

ภาคผนวก ง

ใบรับรองผลการตรวจวัดและวิเคราะห์คุณภาพสิ่งแวดล้อม

ใบรับรองผลการตรวจวัดคุณภาพอากาศในบรรยากาศ

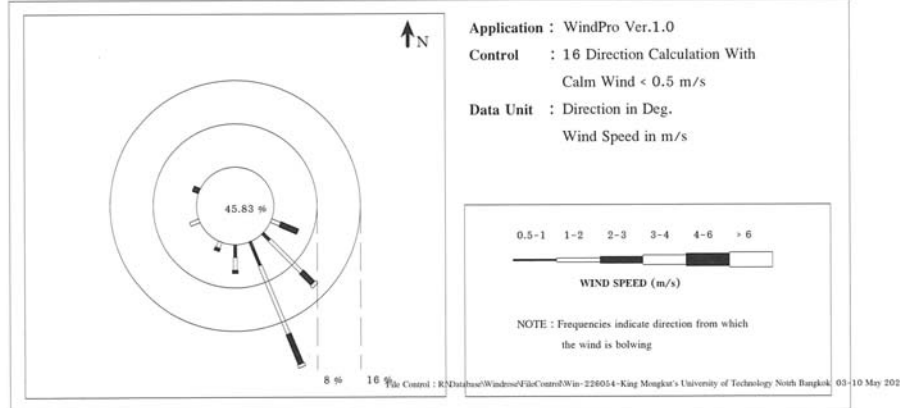


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 03-10 May 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

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	0.0179	0.0357	0.0000	0.0000	0.0000	0.0536
SE	0.0179	0.0833	0.0298	0.0060	0.0000	0.0000	0.1369
SSE	0.0476	0.1369	0.0595	0.0060	0.0000	0.0000	0.2500
S	0.0238	0.0238	0.0060	0.0000	0.0000	0.0000	0.0536
SSW	0.0000	0.0119	0.0060	0.0000	0.0000	0.0000	0.0179
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0179	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	0.0000	0.0000	0.0119	0.0000	0.0000	0.0000	0.0119
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	0.4583						



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



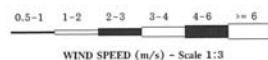
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 03-10 May 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

Time	03-04 May 2026		04-05 May 2026		05-06 May 2026		06-07 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
13:00 - 14:00	1.0	SSE	1.6	SSE	2.7	SE	1.4	S
14:00 - 15:00	1.5	SE	2.0	SSE	0.0	SE	1.2	SE
15:00 - 16:00	2.6	SSE	0.7	S	0.0	SE	1.3	SSE
16:00 - 17:00	0.7	SSE	0.7	S	1.6	SE	0.9	SSE
17:00 - 18:00	1.2	S	0.0	S	1.7	SE	1.0	SSE
18:00 - 19:00	0.8	S	0.0	S	0.0	SE	0.0	SSE
19:00 - 20:00	0.8	SE	0.0	S	0.0	SE	0.0	S
20:00 - 21:00	0.9	SSE	0.0	S	0.0	SE	0.0	SSE
21:00 - 22:00	1.3	SE	0.0	S	0.0	SE	1.0	SSE
22:00 - 23:00	0.8	SSE	0.7	SE	0.0	SE	0.0	SSE
23:00 - 24:00	1.2	SSE	1.9	SE	0.0	SE	0.0	SSE
00:00 - 01:00	1.3	SSE	1.5	SE	0.0	SE	0.0	SSE
01:00 - 02:00	1.9	SSE	0.0	SE	0.0	SE	0.0	SSE
02:00 - 03:00	1.6	SSE	0.0	SE	0.0	SE	0.0	SSE
03:00 - 04:00	1.7	SSE	0.6	SE	0.0	SE	0.0	SSE
04:00 - 05:00	2.8	SSE	0.0	SE	0.0	SE	0.0	SSE
05:00 - 06:00	1.1	SSE	0.0	SE	0.0	SE	0.0	SSE
06:00 - 07:00	1.2	SE	0.0	SE	0.0	SE	1.2	SSE
07:00 - 08:00	0.0	S	0.0	SE	0.0	ESE	0.0	SSE
08:00 - 09:00	0.7	SSE	0.0	SE	1.5	SSE	1.4	ESE
09:00 - 10:00	2.2	SSE	3.0	SE	2.1	S	2.6	ESE
10:00 - 11:00	2.0	SSE	2.5	ESE	1.9	SSE	1.6	SSE
11:00 - 12:00	1.4	SSE	2.7	ESE	2.2	SE	1.5	SE
12:00 - 13:00	1.2	SSW	2.0	SE	0.5	S	2.3	ESE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 03-10 May 2026

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Preeda S.
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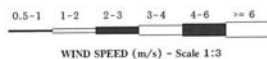
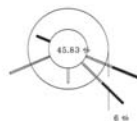
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 03-10 May 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

Time	07-08 May 2026		08-09 May 2026		09-10 May 2026		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
13:00 - 14:00	1.1	WSW	1.5	SSW	1.1	SSE	
14:00 - 15:00	1.4	WSW	3.0	SSE	0.0	SE	
15:00 - 16:00	1.4	WSW	1.0	SSE	1.3	SSE	
16:00 - 17:00	0.0	WSW	1.2	SE	0.0	SE	
17:00 - 18:00	1.7	ESE	1.9	SSE	0.0	SE	
18:00 - 19:00	1.3	ESE	0.6	SSE	0.0	SE	
19:00 - 20:00	0.0	ESE	1.0	SSE	2.1	SSE	
20:00 - 21:00	0.0	ESE	1.0	SSE	0.3	ESE	
21:00 - 22:00	0.0	ESE	1.0	SE	0.3	ESE	
22:00 - 23:00	0.0	ESE	0.0	SE	0.0	ESE	
23:00 - 24:00	0.0	ESE	0.0	SE	0.0	ESE	
00:00 - 01:00	0.0	ESE	0.0	SE	0.0	ESE	
01:00 - 02:00	0.0	ESE	0.0	SE	0.0	ESE	
02:00 - 03:00	0.0	ESE	0.0	SE	0.0	ESE	
03:00 - 04:00	0.0	ESE	0.0	SE	0.0	ESE	
04:00 - 05:00	0.0	ESE	0.0	SE	0.0	ESE	
05:00 - 06:00	2.0	WNW	0.0	SE	0.0	ESE	
06:00 - 07:00	2.2	SE	0.0	ESE	0.0	ESE	
07:00 - 08:00	2.0	SE	0.8	SSE	1.4	SE	
08:00 - 09:00	2.4	ESE	2.7	SSE	1.0	S	
09:00 - 10:00	2.6	ESE	2.6	SSE	0.4	SSW	
10:00 - 11:00	1.6	SE	2.3	SSE	1.5	SSE	
11:00 - 12:00	1.6	SE	0.5	SSE	2.3	SSW	
12:00 - 13:00	1.7	S	2.3	WNW	2.1	SSE	

Wind Rose



File Control : K:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 03-10 May 2026

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Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

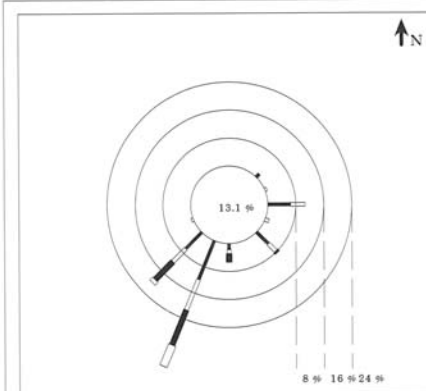


Meteorological Monitoring Results : Wind Rose

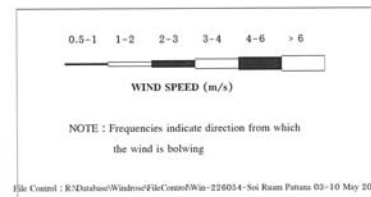
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:66
 Wind Direction Model : Scarlet WS-21 Serial No : AD:66

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	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
ENE	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
E	0.0655	0.0417	0.0000	0.0000	0.0000	0.0000	0.1071
ESE	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
SE	0.0476	0.0298	0.0060	0.0000	0.0000	0.0000	0.0833
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0179	0.0119	0.0238	0.0000	0.0000	0.0000	0.0536
SSW	0.1190	0.0952	0.1071	0.0655	0.0000	0.0000	0.3869
SW	0.0655	0.0536	0.0714	0.0119	0.0000	0.0000	0.2024
WSW	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
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	0.1310						



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



File Control : K:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 03-10 May 2026

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(Miss Preeda Somjai)
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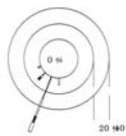
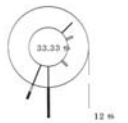
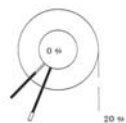
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:66
 Wind Direction Model : Scarlet WS-21 Serial No : AD:66

Time	03-04 May 2026		04-05 May 2026		05-06 May 2026		06-07 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	2.8	SSW	3.3	SSW	2.2	SSW	3.0	SSW
12:00 - 13:00	2.4	SW	3.8	SSW	1.3	ENE	3.4	SSW
13:00 - 14:00	2.6	SW	3.6	SSW	0.6	NE	3.7	SSW
14:00 - 15:00	2.8	SW	2.5	SSW	0.9	NE	2.9	SSW
15:00 - 16:00	3.1	SSW	1.8	SSW	1.3	SE	2.3	SW
16:00 - 17:00	2.7	SSW	0.9	SSW	0.8	SSW	1.7	SSW
17:00 - 18:00	2.6	SW	0.8	SSW	1.8	SSW	1.3	SSW
18:00 - 19:00	3.1	SSW	0.7	SSW	0.5	SSW	0.7	SSW
19:00 - 20:00	2.2	SSW	0.7	SSW	0.3	SSW	0.6	SSW
20:00 - 21:00	2.4	SSW	0.8	SSW	0.5	SSW	0.6	SSW
21:00 - 22:00	2.1	SW	1.9	SE	0.5	S	1.4	SSW
22:00 - 23:00	2.5	SW	0.8	SE	0.4	S	1.6	SSW
23:00 - 24:00	2.1	SSW	1.0	SE	0.4	S	1.1	SSW
00:00 - 01:00	2.6	SW	1.0	ESE	0.3	S	1.1	SSW
01:00 - 02:00	2.1	SSW	0.8	SE	0.3	S	0.7	SSW
02:00 - 03:00	2.4	SSW	0.9	SE	0.4	S	0.7	SSW
03:00 - 04:00	2.1	SSW	0.6	SE	0.4	S	0.6	SSW
04:00 - 05:00	2.1	SW	0.5	SE	0.5	S	0.8	SSW
05:00 - 06:00	1.3	SW	0.8	SE	0.4	S	0.9	SW
06:00 - 07:00	1.6	SW	0.9	SE	0.9	S	1.4	SW
07:00 - 08:00	1.8	SW	0.8	SE	2.1	S	1.1	WSW
08:00 - 09:00	2.3	SSW	1.0	SE	2.3	S	2.4	SSW
09:00 - 10:00	2.9	SSW	1.3	ESE	2.1	S	1.5	S
10:00 - 11:00	2.7	SSW	1.2	E	2.4	S	1.6	S

Wind Rose



File Control : K:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 03-10 May 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team



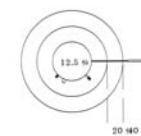
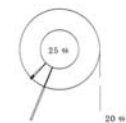
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:66
 Wind Direction Model : Scarlet WS-21 Serial No : AD:66

Time	07-08 May 2026		08-09 May 2026		09-10 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.9	SW	2.2	SW	2.5	SSW
12:00 - 13:00	2.0	SW	3.0	SSW	3.1	SSW
13:00 - 14:00	1.7	SSW	2.6	SE	3.4	SW
14:00 - 15:00	1.9	SSW	1.0	E	3.6	SW
15:00 - 16:00	1.9	SSW	0.8	E	2.9	SW
16:00 - 17:00	1.6	SSW	0.8	E	1.9	SW
17:00 - 18:00	1.2	SSW	0.9	E	1.2	SW
18:00 - 19:00	1.3	SSW	1.0	E	0.8	SW
19:00 - 20:00	1.0	SSW	0.8	E	0.6	SW
20:00 - 21:00	1.3	SSW	0.7	E	0.4	SW
21:00 - 22:00	0.7	SSW	0.4	E	0.5	SW
22:00 - 23:00	0.6	SSW	0.6	E	0.5	SW
23:00 - 24:00	0.4	SSW	0.6	E	0.3	SW
00:00 - 01:00	0.4	SSW	0.5	E	0.1	SW
01:00 - 02:00	0.5	SSW	0.3	E	0.5	SW
02:00 - 03:00	0.3	SSW	0.4	E	0.5	SW
03:00 - 04:00	0.4	SSW	0.5	E	0.4	SW
04:00 - 05:00	0.4	SSW	0.6	E	0.4	SW
05:00 - 06:00	0.4	SSW	0.9	E	0.6	SW
06:00 - 07:00	0.6	SSW	1.0	E	0.9	SW
07:00 - 08:00	0.9	SW	1.4	E	1.1	SW
08:00 - 09:00	0.9	SSW	1.1	E	2.1	SSW
09:00 - 10:00	0.6	SW	1.3	E	2.6	SSW
10:00 - 11:00	1.3	SW	1.6	SE	3.1	SSW

Wind Rose



File Control : K:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 03-10 May 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team

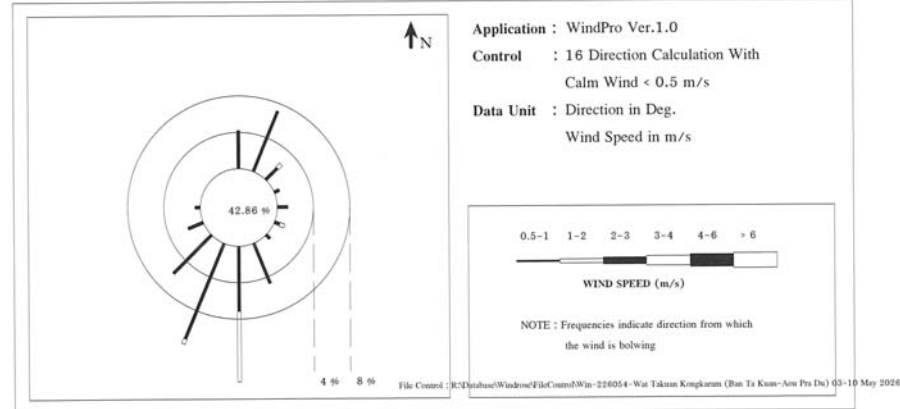


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:42
 Wind Direction Model : Scarlet WS-21 Serial No : AD:42

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0714	0.0000	0.0000	0.0000	0.0000	0.0000	0.0714
NE	0.0179	0.0060	0.0000	0.0000	0.0000	0.0000	0.0238
ENE	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
E	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
ESE	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
SE	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
SSE	0.0476	0.0000	0.0000	0.0000	0.0000	0.0000	0.0476
S	0.0714	0.0774	0.0000	0.0000	0.0000	0.0000	0.1488
SSW	0.1131	0.0060	0.0000	0.0000	0.0000	0.0000	0.1190
SW	0.0595	0.0000	0.0000	0.0000	0.0000	0.0000	0.0595
WSW	0.0179	0.0000	0.0000	0.0000	0.0000	0.0000	0.0179
W	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
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	0.4286						



(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 : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:42
 Wind Direction Model : Scarlet WS-21 Serial No : AD:42

Time	03-04 May 2026		04-05 May 2026		05-06 May 2026		06-07 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	0.9	S	1.1	S	0.8	S	0.8	S
12:00 - 13:00	0.9	SW	1.1	S	0.8	SW	1.0	S
13:00 - 14:00	1.0	SSW	1.1	S	0.5	N	1.1	S
14:00 - 15:00	0.9	SSW	0.9	S	0.4	NNE	1.1	S
15:00 - 16:00	0.9	S	0.8	SSW	0.4	WNW	0.9	S
16:00 - 17:00	0.8	SSE	0.7	SW	0.4	SW	0.6	SSW
17:00 - 18:00	0.9	SSE	0.7	SSW	0.0	NNW	0.3	W
18:00 - 19:00	0.8	S	0.7	SSW	0.0	NNW	0.3	WSW
19:00 - 20:00	0.6	SSW	0.5	S	0.2	N	0.4	WSW
20:00 - 21:00	0.6	SW	0.7	E	0.1	N	0.5	ESE
21:00 - 22:00	0.5	SW	1.1	NE	0.0	NNW	0.6	SE
22:00 - 23:00	0.7	SSW	0.9	NE	0.1	N	0.8	S
23:00 - 24:00	0.7	SSW	0.5	N	0.1	N	0.7	SSW
00:00 - 01:00	0.7	SSW	0.3	N	0.2	N	0.6	SSW
01:00 - 02:00	0.8	SSW	0.4	N	0.1	N	0.3	SW
02:00 - 03:00	0.7	SSW	0.3	N	0.1	N	0.6	SW
03:00 - 04:00	0.6	SW	0.0	N	0.4	N	0.5	WSW
04:00 - 05:00	0.4	W	0.0	N	0.0	NNW	0.6	NNE
05:00 - 06:00	0.4	WSW	0.0	NNW	0.2	N	0.4	N
06:00 - 07:00	0.5	W	0.1	NNE	0.6	NNE	0.6	NNE
07:00 - 08:00	0.8	SW	0.6	NNE	0.6	ENE	0.7	WSW
08:00 - 09:00	0.8	S	0.7	NNE	0.7	SSE	0.4	ENE
09:00 - 10:00	1.0	S	0.6	NNE	0.8	SSE	0.6	E
10:00 - 11:00	1.0	S	0.6	NE	0.7	SSE	0.7	S



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



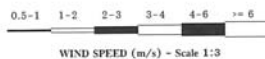
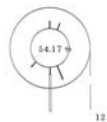
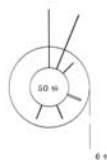
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:42
 Wind Direction Model : Scarlet WS-21 Serial No : AD:42

Time	07-08 May 2026		08-09 May 2026		09-10 May 2026		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
11:00 - 12:00	0.8	SSW	0.0	S	1.0	S	
12:00 - 13:00	0.7	SSW	0.8	SSW	0.8	NNE	
13:00 - 14:00	0.6	SSW	1.1	ESE	1.0	S	
14:00 - 15:00	0.7	SSW	0.8	NNE	1.1	S	
15:00 - 16:00	0.5	SSW	0.3	N	1.0	S	
16:00 - 17:00	0.6	SW	0.3	NNE	0.9	S	
17:00 - 18:00	0.4	SW	0.5	N	0.6	SW	
18:00 - 19:00	0.5	WSW	0.7	NNE	0.4	WSW	
19:00 - 20:00	0.3	W	0.5	N	0.2	NW	
20:00 - 21:00	0.4	W	0.4	N	0.2	NNW	
21:00 - 22:00	0.3	W	0.5	N	0.3	W	
22:00 - 23:00	0.2	NW	0.3	N	0.3	WSW	
23:00 - 24:00	0.3	N	0.3	N	0.2	W	
00:00 - 01:00	0.1	NNW	0.4	N	0.4	SW	
01:00 - 02:00	0.4	N	0.1	N	0.1	WNW	
02:00 - 03:00	0.3	N	0.1	N	0.0	NNW	
03:00 - 04:00	0.2	N	0.0	N	0.4	N	
04:00 - 05:00	0.4	N	0.0	N	0.4	N	
05:00 - 06:00	0.3	N	0.0	N	0.2	N	
06:00 - 07:00	0.5	NNE	0.5	N	0.4	NNE	
07:00 - 08:00	0.4	NNE	0.7	NNE	0.6	N	
08:00 - 09:00	0.4	NNE	0.7	NNE	0.7	SSE	
09:00 - 10:00	0.0	WSW	0.6	NE	0.8	SSE	
10:00 - 11:00	0.0	SE	0.8	SSE	1.0	S	

Wind Rose



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

File Control : R:\Database\Windrose\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 03-10 May 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team

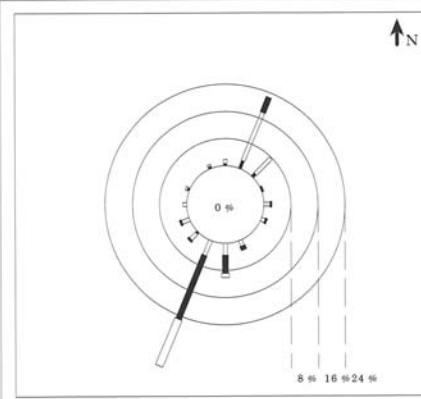


Meteorological Monitoring Results : Wind Rose

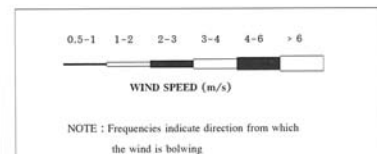
MTR-BST Site 1

Location : Boundary at NE of Plant (1-8) Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:67
 Wind Direction Model : Scarlet WS-21 Serial No : AD:67

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	0.0060	0.0119	0.0000	0.0000	0.0000	0.0000	0.0179
NNE	0.0238	0.1548	0.0476	0.0000	0.0000	0.0000	0.2262
NE	0.0119	0.0655	0.0000	0.0000	0.0000	0.0000	0.0774
ENE	0.0000	0.0000	0.0060	0.0000	0.0000	0.0000	0.0060
E	0.0000	0.0179	0.0060	0.0000	0.0000	0.0000	0.0238
ESE	0.0000	0.0119	0.0060	0.0000	0.0000	0.0000	0.0179
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0179	0.0119	0.0000	0.0000	0.0000	0.0298
S	0.0000	0.0357	0.0536	0.0119	0.0000	0.0000	0.1012
SSW	0.0000	0.0476	0.2024	0.1488	0.0000	0.0000	0.3988
SW	0.0060	0.0238	0.0060	0.0000	0.0000	0.0000	0.0357
WSW	0.0000	0.0238	0.0060	0.0000	0.0000	0.0000	0.0298
W	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
WNW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
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

File Control : R:\Database\Windrose\FileControl\Win-226054-Boundary at NE of Plant (1-8) 03-10 May 2026

(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 (1-8)

Monitor period : 03-10 May 2026

Wind Speed Model : Scarlet WS-21

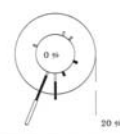
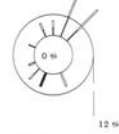
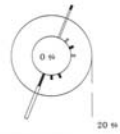
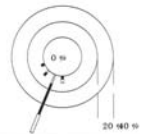
Serial No : AD:67

Wind Direction Model : Scarlet WS-21

Serial No : AD:67

Time	03-04 May 2026		04-05 May 2026		05-06 May 2026		06-07 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	2.7	SSW	3.3	SSW	1.6	NE	2.1	ESE
10:00 - 11:00	3.3	SSW	3.2	SSW	1.6	NE	2.1	S
11:00 - 12:00	3.6	SSW	3.2	SSW	1.2	SSE	2.3	S
12:00 - 13:00	2.3	SW	3.6	SSW	2.8	SSW	3.1	SSW
13:00 - 14:00	2.1	WSW	3.8	SSW	1.6	NNW	3.4	SSW
14:00 - 15:00	3.1	SSW	3.8	SSW	1.0	N	3.7	SSW
15:00 - 16:00	3.0	SSW	3.2	SSW	1.2	WSW	3.8	SSW
16:00 - 17:00	3.2	SSW	2.4	SSW	2.1	SSW	3.0	SSW
17:00 - 18:00	3.0	S	2.4	SSW	1.2	SW	2.2	S
18:00 - 19:00	3.3	SSW	3.0	SSW	0.8	SW	1.9	SSW
19:00 - 20:00	2.5	SSW	2.8	SSW	0.9	WNW	1.7	S
20:00 - 21:00	2.6	S	2.3	S	0.9	NNE	2.3	SSW
21:00 - 22:00	2.6	SSW	2.4	SSE	1.2	NNE	1.8	S
22:00 - 23:00	2.4	SSW	2.5	ENE	1.0	NNE	3.1	SSW
23:00 - 24:00	2.5	SSW	1.6	E	0.9	NNW	2.9	SSW
00:00 - 01:00	2.8	SSW	1.8	NNE	0.8	N	2.7	SSW
01:00 - 02:00	2.7	SSW	1.3	NNE	0.8	NE	2.5	SSW
02:00 - 03:00	2.3	SSW	1.4	NNE	0.8	NNE	2.5	SSW
03:00 - 04:00	2.4	SSW	2.1	NNE	1.0	NNE	2.5	SSW
04:00 - 05:00	1.9	SSW	1.7	NNE	0.9	NE	2.1	S
05:00 - 06:00	1.7	SW	1.6	NNE	0.8	NNE	1.3	NE
06:00 - 07:00	1.8	SSW	1.6	NNE	1.2	NE	1.2	NNE
07:00 - 08:00	1.8	SSW	1.7	NE	1.3	NE	2.0	SSE
08:00 - 09:00	2.5	SSW	1.6	NNE	1.8	SSE	1.2	WNW

Wind Rose



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

File Control R:\Database\Windrose\FireControl\Win-226054-Boundary at NE of Plant (1-8) 03-10 May 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Boundary at NE of Plant (1-8)

Monitor period : 03-10 May 2026

Wind Speed Model : Scarlet WS-21

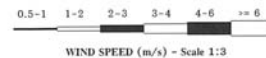
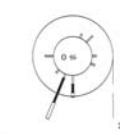
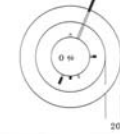
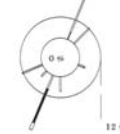
Serial No : AD:67

Wind Direction Model : Scarlet WS-21

Serial No : AD:67

Time	07-08 May 2026		08-09 May 2026		09-10 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	1.6	S	1.2	SSE	1.9	NE
10:00 - 11:00	1.7	ESE	1.3	SSW	1.7	E
11:00 - 12:00	3.1	SSW	2.0	S	2.7	SSW
12:00 - 13:00	2.2	SSW	2.6	SSW	2.8	S
13:00 - 14:00	2.5	SSW	2.6	SSW	3.0	S
14:00 - 15:00	2.1	SSW	2.6	E	3.6	SSW
15:00 - 16:00	2.2	SSW	1.6	NNE	3.7	SSW
16:00 - 17:00	1.8	S	1.0	N	3.8	SSW
17:00 - 18:00	2.3	SSW	1.1	E	3.1	SSW
18:00 - 19:00	1.6	SW	1.7	NNE	2.4	SSW
19:00 - 20:00	1.8	SSW	2.2	NNE	2.2	S
20:00 - 21:00	1.8	SSW	2.2	NNE	1.7	S
21:00 - 22:00	1.4	WSW	2.1	NNE	2.1	SSW
22:00 - 23:00	1.1	WSW	1.9	NNE	2.4	SSW
23:00 - 24:00	1.0	WSW	2.1	NNE	2.5	SSW
00:00 - 01:00	0.9	NNE	2.1	NNE	2.3	SSW
01:00 - 02:00	1.1	NE	1.7	NNE	1.7	SSW
02:00 - 03:00	1.5	NNE	1.6	NNE	1.4	SW
03:00 - 04:00	1.4	NNE	1.6	NNE	1.1	W
04:00 - 05:00	1.5	NNE	1.5	NNE	1.1	W
05:00 - 06:00	1.2	NE	1.5	NNE	1.4	NE
06:00 - 07:00	1.4	NNE	2.1	NNE	1.2	NNE
07:00 - 08:00	1.4	NNE	2.1	NNE	1.3	ESE
08:00 - 09:00	1.2	NE	1.9	NNE	1.4	S

Wind Rose



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

File Control R:\Database\Windrose\FireControl\Win-226054-Boundary at NE of Plant (1-8) 03-10 May 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

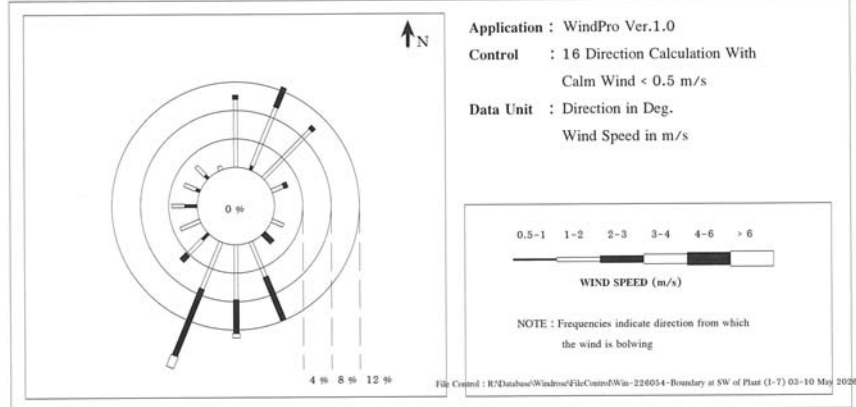


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Boundary at SW of Plant (1-7) Monitor period : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:64
 Wind Direction Model : Scarlet WS-21 Serial No : AD:64

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	0.0952	0.0060	0.0000	0.0000	0.0000	0.1012
NNE	0.0060	0.0893	0.0298	0.0000	0.0000	0.0000	0.1250
NE	0.0000	0.0952	0.0060	0.0000	0.0000	0.0000	0.1012
ENE	0.0000	0.0179	0.0060	0.0000	0.0000	0.0000	0.0238
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0179	0.0000	0.0000	0.0000	0.0000	0.0179
SE	0.0000	0.0000	0.0179	0.0000	0.0000	0.0000	0.0179
SSE	0.0000	0.0536	0.0655	0.0000	0.0000	0.0000	0.1190
S	0.0000	0.0774	0.0476	0.0060	0.0000	0.0000	0.1310
SSW	0.0000	0.0714	0.1012	0.0179	0.0000	0.0000	0.1905
SW	0.0119	0.0298	0.0119	0.0000	0.0000	0.0000	0.0536
WSW	0.0000	0.0298	0.0000	0.0000	0.0000	0.0000	0.0298
W	0.0179	0.0179	0.0000	0.0000	0.0000	0.0000	0.0357
WNW	0.0060	0.0179	0.0000	0.0000	0.0000	0.0000	0.0238
NW	0.0060	0.0179	0.0000	0.0000	0.0000	0.0000	0.0238
NNW	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (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 : 03-10 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:64
 Wind Direction Model : Scarlet WS-21 Serial No : AD:64

Time	03-04 May 2026		04-05 May 2026		05-06 May 2026		06-07 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	2.6	S	2.5	SSE	1.2	W	1.6	NE
11:00 - 12:00	2.2	SSE	2.5	SSE	1.5	S	1.2	S
12:00 - 13:00	2.1	SSW	2.7	SSE	2.2	S	1.5	S
13:00 - 14:00	2.3	S	2.8	SSE	1.2	NNW	1.4	NNE
14:00 - 15:00	2.5	S	2.6	SSE	0.9	W	1.1	NNE
15:00 - 16:00	2.4	SSE	2.0	SSE	1.4	SSW	1.4	WSW
16:00 - 17:00	2.2	SSE	2.0	S	1.6	SSW	1.9	SW
17:00 - 18:00	2.5	SE	2.0	S	1.1	SSW	1.4	SW
18:00 - 19:00	2.3	SE	2.1	SSE	1.0	SSW	0.7	SW
19:00 - 20:00	1.8	SSE	1.8	SSE	0.8	SW	1.1	WNW
20:00 - 21:00	1.7	SSE	1.9	SSE	1.4	N	1.2	NNE
21:00 - 22:00	1.6	SSE	1.8	ESE	2.2	N	1.4	NE
22:00 - 23:00	1.7	S	1.8	SSW	2.4	ENE	1.1	NNE
23:00 - 24:00	1.8	SSE	1.2	WSW	1.4	ENE	1.3	N
00:00 - 01:00	1.9	SSE	1.4	NW	1.3	NNE	1.1	N
01:00 - 02:00	1.6	S	0.9	NW	1.4	NE	1.2	NNE
02:00 - 03:00	1.9	S	1.0	WNW	1.3	NE	0.9	NNE
03:00 - 04:00	1.9	S	1.4	NW	1.9	NNE	1.4	NE
04:00 - 05:00	1.7	SSW	0.8	WNW	1.3	NNE	1.2	NE
05:00 - 06:00	1.7	S	0.8	W	1.4	NE	1.1	N
06:00 - 07:00	1.6	SSW	0.9	W	1.6	NE	1.4	N
07:00 - 08:00	1.8	S	1.0	W	1.3	NE	1.6	N
08:00 - 09:00	1.9	SSE	1.0	NW	1.5	NE	1.3	SSW
09:00 - 10:00	2.3	SSE	1.2	S	1.3	ENE	1.4	SSE

Wind Rose



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



Meteorological Monitoring Results : Wind Rose

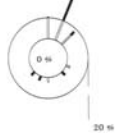
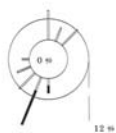
MTR-BST Site 1

Location : Boundary at SW of Plant (1-7)
Wind Speed Model : Scarlet WS-21
Wind Direction Model : Scarlet WS-21

