the diaphragm pump.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perform anti-suckback valve test. Power on until slide plate is held closed, power off and check that slide plate holds closed.

Yes/No	Interim/Major	Dry Mechanical vacuum pumps - Scroll
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replace the tips seal on the IDP pump.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Check for evidence of poor vacuum – Turbo power demand, poor manifold vacuum, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replace the Exhaust Filter if required.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Discuss with customer the need for more frequent changes, if needed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Inform customer that pump gas ballast should be installed all the time.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Perform anti-suckback valve test. Power on until slide plate is held closed, power off and check that slide plate holds closed.

Yes/No	Interim/Major	Cleaning System and Filters
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fans
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Remove dust from fans and vent covers.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Verify fans are functional and that there is enough space around the instrument for proper cooling.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Source cleaning
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Open analyzer and remove the source.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Disassemble, Clean, Re-assemble source.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Re-install source and close analyzer.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Filters
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replace RMSH-2 Helium gas filter – if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replace RMSN-2 Nitrogen gas filter – if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replace RMSHY-2 Hydrogen gas filter – if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CP17968 – Gas Clean Carrier Gas Kit for 7890 for Nitrogen or Helium; Bracket, Mount, and Filter – if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CP17974 – Gas Clean Filter Kit GC/MS 1/B; Mount and Filter – if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CP17973 – Gas Clean Filter; Replacement Filter – if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5190-9071 – Methane Gas Filter – if applicable.

Guidance: If gas filter is replaced, write the change date on the filter using a permanent marker.

System post-check			
Yes/No	Initials	Major	Description
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pump system back down. Wait until system stability has been achieved.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Verify system vacuum reading(s) via the gauge controller.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Leak Check
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Verify system in manual tune
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Compare against previous tune file report(s)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Change to Tune and verify that all temperatures, pressures, and gas flows reach method set points
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Check manually that you have calibration peaks.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EI Autotune Performed

Guidance: If the PM Service is performed prior to a qualification service, then use the qualification procedure as a guide for final instrument setup and checkout.

## Service Review

- ☒ Attach available reports/printouts of all tests to this documentation.
- ☒ Record the Preventive Maintenance service activity in the customer's records/logbook. Record the PM event in the Smart Alerts logbook, if applicable.
- ☒ Update/reset instrument maintenance counters as appropriate.
- ☒ Affix the PM sticker to the system or instrument logbook based on the customer's request.
- ☒ Complete the Service Engineer Comments section if there are additional comments.
- ☒ Review this service, parts replaced, and test results obtained with the customer.
- ☐ If the instrument firmware was updated, record the details of the change in the Service Engineer's Comment box. Systems in a compliant environment may need additional documentation.

## Agilent Test Results Table

Test Description	Expected Test Result	Actual Test Result
Atune and Evaluation	Pass	Pass
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

## Agilent Consumed Parts List Table

☐ Section not applicable

Part Description	Part Number	Product or Model where used	Quantity consumed
Agilent Vacuum Fluid	5191-5851	Rough Pump	1
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

## Signature Page

### Service Engineer Comments (optional)

If there are any specific points you wish to note as part of performing the installation or other items of interest for the customer, please write in this box.

N/A

### Service Completion

Service request number 6006041193 Date service completed 15 Jun, 2023

Agilent signature [Signature] Customer signature Shihuan C.

Total number of pages in this document 12

## Parts – As needed as part of the PM

### Common MS Filters and Seals – 5973/5975/5977/7000/7010/7200/7250 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Helium gas filter – if required	RMSH-2
<input type="checkbox"/>	<input type="checkbox"/>	Nitrogen gas filter – if required	RMSN-2
<input type="checkbox"/>	<input type="checkbox"/>	Big Universal Trap, 1/8" fittings, Hydrogen, if required	RMSHY-2
<input type="checkbox"/>	<input type="checkbox"/>	Gas Clean Carrier Gas Kit for 7800 for Nitrogen or Helium; Bracket, Mount and Filter – if required	CP17988
<input type="checkbox"/>	<input type="checkbox"/>	Gas Clean Filter Kit GC/MS 1/8 in (complete replacement kit) – if required	CP17974
<input type="checkbox"/>	<input type="checkbox"/>	Gas Clean GS/MS Filter – if required	CP17973
<input type="checkbox"/>	<input type="checkbox"/>	Chemical Ionization Gas Purifier (CI systems) – if required	5190-4071
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Agilent AVF Platinum, 1 quart	5191-5851

Gas filters need to be changed only if required

### MS Maintenance Supplies for 5973/5975/5977 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Diffusion pump fluid (Diffusion Pump Models)	6040-0809 Qty 2
<input type="checkbox"/>	<input type="checkbox"/>	IDP-3 Tip Seal Replacement Kit (IDP-3 Dry Pump Models)	G7077-67018
<input type="checkbox"/>	<input type="checkbox"/>	IDP-3 Tip Seal Replacement Kit (no tools – CSD P/N)	5190-9561
<input type="checkbox"/>	<input type="checkbox"/>	IDP-3 Tip Seal Replacement Kit (no tools – VPD P/N)	IDP3TS
<input type="checkbox"/>	<input type="checkbox"/>	Filter element for IDP-3	REPLSLRFLTR2
<input type="checkbox"/>	<input type="checkbox"/>	DS42 Oil Mist Eliminator 3/4G & 3/8	SR03706556
<input type="checkbox"/>	<input type="checkbox"/>	Exhaust oil mist trap (thread) Edwards/Pfeiffer	G1699-60039

### MS Maintenance Supplies for 7000/7010 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Nitrogen gas filter	RMSN-2
<input type="checkbox"/>	<input type="checkbox"/>	IDP-10 Tip Seal Replacement Kit (IDP-10 Dry Scroll Pump Models)	G7004-67023
<input type="checkbox"/>	<input type="checkbox"/>	IDP-10 Tip Seal Replacement Kit (no tools – VPD P/N)	X3807-67000
<input type="checkbox"/>	<input type="checkbox"/>	Oil Mist Filter RV5	G6600-80043
<input type="checkbox"/>	<input type="checkbox"/>	Filter element for the IDP-10	REPLSLRFLTR1

### MS Maintenance Supplies for 7200/7250 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Nitrogen gas filter – if required	RMSN-2
<input type="checkbox"/>	<input type="checkbox"/>	RIS Probe Maintenance Kit (7200 Series only)	G7005-60170
<input type="checkbox"/>	<input type="checkbox"/>	DS202 Oil Mist Eliminator	SR03706800
<input type="checkbox"/>	<input type="checkbox"/>	IDP-15 Tip Seal Replacement Kit (IDP-15 Dry Pump Models)	5190-9613
<input type="checkbox"/>	<input type="checkbox"/>	IDP-15 Tip Seal Replacement Kit (no tools – VPD P/N)	X3815-67000
<input type="checkbox"/>	<input type="checkbox"/>	Filter element for SH-110/SH-112/IDP-15 exhaust silencer	REPLSLRFLTR
<input type="checkbox"/>	<input type="checkbox"/>	DS 3/8 MAG. PLUG AND GASKET	SR03701824

### MS Maintenance Supplies for JetClean

Yes/No	Interim/Major/As needed	Description	Part number
--------	-------------------------	-------------	-------------



☐ ☐ ☐ ☒ ☐ Big Universal Trap, 1/8" fittings, Hydrogen, if required RMSHY-2

### Consumable Parts Reference – Purchasable by customer, not included as part of PM

#### Common MSD Maintenance Supplies 5973/5975/5977/7000/7010/7200/7250 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input checked="" type="checkbox"/>	<input type="checkbox"/>	High Temperature Filaments	G7005-60061 Qty 2
<input type="checkbox"/>	<input type="checkbox"/>	HES Filaments	G7002-60001
<input type="checkbox"/>	<input type="checkbox"/>	LE Filaments	G3850-60021
<input type="checkbox"/>	<input type="checkbox"/>	CI High Temperature Filament – all MSDs	G7005-60072
<input type="checkbox"/>	<input type="checkbox"/>	PFTBA GCMS Tuning Standard calibrant	05971-60571
<input type="checkbox"/>	<input type="checkbox"/>	PFOTD calibrant, 1 mL	8500-8510
<input type="checkbox"/>	<input type="checkbox"/>	PFET, IRM calibrant for GC QTOF 0.5 mL	5190-0531

#### MSD Maintenance Supplies 5973/5975/5977 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal (tip and spring combo)	G1999-60412
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal (tip only)	G3870-20542
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal spring (spring only)	G1999-20023
<input type="checkbox"/>	<input type="checkbox"/>	Repeller insulator	G1099-20133 Qty 2
<input type="checkbox"/>	<input type="checkbox"/>	Lens insulator/holder (HES)	G7002-20074
<input type="checkbox"/>	<input type="checkbox"/>	Ring heater/sensor assembly (HES)	G7002-60043
<input type="checkbox"/>	<input type="checkbox"/>	Ceramic insulator for Extractor (HES)	G7002-20064
<input type="checkbox"/>	<input type="checkbox"/>	Transfer-Line Tip Cap, Threaded	G3870-20547
<input type="checkbox"/>	<input type="checkbox"/>	Transfer-Line Tip Base, Threaded	G3870-20548

#### MS Maintenance Supplies for 7000/7010 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal - 7000	G1999-60412
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal - 7010	G7002-60412
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal (tip only)	G3870-20542
<input type="checkbox"/>	<input type="checkbox"/>	CI Interface tip seal spring (spring only)	G1999-20023
<input type="checkbox"/>	<input type="checkbox"/>	Repeller insulator - 7000	G1099-20133 Qty 2
<input type="checkbox"/>	<input type="checkbox"/>	Lens insulator/holder (HES)	G7002-20074
<input type="checkbox"/>	<input type="checkbox"/>	Ring heater/sensor assembly (HES)	G7002-60043
<input type="checkbox"/>	<input type="checkbox"/>	Ceramic insulator for Extractor (HES)	G7002-20064
<input type="checkbox"/>	<input type="checkbox"/>	Transfer-Line Tip Cap, Threaded	G3870-20547
<input type="checkbox"/>	<input type="checkbox"/>	Transfer-Line Tip Base, Threaded	G3870-20548

#### MS Maintenance Supplies for 7200 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Extractor Lens Insulator	G7005-20133
<input type="checkbox"/>	<input type="checkbox"/>	Ion Focus Insulator	G7005-20442
<input type="checkbox"/>	<input type="checkbox"/>	Ring Heater/Sensor Assembly	G7005-60110
<input type="checkbox"/>	<input type="checkbox"/>	RIS Xfer Tip	G7005-20542
<input type="checkbox"/>	<input type="checkbox"/>	RIS Xfer Tip Spring	G7005-20024

#### MS Maintenance Supplies for 7250 Series

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Lens insulator/holder (HES)	G7002-20074
<input type="checkbox"/>	<input type="checkbox"/>	Ring heater/sensor assembly (HES)	G7002-60043
<input type="checkbox"/>	<input type="checkbox"/>	Ceramic insulator for Extractor (HES)	G7002-20064
<input type="checkbox"/>	<input type="checkbox"/>	Transfer-Line Tip Cap, Threaded	G3870-20547
<input type="checkbox"/>	<input type="checkbox"/>	Transfer-Line Tip Base, Threaded	G3870-20548
<input type="checkbox"/>	<input type="checkbox"/>	El Extractor Transfer Tip	G3870-20542
<input type="checkbox"/>	<input type="checkbox"/>	CI Tip Compression Spring	G1999-20023

#### MS Maintenance Supplies for Intuvo 9000 MS Systems

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Swaged MS Tail - Packaged	G4590-60009
<input type="checkbox"/>	<input type="checkbox"/>	Swaged MS Tail (HES) - Packaged	G4590-60109

#### Common MS Maintenance Supplies

Yes/No	Interim/Major/As needed	Description	Part number
<input type="checkbox"/>	<input type="checkbox"/>	Abrasive paper, 30 um	5061-5896
<input type="checkbox"/>	<input type="checkbox"/>	Alumina powder	393706201
<input type="checkbox"/>	<input type="checkbox"/>	Cloths, clean (pkg of 15)	05980-60061
<input type="checkbox"/>	<input type="checkbox"/>	Cloths, cleaning (pkg of 300)	9310-4828
<input type="checkbox"/>	<input type="checkbox"/>	Cotton swabs (pkg of 100)	5080-5400
<input type="checkbox"/>	<input type="checkbox"/>	Gloves, clean, large	8650-0030
<input type="checkbox"/>	<input type="checkbox"/>	Gloves, clean, small	8650-0029

## 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	13080206	CC401947	4950 PPM CARBON MONOXIDE/NITROGEN	+/- 0.4%	Feb 15, 2019
PRM	12367	APEX1089237	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 J3-598 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

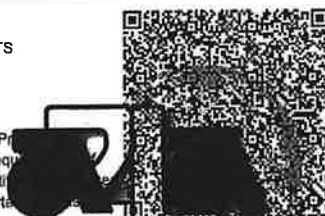
#### PERMANENT NOTES: PRODUCED IN ACCORDANCE WITH ISO17025 REQUIREMENTS

#### 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. This document is 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: 12 Jan 24

Initial Final Average

Barometric press, Pb 758 758 758 mmHg

#### Dry Gas Meter Data

#### Reference Dry Gas Meter Data

Console No. M50-07

Serial No. 358794

Metering System ID

Model S110

DGM Number 90331

Correction factor (Yr) 1.0068

DGM Model MST-C2-1

Last Calibration Date 26 Oct 23

Calibrated by Montri P.