Monitor period : 03-10 May 2026
Serial No : AD:64
Serial No : AD:64

Time	07-08 May 2026		08-09 May 2026		09-10 May 2026	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	2.8	SSW	1.9	S	2.2	SSW
11:00 - 12:00	2.5	SSW	2.8	SSW	2.5	SSW
12:00 - 13:00	2.1	SSW	2.4	SW	2.8	S
13:00 - 14:00	2.5	SSW	2.8	SE	3.2	SSW
14:00 - 15:00	2.3	SSW	2.1	NE	3.6	SSW
15:00 - 16:00	2.1	S	1.2	N	2.9	SSW
16:00 - 17:00	1.9	SSW	1.4	N	3.3	S
17:00 - 18:00	1.7	SW	1.3	N	2.4	SSW
18:00 - 19:00	1.6	SW	2.4	NNE	2.1	SSW
19:00 - 20:00	1.9	SW	2.1	NNE	2.4	SSW
20:00 - 21:00	1.5	WSW	1.7	N	2.2	SSW
21:00 - 22:00	1.3	W	1.5	N	2.6	SSW
22:00 - 23:00	1.3	WSW	1.8	NNE	2.2	SW
23:00 - 24:00	1.0	N	2.2	NNE	2.3	SSW
00:00 - 01:00	1.2	N	1.6	NE	1.5	SSW
01:00 - 02:00	1.7	N	1.2	NNE	1.7	SSW
02:00 - 03:00	1.3	N	1.6	NNE	1.1	WNW
03:00 - 04:00	1.7	NNE	1.2	NNE	1.3	WSW
04:00 - 05:00	1.1	NE	1.4	NE	1.2	ENE
05:00 - 06:00	1.5	NE	1.4	NNE	1.4	N
06:00 - 07:00	1.4	NNE	2.2	NNE	1.3	ESE
07:00 - 08:00	1.7	NE	2.1	NNE	1.2	S
08:00 - 09:00	1.3	S	1.5	NE	2.3	SSW
09:00 - 10:00	1.2	SSW	1.6	ESE	3.2	SSW

Wind Rose



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

File Control R:\Database\Windrose\FireControl\Win-226054-Boundary at SW of Plant (1-7) 03-10 May 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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239 RIMKLONGPRA 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. : 226054-Amb-2605-0049
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 03-09/05/2026
RECEIVED DATE : 13/05/2026 ANALYTICAL DATE : 19/05/2026
REPORT DATE : 22/05/2026 SAMPLE CONDITION : Normal
SITE OPERATOR : Mr. Song Hengchwankun
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	03/05/2026	ppm	<0.05	0.56	0.28	0.27	Flame Ionization
Hydrocarbon	04/05/2026	ppm	<0.05	0.20	0.08	0.25	Detection Method
(NMHC)	05/05/2026	ppm	<0.05	0.08	0.29	0.35	
	06/05/2026	ppm	<0.05	0.29	0.17	0.05	
	07/05/2026	ppm	<0.05	0.13	0.05	0.07	
	08/05/2026	ppm	<0.05	0.05	0.05	0.18	
	09/05/2026	ppm	<0.05	0.05	0.34	0.14	

(Miss Sudaporn Soonthorn)
Analyst

(Miss Narisa Poowasanpet)
Technical Management Team

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

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บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Amb-2605-0049
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 03-09/05/2026
RECEIVED DATE : 13/05/2026 ANALYTICAL DATE : 13/05/2026
REPORT DATE : 22/05/2026 SAMPLE CONDITION : Normal
SITE OPERATOR : Mr. Song Hengchwankun
LOCATION DESCRIPTION : 1. Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)
2. Boundary at NE of Plant (I-8)
3. Boundary at SW of Plant (I-7)

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	RESULTS			REFERENCE METHOD
				1	2	3	
Methyl Tertiary	03/05/2026	ppm	<0.01	ND	ND	ND	Modif.NIOSH 1615
Butyl Ether	04/05/2026	ppm	<0.01	ND	ND	ND	
(MTBE)	05/05/2026	ppm	<0.01	ND	ND	ND	
	06/05/2026	ppm	<0.01	ND	ND	ND	
	07/05/2026	ppm	<0.01	ND	ND	ND	
	08/05/2026	ppm	<0.01	ND	ND	ND	
	09/05/2026	ppm	<0.01	ND	ND	ND	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Miss Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Amb-2605-0049
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 03-09/05/2026
RECEIVED DATE : 13/05/2026 ANALYTICAL DATE : 19/05/2026
REPORT DATE : 22/05/2026 SAMPLE CONDITION : Normal
SITE OPERATOR : Mr. Song Hengchwankun
LOCATION DESCRIPTION : 1. King Mongkut's University of Technology North Bangkok (Rayong)
2. Soi Ruam Pattana

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	REFERENCE		METHOD
				1	2	
Total Hydrocarbon	03/05/2026	ppm	<0.10	4.92	4.52	Flame Ionization
(THC)	04/05/2026	ppm	<0.10	4.87	4.67	Detection Method
	05/05/2026	ppm	<0.10	5.22	4.50	
	06/05/2026	ppm	<0.10	5.13	4.93	
	07/05/2026	ppm	<0.10	5.29	4.66	
	08/05/2026	ppm	<0.10	4.97	4.10	
	09/05/2026	ppm	<0.10	4.80	4.91	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Miss Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor Period : 03-10 May 2026
Analyzer Model : API 200A Station No : SCT-15
Serial No : 2386 Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E Serial No : 1367
Calibration Gas Cylinder I.D. : EB0102326
Certified Date : 08 Jan 2026 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2027

Time	NOx Concentration (ppm)						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
11:00 - 12:00	0.0153	0.0153	0.0132	0.0185	0.0158	0.0142	0.0155
12:00 - 13:00	0.0138	0.0196	0.0150	0.0141	0.0197	0.0167	0.0182
13:00 - 14:00	0.0140	0.0154	0.0141	0.0153	0.0168	0.0165	0.0177
14:00 - 15:00	0.0161	0.0142	0.0202	0.0152	0.0153	0.0173	0.0194
15:00 - 16:00	0.0137	0.0134	0.0125	0.0184	0.0152	0.0155	0.0153
16:00 - 17:00	0.0144	0.0144	0.0131	0.0148	0.0145	0.0150	0.0170
17:00 - 18:00	0.0150	0.0158	0.0125	0.0130	0.0156	0.0147	0.0213
18:00 - 19:00	0.0140	0.0171	0.0150	0.0134	0.0131	0.0123	0.0155
19:00 - 20:00	0.0146	0.0184	0.0123	0.0142	0.0143	0.0145	0.0144
20:00 - 21:00	0.0136	0.0180	0.0133	0.0141	0.0136	0.0140	0.0150
21:00 - 22:00	0.0132	0.0148	0.0164	0.0134	0.0144	0.0152	0.0142
22:00 - 23:00	0.0125	0.0132	0.0172	0.0164	0.0119	0.0186	0.0164
23:00 - 00:00	0.0164	0.0131	0.0108	0.0185	0.0154	0.0126	0.0136
00:00 - 01:00	0.0125	0.0165	0.0125	0.0156	0.0185	0.0137	0.0129
01:00 - 02:00	0.0159	0.0145	0.0158	0.0122	0.0183	0.0165	0.0134
02:00 - 03:00	0.0119	0.0122	0.0176	0.0164	0.0126	0.0192	0.0167
03:00 - 04:00	0.0112	0.0143	0.0128	0.0185	0.0167	0.0152	0.0133
04:00 - 05:00	0.0125	0.0160	0.0114	0.0167	0.0184	0.0142	0.0132
05:00 - 06:00	0.0119	0.0164	0.0148	0.0145	0.0194	0.0165	0.0141
06:00 - 07:00	0.0156	0.0143	0.0184	0.0148	0.0131	0.0173	0.0160
07:00 - 08:00	0.0138	0.0128	0.0162	0.0201	0.0152	0.0172	0.0154
08:00 - 09:00	0.0156	0.0141	0.0136	0.0215	0.0163	0.0144	0.0147
09:00 - 10:00	0.0140	0.0154	0.0143	0.0137	0.0180	0.0175	0.0156
10:00 - 11:00	0.0162	0.0132	0.0156	0.0154	0.0192	0.0163	0.0149
Average-24Hr*	0.0141	0.0151	0.0145	0.0158	0.0159	0.0156	0.0156
Max-1Hr	0.0164	0.0196	0.0202	0.0215	0.0197	0.0192	0.0213
Min-1Hr	0.0112	0.0122	0.0108	0.0122	0.0119	0.0123	0.0129
Standard-1Hr	-						
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 : Oxides of Nitrogen MTR-BST Site 1

Location : Boundary at NE of Plant (I-8) Monitor Period : 03-10 May 2026
Analyzer Model : Teledyne T200 Station No : SCT-12
Serial No : 110 Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E Serial No : 1367
Calibration Gas Cylinder I.D. : EB0102326
Certified Date : 08 Jan 2026 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2027

Time	NOx Concentration (ppm)						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
09:00 - 10:00	0.0135	0.0146	0.0174	0.0123	0.0123	0.0137	0.0135
10:00 - 11:00	0.0145	0.0153	0.0155	0.0147	0.0123	0.0145	0.0144
11:00 - 12:00	0.0135	0.0134	0.0177	0.0136	0.0137	0.0154	0.0125
12:00 - 13:00	0.0113	0.0125	0.0146	0.0134	0.0123	0.0144	0.0114
13:00 - 14:00	0.0144	0.0125	0.0124	0.0145	0.0135	0.0157	0.0106
14:00 - 15:00	0.0135	0.0145	0.0137	0.0135	0.0124	0.0156	0.0096
15:00 - 16:00	0.0096	0.0117	0.0116	0.0125	0.0113	0.0137	0.0086
16:00 - 17:00	0.0107	0.0115	0.0127	0.0134	0.0095	0.0127	0.0074
17:00 - 18:00	0.0116	0.0136	0.0106	0.0136	0.0097	0.0113	0.0096
18:00 - 19:00	0.0103	0.0117	0.0105	0.0114	0.0125	0.0107	0.0107
19:00 - 20:00	0.0114	0.0105	0.0096	0.0116	0.0105	0.0104	0.0075
20:00 - 21:00	0.0117	0.0115	0.0093	0.0115	0.0103	0.0113	0.0083
21:00 - 22:00	0.0087	0.0104	0.0094	0.0105	0.0085	0.0095	0.0075
22:00 - 23:00	0.0077	0.0094	0.0085	0.0094	0.0106	0.0095	0.0095
23:00 - 00:00	0.0094	0.0094	0.0086	0.0084	0.0093	0.0095	0.0086
00:00 - 01:00	0.0114	0.0103	0.0083	0.0105	0.0085	0.0107	0.0097
01:00 - 02:00	0.0096	0.0095	0.0105	0.0113	0.0086	0.0115	0.0116
02:00 - 03:00	0.0087	0.0106	0.0095	0.0097	0.0105	0.0087	0.0094
03:00 - 04:00	0.0075	0.0096	0.0114	0.0104	0.0073	0.0085	0.0097
04:00 - 05:00	0.0126	0.0124	0.0123	0.0087	0.0093	0.0075	0.0103
05:00 - 06:00	0.0133	0.0113	0.0114	0.0086	0.0125	0.0095	0.0096
06:00 - 07:00	0.0137	0.0135	0.0143	0.0096	0.0115	0.0105	0.0085
07:00 - 08:00	0.0135	0.0157	0.0144	0.0145	0.0144	0.0114	0.0106
08:00 - 09:00	0.0115	0.0165	0.0135	0.0137	0.0128	0.0123	0.0165
Average-24Hr*	0.0114	0.0122	0.0120	0.0117	0.0110	0.0116	0.0102
Max-1Hr	0.0145	0.0165	0.0177	0.0147	0.0144	0.0157	0.0165
Min-1Hr	0.0075	0.0094	0.0083	0.0084	0.0073	0.0075	0.0074
Standard-1Hr	-						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(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 : 03-10 May 2026
Analyzer Model : Thermo 42C	Station No : SCT-14
Serial No : 0426708263	Site Operator : Mr. Song Hengchwankun
Calibrator Model : Teledyne 700E	Serial No : 1367
Calibration Gas Cylinder I.D. : EB0102326	
Certified Date : 08 Jan 2026	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2027	

Time	NOx Concentration (ppm)						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 - 11:00	0.0148	0.0148	0.0140	0.0148	0.0152	0.0145	0.0131
11:00 - 12:00	0.0156	0.0153	0.0164	0.0137	0.0156	0.0134	0.0140
12:00 - 13:00	0.0144	0.0143	0.0139	0.0145	0.0123	0.0125	0.0123
13:00 - 14:00	0.0134	0.0140	0.0130	0.0124	0.0133	0.0109	0.0106
14:00 - 15:00	0.0133	0.0138	0.0152	0.0178	0.0116	0.0108	0.0124
15:00 - 16:00	0.0134	0.0166	0.0131	0.0168	0.0113	0.0113	0.0112
16:00 - 17:00	0.0117	0.0123	0.0139	0.0152	0.0131	0.0115	0.0105
17:00 - 18:00	0.0115	0.0112	0.0131	0.0135	0.0105	0.0123	0.0113
18:00 - 19:00	0.0113	0.0114	0.0118	0.0143	0.0126	0.0111	0.0116
19:00 - 20:00	0.0102	0.0105	0.0116	0.0126	0.0123	0.0112	0.0097
20:00 - 21:00	0.0105	0.0107	0.0124	0.0123	0.0130	0.0101	0.0093
21:00 - 22:00	0.0123	0.0120	0.0144	0.0105	0.0133	0.0120	0.0105
22:00 - 23:00	0.0109	0.0111	0.0125	0.0126	0.0131	0.0132	0.0102
23:00 - 00:00	0.0117	0.0121	0.0109	0.0112	0.0122	0.0111	0.0131
00:00 - 01:00	0.0121	0.0143	0.0114	0.0101	0.0120	0.0122	0.0124
01:00 - 02:00	0.0124	0.0111	0.0113	0.0095	0.0104	0.0096	0.0100
02:00 - 03:00	0.0111	0.0102	0.0111	0.0106	0.0105	0.0101	0.0112
03:00 - 04:00	0.0118	0.0101	0.0122	0.0124	0.0124	0.0088	0.0120
04:00 - 05:00	0.0102	0.0092	0.0121	0.0113	0.0112	0.0102	0.0107
05:00 - 06:00	0.0106	0.0117	0.0133	0.0102	0.0106	0.0096	0.0103
06:00 - 07:00	0.0123	0.0134	0.0141	0.0147	0.0115	0.0116	0.0133
07:00 - 08:00	0.0144	0.0127	0.0170	0.0134	0.0113	0.0144	0.0136
08:00 - 09:00	0.0159	0.0143	0.0138	0.0140	0.0118	0.0134	0.0143
09:00 - 10:00	0.0136	0.0169	0.0155	0.0136	0.0150	0.0179	0.0143
Average-24Hr*	0.0125	0.0127	0.0133	0.0130	0.0123	0.0118	0.0117
Max-1Hr	0.0159	0.0169	0.0170	0.0178	0.0156	0.0179	0.0143
Min-1Hr	0.0102	0.0092	0.0109	0.0095	0.0104	0.0088	0.0093
Standard-1Hr	-						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



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

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)	Monitor Period : 03-10 May 2026
Analyzer Model : API 200A	Station No : SCT-15
Serial No : 2386	Site Operator : Mr. Song Hengchwankun
Calibrator Model : Teledyne 700E	Serial No : 1367
Calibration Gas Cylinder I.D. : EB0102326	
Certified Date : 08 Jan 2026	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2027	

Time	NO2 Concentration (ppm)						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
11:00 - 12:00	0.0115	0.0098	0.0098	0.0095	0.0094	0.0096	0.0096
12:00 - 13:00	0.0108	0.0098	0.0098	0.0096	0.0098	0.0097	0.0095
13:00 - 14:00	0.0099	0.0098	0.0099	0.0095	0.0098	0.0095	0.0095
14:00 - 15:00	0.0102	0.0099	0.0101	0.0095	0.0106	0.0096	0.0096
15:00 - 16:00	0.0109	0.0107	0.0100	0.0095	0.0100	0.0100	0.0098
16:00 - 17:00	0.0114	0.0108	0.0104	0.0095	0.0102	0.0104	0.0098
17:00 - 18:00	0.0104	0.0101	0.0101	0.0093	0.0100	0.0100	0.0096
18:00 - 19:00	0.0101	0.0101	0.0100	0.0092	0.0096	0.0096	0.0095
19:00 - 20:00	0.0101	0.0105	0.0100	0.0092	0.0094	0.0095	0.0095
20:00 - 21:00	0.0101	0.0104	0.0101	0.0092	0.0093	0.0096	0.0116
21:00 - 22:00	0.0104	0.0104	0.0099	0.0091	0.0092	0.0093	0.0121
22:00 - 23:00	0.0108	0.0104	0.0094	0.0092	0.0092	0.0095	0.0114
23:00 - 00:00	0.0109	0.0104	0.0094	0.0092	0.0134	0.0094	0.0107
00:00 - 01:00	0.0109	0.0100	0.0092	0.0092	0.0112	0.0095	0.0108
01:00 - 02:00	0.0105	0.0114	0.0093	0.0092	0.0102	0.0095	0.0106
02:00 - 03:00	0.0104	0.0105	0.0094	0.0096	0.0104	0.0093	0.0109
03:00 - 04:00	0.0100	0.0104	0.0081	0.0097	0.0097	0.0094	0.0120
04:00 - 05:00	0.0097	0.0105	0.0104	0.0093	0.0095	0.0092	0.0116
05:00 - 06:00	0.0100	0.0106	0.0097	0.0093	0.0094	0.0091	0.0122
06:00 - 07:00	0.0100	0.0110	0.0101	0.0092	0.0093	0.0091	0.0133
07:00 - 08:00	0.0104	0.0108	0.0096	0.0092	0.0093	0.0092	0.0099
08:00 - 09:00	0.0104	0.0106	0.0095	0.0094	0.0094	0.0093	0.0121
09:00 - 10:00	0.0098	0.0100	0.0095	0.0094	0.0094	0.0095	0.0135
10:00 - 11:00	0.0097	0.0098	0.0096	0.0092	0.0100	0.0095	0.0122
Average-24Hr*	0.0104	0.0104	0.0097	0.0093	0.0099	0.0095	0.0109
Max-1Hr	0.0115	0.0114	0.0104	0.0097	0.0134	0.0104	0.0135
Min-1Hr	0.0097	0.0098	0.0081	0.0091	0.0092	0.0091	0.0095
Standard-1Hr	0.12 ppm						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



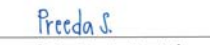
Ambient Air Monitoring Results : Nitrogen dioxide MTR-BST Site 1

Location : Boundary at NE of Plant (1-8)	Monitor Period : 03-10 May 2026
Analyzer Model : Teledyne T200	Station No : SCT-12
Serial No : 110	Site Operator : Mr. Song Hengchwankun
Calibrator Model : Teledyne 700E	Serial No : 1367
Calibration Gas Cylinder I.D. : EB0102326	
Certified Date : 08 Jan 2026	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2027	

Time	NO2 Concentration (ppm)						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
09:00 - 10:00	0.0093	0.0088	0.0146	0.0074	0.0045	0.0090	0.0107
10:00 - 11:00	0.0089	0.0135	0.0118	0.0079	0.0054	0.0087	0.0116
11:00 - 12:00	0.0077	0.0096	0.0140	0.0067	0.0060	0.0114	0.0107
12:00 - 13:00	0.0035	0.0056	0.0098	0.0086	0.0044	0.0085	0.0095
13:00 - 14:00	0.0116	0.0046	0.0085	0.0117	0.0108	0.0139	0.0089
14:00 - 15:00	0.0106	0.0098	0.0109	0.0106	0.0095	0.0137	0.0067
15:00 - 16:00	0.0029	0.0088	0.0089	0.0048	0.0073	0.0110	0.0069
16:00 - 17:00	0.0068	0.0087	0.0099	0.0075	0.0078	0.0069	0.0015
17:00 - 18:00	0.0097	0.0119	0.0077	0.0067	0.0068	0.0075	0.0057
18:00 - 19:00	0.0054	0.0089	0.0076	0.0096	0.0087	0.0090	0.0060
19:00 - 20:00	0.0084	0.0068	0.0058	0.0098	0.0067	0.0065	0.0037
20:00 - 21:00	0.0090	0.0078	0.0066	0.0085	0.0055	0.0085	0.0034
21:00 - 22:00	0.0060	0.0074	0.0066	0.0057	0.0056	0.0075	0.0048
22:00 - 23:00	0.0048	0.0065	0.0058	0.0074	0.0077	0.0067	0.0057
23:00 - 00:00	0.0064	0.0056	0.0038	0.0046	0.0055	0.0067	0.0058
00:00 - 01:00	0.0087	0.0085	0.0084	0.0076	0.0017	0.0089	0.0070
01:00 - 02:00	0.0079	0.0066	0.0077	0.0084	0.0058	0.0087	0.0088
02:00 - 03:00	0.0050	0.0078	0.0058	0.0058	0.0066	0.0059	0.0055
03:00 - 04:00	0.0037	0.0068	0.0075	0.0064	0.0024	0.0066	0.0079
04:00 - 05:00	0.0087	0.0106	0.0105	0.0058	0.0074	0.0016	0.0073
05:00 - 06:00	0.0105	0.0073	0.0076	0.0047	0.0047	0.0036	0.0059
06:00 - 07:00	0.0098	0.0088	0.0125	0.0028	0.0087	0.0066	0.0024
07:00 - 08:00	0.0116	0.0118	0.0115	0.0117	0.0117	0.0025	0.0047
08:00 - 09:00	0.0066	0.0117	0.0077	0.0068	0.0047	0.0085	0.0111
Average-24Hr*	0.0076	0.0085	0.0087	0.0074	0.0065	0.0079	0.0068
Max-1Hr	0.0116	0.0135	0.0146	0.0117	0.0117	0.0139	0.0116
Min-1Hr	0.0029	0.0046	0.0038	0.0028	0.0017	0.0016	0.0015
Standard-1Hr	0.12 ppm						
Standard-24Hr	-						

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


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Preeda Somjai)
Technical Management Team



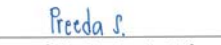
Ambient Air Monitoring Results : Nitrogen dioxide MTR-BST Site 1

Location : Boundary at SW of Plant (1-7)	Monitor Period : 03-10 May 2026
Analyzer Model : Thermo 42C	Station No : SCT-14
Serial No : 0426708263	Site Operator : Mr. Song Hengchwankun
Calibrator Model : Teledyne 700E	Serial No : 1367
Calibration Gas Cylinder I.D. : EB0102326	
Certified Date : 08 Jan 2026	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2027	

Time	NO2 Concentration (ppm)						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 - 11:00	0.0104	0.0099	0.0135	0.0123	0.0107	0.0104	0.0107
11:00 - 12:00	0.0102	0.0088	0.0119	0.0111	0.0105	0.0094	0.0119
12:00 - 13:00	0.0092	0.0085	0.0121	0.0119	0.0096	0.0094	0.0108
13:00 - 14:00	0.0103	0.0081	0.0113	0.0115	0.0096	0.0081	0.0103
14:00 - 15:00	0.0100	0.0110	0.0104	0.0109	0.0096	0.0085	0.0111
15:00 - 16:00	0.0103	0.0100	0.0089	0.0111	0.0098	0.0085	0.0109
16:00 - 17:00	0.0095	0.0096	0.0086	0.0090	0.0092	0.0098	0.0083
17:00 - 18:00	0.0106	0.0097	0.0090	0.0095	0.0084	0.0118	0.0100
18:00 - 19:00	0.0112	0.0085	0.0094	0.0107	0.0102	0.0096	0.0103
19:00 - 20:00	0.0102	0.0100	0.0093	0.0095	0.0098	0.0095	0.0084
20:00 - 21:00	0.0093	0.0082	0.0087	0.0105	0.0119	0.0082	0.0082
21:00 - 22:00	0.0101	0.0093	0.0092	0.0095	0.0093	0.0096	0.0095
22:00 - 23:00	0.0092	0.0108	0.0103	0.0085	0.0084	0.0105	0.0092
23:00 - 00:00	0.0097	0.0099	0.0084	0.0089	0.0089	0.0094	0.0084
00:00 - 01:00	0.0090	0.0089	0.0094	0.0094	0.0087	0.0103	0.0103
01:00 - 02:00	0.0085	0.0089	0.0087	0.0075	0.0079	0.0084	0.0075
02:00 - 03:00	0.0087	0.0086	0.0082	0.0087	0.0082	0.0091	0.0085
03:00 - 04:00	0.0084	0.0089	0.0092	0.0097	0.0088	0.0074	0.0083
04:00 - 05:00	0.0086	0.0083	0.0100	0.0092	0.0113	0.0085	0.0085
05:00 - 06:00	0.0093	0.0093	0.0105	0.0099	0.0087	0.0084	0.0092
06:00 - 07:00	0.0115	0.0118	0.0087	0.0098	0.0096	0.0104	0.0114
07:00 - 08:00	0.0096	0.0113	0.0095	0.0106	0.0103	0.0111	0.0104
08:00 - 09:00	0.0082	0.0086	0.0093	0.0107	0.0109	0.0114	0.0099
09:00 - 10:00	0.0107	0.0143	0.0137	0.0104	0.0095	0.0107	0.0100
Average-24Hr*	0.0097	0.0096	0.0099	0.0100	0.0096	0.0095	0.0097
Max-1Hr	0.0115	0.0143	0.0137	0.0123	0.0119	0.0118	0.0119
Min-1Hr	0.0082	0.0081	0.0082	0.0075	0.0079	0.0074	0.0075
Standard-1Hr	0.12 ppm						
Standard-24Hr	-						

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


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Preeda Somjai)
Technical Management Team

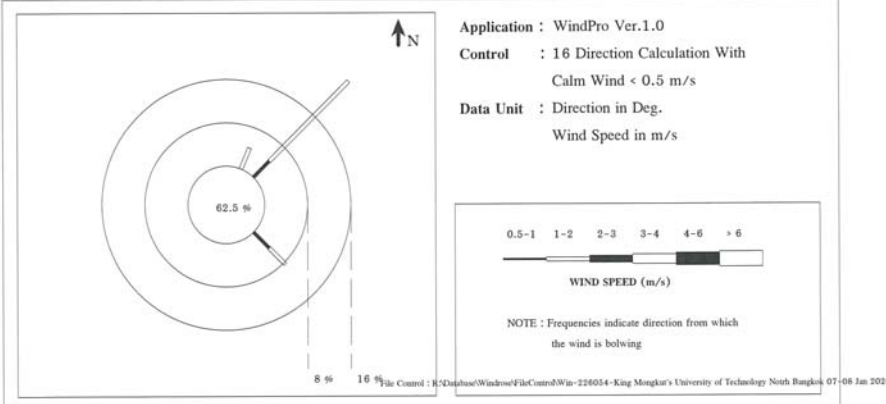


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 07-08 Jan 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:63
 Wind Direction Model : Scarlet WS-21 Serial No : AD:63

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NE	0.0417	0.2083	0.0000	0.0000	0.0000	0.0000	0.2500
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.6250						



(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 : 07-08 Jan 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:63
 Wind Direction Model : Scarlet WS-21 Serial No : AD:63

Time	07-08 Jan 2026	
	WS(m/s)	WD
16:00 - 17:00	1.0	SE
17:00 - 18:00	0.5	SE
18:00 - 19:00	0.0	W
19:00 - 20:00	0.0	WNW
20:00 - 21:00	0.0	NW
21:00 - 22:00	0.0	NW
22:00 - 23:00	0.0	W
23:00 - 24:00	0.0	W
00:00 - 01:00	0.0	NW
01:00 - 02:00	0.0	NE
02:00 - 03:00	0.0	NNE
03:00 - 04:00	0.1	WNW
04:00 - 05:00	0.1	NE
05:00 - 06:00	0.2	NNE
06:00 - 07:00	0.2	NNE
07:00 - 08:00	0.8	NE
08:00 - 09:00	1.4	NE
09:00 - 10:00	1.6	NE
10:00 - 11:00	1.8	NE
11:00 - 12:00	1.7	NE
12:00 - 13:00	1.5	NE
13:00 - 14:00	1.4	NNE
14:00 - 15:00	0.1	NE
15:00 - 16:00	0.1	NNE

Wind Rose



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team

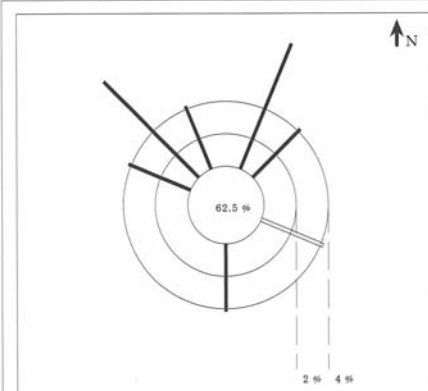


Meteorological Monitoring Results : Wind Rose

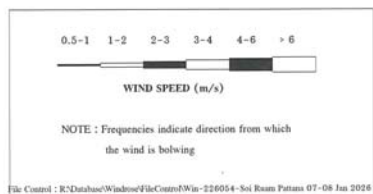
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 07-08 Jan 2026
 Wind Speed Model : NRG Symphonie Serial No : 428003640
 Wind Direction Model : NRG Symphonie Serial No : 428003640

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	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
NE	0.0417	0.0000	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	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
NNW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
CALM	0.6250						



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



(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 : 07-08 Jan 2026
 Wind Speed Model : NRG Symphonie Serial No : 428003640
 Wind Direction Model : NRG Symphonie Serial No : 428003640

Time	07-08 Jan 2026	
	WS(m/s)	WD
14:00 - 15:00	0.2	NNW
15:00 - 16:00	0.3	NNW
16:00 - 17:00	0.5	NNW
17:00 - 18:00	0.3	NNE
18:00 - 19:00	0.2	ESE
19:00 - 20:00	1.1	ESE
20:00 - 21:00	0.1	SE
21:00 - 22:00	0.2	SE
22:00 - 23:00	0.3	S
23:00 - 24:00	0.7	NNE
00:00 - 01:00	0.5	NNE
01:00 - 02:00	0.7	NE
02:00 - 03:00	0.3	SE
03:00 - 04:00	0.1	SSW
04:00 - 05:00	0.2	SSW
05:00 - 06:00	0.3	WSW
06:00 - 07:00	0.5	WNW
07:00 - 08:00	0.6	NW
08:00 - 09:00	0.8	NW
09:00 - 10:00	0.3	NW
10:00 - 11:00	0.2	NNW
11:00 - 12:00	0.2	NNW
12:00 - 13:00	0.3	S
13:00 - 14:00	0.5	S

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 07-08 Jan 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team

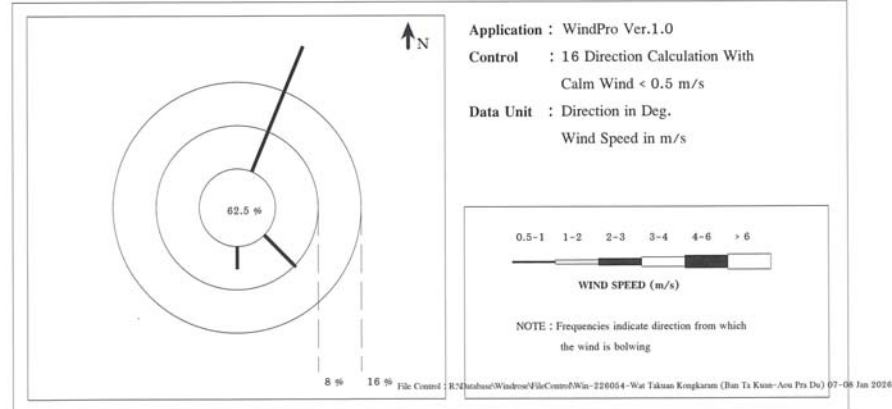


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 07-08 Jan 2026
 Wind Speed Model : NRG Symphonie Serial No : 309012348
 Wind Direction Model : NRG Symphonie Serial No : 309012348

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	0.2500	0.0000	0.0000	0.0000	0.0000	0.0000	0.2500
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	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.6250						



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



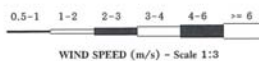
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 07-08 Jan 2026
 Wind Speed Model : NRG Symphonie Serial No : 309012348
 Wind Direction Model : NRG Symphonie Serial No : 309012348

Time	07-08 Jan 2026	
	WS(m/s)	WD
09:00 - 10:00	0.6	SE
10:00 - 11:00	0.4	ESE
11:00 - 12:00	0.9	SE
12:00 - 13:00	0.8	S
13:00 - 14:00	0.6	NNE
14:00 - 15:00	0.5	NNE
15:00 - 16:00	0.4	NNE
16:00 - 17:00	0.5	NNE
17:00 - 18:00	0.4	SSE
18:00 - 19:00	0.3	SSE
19:00 - 20:00	0.3	S
20:00 - 21:00	0.5	NNE
21:00 - 22:00	0.3	NNE
22:00 - 23:00	0.3	NNE
23:00 - 24:00	0.3	NNE
00:00 - 01:00	0.3	NNE
01:00 - 02:00	0.5	NNE
02:00 - 03:00	0.4	NNE
03:00 - 04:00	0.4	N
04:00 - 05:00	0.3	N
05:00 - 06:00	0.3	N
06:00 - 07:00	0.5	NNE
07:00 - 08:00	0.4	NNE
08:00 - 09:00	0.3	NNE

Wind Rose



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0052/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 07-08/01/2026	ANALYTICAL DATE	: 12-15/01/2026
SAMPLING TIME	: 15:54-15:00	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 09/01/2026	FILE CODE	: 226054_TO-15_January
REPORT DATE	: 17/01/2026		

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	$\mu\text{g}/\text{m}^3$	
	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, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen
(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

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.

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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.	: 0052/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 07-08/01/2026	ANALYTICAL DATE	: 13-15/01/2026
SAMPLING TIME	: 15:50-14:55	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 09/01/2026	FILE CODE	: 226054_TO-15_January
REPORT DATE	: 17/01/2026		

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, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen
(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Technical Management Team

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

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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.	: 0052/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 07-08/01/2026	ANALYTICAL DATE	: 13-15/01/2026
SAMPLING TIME	: 15:35-14:41	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 09/01/2026	FILE CODE	: 226054_TO-15_January
REPORT DATE	: 17/01/2026		

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

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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).

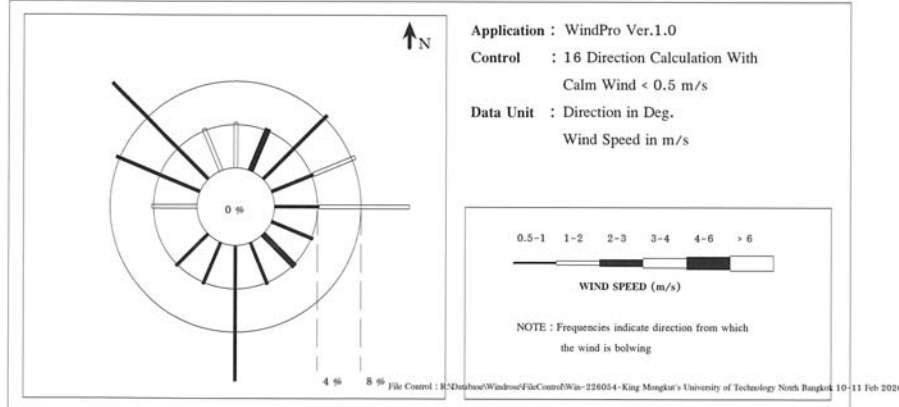
R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 10-11 Feb 2026



Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location	: King Mongkut's University of Technology North Bangkok	Monitor period	: 10-11 Feb 2026
Wind Speed Model	: Scarlet WS-21	Serial No	: AD:42
Wind Direction Model	: Scarlet WS-21	Serial No	: AD:42

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	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
NE	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
ENE	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
E	0.0417	0.0833	0.0000	0.0000	0.0000	0.0000	0.1250
ESE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
SSE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.1250	0.0000	0.0000	0.0000	0.0000	0.0000	0.1250
SSW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SW	0.0417	0.0000	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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
WNW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
NW	0.1250	0.0000	0.0000	0.0000	0.0000	0.0000	0.1250
NNW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



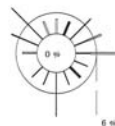
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 10-11 Feb 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:42
 Wind Direction Model : Scarlet WS-21 Serial No : AD:42

Time	10-11 Feb 2026	
	WS(m/s)	WD
16:00 - 17:00	2.6	SE
17:00 - 18:00	0.7	NW
18:00 - 19:00	0.8	ESE
19:00 - 20:00	0.9	NW
20:00 - 21:00	0.7	SSE
21:00 - 22:00	0.7	WNW
22:00 - 23:00	0.9	ENE
23:00 - 24:00	2.1	NNE
00:00 - 01:00	1.0	NNW
01:00 - 02:00	0.7	S
02:00 - 03:00	1.0	E
03:00 - 04:00	0.7	SW
04:00 - 05:00	0.8	E
05:00 - 06:00	1.0	N
06:00 - 07:00	0.8	NE
07:00 - 08:00	0.7	S
08:00 - 09:00	0.9	NE
09:00 - 10:00	1.3	ENE
10:00 - 11:00	0.9	SSW
11:00 - 12:00	0.8	NW
12:00 - 13:00	0.7	S
13:00 - 14:00	1.1	E
14:00 - 15:00	0.7	WNW
15:00 - 16:00	1.0	W

Wind Rose



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

File Control R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 10-11 Feb 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team

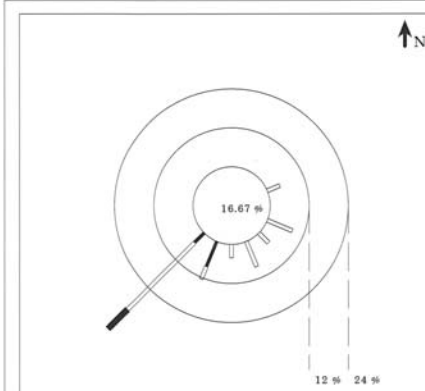


Meteorological Monitoring Results : Wind Rose

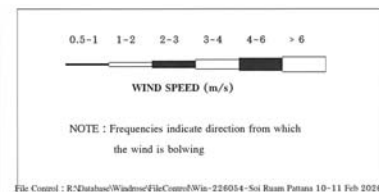
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 10-11 Feb 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:20
 Wind Direction Model : Scarlet WS-21 Serial No : AD:20

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
SE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
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	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
SW	0.0417	0.2917	0.0833	0.0000	0.0000	0.0000	0.4167
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	0.1667						



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

File Control R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 10-11 Feb 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



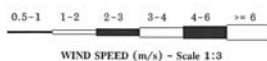
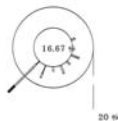
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 10-11 Feb 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:20
 Wind Direction Model : Scarlet WS-21 Serial No : AD:20

Time	10-11 Feb 2026	
	WS(m/s)	WD
16:00 - 17:00	1.5	ENE
17:00 - 18:00	1.4	ESE
18:00 - 19:00	1.3	SE
19:00 - 20:00	1.3	ESE
20:00 - 21:00	1.5	SSE
21:00 - 22:00	1.4	SSE
22:00 - 23:00	1.5	S
23:00 - 24:00	1.9	SSW
00:00 - 01:00	2.3	SW
01:00 - 02:00	2.1	SW
02:00 - 03:00	1.7	SW
03:00 - 04:00	1.6	SW
04:00 - 05:00	1.3	SW
05:00 - 06:00	1.3	SW
06:00 - 07:00	1.3	SW
07:00 - 08:00	1.3	SW
08:00 - 09:00	1.2	SW
09:00 - 10:00	0.7	SSW
10:00 - 11:00	0.6	SW
11:00 - 12:00	0.6	SSW
12:00 - 13:00	0.4	ENE
13:00 - 14:00	0.3	ENE
14:00 - 15:00	0.2	NE
15:00 - 16:00	0.1	NE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 10-11 Feb 2026


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team

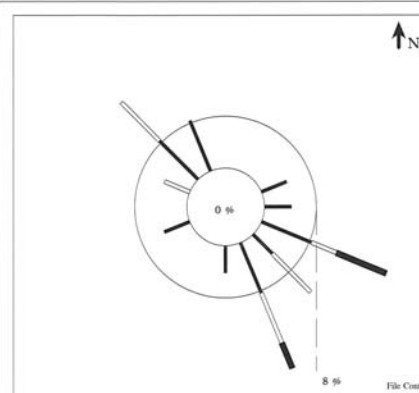


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 10-11 Feb 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:16
 Wind Direction Model : Scarlet WS-21 Serial No : AD:16

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0833	0.0417	0.0833	0.0000	0.0000	0.0000	0.2083
SE	0.0417	0.0833	0.0000	0.0000	0.0000	0.0000	0.1250
SSE	0.0833	0.0833	0.0417	0.0000	0.0000	0.0000	0.2083
S	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NW	0.0833	0.0833	0.0000	0.0000	0.0000	0.0000	0.1667
NNW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
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

File Control : R:\Database\Windrose\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 10-11 Feb 2026


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



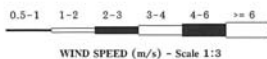
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 10-11 Feb 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:16
 Wind Direction Model : Scarlet WS-21 Serial No : AD:16

Time	10-11 Feb 2026	
	WS(m/s)	WD
16:00 - 17:00	1.1	SE
17:00 - 18:00	0.8	ESE
18:00 - 19:00	1.9	ESE
19:00 - 20:00	2.1	ESE
20:00 - 21:00	1.4	SSE
21:00 - 22:00	0.6	NNW
22:00 - 23:00	1.2	NW
23:00 - 24:00	1.2	WNW
00:00 - 01:00	0.6	E
01:00 - 02:00	1.6	SSE
02:00 - 03:00	0.5	NW
03:00 - 04:00	0.5	ENE
04:00 - 05:00	0.6	ESE
05:00 - 06:00	2.4	ESE
06:00 - 07:00	2.2	SSE
07:00 - 08:00	0.6	NNW
08:00 - 09:00	1.6	NW
09:00 - 10:00	0.5	SSE
10:00 - 11:00	0.6	WSW
11:00 - 12:00	0.7	SSE
12:00 - 13:00	0.5	NW
13:00 - 14:00	0.5	SE
14:00 - 15:00	1.0	SE
15:00 - 16:00	0.9	S

Wind Rose



File Control R:\Database\Winform\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 10-11 Feb 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800
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 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. : 0243.0244.0245/69
 SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Subatmospheric Pressure Sampling
 SAMPLING DATE : 10-11/02/2026 ANALYTICAL DATE : 14-17/02/2026
 SAMPLING TIME : 16:32-15:53 SAMPLE CONDITION : Normal
 RECEIVED DATE : 12/02/2026 FILE CODE : 226054_TO-15_February
 REPORT DATE : 20/02/2026

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	1.52	3.36	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Methods TO-15,1999

(Miss Jutarat Jaemruen)

Analyst

(Miss Sirivan Chimsanap)

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).



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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.	: 0243.0244.0245/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/02/2026	ANALYTICAL DATE	: 14-17/02/2026
SAMPLING TIME	: 16:15-15:47	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/02/2026	FILE CODE	: 226054_TO-15_February
REPORT DATE	: 20/02/2026		

Compound	Non Detection		SAMPLING LOCATION Soi Ruam Pattana		STANDARD* ($\mu\text{g}/\text{m}^3$)
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	0.82	1.81	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Shirwan Chimsa-ng

(Miss Siriwan Chimsa-ng)

Technical Management Team

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0243.0244.0245/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/02/2026	ANALYTICAL DATE	: 14-17/02/2026
SAMPLING TIME	: 16:08-15:34	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/02/2026	FILE CODE	: 226054_TO-15_February
REPORT DATE	: 20/02/2026		

Compound	Non Detection		SAMPLING LOCATION Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)		STANDARD* ($\mu\text{g}/\text{m}^3$)
	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, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Shirwan Chimsa-ng

(Miss Siriwan Chimsa-ng)

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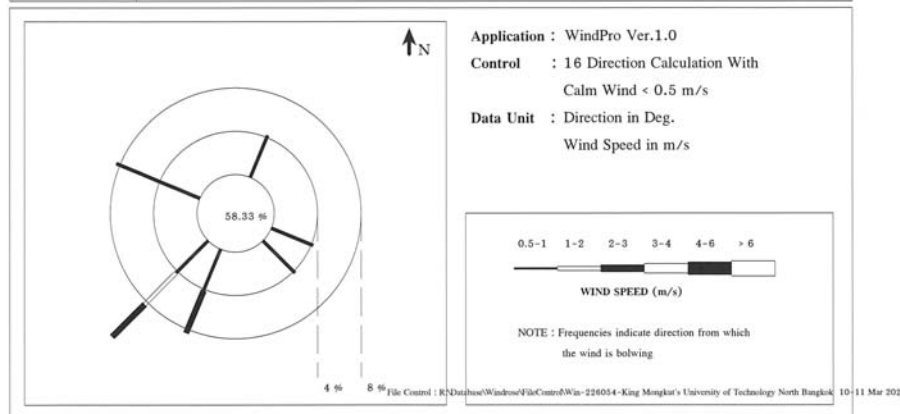


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 10-11 Mar 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A4904
 Wind Direction Model : Novalynx WS-25 Serial No : A4904

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	0.0417	0.0000	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	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
SW	0.0417	0.0417	0.0417	0.0000	0.0000	0.0000	0.1250
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	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
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	0.5833						



(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 : 10-11 Mar 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A4904
 Wind Direction Model : Novalynx WS-25 Serial No : A4904

Time	10-11 Mar 2026	
	WS(m/s)	WD
09:00 - 10:00	0.2	E
10:00 - 11:00	0.0	SE
11:00 - 12:00	2.9	SSW
12:00 - 13:00	2.5	SW
13:00 - 14:00	0.2	S
14:00 - 15:00	1.0	SW
15:00 - 16:00	0.5	SSW
16:00 - 17:00	0.6	SW
17:00 - 18:00	0.4	WNW
18:00 - 19:00	0.5	WNW
19:00 - 20:00	0.5	WNW
20:00 - 21:00	0.4	NNE
21:00 - 22:00	0.4	NNE
22:00 - 23:00	0.4	NNE
23:00 - 24:00	0.4	NNE
00:00 - 01:00	0.6	NNE
01:00 - 02:00	0.4	NNE
02:00 - 03:00	0.4	NNE
03:00 - 04:00	0.4	NNE
04:00 - 05:00	0.4	NNW
05:00 - 06:00	0.6	SE
06:00 - 07:00	0.5	ESE
07:00 - 08:00	0.4	ESE
08:00 - 09:00	0.4	SE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 10-11 Mar 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team

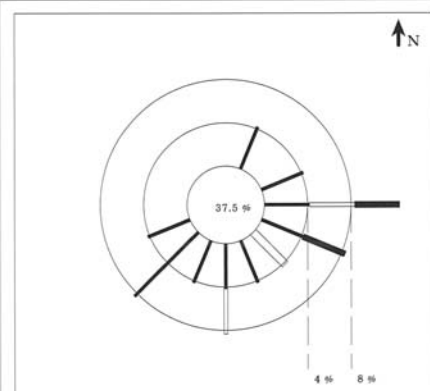


Meteorological Monitoring Results : Wind Rose

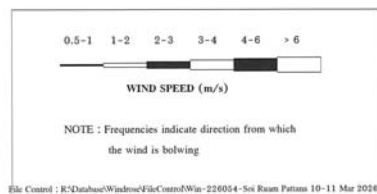
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 10-11 Mar 2026
 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						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	0.0417	0.0000	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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
E	0.0417	0.0417	0.0417	0.0000	0.0000	0.0000	0.1250
ESE	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
SE	0.0000	0.0000	0.0000	0.0417	0.0000	0.0000	0.0417
SSE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
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	0.3750						



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



(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 : 10-11 Mar 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A4907
 Wind Direction Model : Novalynx WS-25 Serial No : A4907

Time	10-11 Mar 2026	
	WS(m/s)	WD
10:00 - 11:00	1.6	E
11:00 - 12:00	0.4	NNE
12:00 - 13:00	3.7	SE
13:00 - 14:00	2.8	ESE
14:00 - 15:00	1.7	S
15:00 - 16:00	2.7	E
16:00 - 17:00	0.6	SW
17:00 - 18:00	0.4	SSW
18:00 - 19:00	0.4	E
19:00 - 20:00	0.5	SW
20:00 - 21:00	0.6	E
21:00 - 22:00	0.5	S
22:00 - 23:00	0.4	N
23:00 - 24:00	0.5	SSW
00:00 - 01:00	0.4	ESE
01:00 - 02:00	0.4	SE
02:00 - 03:00	0.4	NE
03:00 - 04:00	0.5	WSW
04:00 - 05:00	0.6	ENE
05:00 - 06:00	0.5	SSE
06:00 - 07:00	0.4	SW
07:00 - 08:00	0.4	NNE
08:00 - 09:00	0.5	NNE
09:00 - 10:00	0.5	ESE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 10-11 Mar 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team

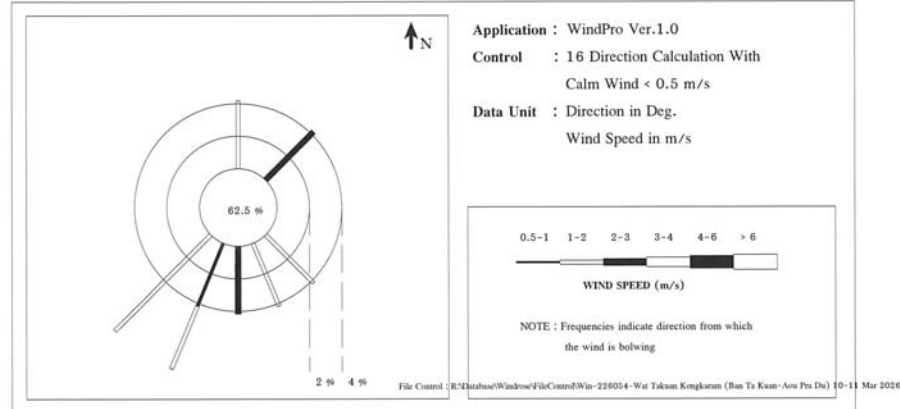


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 10-11 Mar 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5092
 Wind Direction Model : Novalynx WS-25 Serial No : A5092

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0417	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	0.0000	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	0.0417	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	0.0417	0.0000	0.0000	0.0000	0.0417
SSW	0.0417	0.0417	0.0000	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						



(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 : 10-11 Mar 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5092
 Wind Direction Model : Novalynx WS-25 Serial No : A5092

Time	10-11 Mar 2026	
	WS(m/s)	WD
07:00 - 08:00	2.4	S
08:00 - 09:00	0.3	N
09:00 - 10:00	1.2	SW
10:00 - 11:00	1.2	SE
11:00 - 12:00	2.1	NE
12:00 - 13:00	1.2	SSE
13:00 - 14:00	1.4	SW
14:00 - 15:00	1.4	SSW
15:00 - 16:00	1.2	N
16:00 - 17:00	0.9	SSW
17:00 - 18:00	0.3	NE
18:00 - 19:00	0.2	NE
19:00 - 20:00	0.0	NE
20:00 - 21:00	0.0	NE
21:00 - 22:00	0.0	SW
22:00 - 23:00	0.0	ENE
23:00 - 24:00	0.0	N
00:00 - 01:00	0.3	NE
01:00 - 02:00	0.0	E
02:00 - 03:00	0.0	WSW
03:00 - 04:00	0.0	ESE
04:00 - 05:00	0.3	SE
05:00 - 06:00	0.1	SSE
06:00 - 07:00	0.3	WSW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 10-11 Mar 2026

(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.	: 0436.0437/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/03/2026	ANALYTICAL DATE	: 13-17/03/2026
SAMPLING TIME	: 14:40-15:38	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/03/2026	FILE CODE	: 226054_TO-15_March
REPORT DATE	: 17/03/2026		

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, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-ngaj

(Miss Siriwan Chimsa-ngaj)

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.

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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.	: 0436.0437/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/03/2026	ANALYTICAL DATE	: 13-17/03/2026
SAMPLING TIME	: 14:33-15:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/03/2026	FILE CODE	: 226054_TO-15_March
REPORT DATE	: 17/03/2026		

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, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-ngaj

(Miss Siriwan Chimsa-ngaj)

Technical Management Team

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บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0436.0437/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/03/2026	ANALYTICAL DATE	: 13-17/03/2026
SAMPLING TIME	: 14:25-15:20	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/03/2026	FILE CODE	: 226054_TO-15_March
REPORT DATE	: 17/03/2026		

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

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Methods TO-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Shirwan Chimsa-nga

(Miss Shirwan Chimsa-nga)

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).

R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 04-05 Apr 2026



Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 04-05 Apr 2026

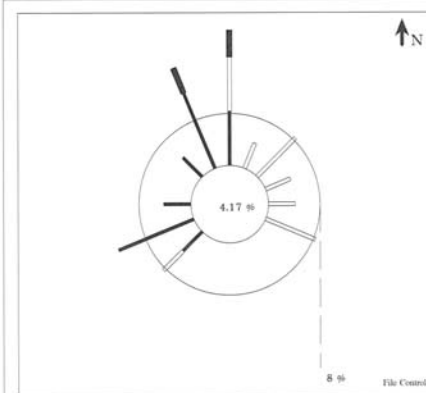
Wind Speed Model : Novalynx NL-32

Serial No : 1205

Wind Direction Model : Novalynx NL-32

Serial No : 1205

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



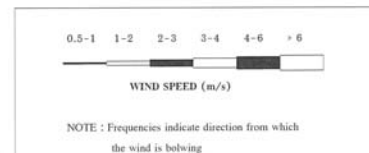
Application : WindPro Ver.1.0

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

File Control : R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 04-05 Apr 2026

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team



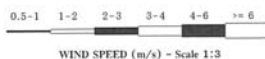
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 04-05 Apr 2026
 Wind Speed Model : Novalynx NL-32 Serial No : 1205
 Wind Direction Model : Novalynx NL-32 Serial No : 1205

Time	04-05 Apr 2026	
	WS(m/s)	WD
14:00 - 15:00	1.2	ESE
15:00 - 16:00	1.0	ESE
16:00 - 17:00	1.1	SW
17:00 - 18:00	0.5	WSW
18:00 - 19:00	0.7	WSW
19:00 - 20:00	0.6	WSW
20:00 - 21:00	0.5	W
21:00 - 22:00	0.7	NW
22:00 - 23:00	0.5	N
23:00 - 24:00	0.5	SW
00:00 - 01:00	0.4	NW
01:00 - 02:00	0.7	NNW
02:00 - 03:00	0.7	NNW
03:00 - 04:00	0.9	N
04:00 - 05:00	0.9	NNW
05:00 - 06:00	1.1	E
06:00 - 07:00	1.3	NE
07:00 - 08:00	1.0	NNE
08:00 - 09:00	1.7	N
09:00 - 10:00	1.4	NE
10:00 - 11:00	1.6	ENE
11:00 - 12:00	1.3	N
12:00 - 13:00	2.1	N
13:00 - 14:00	2.0	NNW

Wind Rose



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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

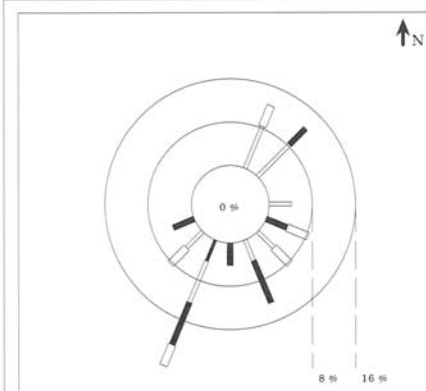


Meteorological Monitoring Results : Wind Rose

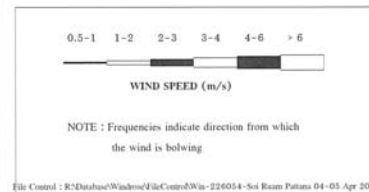
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 04-05 Apr 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

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



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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



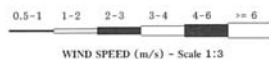
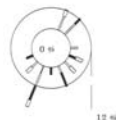
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 04-05 Apr 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

Time	04-05 Apr 2026	
	WS(m/s)	WD
09:00 - 10:00	2.5	SSE
10:00 - 11:00	3.9	ESE
11:00 - 12:00	2.6	SSW
12:00 - 13:00	2.9	SSE
13:00 - 14:00	3.0	SSW
14:00 - 15:00	2.6	SSW
15:00 - 16:00	3.8	SW
16:00 - 17:00	2.7	S
17:00 - 18:00	1.7	NNE
18:00 - 19:00	3.1	NNE
19:00 - 20:00	1.4	NNE
20:00 - 21:00	2.6	ESE
21:00 - 22:00	0.6	SSW
22:00 - 23:00	1.6	NE
23:00 - 24:00	1.5	SSW
00:00 - 01:00	2.7	WSW
01:00 - 02:00	1.5	SSW
02:00 - 03:00	1.9	SW
03:00 - 04:00	2.6	NE
04:00 - 05:00	3.0	SE
05:00 - 06:00	1.9	SSE
06:00 - 07:00	1.4	E
07:00 - 08:00	1.1	SE
08:00 - 09:00	1.9	NE

Wind Rose



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

File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 04-05 Apr 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

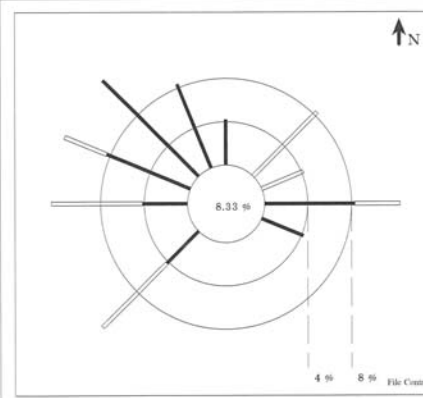


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 04-05 Apr 2026
 Wind Speed Model : Novalynx NL-32 Serial No : 1208
 Wind Direction Model : Novalynx NL-32 Serial No : 1208

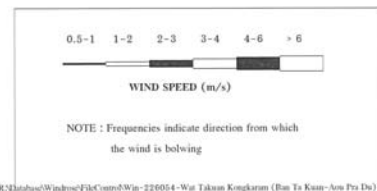
Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833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



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

File Control : R:\Database\Windrose\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 04-05 Apr 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



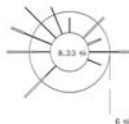
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 04-05 Apr 2026
 Wind Speed Model : Novalynx NL-32 Serial No : 1208
 Wind Direction Model : Novalynx NL-32 Serial No : 1208

Time	04-05 Apr 2026	
	WS(m/s)	WD
14:00 - 15:00	0.9	E
15:00 - 16:00	1.1	E
16:00 - 17:00	1.0	SW
17:00 - 18:00	0.8	ESE
18:00 - 19:00	0.5	SW
19:00 - 20:00	0.5	WNW
20:00 - 21:00	0.6	E
21:00 - 22:00	0.6	NW
22:00 - 23:00	0.7	WNW
23:00 - 24:00	0.6	NW
00:00 - 01:00	0.4	NW
01:00 - 02:00	0.5	NNW
02:00 - 03:00	0.4	WNW
03:00 - 04:00	0.9	NW
04:00 - 05:00	0.8	NNW
05:00 - 06:00	0.6	N
06:00 - 07:00	1.1	WNW
07:00 - 08:00	0.8	W
08:00 - 09:00	1.1	W
09:00 - 10:00	1.0	W
10:00 - 11:00	1.5	SW
11:00 - 12:00	1.7	NE
12:00 - 13:00	1.4	NE
13:00 - 14:00	1.8	ENE

Wind Rose



0.5-1 1-2 2-3 3-4 4-6 >= 6
 WIND SPEED (m/s) - Scale 1:3

File Control : R:\Database\Windrose\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 04-05 Apr 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team



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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. (BST Site 1) REQUEST SERVICE No. : 0572.0569.0571.69
 SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Subatmospheric Pressure Sampling
 SAMPLING DATE : 04-05/04/2026 ANALYTICAL DATE : 07-09/04/2026
 SAMPLING TIME : 15:45-16:05 SAMPLE CONDITION : Normal
 RECEIVED DATE : 06/04/2026 FILE CODE : 226054_TO-15_April
 REPORT DATE : 16/04/2026

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, 2nd EPA Methods TO-15,1999

(Miss Jutarat Jaemruen)

Analyst

(Miss Sirivan Chimsa-ngu)

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).



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0572.0569.0571/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/04/2026	ANALYTICAL DATE	: 07-09/04/2026
SAMPLING TIME	: 16:26-15:26	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/04/2026	FILE CODE	: 226054_TO-15_April
REPORT DATE	: 16/04/2026		

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

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-ngu

(Miss Siriwan Chimsa-ngu)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0572.0569.0571/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/04/2026	ANALYTICAL DATE	: 07-09/04/2026
SAMPLING TIME	: 15:35-15:53	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/04/2026	FILE CODE	: 226054_TO-15_April
REPORT DATE	: 16/04/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ($\mu\text{g}/\text{m}^3$)
	ppbv	$\mu\text{g}/\text{m}^3$	Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-ngu

(Miss Siriwan Chimsa-ngu)

Technical Management Team

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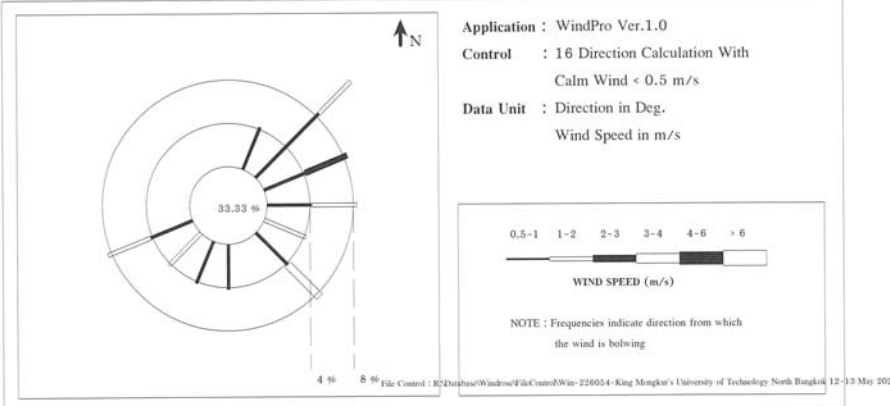
3. * Notification of the Pollution Control Department, dated December 18.B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126. Special Part 13D dated January 27. B.E. 2552 (2009).



Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 12-13 May 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NE	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
ENE	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
E	0.0417	0.0417	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	0.0417	0.0000	0.0000	0.0417	0.0000	0.0000	0.0833
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
WSW	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
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	0.3333						



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

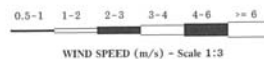


Meteorological Monitoring Results : Wind Rose MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 12-13 May 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5084
 Wind Direction Model : Novalynx WS-25 Serial No : A5084

Time	12-13 May 2026	
	WS(m/s)	WD
13:00 - 14:00	0.7	WSW
14:00 - 15:00	1.1	E
15:00 - 16:00	1.4	SW
16:00 - 17:00	0.8	E
17:00 - 18:00	0.6	SE
18:00 - 19:00	0.3	E
19:00 - 20:00	0.4	N
20:00 - 21:00	0.5	SSW
21:00 - 22:00	0.4	E
22:00 - 23:00	0.5	S
23:00 - 24:00	0.6	NNE
00:00 - 01:00	0.3	WSW
01:00 - 02:00	0.4	ESE
02:00 - 03:00	0.4	SE
03:00 - 04:00	0.4	NE
04:00 - 05:00	0.5	NE
05:00 - 06:00	0.3	S
06:00 - 07:00	0.8	NE
07:00 - 08:00	0.9	ENE
08:00 - 09:00	1.0	WSW
09:00 - 10:00	1.6	ESE
10:00 - 11:00	1.0	NE
11:00 - 12:00	3.6	SE
12:00 - 13:00	2.8	ENE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 12-13 May 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

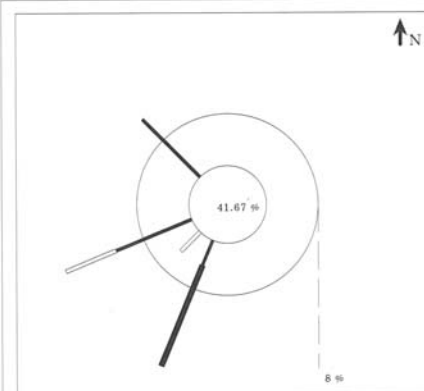


Meteorological Monitoring Results : Wind Rose

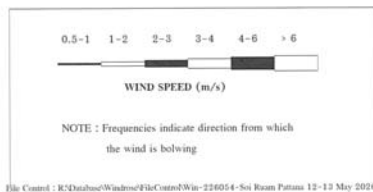
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 12-13 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:66
 Wind Direction Model : Scarlet WS-21 Serial No : AD:66

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	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0417	0.0000	0.1667	0.0000	0.0000	0.0000	0.2083
SW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
WSW	0.1250	0.0833	0.0000	0.0000	0.0000	0.0000	0.2083
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	0.1250	0.0000	0.0000	0.0000	0.0000	0.0000	0.1250
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.4167						



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



(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 : 12-13 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:66
 Wind Direction Model : Scarlet WS-21 Serial No : AD:66

Time	12-13 May 2026	
	WS(m/s)	WD
12:00 - 13:00	1.5	SW
13:00 - 14:00	0.2	WSW
14:00 - 15:00	0.3	WSW
15:00 - 16:00	0.2	WSW
16:00 - 17:00	0.3	WSW
17:00 - 18:00	0.3	WSW
18:00 - 19:00	0.2	WSW
19:00 - 20:00	0.3	WSW
20:00 - 21:00	0.6	WSW
21:00 - 22:00	0.5	WSW
22:00 - 23:00	0.4	WSW
23:00 - 24:00	0.6	WSW
00:00 - 01:00	1.0	WSW
01:00 - 02:00	2.3	SSW
02:00 - 03:00	2.6	SSW
03:00 - 04:00	2.8	SSW
04:00 - 05:00	2.9	SSW
05:00 - 06:00	1.6	WSW
06:00 - 07:00	0.9	NW
07:00 - 08:00	0.9	NW
08:00 - 09:00	0.8	NW
09:00 - 10:00	0.7	SSW
10:00 - 11:00	0.2	SSE
11:00 - 12:00	0.0	SSE

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 12-13 May 2026

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Preeda Somjai)
 Technical Management Team

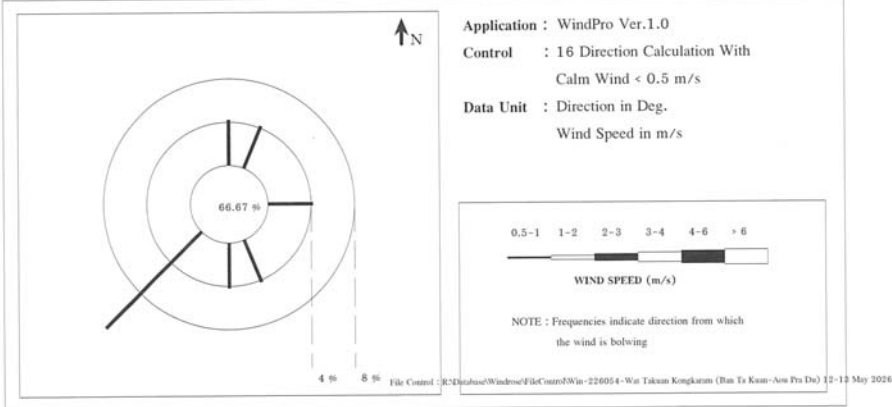


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 12-13 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:42
 Wind Direction Model : Scarlet WS-21 Serial No : AD:42

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0417	0.0000	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	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.1250	0.0000	0.0000	0.0000	0.0000	0.0000	0.1250
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	0.6667						



(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 : 12-13 May 2026
 Wind Speed Model : Scarlet WS-21 Serial No : AD:42
 Wind Direction Model : Scarlet WS-21 Serial No : AD:42

Time	12-13 May 2026	
	WS(m/s)	WD
11:00 - 12:00	0.6	SW
12:00 - 13:00	0.7	SW
13:00 - 14:00	0.6	SW
14:00 - 15:00	0.3	WSW
15:00 - 16:00	0.3	W
16:00 - 17:00	0.3	W
17:00 - 18:00	0.1	NW
18:00 - 19:00	0.0	NNW
19:00 - 20:00	0.0	NNW
20:00 - 21:00	0.0	NW
21:00 - 22:00	0.0	NW
22:00 - 23:00	0.0	NNW
23:00 - 24:00	0.0	NNW
00:00 - 01:00	0.1	N
01:00 - 02:00	0.0	N
02:00 - 03:00	0.3	N
03:00 - 04:00	0.2	N
04:00 - 05:00	0.2	N
05:00 - 06:00	0.6	NNE
06:00 - 07:00	0.4	ENE
07:00 - 08:00	0.5	E
08:00 - 09:00	0.7	SSE
09:00 - 10:00	0.8	S
10:00 - 11:00	0.9	N

Wind Rose



(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0824.0822.0823/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 12-13/05/2026	ANALYTICAL DATE	: 15-16.19-21/05/2026
SAMPLING TIME	: 13:30-14:25	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 14/05/2026	FILE CODE	: 226054_TO-15_May
REPORT DATE	: 22/05/2026		

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	0.78	1.73	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd ed., EPA Methods TO-15,1999

Jutarat Jaermuen
(Miss Jutarat Jaermuen)

Analyst

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

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
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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.	: 0824.0822.0823/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 12-13/05/2026	ANALYTICAL DATE	: 15-16.19-21/05/2026
SAMPLING TIME	: 12:25-12:36	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 14/05/2026	FILE CODE	: 226054_TO-15_May
REPORT DATE	: 22/05/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ($\mu\text{g}/\text{m}^3$)
			Soi Ruam Pattana		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	0.33	0.73	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd ed., EPA Methods TO-15,1999

Jutarat Jaermuen
(Miss Jutarat Jaermuen)

Analyst

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0824.0822.0823/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 12-13/05/2026	ANALYTICAL DATE	: 15-16.19-21/05/2026
SAMPLING TIME	: 12:40-12:05	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 14/05/2026	FILE CODE	: 226054_TO-15_May
REPORT DATE	: 22/05/2026		

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

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Sitthuan Chimsa-ngu

(Miss Siriwan Chimsa-ngu)

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K:\Database\Windows\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 09-10 Jun 2026



Meteorological Monitoring Results : Wind Rose
MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 09-10 Jun 2026

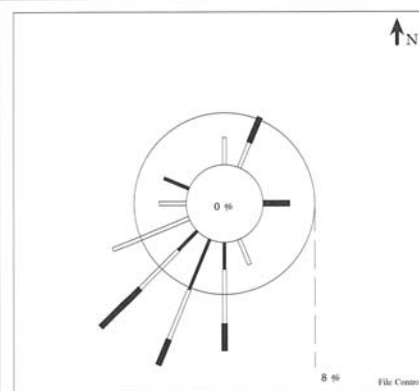
Wind Speed Model : Campbell CR510

Serial No : 10853

Wind Direction Model : Campbell CR510

Serial No : 10853

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0000	0.0417	0.0417	0.0000	0.0000	0.0000	0.0833
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	0.0417	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	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	0.0417	0.0833	0.0417	0.0000	0.0000	0.0000	0.1667
SSW	0.0833	0.0833	0.0417	0.0000	0.0000	0.0000	0.2083
SW	0.0417	0.0833	0.0833	0.0000	0.0000	0.0000	0.2083
WSW	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
W	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
WNW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
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

0.5-1 1-2 2-3 3-4 4-6 > 6
WIND SPEED (m/s)

NOTE : Frequencies indicate direction from which
the wind is blowing

K:\Database\Windows\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 09-10 Jun 2026

Katesarin Vorradetwittaya

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



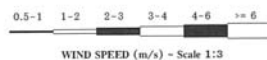
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : King Mongkut's University of Technology North Bangkok Monitor period : 09-10 Jun 2026
 Wind Speed Model : Campbell CR510 Serial No : 10853
 Wind Direction Model : Campbell CR510 Serial No : 10853

Time	09-10 Jun 2026	
	WS(m/s)	WD
11:00 - 12:00	2.1	SW
12:00 - 13:00	1.7	NNE
13:00 - 14:00	2.2	S
14:00 - 15:00	1.5	SW
15:00 - 16:00	0.7	S
16:00 - 17:00	2.1	NNE
17:00 - 18:00	1.7	WSW
18:00 - 19:00	2.3	SSW
19:00 - 20:00	0.6	SSW
20:00 - 21:00	1.1	SSE
21:00 - 22:00	0.7	SSW
22:00 - 23:00	1.3	WSW
23:00 - 24:00	1.1	SSW
00:00 - 01:00	0.8	WNW
01:00 - 02:00	1.4	N
02:00 - 03:00	1.2	SW
03:00 - 04:00	1.2	WSW
04:00 - 05:00	1.2	SSW
05:00 - 06:00	2.1	E
06:00 - 07:00	1.6	W
07:00 - 08:00	0.7	SW
08:00 - 09:00	1.8	S
09:00 - 10:00	2.1	SW
10:00 - 11:00	1.3	S

Wind Rose



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

File Control : R:\Database\Windrose\FileControl\Win-226054-King Mongkut's University of Technology North Bangkok 09-10 Jun 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

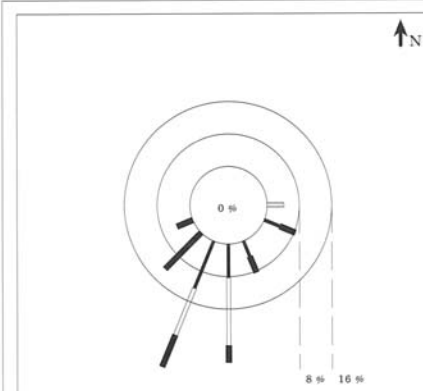


Meteorological Monitoring Results : Wind Rose

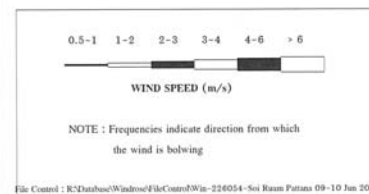
MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 09-10 Jun 2026
 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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0417	0.0000	0.0417	0.0000	0.0000	0.0000	0.0833
S	0.0833	0.1667	0.0417	0.0000	0.0000	0.0000	0.2917
SSW	0.1250	0.1250	0.0833	0.0000	0.0000	0.0000	0.3333
SW	0.0000	0.0000	0.1250	0.0000	0.0000	0.0000	0.1250
WSW	0.0000	0.0000	0.0417	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	0.0000						



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



0.5-1 1-2 2-3 3-4 4-6 > 6
 WIND SPEED (m/s)

NOTE : Frequencies indicate direction from which the wind is blowing

File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 09-10 Jun 2026

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



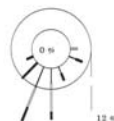
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Soi Ruam Pattana Monitor period : 09-10 Jun 2026
 Wind Speed Model : Novalynx WS-25 Serial No : A5086
 Wind Direction Model : Novalynx WS-25 Serial No : A5086

Time	09-10 Jun 2026	
	WS(m/s)	WD
11:00 - 12:00	1.4	SSW
12:00 - 13:00	1.2	S
13:00 - 14:00	0.7	ESE
14:00 - 15:00	0.9	SSW
15:00 - 16:00	2.2	S
16:00 - 17:00	2.8	SSE
17:00 - 18:00	1.5	SSW
18:00 - 19:00	2.3	SW
19:00 - 20:00	1.9	S
20:00 - 21:00	2.1	SSW
21:00 - 22:00	1.6	SSW
22:00 - 23:00	0.7	SSW
23:00 - 24:00	0.6	S
00:00 - 01:00	0.8	S
01:00 - 02:00	0.9	SSE
02:00 - 03:00	0.7	SSW
03:00 - 04:00	1.9	E
04:00 - 05:00	1.6	S
05:00 - 06:00	1.2	S
06:00 - 07:00	2.9	SW
07:00 - 08:00	2.5	SSW
08:00 - 09:00	2.7	SW
09:00 - 10:00	2.3	WSW
10:00 - 11:00	2.4	ESE

Wind Rose



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

File Control : R:\Database\Windrose\FileControl\Win-226054-Soi Ruam Pattana 09-10 Jun 2026

(Signature)
 (Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Signature)
 Preeda S.

(Miss Preeda Somjai)
 Technical Management Team

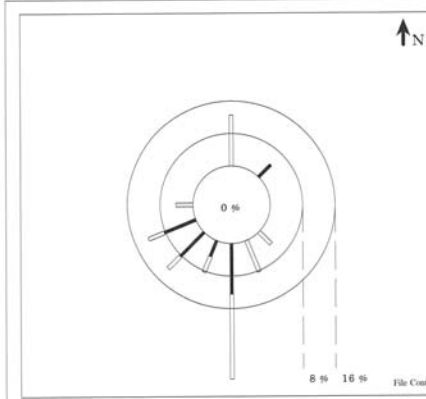


Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 09-10 Jun 2026
 Wind Speed Model : Campbell CR510 Serial No : 14083
 Wind Direction Model : Campbell CR510 Serial No : 14083

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	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0417	0.0000	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	0.0000	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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
S	0.1250	0.2083	0.0000	0.0000	0.0000	0.0000	0.3333
SSW	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SW	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
WSW	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
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						



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

File Control : R:\Database\Windrose\FileControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 09-10 Jun 2026

(Signature)
 (Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Signature)
 Preeda S.

(Miss Preeda Somjai)
 Technical Management Team



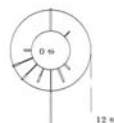
Meteorological Monitoring Results : Wind Rose

MTR-BST Site 1

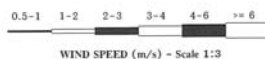
Location : Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) Monitor period : 09-10 Jun 2026
 Wind Speed Model : Campbell CR510 Serial No : 14083
 Wind Direction Model : Campbell CR510 Serial No : 14083

Time	09-10 Jun 2026	
	WS(m/s)	WD
11:00 - 12:00	1.2	SE
12:00 - 13:00	0.9	S
13:00 - 14:00	1.5	SW
14:00 - 15:00	0.5	SSW
15:00 - 16:00	1.1	S
16:00 - 17:00	1.4	W
17:00 - 18:00	1.4	N
18:00 - 19:00	1.2	N
19:00 - 20:00	1.2	S
20:00 - 21:00	0.5	NE
21:00 - 22:00	0.5	SW
22:00 - 23:00	1.3	S
23:00 - 24:00	1.4	S
00:00 - 01:00	1.5	SSW
01:00 - 02:00	1.3	S
02:00 - 03:00	0.7	S
03:00 - 04:00	0.5	S
04:00 - 05:00	0.8	SW
05:00 - 06:00	1.4	WSW
06:00 - 07:00	1.5	SSE
07:00 - 08:00	1.2	N
08:00 - 09:00	1.4	SSE
09:00 - 10:00	0.8	WSW
10:00 - 11:00	0.8	WSW

Wind Rose



File Control : R:\Database\Windows\FireControl\Win-226054-Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du) 09-10 Jun 2026



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800
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 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. : 1006.1004.1005/69
 SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Subatmospheric Pressure Sampling
 SAMPLING DATE : 09-10/06/2026 ANALYTICAL DATE : 12.15-17/06/2026
 SAMPLING TIME : 15:57-15:30 SAMPLE CONDITION : Normal
 RECEIVED DATE : 11/06/2026 FILE CODE : 226054_TO-15_June
 REPORT DATE : 17/06/2026

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	2.33	5.16	5.3

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Sirwan Chimsa-nga

(Miss Sirwan Chimsa-nga)

Technical Management Team

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1006.1004.1005/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 09-10/06/2026	ANALYTICAL DATE	: 12.15-17/06/2026
SAMPLING TIME	: 11:00-10:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 11/06/2026	FILE CODE	: 226054_TO-15_June
REPORT DATE	: 17/06/2026		

Compound	Non Detection		SAMPLING LOCATION Soi Ruam Pattana		STANDARD* ($\mu\text{g}/\text{m}^3$)
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	2.30	5.09	5.3

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 1006.1004.1005/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 09-10/06/2026	ANALYTICAL DATE	: 12.15-17/06/2026
SAMPLING TIME	: 15:49-15:40	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 11/06/2026	FILE CODE	: 226054_TO-15_June
REPORT DATE	: 17/06/2026		

Compound	Non Detection		SAMPLING LOCATION Wat Takuan Kongkaram (Ban Ta Kuan-Aou Pra Du)		STANDARD* ($\mu\text{g}/\text{m}^3$)
	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, 2nd EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Technical Management Team

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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



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-Stack-2605-0048
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 03/05/2026	SAMPLING TIME	: 02.00-02.45 p.m.
RECEIVED DATE	: 06/05/2026	ANALYTICAL DATE	: 07/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 3.74	m/s
Diameter	: 1.30	m	Flow Rate*	: 62.18	Ncu.m/min
Temperature	: 961.3	°C	Moisture	: 13.3	%
Excess Oxygen	: 12.8	%			

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		12.8%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maia Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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4. ^{1/} Emission standard @ 7%O₂ according to EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-Stack-2605-0048
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 03/05/2026	SAMPLING TIME	: 02.00-02.45 p.m.
RECEIVED DATE	: 06/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk (7-239-0-0024)
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 3.74	m/s
Diameter	: 1.30	m	Flow Rate*	: 62.18	Ncu.m/min
Temperature	: 961.3	°C	Moisture	: 13.3	%
Excess Oxygen	: 12.8	%			

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		12.8%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	30.44	52.24	200 ^{1/} /80 ^{2/}	US.EPA Method 7

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018

Maia Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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4. ^{1/} Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O₂.
5. ^{2/} Emission standard @ 7%O₂ according to EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Stack-2605-0048
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : -
SAMPLING DATE : 04/05/2026 SAMPLING TIME : 01.30-02.35 p.m.
RECEIVED DATE : 06/05/2026 ANALYTICAL DATE : 07/05/2026
REPORT DATE : 20/05/2026 OPERATOR : Mr. Kittipong Thakoengsuk
STACK LOCATION : BD Destruction Unit (Outlet) FUEL TYPE : C4-LPG
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.96 m/s
Diameter : 1.30 m Flow Rate* : 82.38 Ncu.m/min
Temperature : 966.8 °C Moisture : 12.9 %
Excess Oxygen : 12.3 %

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		12.3%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Main Pawanapetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Stack-2605-0048
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 7-239
SAMPLING DATE : 04/05/2026 SAMPLING TIME : 01.30-02.35 p.m.
RECEIVED DATE : 06/05/2026 ANALYTICAL DATE : 14/05/2026
REPORT DATE : 20/05/2026 OPERATOR : Mr. Kittipong Thakoengsuk (7-239-9-0024)
STACK LOCATION : BD Destruction Unit (Outlet) FUEL TYPE : C4-LPG
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height : 30.0 m Gas Velocity : 4.96 m/s
Diameter : 1.30 m Flow Rate* : 82.38 Ncu.m/min
Temperature : 966.8 °C Moisture : 12.9 %
Excess Oxygen : 12.3 %

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		12.3%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	31.33	50.44	200 ^{1/} /80 ^{2/}	US.EPA Method 7

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-9-0018

Main Pawanapetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-9-0010

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- ^{2/} Emission standard @ 7%O₂ according to EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Stack-2605-0048
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : -
SAMPLING DATE : 05/05/2026 SAMPLING TIME : 02.50-03.30 p.m.
RECEIVED DATE : 06/05/2026 ANALYTICAL DATE : 07/05/2026
REPORT DATE : 20/05/2026 OPERATOR : Mr. Kittipong Thakoengsuk
STACK LOCATION : BD Destruction Unit (Outlet) FUEL TYPE : C4-LPG
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.94	m/s
Diameter	: 1.30	m	Flow Rate*	: 82.54	Ncu.m/min
Temperature	: 962.5	°C	Moisture	: 12.6	%
Excess Oxygen	: 12.5	%			

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		12.5%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Naimee Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Stack-2605-0048
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 7-239
SAMPLING DATE : 05/05/2026 SAMPLING TIME : 02.50-03.30 p.m.
RECEIVED DATE : 06/05/2026 ANALYTICAL DATE : 14/05/2026
REPORT DATE : 20/05/2026 OPERATOR : Mr. Kittipong Thakoengsuk (7-239-0-0024)
STACK LOCATION : BD Destruction Unit (Outlet) FUEL TYPE : C4-LPG
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.94	m/s
Diameter	: 1.30	m	Flow Rate*	: 82.54	Ncu.m/min
Temperature	: 962.5	°C	Moisture	: 12.6	%
Excess Oxygen	: 12.5	%			

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		12.5%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	35.71	58.86	200 ^{1/} /80 ^{2/}	US.EPA Method 7

Bongkarn

(Miss Pannapa Budthum)

Analyst

REG.NO.7-239-0-0018

Naimee Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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- ^{2/} Emission standard @ 7%O₂ according to EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-Stack-2605-0048
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : -
SAMPLING DATE : 06/05/2026 SAMPLING TIME : 02.00-02.40 p.m.
RECEIVED DATE : 11/05/2026 ANALYTICAL DATE : 14/05/2026
REPORT DATE : 20/05/2026 OPERATOR : Mr. Kittipong Thakoengsuk
STACK LOCATION : BD Destruction Unit (Outlet) FUEL TYPE : C4-LPG
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.77	m/s
Diameter	: 1.30	m	Flow Rate*	: 78.73	Ncu.m/min
Temperature	: 973.5	°C	Moisture	: 13.0	%
Excess Oxygen	: 12.3	%			

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		12.3%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Naris Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 7-239
SAMPLING DATE : 06/05/2026 SAMPLING TIME : 02.00-02.40 p.m.
RECEIVED DATE : 11/05/2026 ANALYTICAL DATE : 14/05/2026
REPORT DATE : 20/05/2026 OPERATOR : Mr. Kittipong Thakoengsuk (7-239-0-0024)
STACK LOCATION : BD Destruction Unit (Outlet) FUEL TYPE : C4-LPG
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.77	m/s
Diameter	: 1.30	m	Flow Rate*	: 78.73	Ncu.m/min
Temperature	: 973.5	°C	Moisture	: 13.0	%
Excess Oxygen	: 12.3	%			

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		12.3%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	39.57	64.20	200 ^{1/} /80 ^{2/}	US.EPA Method 7

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018

Naris Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 07/05/2026	SAMPLING TIME	: 01.55-02.50 p.m.
RECEIVED DATE	: 11/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.75	m/s
Diameter	: 1.30	m	Flow Rate*	: 79.49	Ncu.m/min
Temperature	: 962.5	°C	Moisture	: 12.5	%
Excess Oxygen	: 12.5	%			

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		12.5%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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SAMPLING DATE	: 07/05/2026	SAMPLING TIME	: 01.55-02.50 p.m.
RECEIVED DATE	: 11/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk (7-239-0-0024)
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.75	m/s
Diameter	: 1.30	m	Flow Rate*	: 79.49	Ncu.m/min
Temperature	: 962.5	°C	Moisture	: 12.5	%
Excess Oxygen	: 12.5	%			

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		12.5%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	32.59	53.93	200 ^{1/80} 2/	US.EPA Method 7

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-Stack-2605-0048
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING TIME	: 01.45-02.30 p.m.
RECEIVED DATE	: 11/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.97	m/s
Diameter	: 1.30	m	Flow Rate*	: 82.92	Ncu.m/min
Temperature	: 970.8	°C	Moisture	: 12.3	%
Excess Oxygen	: 12.7	%			

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		12.7%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Main Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-Stack-2605-0048
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 08/05/2026	SAMPLING TIME	: 01.45-02.30 p.m.
RECEIVED DATE	: 11/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk (7-239-0-0024)
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.97	m/s
Diameter	: 1.30	m	Flow Rate*	: 82.92	Ncu.m/min
Temperature	: 970.8	°C	Moisture	: 12.3	%
Excess Oxygen	: 12.7	%			

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		12.7%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	35.73	60.57	200 ^{1/} /80 ^{2/}	US.EPA Method 7

Bongkorn P.

(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018

Main Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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

- This report shall not be reproduced, except in full, without official approval.
- * At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
- ^{1/} Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O₂.
- ^{2/} Emission standard @ 7%O₂ according to EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-Stack-2605-0048
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 09/05/2026	SAMPLING TIME	: 01.25-02.45 p.m.
RECEIVED DATE	: 13/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.94	m/s
Diameter	: 1.30	m	Flow Rate*	: 83.11	Ncu.m/min
Temperature	: 956.8	°C	Moisture	: 12.5	%
Excess Oxygen	: 13.3	%			

PARAMETER	UNIT	RESULTS*		STANDARD ^{1/}	REFERENCE METHOD
		13.3%O ₂	7%O ₂		
1,3-Butadiene	ppm	ND (<0.01)	ND (<0.02)	0.24	US.EPA Method 18

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Main Panwasanetch

(Miss Narisa Poowasanetch)

Technical Management Team

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- * At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
- ^{1/} Emission standard @ 7%O₂ according to EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-Stack-2605-0048
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 09/05/2026	SAMPLING TIME	: 01.25-02.45 p.m.
RECEIVED DATE	: 13/05/2026	ANALYTICAL DATE	: 14/05/2026
REPORT DATE	: 20/05/2026	OPERATOR	: Mr. Kittipong Thakoengsuk (7-239-0-0024)
STACK LOCATION	: BD Destruction Unit (Outlet)	FUEL TYPE	: C4-LPG
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 30.0	m	Gas Velocity	: 4.94	m/s
Diameter	: 1.30	m	Flow Rate*	: 83.11	Ncu.m/min
Temperature	: 956.8	°C	Moisture	: 12.5	%
Excess Oxygen	: 13.3	%			

PARAMETER	UNIT	RESULTS*		STANDARD	REFERENCE METHOD
		13.3%O ₂	7%O ₂		
Oxide of Nitrogen	ppm	28.54	51.97	200 ^{1/} /80 ^{2/}	US.EPA Method 7

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018

Main Panwasanetch

(Miss Narisa Poowasanetch)

Technical Management Team

REG.NO.7-239-0-0010

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

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- * At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
- ^{1/} Notification of the Ministry of Industry, B.E.2549 (2006) and the Ministry of Natural Resources and Environment, B.E.2549 (2006) @ 7%O₂.
- ^{2/} Emission standard @ 7%O₂ according to EIA report.

ใบรับรองผลการตรวจวัดระดับเสียงทั่วไป



Noise Monitoring Result : Community Noise

MTR-BST Site 1

Location : Boundary-N			Monitor Period : 03-10 May 2026				
SLM Model : Cirrus CR161B			Serial No : G301354				
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515			Serial No : 97097				
Calibration Ref dB(A) : 94.0			Certified Date : 14 Oct 2025				
SLM Reading / Adjust dB(A) : 93.7/0.0			Expire Date : 13 Oct 2026				
Cal Sheet No. : CR-515-2026-116							
Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 ~ 11:00	67.1	67.2	66.4	68.3	68.2	67.3	68.2
11:00 ~ 12:00	66.6	67.0	66.3	66.8	71.7	66.7	68.1
12:00 ~ 13:00	66.5	66.7	66.7	66.9	70.7	66.2	66.1
13:00 ~ 14:00	66.9	67.3	68.4	67.3	69.6	66.7	66.8
14:00 ~ 15:00	67.0	67.0	67.5	69.0	69.4	67.5	67.5
15:00 ~ 16:00	66.8	67.4	68.7	67.5	67.7	66.8	67.2
16:00 ~ 17:00	66.6	68.4	68.2	67.2	66.9	66.6	67.3
17:00 ~ 18:00	66.6	66.7	66.8	66.6	66.7	66.7	66.6
18:00 ~ 19:00	66.6	66.7	66.6	66.4	66.8	66.6	67.1
19:00 ~ 20:00	66.6	66.6	66.5	66.7	67.0	66.6	66.8
20:00 ~ 21:00	66.6	66.5	66.5	66.6	66.7	66.6	66.7
21:00 ~ 22:00	66.6	66.5	66.7	66.4	66.7	66.7	66.8
22:00 ~ 23:00	66.6	67.1	66.9	66.7	66.8	66.7	66.8
23:00 ~ 00:00	66.7	67.4	66.7	66.9	66.5	66.8	66.9
00:00 ~ 01:00	66.7	67.1	66.6	66.8	66.5	66.8	67.0
01:00 ~ 02:00	66.6	67.0	66.6	66.9	66.5	66.8	66.9
02:00 ~ 03:00	66.9	67.2	66.7	66.9	66.8	66.9	66.9
03:00 ~ 04:00	66.9	67.2	66.7	66.8	66.6	66.9	66.8
04:00 ~ 05:00	66.9	67.4	66.7	66.7	66.6	66.9	66.8
05:00 ~ 06:00	66.8	67.3	66.9	67.7	66.6	67.1	66.9
06:00 ~ 07:00	66.8	67.5	66.9	66.8	66.5	66.8	66.9
07:00 ~ 08:00	66.7	67.1	66.8	66.5	66.3	66.5	66.6
08:00 ~ 09:00	66.9	67.2	67.0	66.7	66.3	67.2	66.9
09:00 ~ 10:00	67.3	67.1	68.0	68.0	68.0	68.0	66.9
Leq(24)*	66.8	67.1	67.0	67.1	67.7	66.9	67.0
Ldn	73.2	73.6	73.2	73.4	73.3	73.3	73.3
Lmax **	83.6	89.2	98.0	100.0	95.3	87.6	95.4
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 : Boundary-N				Monitor Period : 03-10 May 2026			
SLM Model : Cirrus CR161B				Serial No : G301354			
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 14 Oct 2025			
SLM Reading / Adjust dB(A) : 93.7/0.0				Expire Date : 13 Oct 2026			
Cal Sheet No. : CR-515-2026-116							
Time	L90 (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 ~ 11:00	66.7	66.6	66.0	67.4	66.8	66.3	66.2
11:00 ~ 12:00	66.1	66.4	65.9	66.0	66.5	66.1	66.1
12:00 ~ 13:00	66.1	66.4	65.9	65.9	66.5	65.9	65.8
13:00 ~ 14:00	66.3	66.4	66.3	66.0	66.5	65.9	66.0
14:00 ~ 15:00	66.6	66.4	67.0	66.7	67.4	66.2	65.9
15:00 ~ 16:00	66.3	66.6	66.5	66.6	66.4	66.4	66.2
16:00 ~ 17:00	66.3	67.1	67.2	66.7	66.1	66.3	66.3
17:00 ~ 18:00	66.4	66.2	66.1	66.3	66.4	66.4	66.3
18:00 ~ 19:00	66.3	66.3	66.3	66.1	66.5	66.3	66.5
19:00 ~ 20:00	66.3	66.3	66.2	66.4	66.6	66.4	66.4
20:00 ~ 21:00	66.4	66.3	66.2	66.2	66.4	66.4	66.4
21:00 ~ 22:00	66.4	66.2	66.5	66.2	66.4	66.4	66.5
22:00 ~ 23:00	66.3	66.2	66.6	66.4	66.5	66.5	66.5
23:00 ~ 00:00	66.4	66.9	66.4	66.6	66.3	66.6	66.5
00:00 ~ 01:00	66.4	66.8	66.4	66.5	66.2	66.5	66.6
01:00 ~ 02:00	66.3	66.8	66.4	66.6	66.1	66.6	66.6
02:00 ~ 03:00	66.6	66.9	66.5	66.6	66.5	66.6	66.7
03:00 ~ 04:00	66.6	67.0	66.4	66.5	66.3	66.6	66.6
04:00 ~ 05:00	66.6	67.1	66.5	66.5	66.4	66.7	66.5
05:00 ~ 06:00	66.5	67.0	66.7	66.6	66.4	66.8	66.6
06:00 ~ 07:00	66.5	67.1	66.6	66.4	66.3	66.5	66.7
07:00 ~ 08:00	66.4	66.8	66.4	66.1	66.1	66.3	66.3
08:00 ~ 09:00	66.4	66.6	66.2	66.4	66.0	66.1	66.5
09:00 ~ 10:00	66.5	66.1	66.6	66.4	66.5	66.3	66.4
L90(avg)*	66.4	66.6	66.4	66.4	66.4	66.4	66.4

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 : Boundary-S		Monitor Period : 03-10 May 2026					
SLM Model : Cirrus CR161B		Serial No : G303821					
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515		Serial No : 97097					
Calibration Ref dB(A) : 94.0		Certified Date : 14 Oct 2025					
SLM Reading / Adjust dB(A) : 93.7/0.0		Expire Date : 13 Oct 2026					
Cal Sheet No. : CR-515-2026-116							
Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 ~ 11:00	62.5	64.2	63.3	62.9	63.0	65.1	63.1
11:00 ~ 12:00	62.7	62.4	62.9	62.1	61.3	64.2	63.1
12:00 ~ 13:00	62.1	62.1	61.5	63.3	60.3	61.5	63.0
13:00 ~ 14:00	61.8	63.5	65.8	62.3	64.3	63.3	62.8
14:00 ~ 15:00	62.0	63.1	62.3	63.2	66.1	64.0	62.9
15:00 ~ 16:00	62.2	63.8	60.5	62.3	64.4	62.3	63.7
16:00 ~ 17:00	62.1	62.8	59.9	60.4	61.7	61.1	63.8
17:00 ~ 18:00	62.7	62.3	63.1	62.3	62.1	61.8	64.6
18:00 ~ 19:00	63.7	62.6	60.5	60.2	61.6	61.4	63.2
19:00 ~ 20:00	63.0	62.9	59.9	60.6	61.6	62.0	62.9
20:00 ~ 21:00	63.6	63.2	60.2	60.2	59.8	61.1	63.0
21:00 ~ 22:00	63.0	63.2	60.7	60.8	61.5	60.6	63.7
22:00 ~ 23:00	62.2	65.9	63.5	64.2	63.9	63.4	63.4
23:00 ~ 00:00	62.3	66.2	64.0	64.4	63.3	63.9	63.0
00:00 ~ 01:00	62.3	63.6	63.7	63.2	62.8	63.4	63.1
01:00 ~ 02:00	62.5	62.6	63.5	63.2	62.8	63.5	62.6
02:00 ~ 03:00	62.3	62.8	63.8	63.4	63.1	63.5	62.4
03:00 ~ 04:00	63.0	63.0	63.6	63.2	64.1	63.6	62.9
04:00 ~ 05:00	62.1	62.7	63.3	63.3	63.9	63.9	63.5
05:00 ~ 06:00	61.5	62.8	62.8	66.0	64.1	63.2	63.4
06:00 ~ 07:00	62.2	62.8	63.2	63.7	63.5	63.2	63.3
07:00 ~ 08:00	61.9	62.9	65.4	63.5	63.2	62.8	63.3
08:00 ~ 09:00	63.2	63.9	65.5	63.1	63.6	62.9	63.0
09:00 ~ 10:00	65.1	64.7	66.5	64.0	68.3	63.9	63.0
Leq(24)*	62.7	63.5	63.3	63.0	63.5	63.0	63.2
Ldn	68.8	70.2	69.9	70.1	69.9	69.8	69.5
Lmax **	97.9	101.0	107.1	98.7	93.9	95.3	83.5
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