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V <sub>r</sub> Liters	DGM Volume V <sub>m</sub> Liters	Temperature (°C)				Time @ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T <sub>r</sub>	Dry Gas Meter					
				Inlet T <sub>i</sub>	Outlet T <sub>o</sub>	Avg T <sub>m</sub>			
12.5	100.0	100.6	25	25	24	24.5	9.72	0.9981	53.7523
25.0	100.2	100.2	25	25	24	24.5	6.48	1.0029	47.6709
50.0	100.0	100.8	25	25	24	24.5	4.77	0.9919	51.7327
76.0	100.2	100.9	25	25	24	24.5	3.90	0.9908	52.4606
100.0	100.1	99.6	25	25	24	24.5	3.90	1.0005	53.0627
150.0	100.2	98.9	25	25	24	24.5	2.82	1.0032	54.0289

Average 0.9979 52.1180

Approved by: *[Signature]*

Sheet No. : CAL-PI-PS20-02/2024



## PITOT TUBE CALIBRATION

Calibration Location: SECOT

Calibration Date : 09-01-2024

Calibration Duct No.: CD-0123

Calibration Standard Pitot tube data

Pitot No. : Std-02

Coefficient (Cp) : 0.99

Type S Pitot No. : PS20-02

Calibrated by : Mr. Montri P.

### A Side Calibration

Run No.	$\Delta P_{std}$ (mm H <sub>2</sub> O)	$\Delta P_s$ (mm H <sub>2</sub> O)	Cp(s)	Deviation, $\delta$ Cp(s) - Cp(A)
1	15.00	21.00	0.8367	-0.0068
2	15.00	20.50	0.8468	0.0034
3	15.00	20.50	0.8468	0.0034

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

### B Side Calibration

Run No.	$\Delta P_{std}$ (mm H <sub>2</sub> O)	$\Delta P_s$ (mm H <sub>2</sub> O)	Cp(s)	Deviation, $\delta$ Cp(s) - Cp(B)
1	15.00	21.00	0.8367	0.0000
2	15.00	21.00	0.8367	0.0000
3	15.00	21.00	0.8367	0.0000

$C_{P(B),avg}$  0.8367

| CP(A) - CP(B) | = 0.0068

$C_{P(Avg)}$  = 0.8401

Approved by :

\*\*\*  $\delta$  must be  $\leq 0.01$  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 \*\*\*

Sheet No. : CAL-PI-LL10-01/2024



## PITOT TUBE CALIBRATION

Calibration Location: SECOT

Calibration Date : 09-01-2024

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.	$\Delta P_{std}$ (mm H <sub>2</sub> O)	$\Delta P_s$ (mm H <sub>2</sub> O)	Cp(s)	Deviation, $\delta$ Cp(s) - Cp(A)
1	15.00	20.50	0.8468	0.0000
2	15.00	20.50	0.8468	0.0000
3	15.00	20.50	0.8468	0.0000

$C_{P(A),avg}$  0.8468

### B Side Calibration

Run No.	$\Delta P_{std}$ (mm H <sub>2</sub> O)	$\Delta P_s$ (mm H <sub>2</sub> O)	Cp(s)	Deviation, $\delta$ Cp(s) - Cp(B)
1	15.00	20.50	0.8468	0.0000
2	15.00	20.50	0.8468	0.0000
3	15.00	20.50	0.8468	0.0000

$C_{P(B),avg}$  0.8468

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

$C_{P(Avg)}$  = 0.8468

Approved by :

\*\*\*  $\delta$  must be  $\leq 0.01$  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 \*\*\*



## SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: May 18, 24

## 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
20	Cirrus	CR162B	G301014	93.7	0.0
26	Cirrus	CR162C	G300841	93.7	0.0
40	Cirrus	CR162B	G302740	93.7	0.0
41	Cirrus	CR162B	G302737	93.7	0.0
43	Cirrus	CR162B	G302741	93.7	0.0
44	Cirrus	CR162B	G302742	93.7	0.0

Calibrated by :

Approved by : Preeda S.



ELECTRICAL AND ELECTRONICS INSTITUTE  
FOUNDATION FOR INDUSTRIAL DEVELOPMENT  
975 Moo 4, Bangpoo Industrial Estate, Soi 8, Sukhumvit Road km 37,  
Phraek Sa, Mueang Samut Prakan, Samut Prakan 10280  
Tel: +66 2709 4860 Fax: +66 2324 0917



Certificate No.: CP20230345EA  
Operation No.: CP2023080023

## Certificate of Calibration

Equipment: Sound Calibrator  
Manufacturer: Cirrus Research Plc  
Model/Type: CR:515  
Serial No.: 97097  
ID No.:  
Customer: SECOT Co.,Ltd.  
Address: 239 Rimklongprapa Rd., Bangsue,  
Bangkok 10800 Thailand  
Received Date: 28 August 2023  
Calibrated Date: 4 September 2023  
Issued Date: 8 September 2023  
Calibrated by: Ms. Juntaporn Kunhakom

Approved by:

( Mr. Sittichai Swaksuriyawong )  
Group Manager

This report was prepared electronically using applicable electronic signature. Printing or copy of file are considered as a copy of the document.

The reported uncertainty of measurement was based on standard uncertainty multiplied by a coverage factor ( $k$ ) providing a level of confidence of approximately 95%. This certificate may not be reproduced other than in full except with the prior written approval of the Electrical and Electronics Institute, Foundation for Industrial Development.



ELECTRICAL AND ELECTRONICS INSTITUTE  
FOUNDATION FOR INDUSTRIAL DEVELOPMENT

Certificate No.: CP20230345EA

Calibration Report

Equipment: Sound Calibrator  
Manufacturer: Cirrus Research Plc  
Model/Type: CR-515  
Serial No.: 97097  
ID No.:  
Ambient Temperature: ( 23 ± 2 ) °C  
Relative Humidity: ( 50 ± 15 ) %  
Pressure: (101.3 ± 1.5) kPa

Method of Calibration :-  
IEC 60942:2017

Condition of this result of calibration

1. Reference standards instrument :-

Instrument	Model	Serial No.	Cert. No.	Due Date
1) Standard microphone	4180	2787490	AA-1024-22	6 November 2023
2) Waveform Generator	33511B	MY52302264	CK20230039EA	27 June 2024
3) Audio Analyzing DMM	2015-P	000136E	E1U225466	2 December 2023
4) Pressure humidity and Temperature Transmitter	PTU301	F0640002	CL1-P230024 CD20230196EA	20 March 2024 23 July 2024

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

3. This certification is traceable to the international system of unit maintained at :-

Reference standards instrument for Acoustic function

- National Institute of Metrology (Thailand)

Reference standards instrument for Electrical function

- Electrical and Electronics Institute; NSC Accredited Calibration No.0119

Result of Calibration:-

1. Function : Sound pressure level

Normal Frequency (Hz)	Specified Sound Pressure level (dB)	Measured value (dB)	Deviated value <sup>[1]</sup> (dB)	Acceptance limit <sup>[3]</sup> (dB)
1000	94	94.13	0.13	±0.25

2. Function : Frequency

Normal Sound Pressure level (dB)	Specified Frequency (Hz)	Measured value (Hz)	Deviated value <sup>[2]</sup> (%)	Acceptance limit <sup>[3]</sup> (%)
94	1000	1000.3	0.0	±0.7



ELECTRICAL AND ELECTRONICS INSTITUTE  
FOUNDATION FOR INDUSTRIAL DEVELOPMENT

Certificate No.: CP20230345EA

Calibration Report

3. Function : Total distortion + noise

Normal Sound Pressure level (dB)	Normal Frequency (Hz)	Measured value <sup>[4]</sup> (%)	Acceptance limit <sup>[5]</sup> (%)
94	1000	1.0	2.5

Uncertainty of measurement

Function	Uncertainty	Maximum-permitted uncertainty of measurement
Sound pressure level	0.10 dB	0.15 dB
Frequency	0.10 %	0.20 %
Total distortion + noise	0.40 %	0.50 %

Note: [1] The deviated value is the absolute value of the difference between the measured value and the corresponding specified sound pressure level.

[2] The deviated value is the absolute value of the difference in percent between the measured value and the corresponding specified frequency.

[3] The acceptance limit is for the deviated value.

[4] The measured value is the total distortion + noise, measured over the frequency range from 20 Hz to 20 kHz.

[5] The acceptance limit is for the Measured value.

Remarks: 1. Acceptance limit was IEC 60942:2017 Class 1.

2. Maximum-permitted uncertainty of measurement was IEC 60942:2017 Class 1.

3. The coverage factor  $k = 2.00$

-- End of Report --



# PinAAcle 900T Preventive Maintenance Report

Company Name: Secot.co.th.

Instrument Location: Instrument room.

239 Rimkhlong Prapa Road, Bang Sue, Bangkok 10800

Instrument Serial No.: PTDS23051001

Date: 27-Mar-2024

## PinAAcle 900T Preventive Maintenance (PM)

Company Name:	Secot.co.th.		
Address (Instrument Location):	239 Rimkhlong Prapa Road, Bang Sue, Bangkok 10800		
Serial Number:	PTDS23051001	PM Number:	1 OF 2 W
Customer Name (if applicable):	K.Araya	Telephone Number:	0-2910-5021-6
Customer Support Engineer Name:	K.Piyawit	Service Order Number:	WO-02706368
Date PM Performed: (DD-MMM-YYYY)	27-Mar-2024	Next PM Due Date: (DD-MMM-YYYY)	27-Sep-2024
Standard Labor Hours to Complete PM :		5 hours.	

Part Number	Release	Publication Date	
09370143 Rev.9	A	January 2018	

### Scope

The purpose of this PM is to ensure the continued functionality of the PinAAcle 900T by inspecting and replacing any worn or damaged parts. This service should only be performed by a trained representative of PerkinElmer.

The customer should save their method before the PM begins.

### General Instructions:

The customer must provide the engineer operational data to demonstrate recent instrument performance prior to starting the PM. Always check with the customer before making any changes that may affect the customer's analysis or calibration, including a current back-up of system software and/or data files. The completed document should be signed by an authorized PerkinElmer and customer representative and left with the customer. Update the PM sticker and instrument logbook as required.

### Copyright Information

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this publication may be reproduced in any form whatsoever or translated into any language without the prior, written permission of PerkinElmer, Inc. Copyright © 2013 PerkinElmer, Inc.

### Trademarks

Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are protected by law. PerkinElmer is a registered trademark of PerkinElmer, Inc. All other trademarks and registered trademarks not owned by PerkinElmer, Inc. or its subsidiaries that are depicted herein are the property of their respective owners.

Except as specifically set forth in its terms and conditions of sale, PerkinElmer makes no Warranty of any kind with regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

PerkinElmer shall not be liable for incidental or consequential damages in connection with the furnishing or use of this document.

## Component List

Component / Specific Model	Serial #	Configuration Notes
PinAAcle 900T	PTD523051001	Syngistix v.5.10

## Parts Lists

Parts Included with the PM		
Part Number (if applicable)	Description	Quantity
B0501696	Fan Filters	N/A
B3002013	THGA Contact Cylinders	N/A
B3141064	Glycerol for THGA Cooling	N/A
N3160156	O-Ring Kits for Sampling Introduction ( Stainless Steels Nebulizer)	N/A
N3160157	O-Ring Kits for Sampling Introduction ( Plastic Nebulizer)	N/A
N9301714	Replacement Acetylene Filter Cartridge	N/A
TH001022	Replacement Air Filter Cartridge	N/A

Additional Reagents and Standards Required for PM				
Part Number (if applicable)	Description	Quality	Batch/Lot #	Expired Date (MM/YY)
N9300183	1000 mg/L Copper Standard	AR	27-39CRY1	30-Apr-2025
N9300244	GFAAS Mixed Standard	AR	60-004CRY1	28-Feb-2025

Additional Reagents and Standards Required for PM (Customer Support Solution)				
Part Number (if applicable)	Description	Quantity	Batch/Lot #	Expiration Date (MM/YY)
N/A	DI Water	250 mL	AR	AR
N/A	0.5% HNO <sub>3</sub>	250 mL	AR	AR

Additional Tools Required for PM			
Part Number (if applicable)	Description	Quantity	Serial #
N1013000	0.2A Neutral density filter	1	MGO-056
N1013002	1.0A Neutral density filter	1	MG2-258
B3100652 Or N9307029	Electronic Flow Meter	1	MY2231FC07
B0505495	Test Jig	1	N/A
03030997	System 2 EDL Driver	1	03030997
N3050605	As System 2 EDL	1	16148
N3050121	Cu Lumina HCL	1	092216-010130
N3050109	Ba Lumina HCL	1	102416-040160
N3050139	K Lumina HCL	1	110716-010060
N3050152	Ni Lumina HCL	1	100516-030190
N3050119	Cr Lumina HCL	1	030621-020190

## Procedure Checklist

Use (✓) to check off those steps in the checklist that have been completed.