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise MTR-BST Site 1

Location : Boundary-S				Monitor Period : 03-10 May 2026			
SLM Model : Cirrus CR161B				Serial No : G303821			
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 14 Oct 2025			
SLM Reading / Adjust dB(A) : 93.7/0.0				Expire Date : 13 Oct 2026			
Cal Sheet No. : CR-515-2026-116							
Time	L90 (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 ~ 11:00	61.5	61.8	59.6	60.8	61.1	61.0	62.0
11:00 ~ 12:00	61.4	61.4	59.5	60.2	59.9	60.7	62.2
12:00 ~ 13:00	61.2	60.9	59.3	59.8	59.2	60.6	62.0
13:00 ~ 14:00	60.7	61.6	59.8	59.9	59.7	60.3	61.7
14:00 ~ 15:00	60.9	61.7	59.5	60.1	60.9	60.6	61.9
15:00 ~ 16:00	61.3	61.9	59.2	59.8	60.1	59.6	62.4
16:00 ~ 17:00	61.1	61.3	59.1	59.6	60.4	59.1	62.7
17:00 ~ 18:00	61.6	61.0	59.5	59.7	60.9	60.5	62.8
18:00 ~ 19:00	62.6	61.8	59.4	59.6	60.6	60.4	62.5
19:00 ~ 20:00	62.0	61.9	59.4	59.6	60.6	61.4	62.3
20:00 ~ 21:00	61.9	62.2	59.5	59.7	59.1	60.6	62.3
21:00 ~ 22:00	61.7	62.2	59.7	60.2	59.4	60.0	62.2
22:00 ~ 23:00	61.4	61.7	62.6	63.2	62.5	62.8	62.4
23:00 ~ 00:00	61.0	62.9	62.5	63.1	62.2	62.7	62.4
00:00 ~ 01:00	61.4	62.8	62.9	62.1	61.3	62.8	62.4
01:00 ~ 02:00	61.6	61.7	62.5	62.1	61.9	62.9	61.9
02:00 ~ 03:00	61.3	62.1	63.2	62.3	62.1	62.9	61.7
03:00 ~ 04:00	61.9	62.2	62.9	62.1	62.4	63.0	61.8
04:00 ~ 05:00	61.2	62.0	62.5	62.0	63.1	63.3	63.0
05:00 ~ 06:00	60.9	62.1	61.8	63.0	63.1	62.7	62.8
06:00 ~ 07:00	61.3	62.1	62.3	62.6	62.8	62.6	62.8
07:00 ~ 08:00	61.2	62.3	62.0	62.2	62.4	62.2	62.7
08:00 ~ 09:00	61.3	62.1	61.5	61.3	61.7	62.0	62.4
09:00 ~ 10:00	62.3	60.6	61.0	61.1	60.6	62.4	62.0
L90(avg)*	61.5	61.9	61.1	61.3	61.3	61.7	62.3

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BST Site 1

Location : Boundary-E				Monitor Period : 03-10 May 2026			
SLM Model : Cirrus CR161B				Serial No : G303827			
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 14 Oct 2025			
SLM Reading / Adjust dB(A) : 93.6/0.1				Expire Date : 13 Oct 2026			
Cal Sheet No. : CR-515-2026-116							
Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
09:00 ~ 10:00	59.1	62.2	57.6	55.6	57.5	57.8	58.9
10:00 ~ 11:00	58.6	61.3	59.9	55.4	56.7	54.8	55.2
11:00 ~ 12:00	58.4	60.3	60.4	56.1	54.8	53.7	56.2
12:00 ~ 13:00	58.3	58.1	59.2	57.4	54.8	53.9	53.0
13:00 ~ 14:00	57.8	58.9	63.8	55.3	54.0	53.9	54.8
14:00 ~ 15:00	58.0	59.7	58.0	55.4	53.4	54.0	55.0
15:00 ~ 16:00	58.1	57.9	55.5	54.9	53.3	55.5	56.3
16:00 ~ 17:00	58.4	58.0	56.0	54.8	55.0	54.4	55.3
17:00 ~ 18:00	58.9	58.1	58.8	56.8	56.6	56.0	55.0
18:00 ~ 19:00	59.7	58.3	56.8	55.5	55.5	55.8	55.5
19:00 ~ 20:00	59.0	58.1	56.4	55.8	55.1	55.5	54.8
20:00 ~ 21:00	58.2	57.2	55.3	53.7	54.6	54.4	54.0
21:00 ~ 22:00	58.1	57.2	55.3	54.5	54.0	54.3	53.8
22:00 ~ 23:00	58.2	65.7	56.9	56.6	55.1	54.6	54.0
23:00 ~ 00:00	58.0	64.8	56.6	56.2	54.9	54.4	53.4
00:00 ~ 01:00	58.2	59.4	56.3	56.3	55.0	54.7	53.6
01:00 ~ 02:00	57.9	57.9	56.2	56.0	54.8	54.6	53.6
02:00 ~ 03:00	58.3	57.4	56.3	55.9	55.4	54.8	53.5
03:00 ~ 04:00	58.4	57.2	56.6	56.0	55.4	54.7	53.5
04:00 ~ 05:00	58.1	57.3	56.4	56.4	55.4	54.8	56.0
05:00 ~ 06:00	59.9	58.2	56.7	59.8	55.8	55.0	54.2
06:00 ~ 07:00	59.4	58.7	57.9	56.9	56.9	55.9	55.1
07:00 ~ 08:00	59.5	61.0	61.0	57.5	59.0	56.4	54.9
08:00 ~ 09:00	60.9	59.1	56.4	56.1	55.4	55.8	53.5
Leq(24)*	58.7	60.0	58.1	56.2	55.5	55.1	54.9
Ldn	65.0	67.2	63.5	63.1	61.9	61.3	60.8
Lmax **	88.1	102.6	108.1	96.0	86.6	88.5	88.7
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

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BST Site 1

Location : Boundary-E			Monitor Period : 03-10 May 2026				
SLM Model : Cirrus CR161B			Serial No : G303827				
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515			Serial No : 97097				
Calibration Ref dB(A) : 94.0			Certified Date : 14 Oct 2025				
SLM Reading / Adjust dB(A) : 93.6/0.1			Expire Date : 13 Oct 2026				
Cal Sheet No. : CR-515-2026-116							
Time	L90 (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
09:00 ~ 10:00	57.3	57.4	54.2	53.4	52.3	51.4	53.8
10:00 ~ 11:00	57.1	57.4	54.3	53.1	53.5	51.4	53.0
11:00 ~ 12:00	56.8	57.0	54.3	52.4	52.7	51.7	52.5
12:00 ~ 13:00	56.8	56.6	54.1	51.4	51.5	50.0	51.6
13:00 ~ 14:00	56.7	56.9	54.8	52.0	51.6	50.0	52.7
14:00 ~ 15:00	56.6	56.5	54.4	53.1	50.9	50.3	53.0
15:00 ~ 16:00	56.7	56.0	53.7	51.9	50.8	52.0	52.8
16:00 ~ 17:00	56.9	56.4	53.5	51.8	52.5	51.8	53.2
17:00 ~ 18:00	57.4	56.1	54.3	52.9	52.3	52.5	53.2
18:00 ~ 19:00	58.0	56.9	54.2	53.0	53.0	53.8	53.4
19:00 ~ 20:00	57.5	56.2	53.8	52.4	53.0	53.6	52.9
20:00 ~ 21:00	57.1	56.1	54.2	52.5	52.9	53.3	52.7
21:00 ~ 22:00	57.2	56.1	54.3	53.3	53.0	53.2	52.7
22:00 ~ 23:00	57.1	56.2	55.8	55.2	53.9	53.8	52.9
23:00 ~ 00:00	57.2	57.6	55.9	55.2	53.7	53.6	52.5
00:00 ~ 01:00	57.3	58.1	55.4	55.3	54.2	53.7	52.8
01:00 ~ 02:00	56.8	56.9	55.2	54.9	54.2	53.8	52.8
02:00 ~ 03:00	57.2	56.5	55.4	55.0	54.6	53.7	52.7
03:00 ~ 04:00	57.4	56.4	55.6	54.8	54.6	53.7	52.5
04:00 ~ 05:00	57.0	56.6	55.3	54.8	54.6	53.9	52.5
05:00 ~ 06:00	56.9	56.9	55.3	55.7	54.7	53.7	53.1
06:00 ~ 07:00	57.5	57.2	56.0	55.4	55.1	54.1	53.7
07:00 ~ 08:00	57.3	57.1	55.6	55.1	54.7	54.2	52.5
08:00 ~ 09:00	57.2	55.5	53.6	53.4	53.0	53.3	52.0
L90(avg)*	57.1	56.7	54.8	53.9	53.4	53.0	52.8

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise MTR-BST Site 1

Location : Boundary-W				Monitor Period : 03-10 May 2026			
SLM Model : Cirrus CR161B				Serial No : G302630			
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 14 Oct 2025			
SLM Reading / Adjust dB(A) : 93.7/0.0				Expire Date : 13 Oct 2026			
Cal Sheet No. : CR-515-2026-116							
Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 ~ 11:00	66.0	69.6	65.5	66.6	68.7	66.5	65.7
11:00 ~ 12:00	64.9	66.3	68.0	66.2	67.6	66.6	66.4
12:00 ~ 13:00	62.7	66.6	66.3	64.4	64.9	65.0	65.0
13:00 ~ 14:00	65.5	64.5	68.9	65.3	67.4	64.8	64.3
14:00 ~ 15:00	64.2	64.3	67.7	65.4	66.4	65.9	63.9
15:00 ~ 16:00	64.3	65.2	66.6	65.1	67.6	66.1	64.1
16:00 ~ 17:00	64.3	66.1	65.8	65.6	66.3	63.5	65.4
17:00 ~ 18:00	66.6	68.3	68.3	67.1	68.0	68.1	67.6
18:00 ~ 19:00	63.9	65.8	68.0	67.8	66.9	67.3	65.2
19:00 ~ 20:00	65.0	68.0	69.6	67.5	69.3	68.6	66.4
20:00 ~ 21:00	65.8	65.5	70.2	66.3	65.8	68.6	64.8
21:00 ~ 22:00	62.4	63.8	67.3	65.1	62.3	62.7	63.1
22:00 ~ 23:00	62.9	68.2	69.5	64.5	63.9	63.8	64.3
23:00 ~ 00:00	62.7	67.2	66.2	64.5	62.3	64.3	62.8
00:00 ~ 01:00	63.5	66.4	63.6	64.0	63.8	64.0	63.4
01:00 ~ 02:00	62.6	63.9	62.9	63.2	60.6	66.6	61.6
02:00 ~ 03:00	64.0	63.4	63.7	63.1	61.7	62.9	62.2
03:00 ~ 04:00	65.5	64.9	64.3	63.5	63.0	62.8	64.0
04:00 ~ 05:00	64.5	66.1	64.5	64.1	61.2	64.3	62.9
05:00 ~ 06:00	65.8	64.6	64.2	66.6	64.8	66.1	64.1
06:00 ~ 07:00	67.2	67.8	67.5	68.4	67.2	67.2	67.1
07:00 ~ 08:00	69.6	70.0	70.0	70.1	69.7	70.1	67.5
08:00 ~ 09:00	66.8	68.0	68.6	68.1	67.1	66.5	65.1
09:00 ~ 10:00	67.9	66.1	67.7	65.8	67.4	65.2	66.9
Leq(24)*	65.3	66.7	67.4	66.1	66.3	66.2	65.0
Ldn	71.2	72.7	72.5	71.7	70.8	71.7	70.6
Lmax **	103.5	108.3	110.8	101.1	101.3	102.6	99.0
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 : 03-10 May 2026			
SLM Model : Cirrus CR161B				Serial No : G302630			
Site Operator : Mr. Song Hengchwankun							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 14 Oct 2025			
SLM Reading / Adjust dB(A) : 93.7/0.0				Expire Date : 13 Oct 2026			
Cal Sheet No. : CR-515-2026-116							
Time	L90 (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
10:00 - 11:00	61.2	60.4	60.2	60.2	60.7	60.1	59.8
11:00 - 12:00	60.1	59.8	59.1	57.2	58.8	59.3	59.6
12:00 - 13:00	59.8	59.3	58.5	56.5	58.2	59.4	59.3
13:00 - 14:00	60.3	59.2	60.1	57.9	58.8	59.6	58.9
14:00 - 15:00	61.0	59.2	60.6	58.1	59.9	59.4	58.7
15:00 - 16:00	59.9	60.3	59.9	58.0	59.0	60.2	58.8
16:00 - 17:00	59.8	60.0	59.5	58.0	58.5	58.7	59.3
17:00 - 18:00	60.0	59.7	59.5	57.8	58.7	59.0	58.1
18:00 - 19:00	60.0	59.7	61.1	58.9	58.5	59.9	58.2
19:00 - 20:00	59.9	60.3	61.3	59.3	59.8	60.8	58.5
20:00 - 21:00	60.2	60.0	61.7	59.1	58.7	60.1	59.9
21:00 - 22:00	60.0	59.6	64.2	62.3	58.4	60.8	60.0
22:00 - 23:00	59.8	60.9	64.0	62.2	58.3	60.8	59.8
23:00 - 00:00	59.9	62.5	60.4	61.9	58.3	60.4	59.8
00:00 - 01:00	59.8	63.2	60.4	61.5	58.9	60.8	59.9
01:00 - 02:00	60.1	62.3	60.4	61.6	59.1	60.5	59.8
02:00 - 03:00	61.9	62.1	60.4	61.4	59.7	60.4	60.0
03:00 - 04:00	62.1	62.7	60.3	61.5	59.6	60.6	60.1
04:00 - 05:00	62.5	63.6	60.4	61.6	59.6	60.5	60.4
05:00 - 06:00	62.2	62.6	60.6	62.3	59.6	60.6	60.6
06:00 - 07:00	62.6	62.7	61.2	64.2	59.9	61.1	60.1
07:00 - 08:00	63.2	63.7	62.9	62.4	60.9	62.3	59.8
08:00 - 09:00	60.2	62.2	58.9	59.9	58.7	60.0	59.0
09:00 - 10:00	60.5	61.1	61.8	60.2	60.5	59.6	59.0
L90(avg)*	60.8	61.4	61.0	60.6	59.3	60.3	59.5

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 : 03-10 May 2026
SLM Model : Cirrus CR161B Serial No : G303836
Site Operator : Mr. Song Hengchwankun

Calibrator Model : Cirrus CR:515 Serial No : 97097
Calibration Ref dB(A) : 94.0 Certified Date : 14 Oct 2025
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 13 Oct 2026
Cal Sheet No. : CR-515-2026-116

Time	Equivalent Sound Pressure Level (dB(A))							
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026	2026
12:00 - 13:00	57.7	57.1	60.1	63.2	57.4	59.6	55.3	
13:00 - 14:00	57.1	58.7	62.0	61.1	56.8	59.3	55.8	
14:00 - 15:00	52.4	64.0	58.8	61.7	51.6	57.5	59.4	
15:00 - 16:00	51.3	54.8	55.1	56.6	49.8	56.5	57.5	
16:00 - 17:00	52.8	58.1	56.8	52.2	51.7	53.7	49.2	
17:00 - 18:00	54.1	52.4	53.6	49.5	52.3	49.1	49.7	
18:00 - 19:00	58.2	56.0	57.8	49.5	52.3	54.8	54.7	
19:00 - 20:00	54.8	44.1	45.3	43.1	45.3	45.6	45.5	
20:00 - 21:00	53.8	44.1	45.1	42.7	43.2	46.4	42.6	
21:00 - 22:00	53.7	43.6	45.0	43.1	45.5	46.0	47.7	
22:00 - 23:00	47.5	67.4	45.6	46.3	43.3	45.3	42.1	
23:00 - 00:00	43.0	66.0	45.0	45.4	44.7	46.4	42.4	
00:00 - 01:00	42.3	58.1	45.1	45.7	45.0	43.2	42.8	
01:00 - 02:00	42.0	49.7	45.1	45.1	43.8	45.9	42.4	
02:00 - 03:00	43.2	46.5	48.0	43.9	43.5	52.6	43.3	
03:00 - 04:00	46.2	45.8	44.4	45.5	49.3	45.3	44.3	
04:00 - 05:00	45.8	47.3	47.5	47.3	48.5	51.0	45.9	
05:00 - 06:00	57.9	59.9	53.5	53.4	54.1	57.5	56.6	
06:00 - 07:00	51.0	56.5	57.5	52.6	52.7	54.1	54.6	
07:00 - 08:00	57.2	54.9	58.4	59.0	56.2	56.5	60.5	
08:00 - 09:00	61.0	57.5	60.7	54.8	59.2	58.6	60.6	
09:00 - 10:00	60.4	61.9	62.2	60.9	57.6	60.8	60.3	
10:00 - 11:00	60.3	59.5	62.4	63.7	58.5	59.1	65.9	
11:00 - 12:00	58.8	61.0	61.5	60.4	57.1	58.6	65.0	
Leq(24)*	55.7	59.6	57.3	57.0	53.7	55.6	57.7	
Ldn	58.6	67.3	59.7	58.8	57.1	59.3	59.7	
Lmax **	88.7	93.7	104.1	96.6	81.7	87.8	104.4	
Standard-24Hr	70 dB(A)							
Standard-Max	115 dB(A)							

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

** Maximum Sound Pressure Level between 12:00-12:00

(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 : 03-10 May 2026
SLM Model : Cirrus CR161B Serial No : G303836
Site Operator : Mr. Song Hengchwankun

Calibrator Model : Cirrus CR:515 Serial No : 97097
Calibration Ref dB(A) : 94.0 Certified Date : 14 Oct 2025
SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : 13 Oct 2026
Cal Sheet No. : CR-515-2026-116

Time	L90 (dB(A))							
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026	2026
12:00 - 13:00	53.0	54.7	55.9	59.1	54.7	57.4	53.6	
13:00 - 14:00	54.1	54.7	57.0	59.6	54.6	57.7	53.6	
14:00 - 15:00	48.1	61.6	54.9	59.1	48.8	53.7	58.0	
15:00 - 16:00	46.0	50.8	51.9	53.1	47.7	53.9	51.8	
16:00 - 17:00	51.4	53.6	49.6	49.9	48.1	48.2	47.5	
17:00 - 18:00	53.0	50.0	47.5	45.0	46.0	46.1	45.3	
18:00 - 19:00	56.2	46.3	46.0	44.4	44.9	45.7	48.0	
19:00 - 20:00	52.3	43.7	44.9	42.4	42.7	45.1	43.8	
20:00 - 21:00	51.2	43.1	44.3	41.4	42.0	45.1	41.2	
21:00 - 22:00	50.1	42.9	44.3	41.9	42.8	44.5	42.6	
22:00 - 23:00	45.9	45.8	44.9	44.0	42.5	44.5	41.1	
23:00 - 00:00	41.9	61.2	44.1	44.3	42.6	42.9	40.6	
00:00 - 01:00	41.7	58.0	44.3	44.3	43.6	41.9	40.3	
01:00 - 02:00	41.6	48.0	44.3	41.9	42.9	41.3	40.8	
02:00 - 03:00	42.4	45.8	44.1	41.0	42.7	40.3	40.5	
03:00 - 04:00	41.8	45.0	43.4	40.7	42.9	42.6	40.5	
04:00 - 05:00	41.3	44.7	43.3	42.0	42.9	40.4	41.6	
05:00 - 06:00	44.3	47.5	46.3	47.4	47.4	46.6	50.4	
06:00 - 07:00	47.3	50.9	52.8	49.5	49.9	49.6	51.8	
07:00 - 08:00	50.9	51.7	52.7	55.3	50.8	54.3	58.4	
08:00 - 09:00	57.0	53.4	57.0	53.1	54.5	54.8	58.7	
09:00 - 10:00	56.6	58.1	58.0	57.5	55.6	58.7	61.1	
10:00 - 11:00	56.3	57.3	60.2	61.1	57.1	57.4	63.4	
11:00 - 12:00	55.4	57.6	59.2	58.1	55.6	55.2	63.1	
L90(avg)*	52.0	54.7	53.4	54.2	50.7	52.5	55.6	

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise MTR-BST Site 1

Location : Soi Ruam Pattana
SLM Model : Cirrus CR161B
Site Operator : Mr. Song Hengchwankun

Monitor Period : 03-10 May 2026
Serial No : G301339

Calibrator Model : Cirrus CR:515
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.7/0.0
Cal Sheet No. : CR-515-2026-116

Serial No : 97097
Certified Date : 14 Oct 2025
Expire Date : 13 Oct 2026

Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
12:00 ~ 13:00	54.3	54.3	51.9	52.2	53.0	52.3	51.5
13:00 ~ 14:00	54.5	52.2	53.7	50.2	52.0	53.2	49.6
14:00 ~ 15:00	53.9	50.6	53.5	51.4	49.5	52.8	51.3
15:00 ~ 16:00	53.3	52.1	50.4	52.7	50.0	51.7	51.0
16:00 ~ 17:00	53.9	52.5	51.8	53.2	53.2	53.1	53.3
17:00 ~ 18:00	55.3	53.1	54.7	53.5	54.1	55.3	55.3
18:00 ~ 19:00	54.0	55.4	54.4	55.1	55.3	51.9	53.8
19:00 ~ 20:00	51.9	54.1	54.3	54.8	54.6	53.8	51.5
20:00 ~ 21:00	51.6	53.4	52.6	51.9	51.9	51.1	52.6
21:00 ~ 22:00	46.2	50.7	50.4	50.5	50.7	50.0	50.1
22:00 ~ 23:00	47.5	49.6	50.1	48.9	49.3	46.8	48.3
23:00 ~ 00:00	44.0	51.2	47.5	46.3	47.6	45.7	46.1
00:00 ~ 01:00	45.5	51.1	46.9	45.2	46.0	44.9	46.2
01:00 ~ 02:00	42.6	46.8	46.8	45.1	44.3	41.7	44.3
02:00 ~ 03:00	44.7	45.6	52.5	43.1	43.4	45.7	49.8
03:00 ~ 04:00	43.8	51.2	49.0	43.6	46.0	43.7	44.4
04:00 ~ 05:00	44.6	48.5	45.5	44.9	52.4	42.6	45.3
05:00 ~ 06:00	51.5	48.3	46.8	53.8	54.6	51.3	51.5
06:00 ~ 07:00	51.9	54.7	54.8	53.5	53.3	53.0	53.7
07:00 ~ 08:00	54.6	56.4	51.6	54.5	55.2	56.1	51.8
08:00 ~ 09:00	52.4	55.9	53.1	51.1	50.3	50.9	53.1
09:00 ~ 10:00	51.2	55.7	53.5	50.8	50.6	52.4	54.6
10:00 ~ 11:00	50.6	52.1	53.9	52.9	50.4	51.9	51.6
11:00 ~ 12:00	51.4	50.7	51.9	52.2	51.6	52.2	55.6
Leq(24)*	51.7	52.7	52.1	51.7	51.8	51.6	51.7
Ldn	55.3	57.5	57.0	56.2	57.1	55.4	56.2
Lmax **	100.1	86.1	80.4	81.8	94.0	83.5	91.0
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

** Maximum Sound Pressure Level between 12:00-12:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise MTR-BST Site 1

Location : Soi Ruam Pattana
SLM Model : Cirrus CR161B
Site Operator : Mr. Song Hengchwankun

Monitor Period : 03-10 May 2026
Serial No : G301339

Calibrator Model : Cirrus CR:515
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.7/0.0
Cal Sheet No. : CR-515-2026-116

Serial No : 97097
Certified Date : 14 Oct 2025
Expire Date : 13 Oct 2026

Time	L90 (dB(A))						
	03-04 May 2026	04-05 May 2026	05-06 May 2026	06-07 May 2026	07-08 May 2026	08-09 May 2026	09-10 May 2026
12:00 ~ 13:00	50.5	46.3	44.9	45.2	47.3	46.4	46.2
13:00 ~ 14:00	47.8	45.9	48.0	45.0	45.9	45.4	43.6
14:00 ~ 15:00	49.6	47.4	48.5	47.8	44.4	49.6	45.8
15:00 ~ 16:00	49.1	46.6	44.8	47.4	44.8	47.8	48.1
16:00 ~ 17:00	50.0	47.8	47.3	50.1	49.3	48.5	51.2
17:00 ~ 18:00	50.6	48.8	49.3	49.1	49.0	50.3	50.0
18:00 ~ 19:00	49.7	50.7	51.4	50.5	49.7	48.1	49.4
19:00 ~ 20:00	47.1	49.7	49.4	49.1	51.0	48.5	48.6
20:00 ~ 21:00	46.3	50.0	47.1	47.2	48.0	46.3	48.2
21:00 ~ 22:00	44.0	47.9	46.4	47.0	48.5	46.0	46.0
22:00 ~ 23:00	43.5	46.5	45.3	44.7	47.6	44.8	44.6
23:00 ~ 00:00	42.6	47.3	44.8	43.7	45.5	43.7	43.5
00:00 ~ 01:00	42.8	49.5	42.8	44.4	44.1	42.2	43.7
01:00 ~ 02:00	41.0	46.4	42.6	43.8	43.7	40.4	42.9
02:00 ~ 03:00	41.5	45.1	43.8	42.5	42.8	41.5	43.1
03:00 ~ 04:00	41.8	43.8	47.2	41.6	41.7	40.8	42.9
04:00 ~ 05:00	42.2	42.2	43.5	43.2	41.7	41.3	43.8
05:00 ~ 06:00	46.1	42.7	43.5	49.2	47.4	47.2	46.4
06:00 ~ 07:00	48.4	48.9	50.1	49.3	49.6	49.3	49.2
07:00 ~ 08:00	47.5	51.3	46.6	49.1	49.7	47.5	46.4
08:00 ~ 09:00	46.1	52.1	48.8	47.3	45.6	45.5	47.7
09:00 ~ 10:00	44.8	50.2	48.2	44.9	44.8	46.8	45.4
10:00 ~ 11:00	44.7	46.7	47.4	48.2	44.1	48.7	45.4
11:00 ~ 12:00	46.1	45.7	46.1	48.2	45.2	48.0	46.4
L90(avg)*	47.0	48.2	47.2	47.3	47.1	46.8	46.9

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

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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. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_SOIL_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW1	STANDARD ^u
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 : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3rd ED., 2001

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

MR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-0004

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

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

3. ^u Notification of the Ministry of Industry, B.E.2559 (2016).



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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. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_SOIL_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW2	STANDARD ^u
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 : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3rd ED., 2001

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

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Technical Management Team

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)
Analyst

REG. NO. 7-239-9-0022

Mrs. Araya Tippiarak

(Mrs. Araya Tippiarak)
Technical Management Team

REG. NO. 7-239-9-0004

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

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(Miss Jutarat Jaemruen)
Analyst

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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	STANDARD ¹⁾
				MW5	
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 : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020.

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

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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	STANDARD ¹⁾
				MW6	
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 : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020.

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(Miss Jutarat Jaemruen)

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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. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_SOIL_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW7	STANDARD ¹⁾
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 : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020.

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(Miss Jutarat Jaemruen)

Analyst

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Technical Management Team

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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. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 224054_SOIL_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW8	STANDARD ¹⁾
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 : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020.

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

Mrs. Araya Tippiaruk

(Mrs. Araya Tippiaruk)

Technical Management Team

REG. NO. 7-239-9-0004

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 08:48-08:55
ANALYTICAL DATE	: 19-24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-8-0025
SAMPLE CONDITION	: เหลือ 4 ลิตร	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MWI	STANDARD ^{1/}
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 24th ED. 2023 (AWWA/APH/ WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-8-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. 7-239-8-0005

- Remark :**
1. Reported analysis refers to submitted sample only.
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 3. ^{1/} Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 08:48-08:55
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เหลือ 4 ลิตร	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MWI	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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 3. - Not available.



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 14:17-14:29
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/06/2026		: 7-239-n-0025
SAMPLE CONDITION	: เติ่งงัส	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW2	STANDARD ^U
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 24th ED. 2023 (AWWA/PHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-n-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. 7-239-n-0005

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 14:17-14:29
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เติ่งงัส	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW2	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 13:44-13:57
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-8-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW3	STANDARD ^{1/}
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 24th ED. 2022 (AWWA/APHA/WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-8-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. 7-239-8-0005

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 13:44-13:57
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW3	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

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Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 11:36-11:53
ANALYTICAL DATE	: 19-24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-8-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW4	STANDARD ¹⁾
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 24th ED. 2021 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-8-0022

Khemchuda Insorn

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Technical Management Team

REG. NO. 7-239-8-0005

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SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 11:36-11:53
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REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW4	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 09:28-09:40
ANALYTICAL DATE	: 19-24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-n-0025
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW5	STANDARD ^{1/}
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 24TH ED. 2021 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

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Khemchuda Insorn

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Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 09:28-09:40
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW5	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

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CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 11:00-11:18
ANALYTICAL DATE	: 19-24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-8-0025
SAMPLE CONDITION	: เหลือถัง	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW6	STANDARD ^{1/}
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 21ST ED., 2021 (AWWA/APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-8-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

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GROUND WATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 11:00-11:18
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เหลือถัง	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW6	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 10:30-10:41
ANALYTICAL DATE	: 19-24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-8-0025
SAMPLE CONDITION	: เหลือถัง	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW7	STANDARD ¹⁾
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 24th ED. 2021 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-8-0022

Khemchuda Insorn

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 10:30-10:41
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: *
SAMPLE CONDITION	: เหลือถัง	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW7	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

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GROUND WATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 09:57-10:16
ANALYTICAL DATE	: 19-24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: 7-239-8-0025
SAMPLE CONDITION	: เหลือ4ลิ	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW8	STANDARD ^{1/}
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 24th ED. 2021 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-8-0022

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No	: 1046/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 17/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 09:57-10:16
ANALYTICAL DATE	: 24/06/2026	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/06/2026		: -
SAMPLE CONDITION	: เหลือ4ลิ	FILE CODE	: 226054_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW8	STANDARD
1,3-Butadiene	mg/l	SW 846 5030C/8260D	< 0.0005	ND	-

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 7th ED., 2000

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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

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3. - Not available.