### 1. General:

- ☒ Review the instrument performance with the customer and document any recent problems.
- ☒ Inspect the customer log book and make any appropriate PM entries.
- ☒ Perform general inspection of system for cleanliness.

### 2. PC Instrument Software:

- ☒ Instrument Software user files/databases archived, packed, and/or deleted as needed.

### 3. Mechanical:

- ☒ Inspect and clean all fans and filters. Replace filters if necessary
- ☒ Inspect all gas and water lines for leaks and/or wear. Replace if needed. Thoroughly inspect all quick connects. Replace the Y connector, P/N 09921079, if needed.
- ☒ Clean exterior of the instrument.

#### 3.1 Flame Technique

- ☒ Inspect the burner head, burner chamber, and nebulizer. Clean if needed as stated in the Hardware Guide.
- ☒ Check burner head dimensions with the feeler gauge as stated in the Hardware Guide in the Maintenance chapter section on cleaning the burner head and checking slot width. Replace if out of specification
- ☒ Check the condition of the end cap, burner head, and nebulizer O-rings. Replace if necessary.
- ☒ Check the drain system for signs of wear. Replace worn or damaged parts.
- ☒ Visually check for proper flame conditions when igniting the Air-C<sub>2</sub>H<sub>2</sub> and N<sub>2</sub>O-C<sub>2</sub>H<sub>2</sub> flames (if applicable).

#### 3.2 THGA Technique

- ☒ Inspect the pole pieces and clean where the pole pieces contact the furnace. Replace the pole piece p-rings as needed, P/N's B0501018 & B0501250. Grease the O-rings as needed with Apiezon L grease, P/N 09905148
- ☒ Inspect the four insulation pads on the front contact housing of the THGA in furnace. If the pads are missing replace the THGA furnace or replace the insulator pads on the furnace.
- ☒ Inspect the graphite tube and clean the contact cylinders. Replace if necessary.
- ☒ Check internal and external gas flows with the Electronic Gas Flow Meter and the Gas Flow Test Probe as described in the Service Manual. Correct if necessary.
- ☒ Check furnace open/close function.
- ☒ Verify the operation of the GFTV Camera for proper operation and viewing alignment in the furnace camera Tube View window. Align if needed.
- ☒ Check the operation of the Halogen Light ASSY for the GFTV Camera. Replace if needed.
- ☒ Check the water level/quality in the recirculation (if applicable). Add distilled water if necessary.
- ☒ Check the cooling system fluid flow rate with the FCS In-Line Flow Meter for proper levels if needed. Refer to SDB# COSY008.STN

- ☒ Perform Cooling System maintenance if needed per SDB# COSY005.STN.
- ☒ Check auto sampler operation.
- ☒ Perform an auto sampler check valve test as described in the Service Manual.
- ☒ Lubricate the spindles of the auto sampler pumps and all moving parts of the tray mechanics as described in the Service Manual.
- ☒ Inspect the auto sampler sampling capillary as described in the Service Manual. Replace if necessary.

### 4. Electrical:

- ☒ Inspect PC boards. Clean if necessary.
- ☒ Carefully check all internal and external cable connections.
- ☒ Check instrument firmware revisions upgrade to current levels (if necessary)
- ☒ Run Diagnostics Test within the Advanced function of the Spectrometer page. Check the results in the service log folder in the Spectrometer BM Log Viewer.

### 5. Optics:

- ☒ Inspect and clean the sample compartment windows, if needed.
- ☒ Inspect and clean the furnace windows, if needed.
- ☒ Inspect and clean the GFTV camera lens, if needed.
- ☒ Inspect optics. Clean or replace if necessary,

### 6. Gasses:

- ☒ Verify that the Gasses supplied to the instrument are within the pressure and purity specifications found in the PinAAcle 900 Series Pre-installation Checklist SDB.
- ☒ Verify that the air filter element is dry. Replace if necessary.

### 7. Flame Interlock Check:

Description: Check to ensure that all safety interlocks are closed.

Parameter	Specification	Test Results	Pass/Fail
Flame Sensor	Air/C <sub>2</sub> H <sub>2</sub> Flame correctly shuts down	Active	Passed
Drain Sensor	Air/C <sub>2</sub> H <sub>2</sub> Flame correctly shuts down	Active	Passed
Nebulizer Sensor	Air/C <sub>2</sub> H <sub>2</sub> Flame correctly shuts down	Active	Passed
C <sub>2</sub> H <sub>2</sub> Pressure Sensor	Air/C <sub>2</sub> H <sub>2</sub> Flame correctly shuts down	Active	Passed
Air Pressure Sensor	Air/C <sub>2</sub> H <sub>2</sub> Flame correctly shuts down	Active	Passed
Burner Head Sensor	Choosing Nitrous Oxide as the oxidant should trigger an interlock shuts down	Active	Passed



## 8. After PM Performance tests [Flame]:

### 8.1 Detector Linearity with Barium

Description: Ensures that the detector is linear in the Visible Range.

Parameter	Specification	Certificate Value at 553.6 nm (Abs.)	Test Results	Pass/Fail
1.0 A ND Filter	± 5% from Cert.	1.0154	0.9921	Passed
0.2 A ND Filter	± 5% from Cert.	0.1806	0.2037	Passed

### 8.2 Baseline Noise at 1.0 Absorbance with Barium

Description: Ensures that a high absorbance will not produce excessive noise.

Parameter	Specification	Results	Pass/Fail
Standard Deviation	≤ 0.010	0.0031	Passed

### 8.3 AA Baseline Noise with Copper

Description: Check baseline noise.

Parameter	Specification	Results	Pass/Fail
Standard Deviation	≤ 0.001	0.0005	Passed

### 8.4 D<sub>2</sub> Background Compensation with Copper

Description: Verifies the instruments ability to compensate for Background absorption.

Parameter	Specification	Results	Pass/Fail
Standard Deviation	≤ 0.010	0.0004	Passed

### 8.5 AA-BG Baseline Noise with Copper

Description: Ensures that background correction does not produce excessive noise.

Parameter	Specification	Results	Pass/Fail
Standard Deviation	≤ 0.005	0.0001	Passed

### 8.6 AA-BG Baseline Noise with Arsenic

Description: Ensures that background correction does not produce excessive noise at a low wavelength.

Parameter	Specification	Results	Pass/Fail
Standard Deviation	≤ 0.005	0.0004	Not Applicable

### 8.7 Flame Sensitivity

Description: Instrument Sensitivity checked against Copper standard.

Standard Copper Sensitivity	Specification	Results (Abs.)	Pass/Fail
5 mg/L Sensitivity SS Neb (if applicable)	> 0.250 Abs.	N/A	Not Applicable
2 mg/L Sensitivity HS Neb (if applicable)	> 0.250 Abs.	0.3541	Passed

## 9. After PM Performance tests [THGA]:

### 9.1 Furnace Gas Flows

Description: Ensures the flow rates are within specification.

Parameter	Specification	Test Results	Pass/Fail
Internal Flow Rate	250 mL/min ± 25 mL/min	250	Passed
External Flow Rate	100 mL/min ± 10 mL/min	99	Passed

### 9.2 Chromium Baseline Noise

Description: Signal to noise check.

Parameter	Specification	Results	Pass/Fail
Baseline Noise	≤ 0.005 Abs	0.0004	Passed
Standard Deviation	≤ 0.005	0.0001	Passed

### 9.3 Chromium Characteristic Mass and Precision

Description: Calculate the characteristic mass using the characteristic mass tool and precision from the integrated absorbance values.

Parameter	Specification	Results	Pass/Fail
Cr m <sub>0</sub> Results	≤ 7.0 pg/0.0044 A-s	4.90	Passed
Precision	≤ 2.0 %	0.82	Passed

#### 9.4 Copper Characteristic Mass and Zeeman Ratio

Description: Calculate the characteristic mass using the characteristic mass tool and check the Zeeman Ratio.

Parameter	Specification	Results	Pass/Fail
Cu mg Result	$\leq 16.5 \text{ pg}/0.0044 \text{ A}\cdot\text{s}$	14.20	Passed
Zeeman Ratio	$0.52 \pm 0.04$	0.5430	Passed



#### 10. Review:

- ☒ Review with the customer PM work performed.
- ☒ Review with the customer routine maintenance procedures.
- ☒ Discuss recommended customer supplied materials to have on hand.
- ☒ Attach PM sticker.

#### Additional Comments

Additional Comments Regarding the PM	
Zeeman Ratio	$= \frac{\text{Atomic Signal (Peak area)}}{\text{Atomic Signal (Peak area)} + \text{Background Signal (Peak area)}}$ $= \frac{0.1545}{0.1545 + 0.1300}$ $= 0.5430$

#### Review

The preventive maintenance checks and if applicable performance tests for PinAAcle 900T have been completed.	
This PinAAcle 900T Passes <input type="checkbox"/> Fails <input type="checkbox"/> the preventive maintenance.	
Review of Preventive Maintenance:	
Authorized PerkinElmer Representative: 	Date: 27-Mar-2024 (DD-MMM-YYYY)
Authorized Customer Representative: 	Date: 27-Mar-2024 (DD-MMM-YYYY)

## Agilent CrossLab Start Up Services

### Agilent 5100 5110 ICP-OES Preventive Maintenance

Agilent Preventive Maintenance provides factory recommended service for your analytical instruments to assure reliable operation and the accuracy of your results

Delivered by highly trained and certified service engineers using genuine Agilent parts and supplies, Agilent Preventive Maintenance provides what you need to reduce unplanned downtime and keep your systems operating at their peak performance.

This checklist is used as a guide for completing the preventive maintenance tasks. A signed copy of this checklist is provided for your records.

## Introduction

### Customer Information

- Customers should provide all necessary operating supplies upon request of the engineer.
- A customer representative should be available to the engineer while performing the preventive maintenance procedures. Customers are responsible for regular maintenance and are encouraged to observe the service representative.
- Any parts not included in the Parts Lists section of this document are not part of the recommended Preventive Maintenance service nor are they included in the price of this service.
- If a system requires the use of extra or special procedures and/or parts for the maintenance service, then these must be ordered separately and charged as a repair, which may incur additional costs.
- For customers using HF applications, the instrument should be returned to its standard sample introduction system.

### Important Customer Web Links

- To access **Agilent University**, visit <http://www.agilent.com/crosslab/university/> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- To access the **Agilent Resource Center** web page, visit <https://www.agilent.com/en-us/agilentresources>. The following Information topics are available:
  - Sample Prep and Containment
  - Chemical Standards
  - Analysis
  - Service and Support
  - Application Workflows
- The **Agilent Community** is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>
- Videos about specific preparation requirements for your instrument can be found by searching the **Agilent YouTube** channel at <https://www.youtube.com/user/agilent>
- **Need to place a service call?** Flexible Repair Options | Agilent

### Service Engineer's Responsibilities

- Contact the customer and ensure that all necessary supplies are available before the preventive maintenance visit.
- Only select those pages that relate to the system or module being serviced.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using either a "X" or tick mark "✓".
- Check "Service not applicable" check boxes to indicate services/tasks not delivered, as appropriate.
- Complete the Preventive Maintenance services in the most logical order relevant to the individual system service in the order of the tasks listed.
- Complete the Service Review section together with the customer.
- Complete the fields for page numbers at the foot of each selected page
- Add relevant page numbers to selected pages and complete the total number of pages field in the Service Completion section
- Ask the customer to sign the Service Verification section including the customer's and your signature.

## Instrument Maintenance

### System Information

- ☐ Check this box if an instrument configuration report is attached instead of completing the table.

Instrument System Name and ID	5110 VDV 309-OES
Instrument System Site and Location	Secot Co., Ltd.

List System Component Product Numbers	List the Serial Numbers of each Component
1. G 3015A	NY 16230003
2. G 3210A	AU 16151341
3. G 3281-30000	3B 1641345
4.	
5.	
6.	
7.	
8.	
9.	

ICP-OES Configuration Table	Circle the type or write in the type if other
Nebulizer Type	SeaSpray   OneNeb   Conikal   Other
Spray Chamber	Cyclonic Single Pass   Cyclonic Double Pass   Other
Torch	Radial   Dual View   Other
Torch Type	One Piece   Semi Demountable   Fully Demountable   Other
Injector Diameter	2.4mm   0.8mm   1.4mm   0.8mm   Other
Injector Material	Quartz   Ceramic   Other

### Preparation

- ☒ Discuss any specific issues with the customer before starting.
- ☒ Review the instrument logbook for recorded problems and comments.
- ☒ Save instrument control settings before starting the procedure.
- ☒ Perform a general inspection of the system for cleanliness.
- ☒ Check for proper installation of parts, assemblies, sensors etc.
- ☒ Check system for required installation of components and implementation of Service Notes
- ☒ Check for required firmware/software updates and verify with customers if they would like them installed.
- ☐ For HF application systems, if standard sample introduction system was not installed, ask the customer to install it. N/A
- ☒ Ask the customer to remove any samples from the ICP-OES sample introduction area, auto sampler or around the ICP-OES.