ใบรับรองผลการตรวจวัดคุณภาพน้ำระบายทิ้ง
จากระบบผลิตน้ำหล่อเย็น



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0002/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 02/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 03/01/2026	SAMPLING TIME	: 11:40
ANALYTICAL DATE	: 06-12/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 15/01/2026	FILE CODE	: 226054_WW_January
SAMPLE CONDITION	: เติบโต		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	16.07	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED. 2023 (AWWA, APHA, WEF)

Pornapa Budthum
(Miss Pornapa Budthum)

Khemchuda Insorn
(Miss Khemchuda Insorn)
Technical Management Team

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0202/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:20
ANALYTICAL DATE	: 09-13/02/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 16/02/2026	FILE CODE	: 226054_WW_February
SAMPLE CONDITION	: เติบโต		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	14.87	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED. 2023 (AWWA, APHA, WEF)

Pornapa Budthum
(Miss Pornapa Budthum)

Khemchuda Insorn
(Miss Khemchuda Insorn)
Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0402/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 10:30
ANALYTICAL DATE	: 10-18/03/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 19/03/2026		: *
SAMPLE CONDITION	: เกลือไฮโป	FILE CODE	: 226054_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	18.10	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED. 2021 (AWWA, APHA, WEF)

Pornnapa Budthum

(Miss Pornnapa Budthum)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0559/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:26
ANALYTICAL DATE	: 08-10/04/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 17/04/2026		: *
SAMPLE CONDITION	: เกลือไฮโป	FILE CODE	: 226054_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	16.90	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED. 2021 (AWWA, APHA, WEF)

Pornnapa Budthum

(Miss Pornnapa Budthum)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0764/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 08:54
ANALYTICAL DATE	: 14-22/05/2026	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 29/05/2026	FILE CODE	: 226054_WW_May
SAMPLE CONDITION	: เติลิ่งใส		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	14.68	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED. 2023 (AWWA, APHA, WEF)

Rongpa putthum

(Miss Pornnapa Budthum)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Bangkok Synthetics Co., Ltd. (BST Site 1)	REQUEST SERVICE No.	: 0962/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:40
ANALYTICAL DATE	: 11-17/06/2026	SITE OPERATOR	: Mr. Rommadon Lemmad
REPORT DATE	: 20/06/2026	FILE CODE	: 226054_WW_June
SAMPLE CONDITION	: เติลิ่งใสมีตะกอน		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION CW Return (Cooling tower)	STANDARD
Total Organic Carbon*	mg/l	5310 B	< 0.01	28.35	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED. 2023 (AWWA, APHA, WEF)

Rongpa putthum

(Miss Pornnapa Budthum)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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ใบรับรองผลการตรวจวัดระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน



Noise Monitoring Result : Working Noise MTR-BST Site 1

Location : BDU-DMF Compressor	Monitor Period : Apr 20, 2026
SLM Model : SCARLET ST-21D	Serial No : 821081
Site Operator : Miss Wiraya Patchimboon	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 14 2025
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 13 2026
Cal Sheet No. : CR-515-2026-083	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 20, 2026
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	82.7
09:00 - 10:00	82.9
10:00 - 11:00	82.9
11:00 - 12:00	83.2
12:00 - 13:00	83.5
13:00 - 14:00	82.8
14:00 - 15:00	83.5
15:00 - 16:00	83.4
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)*	83.1
Lmax **	85.6
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 20, 2026
SLM Model : SCARLET ST-21D	Serial No : 821080
Site Operator : Miss Wiraya Patchimboon	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 14 2025
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 13 2026
Cal Sheet No. : CR-515-2026-083	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 20, 2026
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	81.7
09:00 - 10:00	81.7
10:00 - 11:00	81.9
11:00 - 12:00	81.9
12:00 - 13:00	81.9
13:00 - 14:00	81.5
14:00 - 15:00	81.4
15:00 - 16:00	81.4
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)*	81.7
Lmax **	93.1
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



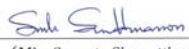
Noise Monitoring Result : Working Noise MTR-BST Site 1

Location : BDU-DMF Steam Line		Monitor Period : Apr 20, 2026		
SLM Model : SCARLET ST-21D		Serial No : 821079		
Site Operator : Miss Wiraya Patchimboon				
Calibrator Model : Cirrus CR:515		Serial No : 97097		
Calibration Ref dB(A) : 94.0		Certified Date : Oct 14 2025		
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Oct 13 2026		
Cal Sheet No. : CR-515-2026-083				
Time	Equivalent Sound Pressure Level (dB(A))			
	Apr 20, 2026			
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				81.8
09:00 - 10:00				81.7
10:00 - 11:00				82.0
11:00 - 12:00				81.7
12:00 - 13:00				81.8
13:00 - 14:00				82.4
14:00 - 15:00				82.3
15:00 - 16:00				82.3
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)*	82.0			
Lmax **	99.1			
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-NMP Compressor		Monitor Period : Apr 20, 2026		
SLM Model : SCARLET ST-21D		Serial No : 821078		
Site Operator : Miss Wiraya Patchimboon				
Calibrator Model : Cirrus CR:515		Serial No : 97097		
Calibration Ref dB(A) : 94.0		Certified Date : Oct 14 2025		
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Oct 13 2026		
Cal Sheet No. : CR-515-2026-083				
Time	Equivalent Sound Pressure Level (dB(A))			
	Apr 20, 2026			
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				83.6
11:00 - 12:00				83.8
12:00 - 13:00				83.8
13:00 - 14:00				83.9
14:00 - 15:00				84.4
15:00 - 16:00				84.0
16:00 - 17:00				84.4
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) *	84.1			
Lmax **	98.0			
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 20, 2026	
SLM Model : SCARLET ST-21D		Serial No : 820722	
Site Operator : Miss Wiraya Patchimboon			
Calibrator Model : Cirrus CR:515		Serial No : 97097	
Calibration Ref dB(A) : 94.0		Certified Date : Oct 14 2025	
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Oct 13 2026	
Cal Sheet No. : CR-515-2026-083			
Time	Equivalent Sound Pressure Level (dB(A))		
	Apr 20, 2026		
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	83.9		
10:00 - 11:00	83.5		
11:00 - 12:00	83.6		
12:00 - 13:00	83.6		
13:00 - 14:00	83.8		
14:00 - 15:00	84.3		
15:00 - 16:00	84.8		
16:00 - 17:00	84.5		
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) *	84.0		
Lmax **	100.1		
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 Steam Line		Monitor Period : Apr 20, 2026	
SLM Model : SCARLET ST-21D		Serial No : 820724	
Site Operator : Miss Wiraya Patchimboon			
Calibrator Model : Cirrus CR:515		Serial No : 97097	
Calibration Ref dB(A) : 94.0		Certified Date : Oct 14 2025	
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Oct 13 2026	
Cal Sheet No. : CR-515-2026-083			
Time	Equivalent Sound Pressure Level (dB(A))		
	Apr 20, 2026		
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	82.7		
10:00 - 11:00	82.8		
11:00 - 12:00	82.8		
12:00 - 13:00	82.7		
13:00 - 14:00	82.9		
14:00 - 15:00	83.5		
15:00 - 16:00	83.6		
16:00 - 17:00	83.2		
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) *	83.0		
Lmax **	92.4		
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 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800
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TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0200
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 10/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Pulsar 22 INSTRUMENT SERIAL NO. : PB614
CALIBRATOR MODEL : Pulsar 22R CALIBRATOR SERIAL NO. : 79781
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 01/04/2025
READING / ADJUST : 113.4 / 0.6 EXPIRE DATE : 31/03/2026
CAL SHEET NO. : NC-PULSAR-2026-023

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (8 hr)	STANDARD*
51716	MN1 : Day	07.42-15.42	74.7	83.7	85.0

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0200
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 10/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Pulsar 22 INSTRUMENT SERIAL NO. : PB636
CALIBRATOR MODEL : Pulsar 22R CALIBRATOR SERIAL NO. : 79781
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 01/04/2025
READING / ADJUST : 113.8 / 0.2 EXPIRE DATE : 31/03/2026
CAL SHEET NO. : NC-PULSAR-2026-023

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
48611	MN1 : Shift A	07.24-19.00	40.1	79.3	83.0

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-TWA-2603-0200
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 10/03/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1040
CALIBRATOR MODEL	: Cirrus RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 02/03/2026
READING / ADJUST	: 114.7 / -0.7	EXPIRE DATE	: 01/03/2027
CAL SHEET NO.	: NC-CIRRUS-2026-028		

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
631316	OP1 : Shift B	07.06-19.00	14.6	74.9	83.0


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Environmental Scientist


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-TWA-2603-0201
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 12/03/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1052
CALIBRATOR MODEL	: Cirrus RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 02/03/2026
READING / ADJUST	: 112.5 / 1.5	EXPIRE DATE	: 01/03/2027
CAL SHEET NO.	: NC-CIRRUS-2026-030		

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
54811	OP1 : Shift C	07.25-19.00	46.1	79.9	83.0


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-TWA-2603-0201
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 12/03/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1053
CALIBRATOR MODEL	: Cirrus RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 02/03/2026
READING / ADJUST	: 113.8 / 0.2	EXPIRE DATE	: 01/03/2027
CAL SHEET NO.	: NC-CIRRUS-2026-030		

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
651446	OP1 : Shift C	07.09-19.00	19.9	76.3	83.0


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Bangkok Synthetics Co., Ltd.	REFERENCE NO.	: 226054-TWA-2603-0201
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 12/03/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Pulsar 22	INSTRUMENT SERIAL NO.	: PB644
CALIBRATOR MODEL	: Pulsar 22R	CALIBRATOR SERIAL NO.	: 79781
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 01/04/2025
READING / ADJUST	: 114.0 / 0.0	EXPIRE DATE	: 31/03/2026
CAL SHEET NO.	: NC-PULSAR-2026-026		

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
661457	OP1 : Shift C	07.31-19.00	45.8	79.9	83.0


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0202
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 16/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Pulsar 22 INSTRUMENT SERIAL NO. : PB632
CALIBRATOR MODEL : Pulsar 22R CALIBRATOR SERIAL NO. : 79781
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 01/04/2025
READING / ADJUST : 114.3 / -0.3 EXPIRE DATE : 31/03/2026
CAL SHEET NO. : NC-PULSAR-2026-027

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
621258	OP1 : Shift A	07.13-19.00	48.4	80.1	83.0


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0202
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 16/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1102
CALIBRATOR MODEL : Cirrus RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 02/03/2026
READING / ADJUST : 114.1 / -0.1 EXPIRE DATE : 01/03/2027
CAL SHEET NO. : NC-CIRRUS-2026-031

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
621269	OP1 : Shift A	07.06-19.00	5.9	71.0	83.0


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Environmental Scientist


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0202
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 16/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1101
CALIBRATOR MODEL : Cirrus RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 02/03/2026
READING / ADJUST : 114.1 / -0.1 EXPIRE DATE : 01/03/2027
CAL SHEET NO. : NC-CIRRUS-2026-031

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
641320	OP1 : Shift A	07.14-19.00	64.7	81.4	83.0


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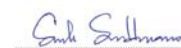
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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0202
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 16/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Pulsar 22 INSTRUMENT SERIAL NO. : PB643
CALIBRATOR MODEL : Pulsar 22R CALIBRATOR SERIAL NO. : 79781
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 01/04/2025
READING / ADJUST : 113.7 / 0.3 EXPIRE DATE : 31/03/2026
CAL SHEET NO. : NC-PULSAR-2026-027

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
621247	OP1 : Shift C	07.22-19.00	39.4	79.2	83.0


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Environmental Scientist


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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0203
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 17/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1040
CALIBRATOR MODEL : Cirrus RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 02/03/2026
READING / ADJUST : 114.0 / 0.0 EXPIRE DATE : 01/03/2027
CAL SHEET NO. : NC-CIRRUS-2026-032

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
39134	OP1 : Shift D	07.36-19.00	61.1	81.1	83.0

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Environmental Scientist

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0203
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 17/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1041
CALIBRATOR MODEL : Cirrus RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 02/03/2026
READING / ADJUST : 113.9 / 0.1 EXPIRE DATE : 01/03/2027
CAL SHEET NO. : NC-CIRRUS-2026-032

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
621243	OP1 : Shift D	07.41-19.00	64.3	81.3	83.0

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0254
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 20/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1054
CALIBRATOR MODEL : Cirrus RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 02/03/2026
READING / ADJUST : 114.0 / 0.0 EXPIRE DATE : 01/03/2027
CAL SHEET NO. : NC-CIRRUS-2026-035

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
621239	MN1 : Shift B	06.50-18.50	22.3	76.7	83.0


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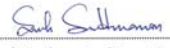
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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Synthetics Co., Ltd. REFERENCE NO. : 226054-TWA-2603-0255
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 24/03/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1055
CALIBRATOR MODEL : Cirrus RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 02/03/2026
READING / ADJUST : 113.6 / 0.4 EXPIRE DATE : 01/03/2027
CAL SHEET NO. : NC-CIRRUS-2026-042

OPERATOR ID	LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
41264	OP1 : Shift C	07.09-19.00	42.1	79.5	83.0


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Environmental Scientist


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

ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0341/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 25/02/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 27/02/2026
		Test Date	: 06/03/2026
Tel/Fax	: 0-3869-8698	Report Date	: 11/03/2026

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	25/02/2026 08:07-16:12	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Maing Panwasanetch
(Miss Narisa Poowasanetch)
Technical Management Team

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

ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0329/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 24/02/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 25/02/2026
		Test Date	: 26/02/2026
Tel/Fax	: 0-3869-8698	Report Date	: 06/03/2026

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 (V-9941)	24/02/2026 08:35-16:35	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
C-1401: BD Plant	24/02/2026 08:27-16:27	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
BDU-NMP: Extractive Distillation :C-2241	24/02/2026 08:20-16:20	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
BDU-NMP: BD Purification : C-2245	24/02/2026 08:24-16:24	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Maing Panwasanetch
(Miss Narisa Poowasanetch)
Technical Management Team

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

ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0341/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 25/02/2026
Address	: No.5, 1-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 27/02/2026
		Test Date	: 05/03/2026
Tel/Fax	: 0-3869-8698	Report Date	: 11/03/2026

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	25/02/2026 08:07-16:12	Methyl tert-butyl ether	NIOSH 1615/GC FID	< 0.02	ND	50

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

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

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0329/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 24/02/2026
Address	: No.5, 1-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 25/02/2026
		Test Date	: 05/03/2026
Tel/Fax	: 0-3869-8698	Report Date	: 06/03/2026

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
C-3001	24/02/2026 08:45-16:45	Methyl tert-butyl ether	NIOSH 1615/GC FID	< 0.02	ND	50

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0341/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 25/02/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 27/02/2026
		Test Date	: 10/03/2026
Tel/Fax	: 0-3869-8698	Report Date	: 11/03/2026

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	25/02/2026 08:07-12:16	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By: Sudaporn S.
(Miss Sudaporn Soonthorn)

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0329/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 24/02/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 25/02/2026
		Test Date	: 27/02/2026
Tel/Fax	: 0-3869-8698	Report Date	: 06/03/2026

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	24/02/2026 08:40-12:40	Methanol	NIOSH 2000/GC FID	< 0.04	0.90	200

Analyst By: Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By: Narisa Poowasanpetch
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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0341/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 25/02/2026
Address	: No.5, 1-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 27/02/2026
Tel/Fax	: 0-3869-8698	Test Date	: 06/03/2026
		Report Date	: 11/03/2026

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	25/02/2026 08:07:12:16	Toluene	NIOSH 1501/GC FID	< 0.023	ND	200

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpeth
(Miss Narisa Poowasanpeth)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0329/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 24/02/2026
Address	: No.5, 1-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 25/02/2026
Tel/Fax	: 0-3869-8698	Test Date	: 27/02/2026
		Report Date	: 06/03/2026

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-1504 : ถังเก็บ Toluene	24/02/2026 08:30-12:30	Toluene	NIOSH 1501/GC FID	< 0.023	ND	200

Analyst By : Sudaporn S.
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Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0890/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 18/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 25/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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	18/05/2026 08:42-16:56	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

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

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0889/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 20/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 23/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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 (V-9941)	20/05/2026 08:47-16:55	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
C-1401: BD Plant	20/05/2026 08:49-17:06	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
BDU-NMP: Extractive Distillation :C-2241	20/05/2026 08:53-17:09	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
BDU-NMP : BD Purification : C-2245	20/05/2026 08:54-17:10	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
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Technical Management Team

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

ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0890/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 18/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 26/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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	18/05/2026 08:42-16:56	Methyl tert-butyl ether	NIOSH 1615/GC FID	< 0.02	ND	50

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

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

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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0889/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 20/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 26/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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	20/05/2026 08:42-16:48	Methyl tert-butyl ether	NIOSH 1615/GC FID	< 0.02	0.07	50

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Mairisa Poowasanpetch
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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0890/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 18/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 29/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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	18/05/2026 08:42-13:09	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Mairisa Poowasanpetch
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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0889/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 20/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
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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	20/05/2026 08:45-13:02	Methanol	NIOSH 2000/GC FID	< 0.04	ND	200

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

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

ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0890/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 18/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 25/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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	18/05/2026 08:42-13:05	Toluene	NIOSH 1501/GC FID	< 0.023	ND	200

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Minin Pawanapetch
(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
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ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 0889/69
For	: Bangkok Synthetics Co., Ltd. (BST Site 1)	Sampling Date	: 20/05/2026
Address	: No.5, I-7 Road, Map Ta Phut Sub-district, Muang District, Rayong Province 21150	Received Date	: 22/05/2026
		Test Date	: 25/05/2026
Tel/Fax	: 0-3869-8698	Report Date	: 29/05/2026

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-1504 : ถังเก็บ Toluene	20/05/2026 08:52-13:04	Toluene	NIOSH 1501/GC FID	< 0.023	ND	200

Analyst By : Sudaporn S.
(Miss Sudaporn Soonthorn)

Approved By : Minin Pawanapetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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

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4. ND = non-detectable.

ภาคผนวก จ

ใบแสดงการตรวจเทียบเครื่องมือ

Agilent CrossLab Start Up Services

Agilent 8890 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.

Agilent 8890 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>.

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	CN2508A105
Instrument System Site and Location	Air Toxic Room

List System Component Product Numbers	List the Serial Numbers of each Component
1. G3540A	CN2508A105
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

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

- ☒ Replace the split vent trap cartridge filter using the Maintenance procedure from either the Browser User interfaces 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.
- ☒ For the inlets installed, perform inlet maintenance using the Maintenance procedure from the Browser User interfaces. Record the results. (Leak and Restriction Test)
- ☐ 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 using the Browser interface.
- ☒ Perform inlet pressure decay test(s) from the diagnostics screen on the Browser User interface. Record if test passed or failed in the results table.

Note: 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.

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 Browser interface or 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.

PM Test Results Table

Test description	Before PM Service	After PM Service
Front detector output	—	—
Back detector output	—	—
AUX 1 detector output	—	—
AUX 2 detector output	—	—
Test description	Expected test result	Actual test result
Leak and Restriction Test after front inlet maintenance	Pass	Pass
Leak and Restriction Test after back inlet maintenance	Pass	—
Leak and Restriction Test after front inlet Split Vent Trap replacement	Pass	Pass
Leak and Restriction Test after back inlet Split Vent Trap replacement	Pass	—
Front inlet pressure decay test	Pass	Pass
Back inlet pressure decay test	Pass	—

PM Parts List Table

Note: 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	8890 GC	/
SSL Capillary Inlet PM kit, Split	5188-6496	8890 GC	—
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	8890 GC	—
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	8890 GC	—
SSL Capillary Ultra Inert Inlet Low Pressure Drop Split Liner - with Glass Wool	5190-2295	8890 GC	—
PP Inlet PM kit	5188-6498	8890 GC	—
Split vent trap PM kit, single cartridge (for MMI, PTV & VI)	5188-6495	8890 GC	—
MMI Cleaning Kit	G3510-60820	8890 GC	—
PTV Septumless Head Rebuild Kit	5182-9747	8890 GC	—
PTV Septumless Head Teflon Guide	5182-9748	8890 GC	—
Ignitor (glow plug) assembly with O-ring	19231-60680	8890 GC	—
FID Collector Rebuild/Cleaning Kit	G1531-67000	8890 GC	—
FID Collector Replacement Kit	G1531-67001	8890 GC	—
Standard .011-inch FID Jet	5200-0176	8890 GC	—
Universal .018-inch FID Jet	5200-0177	8890 GC	—

Agilent 8890 GC Preventive Maintenance Checklist



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 6008571184 Date service completed April 16, 2026
Agilent signature Chauhan I. Customer signature Sidhan C.
Total number of pages in this document 5 Page.



Agilent Preventive Maintenance Services

Agilent GCMS
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

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.

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.

Important Customer Web Links

- To access Agilent training and education, visit <http://www.agilent.com/chem/training> 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 order by sections: Review, System Checks, Pump maintenance, Cleaning System and Filters, then System Post Check.
 - The tasks in each section may be completed in the most logical order relevant to the system. 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 Verification section
- Complete Signature Page and attach Signature Page to Service Order.

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.**

Definition of the Task/Recommended items within the document

Task		Recommended			
Yes	No	Interim	Major	As Needed	
✓					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.

Instrument Maintenance

Select the appropriate service to be performed.

- ☐ Interim Preventive Maintenance (when available, is typically 6 months or at the request of the customer)
- ☒ Major Preventive Maintenance (Yearly)
- ☐ Enhanced Preventive Maintenance (when available, is provided "As needed")

System Information

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

Instrument System Name and ID
Instrument System Site and Location

US2509MA07
Air Toxic Room

List System Component Product Numbers	List the Serial Numbers of each Component
1. 67077C	US2509MA07
2. IDP 3 67077-80097	MY2505S076
3.	
4.	
5.	
6.	

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 firmware version(s). Updating to the most current versions is strongly recommended. Verify with the customer before updating.

Preventive Maintenance Procedures

☐ Service Not Applicable

Interim / Major Preventive Maintenance – GCMS

Yes/No	Interim/Major	Description
☒ ☐	☒ ☐	Perform general inspection of system for cleanliness
☒ ☐	☒ ☐	Discuss any problems the customer is having with the instrument
☒ ☐	☒ ☐	Review customer maintenance records and exclude maintenance on recently serviced items
☒ ☐	☒ ☐	Review the most recent autotune report. This will give a starting point for evaluating spectral peaks, baseline noise, peak shape, mass assignments and resolution.

Interim / Major Preventive Maintenance – System Checks

☐ Service Not Applicable

Yes/No	Interim/Major	Description
☒ ☐	☒ ☐	Verify that calibration peaks were seen prior to starting the PM
☒ ☐	☒ ☐	Vent the instrument
☒ ☐	☒ ☐	Inspect vacuum hoses, pump, exhaust tubing, and power cords for excessive wear.
☒ ☐	☒ ☐	Visually inspect calibrant levels – PFTBA PFDTD (if appl.), IRM (if appl.). Refill if available.
☒ ☐	☒ ☐	Look for any obvious external damage or problems.
☒ ☐	☒ ☐	Clean air intake(s). Cosmetic cover(s) may need to be removed.
☒ ☐	☒ ☐	Verify system line voltage meets instrument specifications: Yes ☐ No ☐
☒ ☐	☒ ☐	For HydroInert systems, verify customer is running hydrogen: Yes ☐ No ☐

Interim / Major Preventive Maintenance – Wet Mechanical vacuum pumps

☒ Service Not Applicable

Yes/No	Interim/Major	Description
☐ ☐	☒ ☐	Check for evidence of oil leakage. Check pump gasket for leakage.
☐ ☐	☐ ☒	GC/MS SQ with diffusion pump; drain and replace diffusion pump oil.
☐ ☐	☒ ☐	Drain and replace mechanical pump oil.
☐ ☐	☒ ☐	Replace Oil Mist Filter if applicable.

Yes/No	Interim/Major	Description
☐ ☐	☒ ☐	Discuss with customer the need for more frequent oil changes if the oil is dirty
☐ ☐	☒ ☐	Don't use mist filters with Chemical Ionization.
☐ ☐	☒ ☐	Perform anti-suckback valve test. Power on until side plate is held closed, power off and check that side plate holds closed. Visually confirm that no oil returns up vacuum hose.

Interim / Major Preventive Maintenance – Dry Mechanical vacuum pumps - Diaphragm

☒ Service Not Applicable

Yes/No	Interim/Major	Description
☐ ☐	☒ ☐	Check for evidence of poor vacuum – Turbo power demand, poor manifold vacuum, etc.
☐ ☐	☒ ☐	Clear air flow paths of dust.
☐ ☐	☒ ☐	If vacuum is poor, then replace the diaphragm pump.
☐ ☐	☒ ☐	Perform anti-suckback valve test. Power on until side plate is held closed, power off and check that side plate holds closed.

Interim / Major Preventive Maintenance – Dry Mechanical vacuum pumps - Scroll

☐ Service Not Applicable

Yes/No	Interim/Major	Description
☐ ☒	☒ ☐	Replace the tips seal on the IDP pump.
☒ ☐	☒ ☐	Check for evidence of poor vacuum – Rough vac pressure, turbo power demand, poor manifold vacuum, etc.
☐ ☒	☒ ☐	Replace the Exhaust Filter if required.
☒ ☐	☒ ☐	Discuss with customer the need for more frequent changes, if needed.
☒ ☐	☒ ☐	Inform customer that pump gas ballast should be installed all the time.
☒ ☐	☒ ☐	Perform anti-suckback valve test. Power on until side plate is held closed, power off and check that side plate holds closed.

Interim / Major Preventive Maintenance – Cleaning System and Filters

☐ Service Not Applicable

Cleaning System and Filters			
Yes/No	Interim/Major	Description	
Fans			
☒	☐	☒	☒
		Remove dust from fans and vent covers.	
☒	☐	☒	☒
		Verify fans are functional and that there is enough space around the instrument for proper cooling.	
Source cleaning (all sources except HydroInert)			
☒	☐	☐	☒
		Open analyzer and remove the source.	
☒	☐	☐	☒
		Disassemble, Clean, Re-assemble source. (7200, also, remove and clean entrance lens)	
☒	☐	☐	☒
		Re-install source and close analyzer.	
HydroInert Source			
☐	☒	☐	☐
		Source NOT to be abrasively cleaned. No cleaning required at PM. If a decrease in performance is observed, recommend to the customer that filaments, insulators (repeller and extractor), extractor lens, and repeller lens may need to be replaced to restore performance. HydroInert source should not be run with helium carrier.	
Filters			
☐	☒	☐	☒
		Replace RMSH-2 Helium gas filter (collision cell gas) – if applicable.	
☐	☒	☐	☒
		Replace RMSN-2 Nitrogen gas filter (collision cell gas) – if applicable.	
☐	☒	☐	☒
		Replace RMSHY-2 Hydrogen gas filter (HydroInert and JetClean) – if applicable.	
☐	☒	☐	☒
		CP17973 – Gas Clean GS/MS Filter (for He, N2 or H2 carrier) – if required	
☐	☒	☐	☒
		5190-9071 – Methane Gas Filter (CI systems) – if applicable	

Guidance: Gas filters need to be changed only if required (ie indicating traps show color change, or if Big Universal Trap are approaching saturation based on time installed or number of gas cylinders changed for that trap)

Interim / Major Preventive Maintenance – System Post Check

☐ Service Not Applicable

System post-check			
Yes/No	Interim/Major	Description	
☒	☐	☒	☒
Pump system back down. Wait until system stability has been achieved.			
☒	☐	☒	☒
Verify system vacuum reading(s) via the gauge controller.			
☒	☐	☒	☒
Leak Check			
☒	☐	☒	☒
Verify system in manual tune			
☒	☐	☒	☒
Compare against previous tune file report(s)			
☒	☐	☒	☒
Change to Tune and verify that all temperatures, pressures, and gas flows reach method set points			
☒	☐	☒	☒
Check manually that you have calibration peaks.			
☒	☐	☒	☒
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 Comments box. Systems in a compliant environment may need additional documentation.
- ☐ Complete Signature Page and attach Signature Page to Service Order.

Test Results

Test Description	Expected Test Result	Actual Test Result
------------------	----------------------	--------------------

Signature Page

Service Engineer Comments (optional)

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

Service Verification

Service Request Number:

6008577184

Service Engineer Name:

Chaiyapit Innom.

Service Engineer Signature:

Chaiyapit I.

Date of Service Completion:

April 16, 2026

Customer Name:

Sittham C.

Total number of pages in this document:

10 page.

SHEET No.: 110_0126



NOX-NO Analyzer Performance Test

Date : 8 Jan 26

Temp: (°C) 25

Barometric Pressure: Pb (mmHg) 760

Analyzer Type :	Nox
Brand :	Teledyne
Model :	T200
S/N :	110

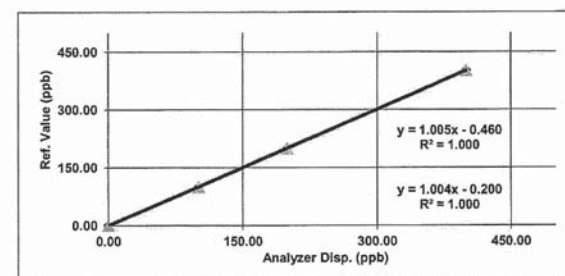
Dilutor :	Teledyne T700 1367
Zero Air :	M701 S/N 1044
STD GAS :	EB0102326
Calibrated by :	Mr. Wittaya K.

NOX-NO Single Point Calibration

Supply Gas	Ref Value	NOX Analyzer Disp.	NO Analyzer Disp.	Slope - Offset
Zero	0.0	0.60	0.30	1.005
Span	450.0	448.9	447.80	1.005

NOX-NO MultiPoint Calibration

Ref Value	NOX Analyzer Disp.	NO Analyzer Disp.	Output Difference	
			NOx Percent Diff abs.	NO Percent Diff abs.
0.00	0.60	0.30	-	-
100.00	99.70	99.60	0.3	0.4
200.00	199.80	199.60	0.1	0.2
400.00	402.00	402.00	0.5	0.5
Average Diff (%)			0.3	0.4

Approved by: 



NOX-NO Analyzer Performance Test

Date : 8 Jan 26

Temp: (°C) 25

Barometric Pressure: Pb (mmHg) 760

Analyzer Type :	Nox
Brand :	API
Model :	200A
S/N :	2386

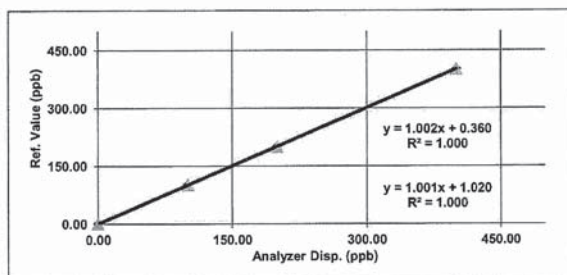
Dilutor :	Teledyne T700 1367
Zero Air :	M701 S/N 1044
STD GAS :	EB0102326
Calibrated by :	Mr. Wittaya K.

NOX-NO Single Point Calibration

Supply Gas	Ref Value	NOX Analyzer Disp.	NO Analyzer Disp.	Slope - Offset
Zero	0.0	0.50	0.40	1.002
Span	450.0	453.0	452.10	1.002

NOX-NO MultiPoint Calibration

Ref Value	NOX Analyzer Disp.	NO Analyzer Disp.	Output Difference	
			NOx Percent Diff abs.	NO Percent Diff abs.
0.00	0.50	0.40	-	-
100.00	102.00	101.00	2.0	1.0
200.00	201.00	200.00	0.5	0.0
400.00	401.40	401.40	0.3	0.3
Average Diff (%)			0.9	0.4



Approved by:

SECOT CO., LTD.
239 Rimklongrappa Rd. Bangtue, Bangkok, 10800, THAILAND
Tel: (662) 9593600 Fax: (662) 9593535
E-Mail: envserv@secot.co.th

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA, LLC
600 Union Landing Road
Cinnaminson, NJ 08077-0000
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number: E04N199E15AC084 Reference Number: 82-401409170-1
Cylinder Number: EB0102326 Cylinder Volume: 144.4 CF
Laboratory: 124 - Riverton (SAP) - NJ Cylinder Pressure: 2015 PSIG
PGVP Number: B52019 Valve Outlet: 660
Gas Code: CO,NO,NOX,SO2,BALN Certification Date: Feb 05, 2019

Expiration Date: Feb 05, 2027

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

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

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

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

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

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

Triad Data Available Upon Request

PERMANENT NOTES: PRODUCED IN ACCORDANCE WITH ISO17025 REQUIREMENTS

NOTES:

Gross Weight: 27806.3 grams

Net Weight: 4733.2 grams

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



TESTING CERT No. 3082.05

Approved for Release

Sheet No. : CAL-M5006/01/26



CONTROL UNIT CALIBRATION

(Metric units, mm)

Date 5 Jan 26

Barometric press, Pb

Initial	Final	Average
758	758	758

mmHg

Dry Gas Meter Data

Console No. M50-06

Metering System ID

DGM Number 28779

DGM Model MST-C2-1

Calibrated by : Montri P.

Reference Dry Gas Meter Data

Serial No. 358794

Model S110

Correction factor (Yr) 1.0058

Last Calibration Date 10 Oct 25

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V _r Liters	DGM Volume V _m Liters	Temperature (°C)				Time ⊙ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T _r	Dry Gas Meter					
				Inlet T _i	Outlet T _o	Avg T _m			
12.5	100.0	101.0	25	25	24	24.5	9.03	0.9930	46.5409
25.0	100.0	101.0	25	25	24	24.5	6.35	0.9918	45.9956
50.0	100.0	101.0	25	25	24	24.5	4.57	0.9894	47.5770
76.0	100.0	100.0	25	25	24	24.5	3.68	0.9968	47.0462
100.0	100.0	99.0	25	25	24	24.5	3.68	1.0045	47.2108
150.0	100.0	99.0	25	25	24	24.5	2.62	0.9997	46.8616

Average 0.9958 46.8720

Approved by :

Sheet No. : CAL-PI-PV12-01/2026



PITOT TUBE CALIBRATION REPORT

Calibration Location: SECOT

Calibration Date : 08-01-2026

Calibration Duct No.: CD-0123

Calibration Standard Pitot tube data

Pitot No. : Std-02

Coefficient (Cp) : 0.99

Type S Pitot No. : PV12-01

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	15.0	21.0	0.8367	0.0000
2	15.0	21.0	0.8367	0.0000
3	15.0	21.0	0.8367	0.0000

C_{P(A),avg} 0.8367

B Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	15.0	20.5	0.8468	0.0034
2	15.0	20.5	0.8468	0.0034
3	15.0	21.0	0.8367	-0.0068

C_{P(B),avg} 0.8435

|CP(A)-CP(B)| = 0.0068

C_{P(Avg)} = 0.8401

Approved by :

*** δ must be ≤ 0.01 for the test to be acceptable ***
*** |Cp(A)-Cp(B)| must also be < 0.01 if average of Cp(A) and Cp(B) is not be used ***

Sheet No. : CR-515-2026-116



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: May 3, 26

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
11	Cirrus	CR161B	G301339	93.7	0.0
13	Cirrus	CR161B	G301354	93.7	0.0
36	Cirrus	CR161B	G302630	93.7	0.0
56	Cirrus	CR161B	G303821	93.7	0.0
57	Cirrus	CR161B	G303827	93.6	0.1
59	Cirrus	CR161B	G303836	93.7	0.0

Calibrated by :

Approved by :

Preeda S.

Sheet No. : CR-515-2026-083



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Apr 20, 26

ACOUSTIC CALIBRATOR

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

No.	Brand	Model	Serial No.	Reading (dB)	dB Adjust
1	SCARLET	ST-21D	820722	93.8	0.0
3	SCARLET	ST-21D	820724	93.8	0.0
11	SCARLET	ST-21D	821078	93.8	0.0
12	SCARLET	ST-21D	821079	93.8	0.0
13	SCARLET	ST-21D	821080	93.8	0.0
14	SCARLET	ST-21D	821081	93.8	0.0

Calibrated by :

Approved by :

Sulei Suthumman



**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.: CP20250278EA
Operation No.: CP2025100271

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: 9 October 2025
Calibrated Date: 14 October 2025
Issued Date: 16 October 2025
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.: CP20250278EA

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	2661000	AA-1011-25	24 June 2026
2) Waveform Generator	33511B	MY52302264	CK20250036EA	29 June 2026
3) Audio Analyzing DMM	2015-P	000136E	CK20250002EA CB20250007EA	25 December 2025 6 January 2026
4) Pressure humidity and Temperature Transmitter	PTU301	F0640003	CL1-P250034 CD20250096EA	10 April 2026 29 March 2026

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); ILAC Policy, Item 2 (1) No.ILAC-P10:07/2020.

Reference standards instrument for Electrical function

- Electrical and Electronics Institute; NSC Accredited Calibration No.0119

- IRPC Metrology Center, IRPC Public Co., Ltd.; NSC Accredited Calibration No.0204.

Result of Calibration:-

1. Function : Sound pressure level

Normal	Specified Sound	Measured value	Deviated value ^[1]	Acceptance limit ^[3]
Frequency (Hz)	Pressure level (dB)	(dB)	(dB)	(dB)
1000	94	94.07	0.07	±0.25

2. Function : Frequency

Normal Sound	Specified Frequency	Measured value	Deviated value ^[2]	Acceptance limit ^[3]
Pressure Level (dB)	(Hz)	(Hz)	(%)	(%)
94	1000	1000.31	0.03	±0.70



ELECTRICAL AND ELECTRONICS INSTITUTE
FOUNDATION FOR INDUSTRIAL DEVELOPMENT

Certificate No.: CP20250278EA

Calibration Report

3. Function : Total distortion + noise

Normal Sound Pressure level (dB)	Normal Frequency (Hz)	Measured value ^[4] (%)	Acceptance limit ^[5] (%)
94	1000	0.47	2.50

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 --



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	ICP-OES 5110 / MY16230003
Instrument System Site and Location	SECOT CO. LTD.

List System Component Product Numbers	List the Serial Numbers of each Component
1. 68015A	MY16230003
2. 68410A	AV16181341
3. 68481-80000	3B1641345
4.	
5.	
6.	
7.	
8.	
9.	

ICP-OES Configuration Table	Circle the type or write in the type if other
Nebulizer Type	<u>SeaSpray</u> OneNeb Conikal Other
Spray Chamber	Cyclonic Single Pass <u>Cyclonic Double Pass</u> Other
Torch	Radial <u>Dual View</u> Other
Torch Type	<u>One Piece</u> Semi Demountable Fully Demountable Other
Injector Diameter	2.4mm <u>1.8mm</u> 1.4mm 0.8mm Other
Injector Material	<u>Quartz</u> 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.
- ☒ 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.
- ☒ Remove and clean instrument water inlet filter.

Agilent Water Recirculator

- ☒ **Service not applicable** Cooling water customer had problem After test
- ☐ 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 is 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
- ☒ 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

ADS 2 Advanced Dilution System (5110 only)

- ☒ **SERVICE NOT APPLICABLE**
- ☐ LOOK FOR ANY OBVIOUS EXTERNAL DAMAGE OR PROBLEMS.
- ☐ REPLACE VALVE ROTOR SEAL ON VALVES A AND B.
- ☐ REPLACE BOTH SYRINGES.
- ☐ REPLACE ACID VAPOR FILTER (WASTE VESSEL)
- ☐ REPLACE VENTING VALVE (DILUENT CARRIER BOTTLE)
- ☐ CHECK FITTINGS FOR SIGNS OF LEAKS.
- ☐ CHECK TUBING INCLUDING AUTOSAMPLER TUBING FOR KINKS OR EXCESSIVE WEAR.

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.
- ☒ 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	4009.3	8855.1	3897.7	9259.9
Mn 257.610 nm SRBR	9247.9	29340.6	9728.5	29370.2
Al 396.152 nm SBR	6.5	20.9	7.5	24.4
K 766.491 nm SBR	2.1	52.7	1033.6	2689.4

* 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	226.512	VAC	222.151	VAC
Mains Current	0.101	A	0.270	A
Instrument Temperature	23.2	°C	24.1	°C
RF Air Flow (sensor speed)	14.0	Hz	16.0	Hz
Plasma Exhaust Temperature	No measurement		59.8	°C
Water Flow Oscillator	No measurement		1.40	L/min
Water Flow Detector	1.11	L/min	1.11	L/min
Water Inlet Temperature	19.5	°C	20.4	°C
Polychromator Temperature	35.0	°C	35.3	°C
CCD Temperature	-40.0	°C	-39.9	°C
Thermal Stabilizer	35.0	°C	35.0	°C
Argon Supply Pressure	538.86	kPa	467.14	kPa
Purge Gas Supply Pressure*1	537.32	kPa	526.28	kPa
Option Gas Supply Pressure*1	-	kPa	-	kPa
Nebulizer Flow	No measurement		0.80	L/min
Nebulizer Back Pressure	No measurement		361.64	kPa
Plasma Gas Flow	No measurement		15.02	L/min
Auxiliary Gas Flow	No measurement		1.20	L/min
RF Power	No measurement		1202.0	W
RF Supply Current	No measurement		8673	A
RF Supply Voltage	No measurement		184.793	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	-
Air inlet filter	G8000-68002	All	1
High Capacity Air Filter	G8010-60189	Optional	1
Rotor seal for 6-7 port valve for AVS6/7	G8494-60002	G8494A/G8495, ADS 2	-
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	-
Syringe, 5mL	5299-0037	ADS 2	-
Syringe, 10mL	5299-0038	ADS 2	-
Acid vapor filter	5043-1193	ADS 2	-
Venting valve	5043-1190	ADS 2	-

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, PVC SolvaFlex, 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
------------------	-------------	------------------------------	-------------------

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.

Cooling water leak recommend change cooling water because cooling water
leak doing flow drop

Service Verification

Service Request Number:

6008554478

Service Engineer Name:

Sarinya Chiothet

Date Service Completed:

27 Apr 2026

Customer Name:

Araya Tipparuk

Service Engineer Signature:

Sarinya C.

Total number of pages in this document:

15

Customer Signature:

~ T2

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:
 - **Safety**
https://www.agilent.com/cs/library/usermanuals/public/7890B_Safety.pdf
 - **Installation and First Startup**
https://www.agilent.com/cs/library/usermanuals/Public/7890B_Installation.pdf
 - **Operation Manual**
https://www.agilent.com/cs/library/usermanuals/Public/7890B_Operation.pdf
 - **Maintaining Your GC**
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	GCMS
Instrument System Site and Location	SECOT Co Ltd

List System Component Product Numbers	List the Serial Numbers of each Component
1. G3442A	CN13201053
2. G4513A	CN13360196
3. G4514A	CN13230031
4.	
5.	
6.	
7.	
8.	
9.	
10.	

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 Browser interface or 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	N/A

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	N/A
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 & 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 Guide	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.

Service Completion

Service request number 6008100914 Date service completed 13 Feb 2026

Agilent signature [Signature] Customer signature Jutard J.

Total number of pages in this document _____

Agilent Preventive Maintenance Services

Agilent GCMS 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

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.

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.

Important Customer Web Links

- To access Agilent training and education, visit <http://www.agilent.com/chem/training> 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 order by sections: Review, System Checks, Pump maintenance, Cleaning System and Filters, then System Post Check.
 - The tasks in each section may be completed in the most logical order relevant to the system. 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 Verification section
- Complete Signature Page and attach Signature Page to Service Order.

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.

Definition of the Task/Recommended items within the document

Task		Recommended			
Yes	No	Interim	Major	As Needed	
✓					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.

Instrument Maintenance

Select the appropriate service to be performed.

- ☐ Interim Preventive Maintenance (when available, is typically 6 months or at the request of the customer)
- ☒ Major Preventive Maintenance (Yearly)
- ☐ Enhanced Preventive Maintenance (when available, is provided "As needed")

System Information

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

Instrument System Name and ID	GCMS
Instrument System Site and Location	SECOT Co Ltd

List System Component Product Numbers	List the Serial Numbers of each Component
1. G3172A	US13343B01
2.	
3.	
4.	
5.	
6.	

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 firmware version(s). Updating to the most current versions is strongly recommended. Verify with the customer before updating.

Preventive Maintenance Procedures

☐ Service Not Applicable

Interim / Major Preventive Maintenance – GCMS

Yes/No	Interim/Major	Description
☒	☒	Perform general inspection of system for cleanliness
☒	☒	Discuss any problems the customer is having with the instrument
☒	☒	Review customer maintenance records and exclude maintenance on recently serviced items
☒	☒	Review the most recent autotune report. This will give a starting point for evaluating spectral peaks, baseline noise, peak shape, mass assignments and resolution.

Interim / Major Preventive Maintenance – System Checks

☐ Service Not Applicable

		System Checks
Yes/No	Interim/Major	Description
☒	☒	Verify that calibration peaks were seen prior to starting the PM
☒	☒	Vent the instrument
☒	☒	Inspect vacuum hoses, pump, exhaust tubing, and power cords for excessive wear.
☒	☒	Visually inspect calibrant levels – PFTBA PFTD (if appl.), IRM (if appl.). Refill if available.
☒	☒	Look for any obvious external damage or problems.
☒	☒	Clean air intake(s). Cosmetic cover(s) may need to be removed.
☒	☒	Verify system line voltage meets instrument specifications: Yes ☒ No ☐
☐	☒	For Hydrolert systems, verify customer is running hydrogen: Yes ☐ No ☐

Interim / Major Preventive Maintenance – Wet Mechanical vacuum pumps

☐ Service Not Applicable

Yes/No	Interim/Major	Wet Mechanical vacuum pumps
Yes/No	Interim/Major	Description
☒	☒	Check for evidence of oil leakage. Check pump gasket for leakage.
☒	☒	GC/MS SQ with diffusion pump; drain and replace diffusion pump oil.
☒	☒	Drain and replace mechanical pump oil.
☐	☒	Replace Oil Mist Filter if applicable.

Yes/No	Interim/Major	Wet Mechanical vacuum pumps
☒	☒	Discuss with customer the need for more frequent oil changes if the oil is dirty
☒	☒	Don't use mist filters with Chemical Ionization.
☒	☒	Perform anti-suckback valve test. Power on until side plate is held closed, power off and check that side plate holds closed. Visually confirm that no oil returns up vacuum hose.

Interim / Major Preventive Maintenance – Dry Mechanical vacuum pumps - Diaphragm

☒ Service Not Applicable

Yes/No	Interim/Major	Dry Mechanical vacuum pumps - Diaphragm
Yes/No	Interim/Major	Description
☐	☒	Check for evidence of poor vacuum – Turbo power demand, poor manifold vacuum, etc.
☐	☒	Clear air flow paths of dust.
☐	☒	If vacuum is poor, then replace the diaphragm pump.
☐	☒	Perform anti-suckback valve test. Power on until side plate is held closed, power off and check that side plate holds closed.

Interim / Major Preventive Maintenance – Dry Mechanical vacuum pumps - Scroll

☒ Service Not Applicable

Yes/No	Interim/Major	Dry Mechanical vacuum pumps - Scroll
Yes/No	Interim/Major	Description
☐	☒	Replace the tips seal on the IDP pump.
☐	☒	Check for evidence of poor vacuum – Rough vac pressure, turbo power demand, poor manifold vacuum, etc.
☐	☒	Replace the Exhaust Filter if required.
☐	☒	Discuss with customer the need for more frequent changes, if needed.
☐	☒	Inform customer that pump gas ballast should be installed all the time.
☐	☒	Perform anti-suckback valve test. Power on until side plate is held closed, power off and check that side plate holds closed.

Interim / Major Preventive Maintenance – Cleaning System and Filters

☐ Service Not Applicable

				Cleaning System and Filters
Yes/No	Interim/Major	Description		
		Fans		
☒	☐	☒	☒	Remove dust from fans and vent covers.
☒	☐	☒	☒	Verify fans are functional and that there is enough space around the instrument for proper cooling.
		Source cleaning (all sources except HydroInert)		
☒	☐	☐	☒	Open analyzer and remove the source.
☒	☐	☐	☒	Disassemble, Clean, Re-assemble source. (7200, also, remove and clean entrance lens)
☒	☐	☐	☒	Re-install source and close analyzer.
		HydroInert Source		
☐	☒	☐	☐	Source NOT to be abrasively cleaned. No cleaning required at PM. If a decrease in performance is observed, recommend to the customer that filaments, insulators (repeller and extractor), extractor lens, and repeller lens may need to be replaced to restore performance. HydroInert source should not be run with helium carrier.
		Filters		
☒	☐	☐	☒	Replace RMSH-2 Helium gas filter (collision cell gas) – if applicable.
☐	☒	☐	☒	Replace RMSN-2 Nitrogen gas filter (collision cell gas) – if applicable.
☐	☒	☐	☒	Replace RMSHY-2 Hydrogen gas filter (HydroInert and JetClean) – if applicable.
☐	☒	☐	☒	CP17973 – Gas Clean GS/MS Filter (for He, N2 or H2 carrier) – if required
☐	☒	☐	☒	5190-9071 – Methane Gas Filter (CI systems) – if applicable

Guidance: Gas filters need to be changed only if required (ie indicating traps show color change, or if Big Universal Trap are approaching saturation based on time installed or number of gas cylinders changed for that trap)

Interim / Major Preventive Maintenance – System Post Check

☐ Service Not Applicable

System post-check			
Yes/No	Interim/Major	Description	
☒	☐	☒	☒
Pump system back down. Wait until system stability has been achieved.			
☒	☐	☒	☒
Verify system vacuum reading(s) via the gauge controller.			
☒	☐	☒	☒
Leak Check			
☒	☐	☒	☒
Verify system in manual tune			
☒	☐	☒	☒
Compare against previous tune file report(s)			
☒	☐	☒	☒
Change to Tune and verify that all temperatures, pressures, and gas flows reach method set points			
☒	☐	☒	☒
Check manually that you have calibration peaks.			
☒	☐	☒	☒
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 Comments box. Systems in a compliant environment may need additional documentation.
- ☒ Complete Signature Page and attach Signature Page to Service Order.

Test Results

Test Description	Expected Test Result	Actual Test Result
------------------	----------------------	--------------------

Signature Page

Service Engineer Comments (optional)

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

Service Verification

Service Request Number:

6008100914

Service Engineer Name:

Supasak N.

Service Engineer Signature:



Date of Service Completion:

13 Feb 2026

Customer Name:

Jutarat J.

Total number of pages in this document:

Parts for consumption during PM

Common Oil and MS Gas Filters – 5973/5975/5977/7000/7010/7200/7250 Series

Part Description	Part Number	Interim	Major	As Needed
Agilent AVF Platinum, 1 quart	5191-5851	✓	✓	✓
Helium gas filter* (collision cell gas) – if required	RMSH-2		✓	✓
Nitrogen gas filter* (collision cell gas) – if required	RMSN-2		✓	✓
Hydrogen gas filter* ^ (Hydrolert and JetClean) – if required	RMSHY-2		✓	✓
Chemical Ionization Gas Purifier (CI systems) (Methane) – if required	5190-9071		✓	✓
Gas Clean GS/MS Filter (for He, N2 or H2) – if required	CP17973		✓	✓
# Gas Clean Filter Kit GC/MS 1/8 in (complete replacement kit - bench mounted) – if required	CP17974			✓
# Gas Clean Carrier Gas Kit for 7890 for He, N2 or H2; Bracket, Mount and Filter – if required	CP17988			✓
# Gas Clean Carrier Gas Kit for 8890 & 8860 for He, N2 or H2; Bracket, Mount and Filter – if required	CP179880			✓

Gas filters need to be changed only if required (ie indicating traps show color change, or if Big Universal Trap are approaching saturation based on time installed or number of gas cylinders changed for that trap)

* Big Universal Trap (BUT), 1/8" fittings

^ Hydrolert and JetClean Systems

Alternate Gas Clean kit part numbers. A Gas Clean filter is included in the kits. They are only necessary if replacing carrier gas Big Universal Traps with indicating traps

MS Maintenance Supplies for 5973/5975/5977 Series

Part Description	Part Number	Interim	Major	As Needed
Diffusion pump fluid (Diffusion Pump Models) Qty 2	6040-0809		✓	✓
Exhaust oil mist trap (threaded) Edwards/Pfeiffer	G1099-80039	✓	✓	✓
DS42 Oil Mist Eliminator 3/4G & 3/8	SR03706556	✓	✓	✓
IDP-3 Tip Seal Replacement Kit (IDP-3 Dry Scroll Pump Models – includes tip seal, 60mm filter element, tools, mask and cleaning supplies)	G7077-67018	✓	✓	✓
IDP-3 Tip Seal Replacement Kit (no tools – CSD P/N)	5190-9561	✓	✓	✓
IDP-3 Tip Seal Replacement Kit (no tools – VPD P/N)	IDP3TS	✓	✓	✓
Filter element for IDP-3 (diameter: 60mm)	REPLSLRFILTER2	✓	✓	✓

MS Maintenance Supplies for 7000/7010 Series

Part Description	Part Number	Interim	Major	As Needed
Oil Mist Filter RV5	G6600-80043	✓	✓	✓
IDP-10 Tip Seal Replacement Kit (IDP-10 Dry Scroll Pump Models – Includes tip seal, 102mm filter element, tools, mask and cleaning supplies)	G7004-67023	✓	✓	✓
IDP-10 Tip Seal Replacement Kit (no tools etc. – VPD P/N)	X3807-67000	✓	✓	✓
Filter element for IDP-10/IDP15 (diameter: 102mm)	REPLSLRFILTER	✓	✓	✓
Filter element for IDP-10/IDP15 (diameter: 79mm)	REPLSLRFILTER1	✓	✓	✓

MS Maintenance Supplies for 7200/7250 Series

Part Description	Part Number	Interim	Major	As Needed
RIS Probe Maintenance Kit (7200 Series only)	G7005-60170		✓	✓
DS202 Oil Mist Eliminator	SR03706800	✓	✓	✓
DS202 3/8" Magnetic Plug and Gasket	SR03701824	✓	✓	✓
IDP-15 Tip Seal Replacement Kit (IDP-15 Dry Scroll Pump Models – Includes tip seal, 102mm filter element, tools, mask and cleaning supplies)	5190-9613	✓	✓	✓
IDP-15 Tip Seal Replacement Kit (no tools etc. – VPD P/N)	X3815-67000	✓	✓	✓
Filter element for IDP-10/IDP15 (diameter: 102mm)	REPLSLRFILTER	✓	✓	✓
Filter element for IDP-10/IDP15 (diameter: 79mm)	REPLSLRFILTER1	✓	✓	✓

HydroInert Source Supplies

To determine if replacement of HydroInert parts is required, please review tune history and sample signal intensity performance. If performance is decreasing, the below parts may be used to restore performance as part of the PM.

One way to determine if the source performance on SQ is being affected is to review the gain factor history in autotune reports or tune history csv file. If the gain factor is increasing the source performance may be degrading.

Since TQ tunes to a fixed gain factor, review PFTBA abundance. If PFTBA abundance is decreasing over time, the source performance may be degrading.

Real sample/standard area counts are another way to determine the performance, there could also be other factors that affect compounds abundance such as inlet and column status.

Part Description	Part Number	Interim	Major	As Needed
Repeller Insulator (qty 2)	G1099-20133			✓
Lens insulator for Extractor (ring insulator)	G3870-20445			✓
HydroInert Extractor lens (9mm)	G7078-20909			✓
HydroInert Repeller	G7078-20902			✓

Common Parts Reference
(Purchased by customer, not included as part of PM)
Filaments and Calibrant Supplies 5973/5975/5977/7000/7010/7200/7250 Series

Part Description	Part Number	SQ	TQ	QTOF
EI High Temperature Filaments	G7005-60061 Qty 2	597X	7000x	N/A
HES, HES 2.0 EI Filaments	G7002-60001	5977B/C	7010x	N/A
HES 2.0 EI Filament Spacer	G7007-20023	N/A	7010x	N/A
LE-EI Filaments (7250 QTOF)	G3850-60021	N/A	N/A	7250
CI High Temperature Filament – SQ, TQ, 7200 QTOF	G7005-60072	N/A	N/A	7200A/B
Axial CI Filament, W/Re Straight (7250 QTOF)	G7250-60095	N/A	N/A	7250
PFTBA GCMS Tuning Standard calibrant	05971-60571	597X	70X0	72X0
PFDTD calibrant, 1 mL	8500-8510	597X	70X0	72X0
PFET, IRM calibrant for GC QTOF 0.5 mL (7200)	5190-0531	N/A	N/A	7200A/B

Transfer line seals and springs 5973/5975/5977/7000/7010/7200/7250 Series

Part Description	Part Number	SQ	TQ	QTOF
CI Interface tip seal (ceramic tip and spring combo) (non-captured CI tip seal interface) (5973, 5975, 7000B)	G1999-60412	5973, 5975	7000B	N/A
CI Interface tip seal (ceramic tip and spring low/non-magnetic spring combo) (non-captured CI tip seal interface) (7010A)	G7002-60412	N/A	7010A	N/A
CI Interface tip seal spring (spring only)	G1999-20023	597X	70X0	72X0
CI Interface tip seal (tip only) (captured style)	G3870-20542	5977x	70X0	72X0
Transfer-Line Tip Base, Threaded (captured style)	G3870-20548	5977x	70X0	72X0
Transfer-Line Tip Cap, Threaded (captured style)	G3870-20547	5977x	70X0	72X0
RIS Xfer Tip (7200)	G7005-20542	N/A	N/A	7200A/B
RIS Xfer Tip Spring (7200)	G7005-20024	N/A	N/A	7200A/B

MS Maintenance Supplies for Intuvo 9000 MS Series

Part Description	Part Number	SQ	TQ	QTOF
Swaged MS Tail - Packaged	G4590-60009	5977x	7000	N/A
Swaged MS Tail (HES, HES 2.0) - Packaged	G4590-60109	5977x	7010x	N/A

Ion source insulators for 5973/5975/5977/7000/7010/7200/7250 Series

Part Description	Part Number	SQ	TQ	QTOF
Repeller insulator (SQ, TQ)	G1099-20133 Qty 2	597X	7000x	N/A
Lens insulator for extractor lens (ceramic ring insulator) (Extractor source)	G3870-20445	5977x	7000C/D/E	N/A
Lens insulator for Extractor lens (Vespel ring insulator) (7000B extractor ion source)	G7000-20445	N/A	7000B only	N/A
Lens stack insulator for SS, Inert, Extractor sources (captures ion focus and entrance lens) (Vespel)	G3170-20530	597X	7000x	N/A
Lens insulator for Extractor lens for HES/HES 2.0/LEEI (ceramic ring insulator)	G7002-20064	5977B/C	7010x	7250
Lens stack insulator/holder for HES/LEEI (Vespel)	G7002-20074	5977B/C	7010x	7250
Lens stack insulator/holder for HES 2.0 (Vespel)	G7007-20074	N/A	7010x	N/A
CI Repeller Lens Insulator (SQ, TQ)	G1999-20433	597X	70X0x	N/A
CI Lens stack insulator (SQ, TQ) (Vespel)	G3170-20540	597X	70X0x	N/A
Repeller insulator (7200 RIS) (Ceramic)	G7005-20447	N/A	N/A	7200A/B
Extractor Lens Insulator (7200 RIS) (Vespel)	G7005-20133	N/A	N/A	7200A/B
Ion Focus Insulator (7200 RIS) (Vespel)	G7005-20442	N/A	N/A	7200A/B
CI Repeller Insulator/bushing (7200 RIS) (Ceramic)	G7005-20030	N/A	N/A	7200A/B

HydroInert coated lenses for 5977/7000 Series

Part Description	Part Number	SQ	TQ	QTOF
HydroInert Repeller	G7078-20902	5977x	7000C/D/E	N/A
Ext Source Body – HydroInert	G7078-20903	5977x	7000C/D/E	N/A
HydroInert Extractor lens (9mm)	G7078-20909	5977x	7000C/D/E	N/A
Ion Focus Lens – HydroInert	G7078-20905	5977x	7000C/D/E	N/A
Entrance Lens – HydroInert	G7078-20904	5977x	7000C/D/E	N/A

Heater/Sensor assemblies for 5973/5975/5977/7000/7010/7200/7250 Series

Part Description	Part Number	SQ	TQ	QTOF
Stainless Steel Heater/Sensor assembly (SST EI 350)	G3870-67180	597X	N/A	N/A
Inert Heater/Sensor assembly (inert EI 350)	G3870-67179	597X	7000A/B	N/A
Extractor Heater/Sensor assembly (Xtr EI 350)	G3870-67177	5977x	7000C/D/E	N/A
H2 EI Heater/Sensor Assembly – HydroInert (H2 EI 350)	G7078-67910	5977x	7000C/D/E	N/A
CI 350 Heater/Sensor Assembly (CI 350)	G3870-67415	597X	70X0x	N/A
Ring heater/sensor assembly (HES, HES 2.0, RIS and LEEI) (ceramic ring)	G7002-60058	5977B/C	7010x	72X0

Rough pump hoses 5973/5975/5977/7000/7010/7200/7250 Series

Part Description	Part Number	SQ	TQ	QTOF
Foreline Hose - Imbedded spring	G7077-60119	597X	70X0x	72X0

Common MS Maintenance Supplies

Part Description	Part Number	SQ	TQ	QTOF
Abrasive paper, 30 µm	5061-5896	597X	70X0	72X0
Alumina powder	393706201	597X	70X0	72X0
Cloths, clean (pkg of 15)	05980-60051	597X	70X0	72X0
Cloths, cleaning (pkg of 300)	9310-4828	597X	70X0	72X0
Cotton swabs (pkg of 100)	5080-5400	597X	70X0	72X0
Gloves, clean, large	8650-0030	597X	70X0	72X0
Gloves, clean, small	8650-0029	597X	70X0	72X0

Teledyne Tekmar ATOMX Purge and Trap Preventive Maintenance Checklist - Standard



Agilent Preventive Maintenance provides factory recommended service for your analytical systems 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.

For more information about Agilent Technologies services please visit our web site using the following URL <http://www.chem.agilent.com/en-us/products/services/pages/default.aspx>

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 additional or special procedures and/or parts for the instrument service, then these must be ordered separately and charged as a repair, which may incur additional costs.

Service Engineer's Responsibilities

- Only complete/printout 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 a "X" or tick mark "✓" in the checkbox.
- Complete Not Applicable check boxes to indicate services not delivered, as needed.
- Complete the PM service in the order of the tasks listed.
- Complete the Service Review section together with the customer.

Teledyne Tekmar ATOMX Purge and Trap Preventive Maintenance Checklist - Standard



System Information

Guidance

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

Instrument system name and ID	GCMS
Instrument system site and location	SECOT Co Ltd
List system component product numbers	List the serial numbers of each component
1. TMR-ATOMX	1. US13296002
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.

Preparation

- ✓ Discuss any specific issues with the customer prior to starting.
- ✓ Review the instrument logbook.
- ✓ Save instrument control settings before starting the procedure.
- ✓ Perform general inspection of system for cleanliness
- ✓ Check for proper installation of safety-related parts, assemblies, sensors etc
- ✓ Check for required firmware updates and verify with customers if they would like it installed.

**Teledyne Tekmar ATOMX Purge and Trap
Preventive Maintenance Checklist - Standard**



Check External Supplies

- ☐ **Section NOT Applicable**
- ☒ Verify the gas source is supplying an input pressure of 50 - 100 psi to the ATOMX. If the customer is using a gas cylinder, verify the cylinder is at 500+ psi.
- ☒ Verify that the waste container has sufficient volume to contain the waste generated. Empty if necessary.
- ☒ Replace the DI water supply with fresh DI water.
 - Make sure the DI water supply is sufficient for sample analysis (1 Liter minimum)
- ☒ Make sure the methanol supply is sufficient for sample analysis.

Atomx Leak and Pressure Check

- ☐ **Section NOT Applicable**
- ☒ Scan through the sample log to verify that the purge pressures are staying consistent throughout the daily runs.
- ☒ Use the Teklink software to check the standard pressure.
- ☒ Run a leak check to ensure that the unit is leak tight.

Inspect ATOMX Hardware

- ☐ **Section NOT Applicable**
- ☒ Check the tray vial holes for foreign particles. Clean if necessary.
- ☒ Inspect the needle for particles or sample build up. Clean if necessary.
- ☒ Inspect the sparger glassware for damage and/or discoloration that could restrict flow or cause contamination. Replace if necessary.
- ☒ Inspect the drain tubing for clogging. Replace the drain line if necessary.
- ☒ Lubricate the ATOMX Carousel Drive. Refer to the diagram on page 6-25 of the ATOMX User Manual for lubrication points. Teledyne Tekmar recommends using DuPont Krytox lubrication.
- ☒ Lubricate the ATOMX Elevator. Refer to the diagram on page 6-32 of the ATOMX User Manual for lubrication points. Teledyne Tekmar recommends using DuPont Krytox lubrication.

Restore Instrument

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.

**Teledyne Tekmar ATOMX Purge and Trap
Preventive Maintenance Checklist - Standard**



Service Review

- ☒ Attach available reports/printouts of all tests to this documentation.
- ☒ Record the PM service activity in the customer's instrument 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 below if there are additional comments
- ☒ Review the service and any test results with the customer.
- ☒ If the Instrument firmware was updated, record the details of the change in the Service Engineer's Comments box below or if necessary, in the customer's IQ records.

Product or Product Type Test Results Table

Test Description	Expected Test Result	Actual Test Result
Leak Test	Pass	Pass

Product or Product Type Parts List Table

Part Description	Part Number	Product or Model# where used	Quantity Consumed
Sparger Glassware	Ask the customer what size sparger glassware they are using; refer to the ATOMX parts list for part numbers.	TMR-ATOMX	1
Lubricant, Dupont Krytox	15-0293-000	TMR-ATOMX	1
Tubing, Drain, Self Retracting	15-0087-002	TMR-ATOMX	1

Teledyne Tekmar ATOMX Purge and Trap
Preventive Maintenance Checklist - Standard



Service Engineer Comments (optional)

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 in this box.

Other Important Customer Web Links

- ☐ How to get information on your product: Literature Library - <http://www.agilent.com/chem/library>
- ☐ Need to know more? - www.agilent.com/chem/education
- ☐ Need technical support, FAQs? - www.agilent.com/chem/techsupp
- ☐ Need supplies? - www.agilent.com/chem/supplies

Service Completion

Service request number 6008100914 Date service completed 13 Feb 2026

Agilent signature [Signature] Customer signature J. J. J.

Number of pages in this document _____

Issued: 30-09-2019, Revision:02

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Select pages for required products or Page 5 of 5

CERTIFICATE OF CALIBRATION

ISSUED BY **Noisemeters**

DATE OF ISSUE **02 March 2026**

CERTIFICATE NUMBER **260487**

Noisemeters

Noisemeters
Acoustic House
Bridlington Road
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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: 02 March 2026

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:
260487

Page 2 of 2

Environmental conditions

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

Before Pressure: 100.27 kPa Temperature: 22.9 °C Humidity: 38.6 %
After Pressure: 100.27 kPa Temperature: 23.1 °C Humidity: 40 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Distortion Meter	Keithley	2015	0939404
Environmental Monitor	Comet	T7510	21962628

Acoustic Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Tolerance	Uncertainty
Level (dB)	114.00	113.97	113.98	113.98	113.98	-0.02	±0.75	0.11 dB
Distortion (%)	< 4.00	0.45	0.44	0.44	0.44	0.44	+4.00	0.13 %
Frequency (Hz)	1000.0	990.3	990.3	990.4	990.3	-9.7	±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.

Functionality Results

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

End of results

CERTIFICATE OF CALIBRATION

ISSUED BY **Noisemeters**

DATE OF ISSUE **02 April 2025** CERTIFICATE NUMBER **237347**

NoiseMeters

NoiseMeters
Acoustic House
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United Kingdom
www.noisemeters.com

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:



doseBadge Reader : IEC 60942:2003

Instrument information

Manufacturer: Pulsar Instruments

Notes:

Model: Model 22R

Serial number: 79781

Class: 2

Test summary

Date of calibration: 01 April 2025

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:
237347

Page 2 of 2

Environmental conditions

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

Before Pressure: 102.23 kPa Temperature: 22.3 °C Humidity: 34.7 %
After Pressure: 102.23 kPa Temperature: 22.3 °C Humidity: 35 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Distortion Meter	Keithley	2015	1053426
Environmental Monitor	Comet	T7510	21962628

Initial Acoustic Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Tolerance	Uncertainty
Level (dB)	114.00	114.07	114.07	114.06	114.07	0.07	±0.75	0.11 dB
Distortion (%)	< 4.00	0.50	0.50	0.49	0.50	0.50	+4.00	0.13 %
Frequency (Hz)	1000.0	998.9	998.9	998.9	998.9	-1.1	±20.0	0.1 Hz

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

Adjusted Acoustic Results

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

Functionality Results

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

End of results



THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

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

Request No.23-69/0266

MTC.No.23-69/0266-01

Number of page(s) 2

CALIBRATION CERTIFICATE

Nomenclature : FLOWMETER

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 : 18 February 2026

Condition of measured item : Normal

Calibration date : 23 February 2026

Standard :

Standard	Certificate No.	Date due	Traceability
RTD Thermometer	PSL-T 0811/67	3-Jul-26	TISTR
Molbox/Pressure Transducer/UpStream	MP-0178-25	29-Jun-27	NIMT
Primary Flow Calibrator S/N 117982	MW-0045-25	2-Jul-27	NIMT

Calibrated by : Terasak Panna

(Mr.Terasak Panna)

Approved by : Ms. Kirana Luanghirun

Director

Mechanical Engineering Standards Laboratory

Ref. 2013269021800834001

Issued Date 27 February 2026

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FM.BLMTC.002 Rev.5

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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

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

Request No.23-69/0266

2/2

MTC.No.23-69/0266-01

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

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

Atmospheric pressure (1010±13) hPa

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

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

Measurement data :

UUC Value (ml/min)	Standard Value (ml/min)	Temperature (°C)	Pressure (hPa)	Deviation (%)	Uncertainty (%)
20.440*	20.192	24.526	1008.94	+1.23	0.95
50.435	50.091	24.519	1008.87	+0.69	0.93
100.95	100.71	24.523	1008.87	+0.23	0.93
200.54	201.14	24.519	1008.93	-0.30	0.93
402.08	401.89	24.503	1009.12	+0.05	0.93

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

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

The end of calibration certificate.