## Preventive Maintenance Procedures

### Record Pre-PM instrument performance

- ☒ Run Instrument Performance test.
- ☒ Record results in Instrument Performance Test Results Table – Pre-PM.

### Clean and inspect ICP-OES system

- ☒ Look for any obvious external damage or problems.
- ☒ Inspect water cooling hoses, gas lines and power cord for excessive wear or damage.
- ☒ Perform a general internal inspection of the system for excessive dust accumulation, clean if necessary.
- ☒ Inspect sample introduction components and record any required maintenance in the Service Engineer Comments and notify the customer as the required actions required.
- ☒ Record the instrument operating conditions in the ICP-OES Status Results Table.
- ☒ Replace the polychromator purge filter.
- ☒ Replace the radial pre-optics window
- ☒ Replace the axial pre-optics window for SVDV and VDV Instruments.
- ☒ Check exhaust flow for the correct positive extraction at the exhaust duct to insure they meet minimum specifications.
- ☒ Replace air inlet dust filter.
- ☐ Replace high capacity air Inlet dust filter element if installed. N/A
- ☒ Remove and clean instrument water Inlet filter.

### Agilent Water Recirculator

- ☐ Service not applicable
- ☒ Drain cooling fluid and remove any particles from the chiller reservoir
- ☒ Remove, clean and reinstall water inlet metal mesh filter if present.
- ☒ Re fill with Agilent Cool Clear cooling fluid.
- ☒ Clean the cooling system Air filter and the condenser.

### SPS 3 Auto Sampler

- ☒ Service not applicable
- ☐ Power cycle the autosampler and verify successful initialization.
- ☐ Inspect X and Z axis belts for wear. Replace if necessary.
- ☐ Clean X and Z axis slide shafts.
- ☐ Using customer's racks and the Agilent software move the sample probe to the 4 outermost corners and rinse port, ensure that the probe is approximately centered in the vial.

### SPS 4 Auto sampler

- ☐ Service not applicable
- ☒ Clean the spill tray, rack location mat, end frames and chassis with a damp soft cloth and diluted mild detergent.
- ☒ Clean the auto sampler cover panels, if cover kit is installed, with domestic window cleaner.
- ☒ Check the X-axis and Z-axis drive belts for cracks, splits, damaged teeth, excessive fraying, color changes or degradation from fumes.
- ☒ Check the X-axis, Theta-axis and Z-axis FFC cables for cracks, incorrect positioning, damaged edges or damaged connectors.
- ☒ Pump Tubing Replacement. Replace peristaltic pump tubing. Replace all tubing that goes from the rinse station to the pump and from the pump to the waste/rinse bottles *only check, passed*
- ☒ Test using customer's tray and move the sample probe to the sample vial 1, wash vial and rinse port and ensure that the probe is centered in the vial. If not use calibration wizard and calibrate the position.

### AVS 4, 6, 7 Advanced Valve System

- ☒ Service not applicable
- ☐ Replace valve rotor seal
- ☐ Check fittings for signs of leaks
- ☐ Check tubing including autosampler tubing for kinks or excessive wear
- ☐ Check high flow pump for signs of leaks

### ICP-OES adjustment

- ☒ Check position of Zn peak, adjust if required.
- ☒ Check Argon Ratio, adjust to specified value if required.
- ☒ Perform Detector Calibration.
- ☒ Perform Instrument Calibration.

### Record Post-PM instrument performance

- ☒ Run Instrument Performance test.
- ☒ Record results in Instrument Performance Test Results Table - Post PM.
- ☒ For systems using ICP Expert version 7.3 and above, run the following Instrument tests
  - ☒ Subsystem Communications Test
  - ☒ Air Flow
  - ☒ Water Flow
  - ☒ Gas Flows
  - ☒ RF Generator
  - ☒ Camera Test
  - ☒ Optics Test
  - ☒ Nebulizer Test
- ☒ Record the result in the Instrument Test Results Table

### Restore Instrument

- ☐ For HF applications, ask the customer to reinstall their sample introduction system. <sup>18</sup>
- ☒ Leave system in an Idle state: on and purging.
- ☒ Guidance: If the PM service is performed prior to a qualification service, then use the qualification procedure as a guide for final instrument set up and checkout.

### Service Review

- ☒ Attach available reports/printouts of all tests to this documentation.
- ☒ Record the Preventive Maintenance service activity in the customer's records/logbook.
- ☒ Record the PM event in the Smart Alerts logbook, if applicable.
- ☒ Update/reset instrument maintenance counters as appropriate.
- ☒ Affix the PM sticker to the system or instrument logbook based on the customer's request.
- ☒ Complete the Service Engineer Comments section if there are additional comments.
- ☒ Review this service, parts replaced, and test results obtained with the customer.
- ☒ If the instrument firmware was updated, record the details of the change in the Service Engineer's Comments box. Systems in a compliant environment may need additional documentation.
- ☒ Complete the Signature Page with both Service Engineer and Customer signatures.

## Test Results

### Instrument Performance Test Results Table

Note: These measurements do not form part of any specification and are for reference only.

	Pre-PM Sensitivity Check		Post-PM Sensitivity Check	
	Radial	Axial*	Radial	Axial*
Zn 213.857 nm SRBR	5017.6	12139.3	4952.3	12410.2
Mn 257.610 nm SRBR	12915.3	35934.0	12460.9	41036.8
Al 396.152 nm SBR	12.5	29.0	12.0	26.4
K 766.491 nm SBR	8.1	33.6	4.3	62.6

\* Axial result is not applicable for G8016AA, G8012AA Radial View instruments.

### Instrument Test Results Table

Note: The Instrument Test results are for systems using ICP Expert version 7.3 and above only.

Instrument Test	Result
Subsystem Communications Test	Pass
Air Flow	Pass
Water Flow	Pass
Gas Flows	Pass
RF Generator	Pass
Camera Test	Pass
Optics Test	Pass
Nebulizer test	Pass

### ICP-OES Status Results Table

Note: These measurements do not form part of any specification and are for reference only.

Measurement	Standby Mode		Plasma On	
Mains Voltage	214.803	VAC	217.170	VAC
Mains Current	0.099	A	0.226	A
Instrument Temperature	23.6	°C	24.2	°C
RF Air Flow (sensor speed)	12.0	Hz	18.0	Hz
Plasma Exhaust Temperature	No measurement		30.6	°C
Water Flow Oscillator	No measurement		1.45	L/min
Water Flow Detector	1.12	L/min	1.09	L/min
Water Inlet Temperature	23.9	°C	21.6	°C
Polychromator Temperature	33.0	°C	33.0	°C
CCD Temperature	-20.0	°C	-39.2	°C
Thermal Stabilizer	33.0	°C	33.0	°C
Argon Supply Pressure	598.26	kPa	597.05	kPa
Purge Gas Supply Pressure*1	595.68	kPa	589.30	kPa
Option Gas Supply Pressure*1	-	kPa	-	kPa
Nebulizer Flow	No measurement		0.70	L/min
Nebulizer Back Pressure	No measurement		310.46	kPa
Plasma Gas Flow	No measurement		11.95	L/min
Auxiliary Gas Flow	No measurement		1.00	L/min
RF Power	No measurement		1199.4	W
RF Supply Current	No measurement		5.655	A
RF Supply Voltage	No measurement		184.734	V

\*1 If option installed



## Consumed PM Parts

Part Description	Part Number	Product or Model# where used	Quantity consumed
Axial Pre-Optic Window	G8010-68014	G8010A, G8011A, G8014A/G8015A	1
Radial Pre-Optic Window	G8010-68015	All	1
Agilent Cool Clear Coolant Fluid	5799-0037	Agilent Water Recirculator	-
Purge Gas Filter	G8010-60136	All	1
Air Inlet filter	G8000-68002	All	1
High Capacity Air Filter	G8010-60189	Optional	-
Rotor seal for 6-7 port valve for AVS6/7	G8494-60002	G8494A/G8495	-
Rotor seal for 4 port valve for AVS4	G8493-60002	G8493A	-
Rinse solution to rinse station 2.5mm id x 1m	G8410-80123	SPS 4	-
Barb connector 2.5mm-1.5mm ID	G8410-80124	SPS 4	-
PVC waste tubing, 8mm od x 5mm id, 2m	G8410-80122	SPS 4	-
Additional Parts may be required from engineer's stock:			
X axis drive belt	5410047500	SPS 3	-
Z axis drive belt	5410047400	SPS 3	-
Peristaltic pump tubing, RVC SoRaFlex, 3 bridged,	3710049000	SPS 4	-

Consumed Parts Reference  
(Purchased by customer, not included as part of PM)

☐ Section Not Applicable.

Part Description	Part Number	Product or Model# where used	Quantity consumed
------------------	-------------	------------------------------	-------------------

## Signature Page

## Service Engineer Comments (optional)

If there are any specific points you wish to note as part of performing the installation or other items of interest for the customer, please write in this box.

## Service Verification

Service Request Number:

606349519

Service Engineer Name:

Kanyakorn S.

Service Engineer Signature:

Kanyakorn S.

Total number of pages in this document:

14

Date Service Completed:

31 Jul 2023

Customer Name:

Customer Signature:

Arun Tisavuth



## Certificate of Completion

Learner Name: Kanyakorn Sukpathrajareon

Title Of Course: ANV-CE-ICPOES-2-008-A: Agilent 5100 ICP-OES Support Neophyte Training

Completion Date: November 2, 2017

Certified By Company: Learning at Agilent

**All Service and Support training certificates have the following specific limitations.**

A certificate for Service and Support training is only valid while employed by Agilent Technologies or while working as an Agilent-authorized service provider, through which the service employee has ongoing access to Agilent's: Safety Alerts, Service Notes, internal technical updates, update training, current documentation, technical support, current parts, and parts updates. Completion of training alone, without being employed by Agilent Technologies, does not qualify an individual to safely install, service or maintain Agilent products.

# CERTIFICATE OF CALIBRATION

ISSUED BY **Noisemeters**  
DATE OF ISSUE **28 April 2023** CERTIFICATE NUMBER **191319**

**NoiseMeters**

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

Page 1 of 1

Test engineer:  
Rebecca Thomas  
Electronically signed:



## doseBadge Reader

### Instrument

Manufacturer: Pulsar Instruments Plc Serial Number: 79781  
Model Number: Model 22R Notes:

### Calibration Procedure

The tests were carried out in accordance with the requirements of IEC 60942:2003 where applicable.

Date of Calibration: 26 April 2023

### Functionality Results

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

### Calibration Results

	Level (dB)	Frequency (Hz)	Distortion (% THD + Noise)
Result	114.00	999.0	0.47
Uncertainty	± 0.11	± 0.14	± 0.10
Tolerances	± 0.60	± 2.00	± 4.00

No adjustments were made during this calibration.

### Environmental Conditions

Pressure: 101.00 kPa  
Temperature: 22.4 °C  
Humidity: 33.7 %

### 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

ISSUED BY **Noisemeters**  
DATE OF ISSUE **26 March 2024** CERTIFICATE NUMBER **211259**

**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: Cirrus Research plc Notes:  
Model: RC:110A  
Serial number: 95167  
Class: 2

### Test summary

Date of calibration: 25 March 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:

211259

Page 2 of 2

## Environmental conditions

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

**Before** Pressure: 99.26 kPa Temperature: 22.1 °C Humidity: 33.4 %  
**After** Pressure: 99.26 kPa Temperature: 22.1 °C Humidity: 34.6 %

## 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	113.41	113.54	113.55	113.50	-0.50	±0.75	0.11 dB
Distortion (%)	< 4.00	0.49	0.50	0.55	0.51	0.51	+4.00	0.13 %
Frequency (Hz)	1000.0	990.5	990.5	990.4	990.5	-9.5	±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	113.99	113.99	113.98	113.99	-0.01	±0.75	0.11 dB
Distortion (%)	< 4.00	0.42	0.41	0.41	0.42	0.42	+4.00	0.13 %
Frequency (Hz)	1000.0	990.3	990.4	990.3	990.4	-9.6	±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



THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

Mechanical Engineering Standards Laboratory Sol 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/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 :

(Ms.Kirana Luanghitun)

TISTR

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.

FM.BL.MTC.002 Rev.4

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 : rumpaig@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 : mntc@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 (  $23 \pm 3$  ) °C , Relative humidity (  $55 \pm 15$  ) %

Atmospheric pressure (  $1010 \pm 13$  ) 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.

TB.

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.

FM.BL.MTC.002 Rev.4

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.23-67/0383

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  
Director  
Mechanical Engineering Standards Laboratory

Ref. 20132670420197001

Issued Date 13 May 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.

FM.BL.MTC.002 Rev.4

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.23-67/0383

2/2

MTC.No.23-67/0383

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

**Ambient condition :** Temperature (  $23 \pm 3$  ) °C , Relative humidity (  $55 \pm 15$  ) %

Atmospheric pressure (  $1010 \pm 13$  ) 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.

Ts.

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.

FM.BLMTC.002 Rev.4

**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

ภาคผนวก จ

หนังสืออนุญาตขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน  
จากกรมโรงงานอุตสาหกรรม



ที่ อก ๐๓๑๐(๑)/ ๑๑ ๐๑ ๖

กรมโรงงานอุตสาหกรรม  
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท  
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

## ๒ ๐ กรกฎาคม ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท ชีคอต จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน  
ลงวันที่ ๗ เมษายน ๒๕๖๖

- สิ่งที่ส่งมาด้วย ๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ แผ่น  
๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๑ แผ่น  
๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๙ แผ่น

ตามหนังสือที่อ้างถึง บริษัท ชีคอต จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ๖-๒๓๙ สถานที่ตั้งเลขที่ ๒๓๙ ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท ชีคอต จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

- ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑๐ ราย ตามสิ่งที่ส่งมาด้วย ๑  
ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓๙ ราย ตามสิ่งที่ส่งมาด้วย ๒  
ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย น้ำใต้ดิน อากาศเสีย สิ่งปฏิกูล หรือวัสดุที่ไม่ใช้แล้ว และดิน ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๒ พฤษภาคม ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกกรมโรงงานอุตสาหกรรมภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ซึ่งคำขอต่ออายุดังกล่าวขอรับได้ที่กรมโรงงานอุตสาหกรรม ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายประสม คำรงพงษ์)

กองวิจัยและเตือนภัยมลพิษโรงงาน  
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน  
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕

โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙

ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th



"อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว"



ส่งที่ส่งมาด้วย ๑

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ชีคอต จำกัด

เลขทะเบียน ๖-๒๓๙

ที่ อก ๐๓๑๐(๑)/ ๑๑ ๐๑ ๖

ลงวันที่ ๒ ๐ กรกฎาคม ๒๕๖๖

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑๐ ราย

- |                               |                            |
|-------------------------------|----------------------------|
| ๑) นายขรรชัย เกรียงไกรอุดม    | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๒ |
| ๒) นางสมฤดี เกรียงไกรอุดม     | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๓ |
| ๓) นางอารยา ทิพรัักษ์         | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๔ |
| ๔) นางสาวเชมชุตตา อินทร์ศรี   | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๕ |
| ๕) นางสาวปรีดา สมใจ           | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๖ |
| ๖) นางสาวอริญญา มาตา          | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๗ |
| ๗) นางสาวลดาวัลย์ วงศ์เจริญ   | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๘ |
| ๘) นางสาวมณีนวรัตน์ เกตะวันดี | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๐๙ |
| ๙) นางสาวริสา ภูวสรณ์เพ็ญ     | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๑๐ |
| ๑๐) นางสาวศิริวรรณ มิสมสง่า   | ทะเบียนเลขที่ ๖-๒๓๙-ค-๐๐๑๑ |



เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ซีคอฟ จำกัด

เลขทะเบียน ๖-๒๓๙

ที่ ออก ๐๓๑๐(๑)/ ๑๑ ๐ ๑ ๖

ลงวันที่ ๒๐ กรกฎาคม ๒๕๖๖

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓๘ ราย

๑) นางสาวสุตาพร สุนทร	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๑
๒) นางสาวสุธาทิพย์ เทียนดี	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๓
๓) นางสาวสุนันทา ศิริคุณานนท์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๔
๔) นายบวร ดีชัยยะ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๕
๕) นางสาวเกศรินทร์ วรเดชวิทยา	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๖
๖) นายอนิวัฒน์ พิมพ์นา	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๗
๗) นายชิตพล สมประสงค์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๘
๘) นางสาวศศิธร พรหมประเสริฐ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๐๙
๙) นายศิวะนนท์ กุลวงศ์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๐
๑๐) นางสาวอลิษา คณิรารานนท์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๑
๑๑) นางสาวสิริวรรณ แก้วชิงดวง	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๒
๑๒) นางสาวปัทมวรรณ สุวรรณวิโรจน์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๓
๑๓) นางสาวกนิษฐา เจริญเชื้อ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๔
๑๔) นายวัชรกานต์ ประมาคะเด	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๕
๑๕) นายชอง เสงฆ์วัลกุล	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๖
๑๖) นางสาวกฤษณา จันทุม	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๗
๑๗) นางสาวพนภา บุตรธรรม	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๘
๑๘) นางสาวธารินี อาจปลิว	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๑๙
๑๙) นายธนโชติ ช่างลื้อ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๐
๒๐) นางสาวพัชรา สมานฉันท์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๑
๒๑) นางสาวจุฑารัตน์ แจ่มเรือน	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๒
๒๒) นางสาวจนิสตา กุ้ยอ่อน	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๓
๒๓) นายกิตติพงศ์ ณะกิจสุข	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๔
๒๔) นายจิรวัฒน์ โคตรคำหาญ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๕
๒๕) นายชนะพล อัครผล	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๖
๒๖) นางสาวทิพย์สุดา วรรณการ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๗
๒๗) นายสิทธิชัย สว่างวงศ์ไชย	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๘
๒๘) นายพิษณุ สีนามเพ็ง	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๒๙
๒๙) นายรัตนชัย ขอบทำกิจ	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๐
๓๐) นายธนาวุฒิ ต่วนแสง	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๑
๓๑) นายณัฐชัย ไชยโคตร	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๒
๓๒) นายณัฐดนัย กลุขณะโสม	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๓
๓๓) นายศุภชัย สุขใหม่	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๔
๓๔) นายรอมฎอน เหลี่ยมหมาด	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๕
๓๕) นางสาวสุภาวดี บัวแก้ว	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๖
๓๖) นางสาวมาเรียณี ฮาแว	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๗
๓๗) นางสาววิระยา ปัจฉิมบุรณ์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๘
๓๘) นางสาวศลิษา อินทรีย์	ทะเบียนเลขที่ ๖-๒๓๙-จ-๐๐๓๙

วิมล

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ซีคอฟ จำกัด

เลขทะเบียน ๖-๒๓๙

ที่ ออก ๐๓๑๐(๑)/ ๑๑ ๐ ๑ ๖

ลงวันที่ ๒๐ กรกฎาคม ๒๕๖๖

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๕๕ รายการ

น้ำเสีย จำนวน 45 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
2	Arsenic	2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
3	Barium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[4]</sup>
4	α-BHC	2) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
5	β-BHC	1) Digestion, Direct Nitrous Oxide-Acetylene Flame Method <sup>[4]</sup>
6	δ-BHC	2) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
7	γ-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
		2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>

วิมล

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Azide Modification Method <sup>[4]</sup> 2) 5-Day BOD Test, Membrane Electrode Method <sup>[4]</sup>
9	Cadmium	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
10	Chemical Oxygen Demand	1) Open Reflux, Titrimetric method <sup>[4]</sup> 2) Closed Reflux, Colorimetric method <sup>[4]</sup> 3) Closed Reflux, Titrimetric Method <sup>[4]</sup>
11	Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
12	Chromium	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
13	Color	ADMI Weighted-Ordinate Spectrophotometric Method <sup>[4]</sup>
14	Copper	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
15	Cyanide	Distillation, Colorimetric method <sup>[4]</sup>
16	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup> <i>สมช</i>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
17	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
18	4,4'-DDT	2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup> 1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
19	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
20	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
21	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
22	Endosulfan Sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
23	Endrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
24	Endrin Aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup> <i>สมช</i>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
25	Formaldehyde	Distillation, Colorimetric Method <sup>[3]</sup>
26	Free Chlorine	1) Iodometric Method <sup>[4]</sup> 2) DPD Colorimetric Method <sup>[4]</sup>
27	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
28	Heptachlor epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
29	Hexavalent Chromium	1) Colorimetric Method <sup>[4]</sup> 2) Extraction, Air-Acetylene Flame Method <sup>[4]</sup>
30	Lead	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
31	Manganese	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
32	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method <sup>[4]</sup>
33	Methoxychlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
34	Nickel	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion...

3) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
		3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
35	Oil & Grease	1) Liquid-Liquid, Partition-Gravimetric Method <sup>[4]</sup> 2) Soxhlet Extraction Method <sup>[4]</sup>
36	pH	Electrometric Method <sup>[4]</sup>
37	Phenols	1) Distillation, Chloroform Extraction Method <sup>[4]</sup> 2) Distillation, Direct Photometric Method <sup>[4]</sup>
38	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[4]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
39	Sulfide	1) Iodometric method <sup>[4]</sup> 2) Methylene blue method <sup>[4]</sup>
40	Temperature	Laboratory and Field Methods <sup>[4]</sup>
41	Total Dissolved Solids	Dried at 180 °C <sup>[4]</sup>
42	Total Kjeldahl Nitrogen	1) Macro Kjeldahl Method <sup>[4]</sup> 2) Semi-Micro Kjeldahl Method <sup>[4]</sup>
43	Total Suspended Solids	Dried at 103-105 °C <sup>[4]</sup>
44	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Colorimetric Method; Calculation <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method; Colorimetric Method; Calculation <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation <sup>[4]</sup>
45	Zinc	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup> 3) Digestion...

น้ำใต้ดิน...

น้ำใต้ดิน จำนวน 125 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
2	Acetone	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>(4)</sup>
3	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>(4)</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
5	Antimony	Digestion, Inductively Coupled Plasma Spectrometric Method <sup>(4)</sup>
6	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>(4)</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>(4)</sup>
7	Atrazine	Liquid-Liquid Extraction, Gas Chromatographic Method <sup>(4)</sup>
8	Barium	1) Digestion, Direct Nitrous Oxide-Acetylene Flame Method <sup>(4)</sup> 2) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>(4)</sup>
9	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
10	Benzene	Purge and Trap Gas Chromatographic/Mass spectrometric Method <sup>(4)</sup>
11	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
12	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup> 3mg

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
13	Benzoic acid	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
14	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
15	Benzo(g,h,i)perylene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
16	Beryllium	Digestion, Inductively Coupled Plasma Spectrometric Method <sup>(4)</sup>
17	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
18	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
19	Bromodichloromethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>(4)</sup>
20	Bromoform	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>(4)</sup>
21	Butanol	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>(4)</sup>
22	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
23	Cadmium	1) Digestion, Direct Air-Acetylene Flame Method <sup>(4)</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>(4)</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>(4)</sup>
24	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(4)</sup>
25	Carbon disulfide	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>(4)</sup>
26	Carbon tetrachloride	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>(4)</sup> 3mg

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
27	Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
28	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
29	Chlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
30	Chlorodibromomethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
31	Chloroform	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
32	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
33	Chromium	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>[4]</sup>
34	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Colorimetric Method; Calculation <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method; Colorimetric Method; Calculation <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method; Colorimetric Method; Calculation <sup>[4]</sup>
35	Chromium (VI)	1) Colorimetric Method <sup>[4]</sup> 2) Extraction, Air-Acetylene Flame Method <sup>[4]</sup>
36	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
37	Cyanide	1) Distillation, Titrimetric Method <sup>[4]</sup> 2) Distillation, Colorimetric Method <sup>[4]</sup>
38	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
39	DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
40	DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
41	DDT	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
42	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
43	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
44	1,2-Dichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
45	1,3-Dichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
46	1,4-Dichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
47	3,3'-Dichlorobenzidine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
48	1,1-Dichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
49	1,2-Dichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
50	1,1-Dichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
51	cis-1,2-Dichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
52	trans-1,2-Dichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
53	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
54	1,2-Dichloropropane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
55	1,3-Dichloropropane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
56	1,3-Dichloropropene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
57	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
58	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
59	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
60	2,4-Dinitrophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
61	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
62	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
63	Di-n-Octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
64	Endosulfan	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid...

2) Liquid-Liquid...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
65	Endrin	2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup> 1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
66	Ethylbenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
67	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
68	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
69	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
70	Heptachlor epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
71	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
72	Hexachloro-1,3-butadiene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
73	n-Hexane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
74	α-HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
75	β-HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid...

2) Liquid-Liquid...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
76	γ-HCH	2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup> 1) Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup> 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
77	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
78	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
79	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
80	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
81	Lead	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>[4]</sup>
82	Manganese	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>[4]</sup>
83	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method <sup>[4]</sup>
84	Methanol	Purge and Trap Gas Chromatographic/ Mass spectrometric Method <sup>[4]</sup>
85	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
86	Methyl bromide	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>

87 Methylene chloride...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
87	Methylene chloride	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
88	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
89	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
90	Methyl tert-butyl ether	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
91	Naphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
92	Nickel	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>[4]</sup>
93	Nitrobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
94	N-Nitrosodiphenylamine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[4]</sup>
95	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
96	Polychlorinated Biphenyls - PCB-1016 - PCB-1221 - PCB-1232 - PCB-1242 - PCB-1248 - PCB-1254 - PCB-1260	Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
97	Pentachlorophenol	Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[4]</sup>
98	pH	Electrometric method <sup>[4]</sup>

99 Phenanthrene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
99	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
100	Phenol	1) Distillation, Chloroform Extraction Method <sup>[4]</sup> 2) Distillation, Direct Photometric Method <sup>[4]</sup> 3) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
101	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
102	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[4]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
103	Silver	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[4]</sup>
104	Styrene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
105	1,1,2,2-Tetrachloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
106	Tetrachloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
107	Toluene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
108	TPH (C <sub>5</sub> -C <sub>8</sub> )	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[12,25]</sup>
109	TPH (C <sub>8</sub> -C <sub>16</sub> )	1) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[9,21]</sup> 2) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass spectrometric Method <sup>[9,25]</sup>
110	TPH (C <sub>16</sub> -C <sub>35</sub> )	1) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[9,21]</sup> <i>วิธี</i>

2) Separatory...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
		2) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass spectrometric Method <sup>[9,25]</sup>
111	1,2,4-Trichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
112	1,1,1-Trichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
113	1,1,2-Trichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
114	Trichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
115	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
116	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
117	1,3,5-Trimethylbenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
118	Vanadium	Digestion, Inductively Coupled Plasma Spectrometric Method <sup>[4]</sup>
119	Vinyl acetate	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
120	Vinyl chloride	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
121	m-Xylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
122	o-Xylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
123	p-Xylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup>
124	Xylene (Total)	Purge and Trap Gas Chromatographic/Mass Spectrometric Method <sup>[4]</sup> <i>วิธี</i>



ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
125	Zinc	1) Digestion, Direct Air-Acetylene Flame Method <sup>[4]</sup> 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method <sup>[4]</sup> 3) Digestion, Inductively Coupled Plasma Spectrometric Method <sup>[4]</sup>

อากาศเสีย (ปล่อยระบาย) จำนวน 27 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
2	Arsenic	1) Isokinetic Sampling, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
3	Beryllium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
4	Cadmium	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
5	Carbon monoxide	Instrumental Analyzer Method <sup>[5]</sup>
6	Chlorine	1) Absorption Sampling, Ion Chromatographic Method <sup>[5]</sup> 2) Isokinetic Sampling, Ion Chromatographic Method <sup>[5]</sup>
7	Chromium	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup> 3100

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
8	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
9	Copper	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
10	Cresol	Adsorption Sampling, Gas Chromatographic Method <sup>[5]</sup>
11	Dioxin/Furans	Isokinetic Sampling <sup>[5]</sup>
12	Hydrogen chloride	1) Absorption Sampling, Ion Chromatographic Method <sup>[5]</sup> 2) Isokinetic Sampling, Ion Chromatographic Method <sup>[5]</sup>
13	Hydrogen Fluoride	1) Absorption Sampling, Ion Chromatographic Method <sup>[5]</sup> 2) Isokinetic Sampling, Ion Chromatographic Method <sup>[5]</sup>
14	Hydrogen Sulfide	Absorption Sampling, Iodometric Method <sup>[5]</sup>
15	Lead	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
16	Manganese	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
17	Mercury	Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method <sup>[5]</sup>
18	Nickel	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup> 3100

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Opacity	Ringelmann's Method <sup>[2]</sup>
20	Oxides of Nitrogen	1) Absorption Sampling, Phenoldisulfonic acid Method <sup>[5]</sup> 2) Absorption Sampling, Ion Chromatographic Method <sup>[5]</sup> 3) Instrumental Analyzer Method <sup>[5]</sup>
21	Selenium	1) Isokinetic Sampling, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[5]</sup> 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
22	Sulfur dioxide	1) Isokinetic Sampling, Barium-Thorin Titrimetric Method <sup>[5]</sup> 2) Absorption Sampling, Barium-Thorin Titrimetric Method <sup>[5]</sup> 3) Instrumental Analyzer Method <sup>[5]</sup>
23	Sulfuric acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method <sup>[5]</sup>
24	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
25	Total Suspended Particulate	1) Isokinetic Sampling, Gravimetric Method <sup>[5]</sup> 2) Paired Train, Isokinetic Sampling, Gravimetric Method <sup>[5]</sup>
26	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method <sup>[5]</sup>
27	Xylene	1) Adsorption Sampling, Gas Chromatographic Method <sup>[5]</sup> 2) Adsorption Sampling, Gas Chromatographic/Mass Spectrometric Method <sup>[5]</sup>

สิ่งปฏิกูล...

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 34 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,6,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,6,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
2	Antimony	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[1,6,16]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[7,16]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
3	Arsenic	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[1,6,16]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[7,16]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
4	Barium	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup>

2) Waste Extraction...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
5	Beryllium	2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
6	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
7	Chlordane	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
8	Chromium	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[10,27]</sup> 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> <i>3) Digestion...</i>

3) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
9	Chromium (III)	3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup> 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method; Waste Extraction, Colorimetric Method; Calculation <sup>[1,6,15,17]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction, Colorimetric Method; Calculation <sup>[1,6,14,17]</sup>
10	Chromium (VI)	3) Digestion, Flame Atomic Absorption Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation <sup>[7,8,15,17]</sup> 4) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation <sup>[7,8,14,17]</sup>
11	Cobalt	1) Waste Extraction, Colorimetric Method <sup>[1,17]</sup> 2) Alkaline Digestion, Colorimetric Method <sup>[9,17]</sup>
12	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup> 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup> <i>3) Digestion...</i>

13 2,4-D...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
13	2,4-D	1) Waste Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,25]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[25]</sup>
14	DDD	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
15	DDE	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
16	DDT	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>

17 Dieldrin...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
17	Dieldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
18	Endrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
19	Heptachlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
20	Lead	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup>

3) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
21	Lindane	3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
22	Mercury	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
23	Methoxychlor	1) Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method <sup>[1,18]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method <sup>[19]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
		1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,22]</sup> 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,9,27]</sup> 3) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,22]</sup> 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>


24 Molybdenum...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
24	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
25	Nickel	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
26	Polychlorinated Biphenyls - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method <sup>[1,9,23]</sup> 2) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,23]</sup>
27	Pentachlorophenol	1) Waste Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[1,25]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[25]</sup>
28	pH	Electrometric Method <sup>[31,32]</sup>
29	Selenium	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[1,6,20]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[7,20]</sup>


4) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
30	Silver	4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup> 1) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
31	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
32	Trichloroethylene	1) Waste Extraction, Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[1,12,26]</sup> 2) Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[12,26]</sup>
33	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
34	Zinc	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method <sup>[1,6,15]</sup> 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method <sup>[1,6,14]</sup> 3) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 4) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>

ดิน จำนวน 124 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup> 

2 Acetone...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
3	Aldrin	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
4	Anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
5	Antimony	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[7,16]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
6	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[7,16]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
7	Atrazine	Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,24]</sup>
8	Barium	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
9	Benz(a)anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
10	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
11	Benzo(b)fluoranthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
12	Benzo(k)fluoranthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
13	Benzoic acid	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup> 

14 Benzo(a)pyrene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
14	Benzo(a)pyrene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
15	Benzo(g,h,i)perylene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
16	Beryllium	Digestion, Inductively Coupled Plasma Method <sup>(7,14)</sup>
17	Bis(2-chloroethyl)ether	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
18	Bis(2-ethylhexyl)phthalate	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
19	Bromodichloromethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
20	Bromoform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
21	Butanol	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
22	Butyl benzyl phthalate	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
23	Cadmium	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>(7,15)</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>(7,14)</sup>
24	Carbazole	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
25	Carbon disulfide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
26	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
27	Chlordane	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>(11,22)</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(11,27)</sup>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
28	p-Chloroaniline	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
29	Chlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
30	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>(13,26)</sup>
31	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>(13,26)</sup>
32	2-Chlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>(11,27)</sup>
33	Chromium	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>(7,15)</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>(7,14)</sup>
34	Chromium (III)	1) Digestion, Flame Atomic Absorption Spectrometric Method; Colorimetric Method; Calculation <sup>(7,8,15,17)</sup> 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation <sup>(7,8,14,17)</sup>
35	Chromium (VI)	Alkaline Digestion, Colorimetric Method <sup>(8,17)</sup>
36	Chrysene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(10,27)</sup>
37	Cyanide	1) Extraction, Distillation, Titrimetric Method <sup>(28,29,30)</sup> 2) Extraction, Distillation, Colorimetric Method <sup>(28,29,30)</sup>
38	2,4-D	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(24)</sup>
39	DDD	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>(11,22)</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>(11,27)</sup>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
40	DDE	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
41	DDT	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
42	Dibenz(a,h)anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
43	Di-n-butyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
44	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
45	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
46	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
47	3,3'-Dichlorobenzidine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
48	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
49	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
50	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
51	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
52	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
53	2,4-Dichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>

54 1,2-Dichloropropane...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
54	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
55	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
56	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
57	Dieldrin	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
58	Diethyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
59	2,4-Dimethylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
60	2,4-Dinitrophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
61	2,4-Dinitrotoluene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
62	2,6-Dinitrotoluene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
63	Di-n-Octyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
64	Endosulfan	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
65	Endrin	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
66	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>

67 Fluoranthene...



ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
67	Fluoranthene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[10,27]</sup>
68	Fluorene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[10,27]</sup>
69	Heptachlor	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
70	Heptachlor epoxide	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
71	Hexachlorobenzene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
72	Hexachloro-1,3-butadiene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
73	n-Hexane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method <sup>[13,26]</sup>
74	α-HCH	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
75	β-HCH	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
76	γ-HCH	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
77	Hexachlorocyclopentadiene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>

78 Hexachloroethane...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
78	Hexachloroethane	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
79	Indeno(1,2,3-cd)pyrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
80	Isophorone	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
81	Lead	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
82	Manganese	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
83	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method <sup>[19]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
84	Methanol	Ultrasonic Extraction, Direct Aqueous Injection, Gas Chromatographic Method <sup>[11,21]</sup>
85	Methoxychlor	1) Ultrasonic Extraction, Gas Chromatographic Method <sup>[11,22]</sup> 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
86	Methyl bromide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
87	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
88	2-Methylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
89	2-Methylnaphthalene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>

90 Methyl tert-butyl ether...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
90	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
91	Naphthalene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
92	Nickel	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
93	Nitrobenzene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
94	N-Nitrosodiphenylamine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
95	N-Nitrosodi-n-propylamine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
96	Polychlorinated Biphenyls - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260	Soxhlet Extraction, Gas Chromatographic Method <sup>[10,23]</sup>
97	Pentachlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[24]</sup>
98	Phenanthrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
99	Phenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[11,27]</sup>
100	Pyrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method <sup>[10,27]</sup>
101	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method <sup>[7,20]</sup>

2) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
102	Silver	2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup> 1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
103	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
104	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
105	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
106	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
107	TPH (C <sub>5</sub> -C <sub>8</sub> )	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
108	TPH (C <sub>8</sub> -C <sub>16</sub> )	1) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,21]</sup> 2) Soxhlet Extraction, Gas Chromatographic/Mass spectrometric Method <sup>[10,26]</sup>
109	TPH (C <sub>16</sub> -C <sub>35</sub> )	1) Soxhlet Extraction, Gas Chromatographic Method <sup>[10,21]</sup> 2) Soxhlet Extraction, Gas Chromatographic/Mass spectrometric Method <sup>[10,26]</sup>
110	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
111	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
112	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
113	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>

114 2,4,5-Trichlorophenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
114	2,4,5-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
115	2,4,6-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method <sup>[11,27]</sup>
116	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
117	Vanadium	Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup>
118	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass spectrometric Method <sup>[13,26]</sup>
119	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
120	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
121	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
122	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
123	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method <sup>[13,26]</sup>
124	Zinc	1) Digestion, Flame Atomic Absorption Spectrometric Method <sup>[7,15]</sup> 2) Digestion, Inductively Coupled Plasma Method <sup>[7,14]</sup> <i>วิธีใหม่</i>

#### เอกสารอ้างอิง

- กระทรวงอุตสาหกรรม. ประกาศกระทรวงอุตสาหกรรม, พ.ศ. 2548. เรื่อง การกำจัดสิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว.ราชกิจจานุเบกษา. 25 มกราคม 2549. เล่มที่ 123 ตอนพิเศษ 11ง.
- กระทรวงอุตสาหกรรม. ประกาศกระทรวงอุตสาหกรรม, พ.ศ. 2549. เรื่อง กำหนดค่าปริมาณเข้มข้นที่เจือปนในอากาศที่ระบายออกจากปล่องของหม้อน้ำโรงสีข้าวที่ใช้แก๊สเป็นเชื้อเพลิง.ราชกิจจานุเบกษา. 4 ธันวาคม 2549. เล่มที่ 123 ตอนพิเศษ 125ง.
- สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย. คู่มือวิเคราะห์น้ำเสีย. พิมพ์ครั้งที่ 4. กรุงเทพฯ: เรือนแก้วการพิมพ์, 2547.

4. APHA, AWWA, WEF. Standard Methods for the Examination of Water and Wastewater. 23<sup>rd</sup> ed. Washington, DC: APHA, 2017.
5. United States Environmental Protection Agency. Standards of Performance for New Stationary Sources. 40 CFR 60. Appendix A, 2023.
6. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. SW-846, 2020.
7. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Acid Digestion of Sediments, Sludges, and Soils. SW-846 Method 3050B, 1996.
8. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Alkaline Digestion for Hexavalent Chromium. SW-846 Method 3060A, 1996.
9. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Separatory Funnel Liquid-Liquid Extraction. SW-846 Method 3510C, 1996.
10. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Soxhlet Extraction. SW-846 Method 3540C, 1996.
11. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Ultrasonic Extraction. SW-846 Method 3550C, 2007.
12. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Purge-and-Trap for Aqueous Samples. SW-846 Method 5030C, 2003.
13. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples. SW-846 Method 5035, 1996.
14. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Inductively Coupled Plasma-optical Emission Spectrometry. SW-846 Method 6010D, 2018.
15. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Flame Atomic Absorption Spectrophotometry. SW-846 Method 7000B, 2007.
16. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Antimony and Arsenic (Atomic Absorption, Borohydride Reduction). SW-846 Method 7062, 1994. *วิธีใหม่*
17. United States...

17. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Chromium, Hexavalent (Colorimetric), SW-846 Method 7196A, 1992.

18. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Mercury in Liquid Waste (Manual Cold-Vapor Technique, SW-846 Method 7470A, 1994.

19. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique, SW-846 Method 7471B, 2007.

20. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Selenium (Atomic Absorption, Borohydride Reduction), SW-846 Method 7742, 1994.

21. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Nonhalogenated Organics Using GC/FID. SW-846 Method 8015D, 2003.


22. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Organochlorine Pesticide by Gas Chromatography. SW-846 Method 8081B, 2007.

23. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Polychlorinated Biphenyls (PCBs) By Gas Chromatography. SW-846 Method 8082A, 2007.

24. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Organophosphorus Compounds by Gas Chromatography. SW-846 Method 8141B, 2007.

25. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Chlorinated Herbicides By GC Using Methylation or Pentafluorobenzoylation Derivatization. SW-846 Method 8151A, 1996.

26. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS). SW-846 Method 8260D, 2018.

27. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. SemiVolatile Organic Compounds by Gas Chromatography/Mass Spectrometry. SW-846 Method 8270E, 2018. 


28. United States...

28. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Total and Amenable Cyanide: Distillation. SW-846 Method 9010C, 2004.

29. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Cyanide Extraction Procedure for Solids and Oils. SW-846 Method 9013A, 2014.

30. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Cyanide in Waters and Extracts Using Titrimetric and Manual Spectrophotometric. SW-846 Method 9014, 2014.

31. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. pH Electrometric Measurement. SW-846 Method 9040C, 2004.

32. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Solid and Waste pH. SW-846 Method 9045D, 2004. 

ที่ อก ๐๓๑๐(๑)/ ๕๐ ๕๔



กรมโรงงานอุตสาหกรรม  
ถนนพระรามที่ ๒ แขวงทุ่งพญาไท  
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๗ พฤษภาคม ๒๕๖๗

เรื่อง เปลี่ยนแปลงบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท ซีคोट จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน  
ลงวันที่ ๒๑ พฤษภาคม ๒๕๖๗

ตามคำขอที่อ้างถึง บริษัท ซีคोट จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๓๙  
สถานที่ตั้งเลขที่ ๒๓๙ ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร ขอเปลี่ยนแปลงบุคลากร  
ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้อยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์  
จำนวน ๒ ราย ได้แก่

๑) นายวัชรกานต์ ประมาคะเต

ทะเบียนเลขที่ ว-๒๓๙-จ-๐๐๑๕

๒) นายรัตนชัย ชอบทำกิจ

ทะเบียนเลขที่ ว-๒๓๙-จ-๐๐๓๐

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายพรต กลั่นกรอง)

รองอธิบดี ปฏิบัติราชการแทน  
อธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน

กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ

โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕

โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙

ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th



ภาคผนวก ข

---

ใบรับรองความสามารถห้องปฏิบัติการและขอบข่ายการรับรอง  
ห้องปฏิบัติการทดสอบ ตามมาตรฐาน ISO/IEC 17025  
จากสำนักงานมาตรฐานอุตสาหกรรม (สมอ.)



แบบ กมช./สมอ.๒  
Form NSC/TISI 2

ใบรับรองเลขที่ 24-LB0026  
(Certificate No.)

## ใบรับรองระบบงาน (Certificate of Accreditation)

อาศัยอำนาจตามความในพระราชบัญญัติการมาตรฐานแห่งชาติ พ.ศ. ๒๕๕๑  
(By Virtue of National Standardization Act B.E. 2551 (2008))

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม  
(Secretary-General, Thai Industrial Standards Institute)

ออกใบรับรองฉบับนี้ให้  
(Issues this certificate to)

บริษัท ซีคอต จำกัด ฝ่ายห้องปฏิบัติการทดสอบด้านสิ่งแวดล้อม  
(Secot Company Limited, Environmental Laboratory Division)

ตั้งอยู่เลขที่  
(Address)

๒๓๙ ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร  
(239 Rimklongprapa Road, Bangsue, Bangsue, Bangkok)

ได้รับการรับรองความสามารถ  
(Certificate of competence)

ตามมาตรฐานเลขที่ มอก. ๑๗๐๒๕ - ๒๕๖๑  
(Standard No. TIS 17025-2561 (2018) (ISO/IEC 17025: 2017))

ข้อกำหนดทั่วไปว่าด้วยความสามารถของ ห้องปฏิบัติการทดสอบและห้องปฏิบัติการสอบเทียบ  
(General requirements for the competence of testing and calibration laboratories)

หมายเลขการรับรองที่ ทดสอบ ๐๓๙๔  
(Accreditation No. Testing 0394)

โดยมีรายละเอียดสาขาและขอบข่ายที่ได้ใบรับรอง แสดงไว้ใน QR CODE และ [www.tisi.go.th](http://www.tisi.go.th)  
(Details of the scheme and scope of the certificate are shown in QR CODE and [www.tisi.go.th](http://www.tisi.go.th))

ออกให้ ณ วันที่ ๖ ธันวาคม พ.ศ. ๒๕๖๖  
(Issue date : 6 December B.E. 2566 (2023))

(นายวีระศักดิ์ เพ็งหล่ง)

ผู้อำนวยการสำนักงานคณะกรรมการการมาตรฐานแห่งชาติ  
ปฏิบัติราชการแทน

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม



Signed by สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม (สมอ.)  
Thai Industrial Standards Institute (TISI)  
Date: 2023-12-06T08:49:54.476+07:00  
d68cbe6b

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม  
(Ministry of Industry Thailand, Thai Industrial Standards Institute)



รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ  
(Scope of Accreditation for Testing)  
ใบรับรองเลขที่ 24-LB0026  
(Certification No. 24-LB0026)



ชื่อห้องปฏิบัติการ  
(Laboratory Name)

หมายเลขการรับรองที่  
(Accreditation No.)

ฉบับที่ 02  
(Issue No.02)

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

บริษัท ซีคอต จำกัด ฝ่ายห้องปฏิบัติการทดสอบด้านสิ่งแวดล้อม  
(Secot Company Limited, Environmental Laboratory Division)

ทดสอบ 0394  
(Testing 0394)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from) (30 October B.E.2566 (2023))

☒ ถาวร  
(Permanent)

☐ นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (environmental field)  1. น้ำและน้ำเสีย (water and wastewater)	- โลหะหนัก (heavy metals)  • สารหนู (Arsenic, As) 0.000 5 mg/L ถึง 0.090 0 mg/L  • สารหนู (Arsenic, As) 0.05 mg/L ถึง 4.50 mg/L  • แบเรียม (Barium, Ba) 0.02 mg/L ถึง 4.50 mg/L  • แคดเมียม (Cadmium, Cd) 0.01 mg/L ถึง 4.50 mg/L  • โครเมียม (Chromium, Cr) 0.01 mg/L ถึง 4.50 mg/L	- Standard Methods for the Examination of Water and Wastewater, APHA , AWWA, WEF, 23 <sup>rd</sup> edition , 2017, Part 3030 F and Part 3114 C  - Standard Methods for the Examination of Water and Wastewater, APHA , AWWA, WEF, 23 <sup>rd</sup> edition , 2017, Part 3030 E and Part 3120 B

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม  
(Ministry of Industry, Thai Industrial Standards Institute)

หน้า 1/9

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02

(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566

(Valid from)

(30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571

(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☐นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (environmental field)</p> <p>1. น้ำและน้ำเสีย (ต่อ) (water and wastewater) (cont.)</p>	<p>- โลหะหนัก (heavy metals)</p> <ul style="list-style-type: none"> <li>ทองแดง (Copper, Cu) 0.02 mg/L ถึง 4.50 mg/L</li> <li>เหล็ก (Iron, Fe) 0.05 mg/L ถึง 9.00 mg/L</li> <li>ตะกั่ว (Lead, Pb) 0.03 mg/L ถึง 4.50 mg/L</li> <li>แมงกานีส (Manganese, Mn) 0.01 mg/L ถึง 9.00 mg/L</li> <li>นิกเกิล (Nickel, Ni) 0.01 mg/L ถึง 4.50 mg/L</li> <li>สังกะสี (Zinc, Zn) 0.02 mg/L ถึง 9.00 mg/L</li> </ul>	<p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> edition, 2017, Part 3030 E and Part 3120 B</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02

(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566

(Valid from)

(30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571

(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☐นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (environmental field)</p> <p>1. น้ำและน้ำเสีย (ต่อ) (water and wastewater) (cont.)</p>	<p>- ซีโอดี (Chemical oxygen demand, COD) 100 mg/L ถึง 4 000 mg/L</p>	<p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> edition, 2017, Part 5220 D</p>
<p>2. บริเวณทำงาน (workplace)</p>	<p>- ฝุ่นละอองรวม (Total dust) 0.10 mg/filter ถึง 2.00 mg/filter</p> <p>- ฝุ่นละอองขนาดเล็ก (Respirable dust) 0.10 mg/filter ถึง 2.00 mg/filter</p>	<p>- NIOSH Manual of Analytical Methods (NMAM), method 0500, 4<sup>th</sup> edition, 15<sup>th</sup> August 1994 (Exclude Sampling)</p> <p>- NIOSH Manual of Analytical Methods (NMAM), method 0600, 4<sup>th</sup> edition, 15<sup>th</sup> January 1998 (Exclude Sampling)</p>



รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02  
(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from) (30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☐นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาส่งแวดล้อม (environmental field)</p> <p>2. บริเวณทำงาน (ต่อ) (workplace) (cont.)</p>	<ul style="list-style-type: none"> <li>เบนซีน (Benzene) 1.10 µg/tube ถึง 420 µg/tube</li> <li>โทลูอีน (Toluene) 1.10 µg/tube ถึง 420 µg/tube</li> <li>โทไทร์ไซลีน (Total xylenes) 2.20 µg/tube ถึง 840 µg/tube</li> <li>เมตา, พารา-ไซลีน (m, p- Xylene) 1.10 µg/tube ถึง 420 µg/tube</li> <li>ออร์โธ-ไซลีน (o- Xylene) 1.10 µg/tube ถึง 420 µg/tube</li> </ul>	<ul style="list-style-type: none"> <li>- NIOSH Manual of Analytical Methods (NMAM), method 1501, 4<sup>th</sup> edition, 15<sup>th</sup> March 2003 (Exclude Sampling)</li> </ul>
<p>3. ปล่องระบายอากาศ (stack)</p>	<ul style="list-style-type: none"> <li>ซัลเฟอร์ไดออกไซด์ (Sulfur dioxide) 1.00 mg/L ถึง 16 000 mg/L (solution)</li> </ul>	<ul style="list-style-type: none"> <li>- US.EPA, Code of Federal Regulations, 40 CFR 60 appendix A, method 6, July 2019 (Exclude Sampling)</li> </ul>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02  
(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from) (30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☐นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาส่งแวดล้อม (environmental field)</p> <p>3. ปล่องระบายอากาศ (ต่อ) (stack) (cont.)</p>	<ul style="list-style-type: none"> <li>ไฮโดรเจนฟลูออไรด์ (Hydrogen fluoride) 5 µg/sample ถึง 400 µg/sample</li> <li>ไฮโดรเจนคลอไรด์ (Hydrogen chloride) 5 µg/sample ถึง 400 µg/sample</li> </ul>	<ul style="list-style-type: none"> <li>- WI-7.2-1-22 based on US.EPA, Code of Federal Regulations, 40 CFR 60 appendix A, method 26, 2019 (Exclude Sampling)</li> </ul>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02  
(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from)  
(30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☒นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาส่งแวดล้อม (environmental field)</p> <p>4. บรรยากาศทั่วไป (ambient air)</p>	<p>สารอินทรีย์ระเหยง่าย (Volatile organic compounds, VOCs)</p> <ul style="list-style-type: none"> <li>คลอโรอีเทน (Chloroethene) 0.05 <math>\mu\text{g}/\text{m}^3</math> ถึง 51.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> <li>1,3-บิวทาไดเอิน (1,3-butadiene) 0.04 <math>\mu\text{g}/\text{m}^3</math> ถึง 44.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> <li>โบรมอมีเทน (Bromomethane) 0.08 <math>\mu\text{g}/\text{m}^3</math> ถึง 77.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> <li>อะคลอสีน (Acrolein) 0.05 <math>\mu\text{g}/\text{m}^3</math> ถึง 45.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> </ul>	<p>- WI-7.2-1-24 based on US EPA , Compendium Method TO-15 , EPA/625/R-96/010b, Second edition, January 1999</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02  
(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from)  
(30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☒นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาส่งแวดล้อม (environmental field)</p> <p>4. บรรยากาศทั่วไป (ต่อ) (ambient air) (cont.)</p>	<p>สารอินทรีย์ระเหยง่าย (Volatile organic compounds, VOCs)</p> <ul style="list-style-type: none"> <li>อะคริโนไนไทรล์ (Acrylonitrile) 0.04 <math>\mu\text{g}/\text{m}^3</math> ถึง 43.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> <li>ไดคลอโรมีเทน (Dichloromethane) 0.14 <math>\mu\text{g}/\text{m}^3</math> to 69.00 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> <li>คาร์บอนไดซัลไฟด์ (Carbon disulfide) 0.06 <math>\mu\text{g}/\text{m}^3</math> ถึง 62.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> <li>ไตรคลอโรมีเทน (Trichloromethane) 0.20 <math>\mu\text{g}/\text{m}^3</math> ถึง 97.00 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> <li>1,2-ไดคลอโรอีเทน (1,2-dichloroethane) 0.08 <math>\mu\text{g}/\text{m}^3</math> ถึง 80.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> </ul>	<p>- WI-7.2-1-24 based on US EPA , Compendium Method TO-15 , EPA/625/R-96/010b, Second edition, January 1999</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02  
(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from) (30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☒นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาส่งแวดล้อม (environmental field)</p> <p>4. บรรยากาศทั่วไป (ต่อ) (ambient air) (cont.)</p>	<p>- สารอินทรีย์ระเหยง่าย (Volatile organic compounds, VOCs)</p> <ul style="list-style-type: none"> <li>เบนซีน (Benzene) 0.06 <math>\mu\text{g}/\text{m}^3</math> ถึง 63.00 <math>\mu\text{g}/\text{m}^3</math> (0.02 ppbv ถึง 20.00 ppbv)</li> <li>คาร์บอนเตตระคลอไรด์ (Carbon tetrachloride) 0.25 <math>\mu\text{g}/\text{m}^3</math> ถึง 125 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> <li>ไตรคลอโรเอทิลีน (Trichloroethylene) 0.21 <math>\mu\text{g}/\text{m}^3</math> ถึง 107 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> <li>1,2-ไดคลอโรโพรเพน (1,2-dichloropropane) 0.18 <math>\mu\text{g}/\text{m}^3</math> ถึง 92.00 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> <li>เตตระคลอโรเอทิลีน (Tetrachloroethylene) 0.27 <math>\mu\text{g}/\text{m}^3</math> ถึง 135 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> </ul>	<p>- WI-7.2-1-24 based on US EPA , Compendium Method TO-15 , EPA/625/R-96/010b, Second edition, January 1999</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)



ฉบับที่ 02  
(Issue No.02)

ออกให้ตั้งแต่วันที่ 30 ตุลาคม พ.ศ. 2566  
(Valid from) (30 October B.E.2566 (2023))

ถึงวันที่ 8 กันยายน พ.ศ. 2571  
(Until) (8 September B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ  
(Laboratory status)

☒ถาวร  
(Permanent)

☒นอกสถานที่  
(Site)

☐ชั่วคราว  
(Temporary)

☐เคลื่อนที่  
(Mobile)

☐หลายสถานที่  
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาส่งแวดล้อม (environmental field)</p> <p>4. บรรยากาศทั่วไป (ต่อ) (ambient air) (cont.)</p>	<p>- สารอินทรีย์ระเหยง่าย (Volatile organic compounds, VOCs)</p> <ul style="list-style-type: none"> <li>1,2-ไดโบรมโอเอเทน (1,2-dibromoethane) 0.31 <math>\mu\text{g}/\text{m}^3</math> ถึง 153 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> <li>1,1,2,2-เตตระคลอโรอีเทน (1,1,2,2-tetrachloroethane) 0.69 <math>\mu\text{g}/\text{m}^3</math> ถึง 137 <math>\mu\text{g}/\text{m}^3</math> (0.10 ppbv ถึง 20.00 ppbv)</li> <li>เบนซิลคลอไรด์ (Benzyl chloride) 0.52 <math>\mu\text{g}/\text{m}^3</math> ถึง 103 <math>\mu\text{g}/\text{m}^3</math> (0.10 ppbv ถึง 20.00 ppbv)</li> <li>1,4-ไดคลอโรเบนซีน (1,4-dichlorobenzene) 0.24 <math>\mu\text{g}/\text{m}^3</math> ถึง 120 <math>\mu\text{g}/\text{m}^3</math> (0.04 ppbv ถึง 20.00 ppbv)</li> </ul>	<p>- WI-7.2-1-24 based on US EPA , Compendium Method TO-15 , EPA/625/R-96/010b, Second edition, January 1999</p>

ภาคผนวก ข

ใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์การทำงาน  
จากกรมสวัสดิการและคุ้มครองแรงงาน



แบบ กภ.บุญ  
นิติบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน  
ใบอนุญาต  
เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง

ใบอนุญาตเลขที่ ๑๔๑๓-๑๓-๒๕๖๕-๑๐๔๘

อนุญาตให้.....นรินทร์ ชีลนท. จั๊กด.....

เลขทะเบียนนิติบุคคล.....๑๑๑๕๕๓๖๑๑๑๙๗๖  
ตั้งอยู่เลขที่ ๒๓๙ ถนนริมคลองประปา แขวงนางซื่อ เขตนางซื่อ กรุงเทพมหานคร.....  
เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวงกำหนด  
มาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน  
เกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ในการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง  
ประกอบกับกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริม ความปลอดภัย อาชีวอนามัย  
และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติความปลอดภัย อาชีวอนามัย และสภาพแวดล้อม  
ในการทำงาน พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๕ ราย ดังรายชื่อแนบท้ายใบอนุญาตนี้

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๖ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕

(นายสมพจน์ กวางแก้ว)  
รองอธิบดี ปฏิบัติราชการแทน  
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

เลขทะเบียนควบคุม

๗-๑๓-๑๔๑๓-๑๔๘-๐๓-๖๕

(ลงนาม)..... (นายทะเบียน)

(นายศักดิ์ศิลป์ ทุลาธร)

ตำแหน่ง ผู้อำนวยการกองความปลอดภัยแรงงาน

รายชื่อบุคลากรแนบท้ายใบอนุญาต  
เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง  
ของบริษัท ซีคอท จำกัด  
ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๕-๐๐๔๘

- |                   |               |
|-------------------|---------------|
| ๑. นางสาวสุนันทา  | ศิริวัฒนานนท์ |
| ๒. นางสาวกนิษฐา   | เจริญเชื้อ    |
| ๓. นางสาวปัทมวรรณ | สุวรรณวิโรจน์ |
| ๔. นางสาวอลิษา    | คณิธรานนท์    |
| ๕. นางสาวชนิตา    | หล้าสาย       |

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๖ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน  
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

รายชื่อบุคลากร (เพิ่มเติม)  
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง  
ของบริษัท ซีคอท จำกัด  
ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๕-๐๐๔๘

- |                   |           |
|-------------------|-----------|
| ๑. นางสาวศลิษา    | อินริย์   |
| ๒. นางสาวมาริยานี | ฮานว      |
| ๓. นางสาววิระยา   | ปัจฉิมบุญ |

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มกราคม พ.ศ. ๒๕๖๖ ถึงวันที่ ๑๖ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๗ มกราคม พ.ศ. ๒๕๖๖



(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน  
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน



แบบ ภก.บญ  
นิติบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน

ใบอนุญาต

เป็นนิติบุคคลผู้ให้บริการตรวจวัดระดับความเข้มข้นของสารเคมีอันตราย  
ในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย

ใบอนุญาตเลขที่ ๑๒๐๑-๐๓-๒๕๖๕-๐๐๔๙

อนุญาตให้ นริษฐ์ ชีคอท. จำกัด

เลขทะเบียนนิติบุคคล ๑๑๑๕๕๓๖๐๐๐๙๗๖

ตั้งอยู่ เลขที่ ๒๓๙ ถนนวิมลทองประเสริฐ แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง  
กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อม  
ในการทำงานเกี่ยวกับสารเคมีอันตราย พ.ศ. ๒๕๕๖ ในการเป็นผู้ให้บริการตรวจวัดระดับความเข้มข้น  
ของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย ประกอบกับ  
กฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อม  
ในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน  
พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๑๔ ราย ดังรายชื่อแนบท้ายใบอนุญาตนี้

ทั้งนี้ ตั้งแต่วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕

(นายสมพงษ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

เลขทะเบียนควบคุม

ข-๓๓-๐๒๐๑-๐๔๙-๐๓-๖๕

(ลงนาม)

(นายทะเบียน)

(นายศักดิ์ศิลป์ ตูลาธร)

ผู้อำนวยการกองความปลอดภัยแรงงาน

รายชื่อบุคลากรแนบท้ายใบอนุญาต  
เป็นนิติบุคคลผู้ให้บริการตรวจวัดระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน  
และสถานที่เก็บรักษาสารเคมีอันตราย  
ของบริษัท ซีคอท จำกัด  
ใบอนุญาตเลขที่ ๐๒๐๑-๐๓-๒๕๖๕-๐๐๔๙

๑. นายชิตพล	สมประสงค์
๒. นายอนิวัฒน์	พิมวันนา
๓. นายศิวะนนท์	กุลวงษ์
๔. นายวัชรกานต์	ประมาคะเต
๕. นายธนโชติ	ช่างลือ
๖. นายกิตติพงศ์	กะแก้งสุข
๗. นายจิรวุฒิ	โคตรคำหาญ
๘. นายศุภกิจ	ติงมูกา
๙. นางสาวธัญลักษณ์	โยธา
๑๐. นางสาวทิพย์สุดา	วรรณการ
๑๑. นางสาวสายธาร	ภูเขียว
๑๒. นายภาคภูมิ	แทนไทย
๑๓. นายธนาวุฒิ	ด่วนแสง
๑๔. นายรัตนชัย	ชอบทำกิจ

ทั้งนี้ ตั้งแต่วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพงษ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน



แบบ กภ.บุญ  
นิติบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน

ใบอนุญาต

เป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตราย  
ในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย

ใบอนุญาตเลขที่ ๐๒๐๒-๐๓-๒๕๖๕-๐๐๓๙

อนุญาตให้ บริษัท ซีคอท จำกัด

เลขทะเบียนนิติบุคคล ๐๑๐๕๕๓๖๐๐๐๗๖

ตั้งอยู่ เลขที่ ๒๓๙ ถนนวิมลของประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง  
กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อม  
ในการทำงานเกี่ยวกับสารเคมีอันตราย พ.ศ. ๒๕๕๖ ในการเป็นผู้ให้บริการวิเคราะห์ระดับความเข้มข้น  
ของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย ประกอบกับ  
กฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อม  
ในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน  
พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๑๔ ราย ดังรายชื่อแนบท้ายใบอนุญาตนี้

ทั้งนี้ ตั้งแต่วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพงษ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน



รายชื่อบุคลากรแนบท้ายใบอนุญาต  
เป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน  
และสถานที่เก็บรักษาสารเคมีอันตราย  
ของบริษัท ซีคोट จำกัด  
ใบอนุญาตเลขที่ ๐๒๐๒-๐๓-๒๕๖๕-๐๐๓๔

๑. นางสาวนริสา	ภูวสรเพ็ชร์
๒. นางสาวอารยา	ทิพรัักษ์
๓. นางสาวศิริวรรณ	นิมสง่า
๔. นางสาวสุธาทิพย์	เทียนเตี้ย
๕. นางสาวพรนภา	บุตรธรรม
๖. นางสาวธาริณี	อาจปลิว
๗. นางสาวกฤษณา	จันทุม
๘. นางสาวพัชรา	สมานฉันท์
๙. นางสาวฉนิษฐา	กัยอ่อน
๑๐. นางสาวศศิภา	ใจดี
๑๑. นางสาวจุฑารัตน์	แจ่มเรือน
๑๒. นางสาวณัฐศิริ	เลิศธีรพัฒน์
๑๓. นางสาวสิญญลักษณ์	อินทประสิทธิ์
๑๔. นางสาวสุตาพร	สุนทร

ทั้งนี้ ตั้งแต่วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๖๘

ให้ไว้ ณ วันที่ ๑๕ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพนธ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน  
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

เลขทะเบียนควบคุม  
ข-๓๓-๐๒๐๒-๐๓๔-๖๑-๖๕

(ลงนาม)  (นายทะเบียน)

(นายศักดิ์ศิลป์ ชูลาธร)

ผู้อำนวยการกองความปลอดภัยแรงงาน