The results relate only to the items tested/calibrated or value assigned.
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FM.BLMTC.002 Rev.5

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THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH (TISTR)

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

Request No.23-69/0266

MTC.No.23-69/0266-02

Number of page(s) 2

CALIBRATION CERTIFICATE

Nomenclature : FLOWMETER

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 : 18 February 2026 **Condition of measured item :** Normal

Calibration date : 24 February 2026

Standard :

Standard	Certificate No.	Date due	Traceability
RTD Thermometer	PSL-T 0811/67	3-Jul-26	TISTR
Molbox/Pressure Transducer/UpStream	MP-0178-25	29-Jun-27	NIMT
Primary Flow Calibrator S/N 119521	MW-0046-25	14-Jul-27	NIMT
Primary Flow Calibrator S/N 119216	MW-0047-25	7-Jul-27	NIMT

Calibrated by : *Terasak Panna*
(Mr.Terasak Panna)

Approved by : *Kirana Luanghirun*
(Ms.Kirana Luanghirun)

Director
Mechanical Engineering Standards Laboratory

Ref. 2013269021800834002

Issued Date 27 February 2026

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.5

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2/2

MTC.No.23-69/0266-02

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

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

Atmospheric pressure (1010 ± 13) hPa

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

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

Measurement data :

UUC Value (L/min)	Standard Value (L/min)	Temperature (°C)	Pressure (hPa)	Deviation (%)	Uncertainty (%)
1.5084	1.5113	24.586	1009.07	-0.19	0.89
5.0064	5.0267	24.575	1009.41	-0.40	0.89
10.026	10.028	24.598	1010.24	-0.02	0.89
15.036	15.033	24.606	1011.51	+0.02	0.89
25.032	24.962	24.639	1015.20	+0.28	0.89

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

The end of calibration certificate.

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8590 B 00710/1000

Agilent
CrossLab
From insight to Outcome

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.

 **Agilent**

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:
 - **Safety**
https://www.agilent.com/cs/library/usermanuals/public/7890B_Safety.pdf
 - **Installation and First Startup**
https://www.agilent.com/cs/library/usermanuals/Public/7890B_Installation.pdf
 - **Operation Manual**
https://www.agilent.com/cs/library/usermanuals/Public/7890B_Operation.pdf
 - **Maintaining Your GC**
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	GC7890B / CN15343147
Instrument System Site and Location	SECOT Ltd / Lab
List System Component Product Numbers	List the Serial Numbers of each Component
1. G3440B	CN15343147
2. G4513A	CN11350133
3. G4514A	CN130826
4.	
5.	
6.	
7.	
8.	
9.	
10.	

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	335.2
Back detector output	N/A	15.2
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	N/A
SSL Capillary Inlet PM kit, split	5188-6496	7890A/B	2
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 & 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 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 6608977823 Date service completed 27 April 2026
 Agilent signature [Signature] Customer signature Maim P. [Signature]
 Total number of pages in this document 6 pages

ภาคผนวก ฉ

หนังสืออนุญาตขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
จากกรมโรงงานอุตสาหกรรม



ที่ อก ๐๓๑๐(๑)/ ๔๐๕๖

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ เขตราชเทวี
กรุงเทพมหานคร ๑๐๔๐๐

๑๙ มิถุนายน ๒๕๖๙

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท ซิคอท จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน

ลงวันที่ ๒ เมษายน ๒๕๖๙

สิ่งที่ส่งมาด้วย ๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ แผ่น

๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๑ แผ่น

๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๑ แผ่น

ตามคำขอที่อ้างถึง บริษัท ซิคอท จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๓๙ สถานที่ตั้งเลขที่ ๒๓๙ ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท ซิคอท จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

ก. ผู้ควบคุมห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๙ ราย ตามสิ่งที่ส่งมาด้วย ๑

ข. เจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๔๐ ราย ตามสิ่งที่ส่งมาด้วย ๒

ค. ขอบข่ายชนิดสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำ/น้ำเสีย น้ำใต้ดิน อากาศเสีย สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว และดิน ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๒ พฤษภาคม ๒๕๗๓ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรมภายใน ๖๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายศิริ จันทรเกิด)

นักวิทยาศาสตร์เชี่ยวชาญ วิชาการการแทน
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน

กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ

โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕

โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๔๙

ไปรษณีย์อิเล็กทรอนิกส์ saraban@div.mail.go.th



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”



เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ซิคอท จำกัด

เลขทะเบียน ว-๒๓๙

ที่ อก ๐๓๑๐(๑)/ ๔๐๕๖

ลงวันที่ ๑๙ มิถุนายน ๒๕๖๙

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๙ ราย

๑) นายขรรชัย เกรียงไกรอุดม

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๒

๒) นางสาวฤดี เกรียงไกรอุดม

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๓

๓) นางสาวเชมชุตตา อินทร์ศร

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๕

๔) นางสาวปรีดา สมใจ

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๖

๕) นางสาวอรุณญา มาตา

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๗

๖) นางสาวลดาวัลย์ วงศ์เจริญ

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๘

๗) นางสาวณัฏฐา เกตวันดี

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๐๙

๘) นางสาวนริสา ภูวสรเพ็ชญ์

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๑๐

๙) นางสาวศิริวรรณ ฉิมสง่า

ทะเบียนเลขที่ ว-๒๓๙-ค-๐๐๑๑

ก. ๙

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ซีคอฟ จำกัด

เลขทะเบียน ว-๒๓๓๙

ที่ อก ๐๓๑๐(๑)/๔๐๕๖

ลงวันที่ ๑๙ มิถุนายน ๒๕๖๔

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย

- ๑) นางสาวสุตาพร สุนทร
- ๒) นางสาวสุธาทิพย์ เทียนเตี้ย
- ๓) นางสาวสุนันทา ศิริพัฒน์นันท์
- ๔) นายบวร ดิษฐ์ยะ
- ๕) นางสาวเกศรินทร์ วรเดชวิทยา
- ๖) นายอนิวัฒน์ พิมพ์นา
- ๗) นายชิตพล สมประสงค์
- ๘) นางสาวศศิธร พรหมประเสริฐ
- ๙) นายศิวะนนท์ กุลวงษ์
- ๑๐) นางสาวอลิษา คณิธรานนท์
- ๑๑) นางสาวสิริวรรณ แก้วชิงดวง
- ๑๒) นางสาวปัทมวรรณ สุวรรณวิโรจน์
- ๑๓) นางสาวกนิษฐา เจริญเชื้อ
- ๑๔) นายชอง เสงฆ์วัลกุล
- ๑๕) นางสาวพรนภา บุตรธรรม
- ๑๖) นางสาวธาริณี อาจปลิว
- ๑๗) นางสาวจุฑารัตน์ แจ่มเรือน
- ๑๘) นางสาวจณิสตา กุ้ยอ่อน
- ๑๙) นายกิตติพงศ์ ณะเกษสุข
- ๒๐) นายจิรวัฒน์ โคตรคำหาญ
- ๒๑) นายชนะพล อัครผล
- ๒๒) นางสาวทิพย์สุดา วรรณการ
- ๒๓) นายสิทธิชัย สว่างวงศ์ไชย
- ๒๔) นายพิษณุ สีนามเพ็ง
- ๒๕) นายธนาวดี ด่วนแสง
- ๒๖) นายรอมฎอน เหล็กหมาด
- ๒๗) นางสาววิระยา ปิงนิมบุรณ์
- ๒๘) นางสาวสุภาพร สุวรรณมณี
- ๒๙) นางสาวณัฐธิดา วิสัยทอง
- ๓๐) นางสาวนิศาวัฒน์ พิมพ์จินดา
- ๓๑) นายพงศ์ศิริ จักรแก้ว
- ๓๒) นายอรรถชัย นวนนัม
- ๓๓) นางสาวรัตนติยากร ชื่นชม
- ๓๔) นางสาวชนิตา หล้าสาย
- ๓๕) นางสาวดวงกมล ทองศิริ
- ๓๖) นายอภิวัฒน์ เมฆสุวรรณ
- ๓๗) นางสาวบุญนุช รุ่งแรก
- ๓๘) นางสาวปวีศา มากกักติ
- ๓๙) นางสาว เจดนา กำรัมย์
- ๔๐) นายณัฐชัย ไชยโคตร

- ทะเบียนเลขที่
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- ว-๒๓๓๙-จ-๐๐๕๒

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ซีคอฟ จำกัด

เลขทะเบียน ว-๒๓๓๙

ที่ อก ๐๓๑๐(๑)/๔๐๕๖

ลงวันที่ ๑๙ มิถุนายน ๒๕๖๔

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๖๔ รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ⁽⁴⁾
2	Arsenic	1) Digestion, Hydride Generation Atomic Absorption Spectrometric Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
3	Barium	1) Digestion, Flame Atomic Absorption Spectrometric Method ⁽⁴⁾ 2) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
4	α-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ⁽⁴⁾
5	β-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ⁽⁴⁾
6	γ-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ⁽⁴⁾
7	δ-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ⁽⁴⁾
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Azide Modification Method ⁽⁴⁾ 2) 5-Day BOD Test, Membrane-Electrode Method ⁽⁴⁾
9	Cadmium	1) Digestion, Flame Atomic Absorption Spectrometric Method ⁽⁴⁾ 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ⁽⁴⁾ 3) Digestion, Inductively Coupled Plasma Method ⁽⁴⁾

อนุมัติ

อนุมัติ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Chemical Oxygen Demand	1) Open Reflux, Titrimetric method ^[4] 2) Closed Reflux, Colorimetric method ^[4] 3) Closed Reflux, Titrimetric Method ^[4]
11	Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
12	Chromium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
13	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[4]
14	Copper	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
15	Cyanide	Total Cyanide after Distillation, Colorimetric Method ^[4]
16	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
17	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
18	4,4'-DDT	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
19	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
20	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]

2) Liquid-Liquid...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
21	Endosulfan II	2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4] 1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
22	Endosulfan Sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
23	Endrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
24	Endrin Aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
25	Formaldehyde	Distillation, Colorimetric Method ^[2]
26	Free Chlorine	1) Iodometric Method ^[4] 2) DPD Colorimetric Method ^[4]
27	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
28	Heptachlor epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
29	Hexavalent Chromium	1) Colorimetric Method ^[4] 2) Extraction, Air-Acetylene Flame Method ^[4]
30	Lead	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]

31 Manganese...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
31	Manganese	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
32	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
33	Methoxychlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
34	Nickel	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
35	Oil & Grease	1) Liquid-Liquid, Partition-Gravimetric Method ^[4] 2) Soxhlet Extraction Method ^[4]
36	pH	Electrometric Method ^[4]
37	Phenols	1) Distillation, Chloroform Extraction Method ^[4] 2) Distillation, Direct Photometric Method ^[4]
38	Selenium	1) Digestion, Hydride Generation Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
39	Sulfide	1) Iodometric Method ^[4] 2) Methylene Blue Method ^[4]
40	Temperature	Laboratory and Field Methods ^[4]
41	Total Dissolved Solids	Dried at 180 °C ^[4]
42	Total Kjeldahl Nitrogen	1) Macro-Kjeldahl Method ^[4] 2) Semi-Micro-Kjeldahl Method ^[4]
43	Total Suspended Solids	Dried from 103 to 105 °C ^[4]
44	Trivalent Chromium	Calculation ^[4]
45	Zinc	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]

น้ำใต้ดิน...

น้ำใต้ดิน จำนวน 129 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
2	Acetone	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
3	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
4	Aluminum	Digestion, Inductively Coupled Plasma Method ^[4]
5	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
6	Antimony	Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
7	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
8	Atrazine	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
9	Barium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
10	Benzo(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
11	Benzene	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
12	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
13	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
14	Benzoic acid	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
15	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
16	Benzo(ghi)perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

น้ำใต้ดิน

17 Beryllium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
17	Beryllium	Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
18	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
19	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
20	Bromodichloromethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
21	Bromoform	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
22	Butanol	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
23	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
24	Cadmium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
25	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
26	Carbon disulfide	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
27	Carbon tetrachloride	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
28	Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
29	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
30	Chlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
31	Chlorodibromomethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]

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32 Chloroform...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
32	Chloroform	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
33	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
34	Chromium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
35	Chromium (III)	Calculation ^[4]
36	Chromium (VI)	1) Colorimetric Method ^[4] 2) Extraction, Air-Acetylene Flame Method ^[4]
37	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
38	Copper	Digestion, Inductively Coupled Plasma Method ^[4]
39	Cyanide	1) Distillation, Titrimetric Method ^[4] 2) Distillation, Colorimetric Method ^[4]
40	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
41	DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
42	DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
43	DDT	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
44	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
45	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
46	1,2-Dichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]

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47 1,3-Dichlorobenzene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
47	1,3-Dichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
48	1,4-Dichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
49	3,3'-Dichlorobenzidine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
50	1,1-Dichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
51	1,2-Dichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
52	1,1-Dichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
53	cis-1,2-Dichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
54	trans-1,2-Dichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
55	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
56	1,2-Dichloropropane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
57	1,3-Dichloropropane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
58	1,3-Dichloropropene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
59	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
60	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
61	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
62	2,4-Dinitrophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
63	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
64	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
65	Di-n-Octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
66	Endosulfan	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
67	Endrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
68	Ethylbenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
69	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
70	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
71	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
72	Heptachlor epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
73	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
74	Hexachloro-1,3-butadiene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
75	n-Hexane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
76	α -HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
77	β -HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
78	γ -HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
79	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
80	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
81	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
82	Iron	Digestion, Inductively Coupled Plasma Method ^[4]
83	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
84	Lead	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
85	Manganese	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
86	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
87	Methanol	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
88	Methoxychlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

89 Methyl bromide...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
89	Methyl bromide	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Methylene chloride	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
91	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
92	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
93	Methyl tert-butyl ether	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
94	Molybdenum	Digestion, Inductively Coupled Plasma Method ^[4]
95	Naphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	Nickel	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
97	Nitrobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	N-Nitrosodiphenylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	PCBs	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
101	Pentachlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
102	pH	Electrometric method ^[4]
103	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Phenol	1) Distillation, Chloroform Extraction Method ^[4] 2) Distillation, Direct Photometric Method ^[4] 3) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
105	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

106 Selenium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
106	Selenium	1) Digestion, Hydride Generation Atomic Absorption Spectrometric Method ^[4]
107	Silver	2) Digestion, Inductively Coupled Plasma Method ^[4] 1) Digestion, Flame Atomic Absorption Spectrometric Method ^[4]
108	Styrene	2) Digestion, Inductively Coupled Plasma Method ^[4] Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
109	1,1,2,2-Tetrachloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Tetrachloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Toluene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
112	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[12,26]
113	TPH (C ₈ -C ₁₆)	1) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[9,21] 2) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass spectrometric Method ^[9,27]
114	TPH (C ₁₆ -C ₃₅)	1) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[9,21] 2) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass spectrometric Method ^[9,27]
115	1,2,4-Trichlorobenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
116	1,1,1-Trichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
117	1,1,2-Trichloroethane	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
118	Trichloroethylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
119	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
120	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

จนนี้

121 1,3,5-Trimethylbenzene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
121	1,3,5-Trimethylbenzene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
122	Vanadium	Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
123	Vinyl acetate	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
124	Vinyl chloride	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
125	m-Xylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
126	o-Xylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
127	p-Xylene	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
128	Xylene (Total)	Purge and Trap Gas Chromatographic/Mass Spectrometric Method ^[4]
129	Zinc	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]

อากาศเสีย (ปล่องระบาย) จำนวน 27 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
2	Arsenic	1) Isokinetic Sampling, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
3	Beryllium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]

จนนี้

4 Cadmium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
4	Cadmium	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
5	Carbon monoxide	Instrumental Analyzer Method ^[5]
6	Chlorine	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
7	Chromium	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
8	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
9	Copper	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
10	Cresol	Adsorption Sampling, Gas Chromatographic Method ^[5]
11	Dioxin/Furans	Isokinetic Sampling ^[5]
12	Hydrogen chloride	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
13	Hydrogen Fluoride	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
14	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]
15	Lead	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
16	Manganese	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
17	Mercury	Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[5]
18	Nickel	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5]

2) Isokinetic...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Opacity	2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
20	Oxides of Nitrogen	Ringelmann's Method ^[11] 1) Absorption Sampling, Phenoldisulfonic acid Method ^[5] 2) Absorption Sampling, Ion Chromatographic Method ^[5] 3) Instrumental Analyzer Method ^[5]
21	Selenium	1) Isokinetic Sampling, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
22	Sulfur dioxide	1) Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[5] 2) Absorption Sampling, Barium-Thorin Titrimetric Method ^[5] 3) Instrumental Analyzer Method ^[5]
23	Sulfuric acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[5]
24	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
25	Total Suspended Particulate	1) Isokinetic Sampling, Gravimetric Method ^[5] 2) Paired Train, Isokinetic Sampling, Gravimetric Method ^[5]
26	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
27	Xylene	1) Adsorption Sampling, Gas Chromatographic Method ^[5] 2) Adsorption Sampling, Gas Chromatographic/Mass Spectrometric Method ^[5]

สิ่งปลูกปลูกหรือวัสดุที่ไม่ใช่แล้ว จำนวน 34 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,6,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,6,9,27]

3) Soxhlet...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
2	Antimony	3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27] 1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[3,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
3	Arsenic	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[3,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
4	Barium	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
5	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
6	Cadmium	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
7	Chlordane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22]

2) Waste Extraction...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
8	Chromium	2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27] 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
9	Chromium (III)	Calculation ^[3,6,7,8,14,15,17]
10	Chromium (VI)	1) Waste Extraction, Colorimetric Method ^[3,17] 2) Alkaline Digestion, Colorimetric Method ^[8,17]
11	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
12	Copper	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
13	2,4-D	1) Waste Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,25] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[25]
14	DDD	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22]

4) Soxhlet Extraction...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	DDE	4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27] 1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
16	DDT	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
17	Dieldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
18	Endrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
19	Heptachlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22]

3) Soxhlet Extraction...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
20	Lead	3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27] 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
21	Lindane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
22	Mercury	1) Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[3,18] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[19] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
23	Methoxychlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,9,27] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
24	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]

25 Nickel...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
25	Nickel	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
26	PCBs	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[3,9,23] 2) Soxhlet Extraction, Gas Chromatographic Method ^[10,23]
27	Pentachlorophenol	1) Waste Extraction, Gas Chromatographic/Mass Spectrometric Method ^[3,25] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[25]
28	pH	Electrometric Method ^[31,32]
29	Selenium	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[3,6,20] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,20] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
30	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
31	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
32	Trichloroethylene	1) Waste Extraction, Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[3,12,26] 2) Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[12,26]
33	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]

34 Zinc...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
34	Zinc	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[3,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[3,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]

ดิน จำนวน 129 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
3	Aldrin	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
4	Aluminum	Digestion, Inductively Coupled Plasma Method ^[7,14]
5	Anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
6	Antimony	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
7	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
8	Atrazine	Ultrasonic Extraction, Gas Chromatographic Method ^[11,26]
9	Barium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
10	Benzo(a)anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
11	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]

12 Benzo(b)fluoranthene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
12	Benzo(b)fluoranthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
13	Benzo(k)fluoranthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
14	Benzoic acid	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
15	Benzo(a)pyrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
16	Benzo(ghi)perylene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
17	Beryllium	Digestion, Inductively Coupled Plasma Method ^[7,14]
18	Bis(2-chloroethyl)ether	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
19	Bis(2-ethylhexyl)phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
20	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
21	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
22	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
23	Butyl benzyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
24	Cadmium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
25	Carbazole	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
26	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
27	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
28	Chlordane	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
29	p-Chloroaniline	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
30	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
31	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
32	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
33	2-Chlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
34	Chromium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
35	Chromium (III)	Calculation ^[7,8,14,15,17]
36	Chromium (VI)	Alkaline Digestion, Colorimetric Method ^[8,17]
37	Chrysene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
38	Copper	Digestion, Inductively Coupled Plasma Method ^[7,14]
39	Cyanide	1) Extraction, Distillation, Titrimetric Method ^[28,29,30] 2) Extraction, Distillation, Colorimetric Method ^[28,29,30]
40	2,4-D	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[25]
41	DDD	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
42	DDE	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
43	DDT	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
44	Dibenz(a,h)anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
45	Di-n-butyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
46	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
47	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
48	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
49	3,3'-Dichlorobenzidine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
50	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
51	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
52	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
53	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
54	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
55	2,4-Dichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
56	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
57	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
58	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
59	Dieldrin	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
60	Diethyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
61	2,4-Dimethylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
62	2,4-Dinitrophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
63	2,4-Dinitrotoluene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
64	2,6-Dinitrotoluene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
65	Di-n-Octyl phthalate	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
66	Endosulfan	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
67	Endrin	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
68	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
69	Fluoranthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
70	Fluorene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
71	Heptachlor	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
72	Heptachlor epoxide	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
73	Hexachlorobenzene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
74	Hexachloro-1,3-butadiene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
75	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
76	α -HCH	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
77	β -HCH	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
78	γ -HCH	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
79	Hexachlorocyclopentadiene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
80	Hexachloroethane	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
81	Indeno(1,2,3-cd)pyrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
82	Iron	Digestion, Inductively Coupled Plasma Method ^[7,14]
83	Isophorone	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
84	Lead	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
85	Manganese	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
86	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[19] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
87	Methanol	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,21] 2) Equilibrium Headspace, Gas Chromatographic Method ^[11,21]

88 Methoxychlor...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
88	Methoxychlor	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
89	Methyl bromide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
90	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
91	Molybdenum	Digestion, Inductively Coupled Plasma Method ^[2,3]
92	2-Methylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
93	2-Methylnaphthalene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
94	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
95	Naphthalene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
96	Nickel	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
97	Nitrobenzene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
98	N-Nitrosodiphenylamine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
99	N-Nitrosodi-n-propylamine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
100	PCBs	Soxhlet Extraction, Gas Chromatographic Method ^[10,23]
101	Pentachlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[24]
102	pH	Electrometric Method ^[4]
103	Phenanthrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
104	Phenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
105	Pyrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]

106 Selenium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
106	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,20]
		2) Digestion, Inductively Coupled Plasma Method ^[7,14]
107	Silver	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15]
		2) Digestion, Inductively Coupled Plasma Method ^[7,14]
108	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
109	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
110	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
111	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
112	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
113	TPH (C ₈ -C ₁₆)	1) Soxhlet Extraction, Gas Chromatographic Method ^[10,21]
		2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
114	TPH (C ₁₆ -C ₃₅)	1) Soxhlet Extraction, Gas Chromatographic Method ^[10,21]
		2) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,27]
115	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
116	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
117	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
118	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
119	2,4,5-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]
120	2,4,6-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,27]

121 1,3,5-Trimethylbenzene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
121	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
122	Vanadium	Digestion, Inductively Coupled Plasma Method ^[7,14]
123	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass spectrometric Method ^[13,26]
124	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
125	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
126	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
127	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
128	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,26]
129	Zinc	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15]
		2) Digestion, Inductively Coupled Plasma Method ^[7,14]

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ภาคผนวก ข

ใบรับรองความสามารถห้องปฏิบัติการและขอบข่ายการรับรอง
ห้องปฏิบัติการทดสอบ ตามมาตรฐาน ISO/IEC 17025
จากสำนักงานมาตรฐานอุตสาหกรรม (สมอ.)



แบบ กมช./ทผอ.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, 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
(Details of the scheme and scope of the certificate are shown in QR CODE and 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



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 03
(Issue No. 03)

สถานภาพห้องปฏิบัติการ
(Laboratory status)

บริษัท ซีคอต จำกัด ฝ่ายห้องปฏิบัติการทดสอบด้านสิ่งแวดล้อม
(Secot Company Limited, Environmental Laboratory Division)

ทดสอบ 0394
(Testing 0394)

ออกให้ตั้งแต่วันที่ 15 กันยายน พ.ศ. 2568
(Valid from 15 September B.E. 2568 (2025))

☒ 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)
สาขาส่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (Water and wastewater)	- Heavy metals • Arsenic (As) 0.000 5 mg/L to 0.090 0 mg/L • Arsenic (As) 0.05 mg/L to 4.50 mg/L • Barium (Ba) 0.02 mg/L to 4.50 mg/L • Cadmium (Cd) 0.01 mg/L to 4.50 mg/L • Chromium (Cr) 0.01 mg/L to 4.50 mg/L	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24 th edition, 2023, Part 3030 F and Part 3114 C - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24 th edition, 2023, Part 3030 E and Part 3120 B

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)

ฉบับที่ 03
(Issue No. 03)

ออกให้ตั้งแต่วันที่ 15 กันยายน พ.ศ. 2568
(Valid from 15 September B.E.2568 (2025))

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)
สาขาสิ่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (ต่อ) (Water and wastewater) (cont.)	- Heavy metals - Copper (Cu) 0.02 mg/L to 4.50 mg/L - Iron (Fe) 0.05 mg/L to 9.00 mg/L - Lead (Pb) 0.03 mg/L to 4.50 mg/L - Manganese (Mn) 0.01 mg/L to 9.00 mg/L - Nickel (Ni) 0.01 mg/L to 4.50 mg/L - Zinc (Zn) 0.02 mg/L to 9.00 mg/L - Chemical oxygen demand (COD) 10.00 mg/L to 9 000 mg/L	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th edition, 2023, Part 3030 E and Part 3120 B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th edition, 2023, Part 5220 D

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

(Certification No. 24-LB0026)

ฉบับที่ 03
(Issue No. 03)

ออกให้ตั้งแต่วันที่ 15 กันยายน พ.ศ. 2568
(Valid from 15 September B.E.2568 (2025))

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)
สาขาสิ่งแวดล้อม (Environmental field) 2. บริเวณทำงาน (Workplace)	- Total dust 0.10 mg/filter to 2.00 mg/filter - Respirable dust 0.10 mg/filter to 2.00 mg/filter - Benzene 0.70 µg/tube to 420 µg/tube - Toluene 0.70 µg/tube to 420 µg/tube - Total xylenes 1.40 µg/tube to 840 µg/tube - m, p-Xylene 0.70 µg/tube to 420 µg/tube	- NIOSH Manual of Analytical Methods (NMAM), Method 0500, 4th edition, 15th August 1994 (Exclude Sampling) - NIOSH Manual of Analytical Methods (NMAM), Method 0600, 4th edition, 15th January 1998 (Exclude Sampling) - NIOSH Manual of Analytical Methods (NMAM), Method 1501, 4th edition, 15th March 2003 (Exclude Sampling)

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

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สถานภาพห้องปฏิบัติการ
(Laboratory status)

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☐ นอกสถานที่

(Site)

☐ชั่วคราว

(Temporary)

☐ เคลื่อนที่

(Mobile)

☐ หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 2. บริเวณทำงาน (ต่อ) (Workplace) (Cont.) 3. ปล่องระบายอากาศ (Stack)	- o-Xylene 0.70 µg/tube to 420 µg/tube - Sulfur dioxide 1.00 mg/L to 16 000 mg/L - Hydrogen fluoride 5 µg/sample to 400 µg/sample - Hydrogen chloride 5 µg/sample to 400 µg/sample	- NIOSH Manual of Analytical Methods (NMAM), Method 1501, 4th edition, 15th March 2003 (Exclude Sampling) - US.EPA, Code of Federal Regulations, 40 CFR 60 appendix A, Method 6, July 2024 (Exclude Sampling) - WI-7.2-1-22 based on US.EPA, Code of Federal Regulations, 40 CFR 60 appendix A, Method 26, 26A, 2024

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 24-LB0026

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ฉบับที่ 03

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ออกให้ตั้งแต่วันที่ 15 กันยายน พ.ศ. 2568

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สถานภาพห้องปฏิบัติการ
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(Mobile)

☐ หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 4. บรรยากาศทั่วไป (Ambient air)	- Volatile organic compounds (VOCs) - Chloroethene 0.05 µg/m³ to 51.00 µg/m³ (0.02 ppbv to 20.00 ppbv) 1,3-butadiene 0.04 µg/m³ to 44.00 µg/m³ (0.02 ppbv to 20.00 ppbv) - Bromomethane 0.08 µg/m³ to 77.00 µg/m³ (0.02 ppbv to 20.00 ppbv) - Acrolein 0.05 µg/m³ to 45.00 µg/m³ (0.02 ppbv to 20.00 ppbv) - Acrylonitrile 0.04 µg/m³ to 43.00 µg/m³ (0.02 ppbv to 20.00 ppbv) - Dichloromethane 0.14 µg/m³ to 69.00 µg/m³ (0.04 ppbv to 20.00 ppbv)	- WI-7.2-1-24 based on US EPA, Compendium Method TO-15, EPA/625/R-96/010b, Second edition, January 1999

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ
(Scope of Accreditation for Testing)
ใบรับรองเลขที่ 24-LB0026
(Certification No. 24-LB0026)



ฉบับที่ 03
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ออกให้ตั้งแต่วันที่ 15 กันยายน พ.ศ. 2568
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สถานภาพห้องปฏิบัติการ
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(Site)

☐ชั่วคราว
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☐เคลื่อนที่
(Mobile)

☐หลายสถานที่
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาส่งแวดล้อม (Environmental field) 4. บรรยากาศทั่วไป (ต่อ) (Ambient air) (cont.)	- Volatile organic compounds (VOCs) - Carbon disulfide 0.06 $\mu\text{g}/\text{m}^3$ to 62.00 $\mu\text{g}/\text{m}^3$ (0.02 ppbv to 20.00 ppbv) - Trichloromethane 0.20 $\mu\text{g}/\text{m}^3$ to 97.00 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv) 1,2-dichloroethane 0.08 $\mu\text{g}/\text{m}^3$ to 80.00 $\mu\text{g}/\text{m}^3$ (0.02 ppbv to 20.00 ppbv) - Benzene 0.06 $\mu\text{g}/\text{m}^3$ to 63.00 $\mu\text{g}/\text{m}^3$ (0.02 ppbv to 20.00 ppbv) - Carbon tetrachloride 0.25 $\mu\text{g}/\text{m}^3$ to 125 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv) - Trichloroethylene 0.21 $\mu\text{g}/\text{m}^3$ to 107 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv)	- WI-7.2-1-24 based on US EPA, Compendium Method TO-15, EPA/625/R-96/010b, Second edition, January 1999

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ
(Scope of Accreditation for Testing)
ใบรับรองเลขที่ 24-LB0026
(Certification No. 24-LB0026)



ฉบับที่ 03
(Issue No. 03)

ออกให้ตั้งแต่วันที่ 15 กันยายน พ.ศ. 2568
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สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาส่งแวดล้อม (environmental field) 4. บรรยากาศทั่วไป (ต่อ) (Ambient air) (Cont.)	- Volatile organic compounds (VOCs) 1,2-dichloropropane 0.18 $\mu\text{g}/\text{m}^3$ to 92.00 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv) - Tetrachloroethylene 0.27 $\mu\text{g}/\text{m}^3$ to 135 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv) 1,2-dibromoethane 0.31 $\mu\text{g}/\text{m}^3$ to 153 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv) 1,1,2,2-tetrachloroethane 0.69 $\mu\text{g}/\text{m}^3$ to 137 $\mu\text{g}/\text{m}^3$ (0.10 ppbv to 20.00 ppbv) - Benzyl chloride 0.52 $\mu\text{g}/\text{m}^3$ to 103 $\mu\text{g}/\text{m}^3$ (0.10 ppbv to 20.00 ppbv) 1,4-dichlorobenzene 0.24 $\mu\text{g}/\text{m}^3$ to 120 $\mu\text{g}/\text{m}^3$ (0.04 ppbv to 20.00 ppbv)	- WI-7.2-1-24 based on US EPA, Compendium Method TO-15, EPA/625/R-96/010b, Second edition, January 1999

ภาคผนวก ซ

ใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์การทำงาน
จากกรมสวัสดิการและคุ้มครองแรงงาน



แบบ กภ.บุญ
นิติบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน

ใบอนุญาต

เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง

ใบอนุญาตเลขที่ ๑๕๑๓-๑๓-๒๕๖๕-๑๑๔๘

อนุญาตให้...บริษัท ซีอีท จำกัด.....

เลขทะเบียนนิติบุคคล ๐๑๑๕๕๓๖๐๐๙๗๖

ตั้งอยู่เลขที่ ๒๓๙ ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ในการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง ประกอบกับกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๗ ราย และรายการเครื่องมือตรวจวัด จำนวน ๖๕ เครื่อง ดังรายละเอียดแนบท้ายใบอนุญาตนี้

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๘ ถึงวันที่ ๑๖ มิถุนายน พ.ศ. ๒๕๗๑

ให้ไว้ ณ วันที่ ๒ มิถุนายน พ.ศ. ๒๕๖๘

(นายศักดิ์ศิลป์ ทุลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

เลขทะเบียนควบคุม

๓-๑๑-๐๔๐๓-๐๕๓-๐๒-๖๘

(ลงนาม)

(นายทะเบียน)

(นางสาวสุวิทย์ ทวีสุข)

ตำแหน่ง ผู้อำนวยการกองความปลอดภัยแรงงาน

รายชื่อบุคลากรแนบท้ายใบอนุญาต
 เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง
 ของบริษัท ซีคोट จำกัด
 ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๕-๐๐๔๘

- | | |
|-------------------|---------------|
| ๑. นางสาวสุนันtha | ศิริวัฒนานนท์ |
| ๒. นางสาวกนิษฐา | เจริญเชื้อ |
| ๓. นางสาวอลิษา | คณิธรานนท์ |
| ๔. นางสาวชนิตา | หล้าสาย |
| ๕. นางสาวศลิษา | อินริย์ |
| ๖. นางสาววิระยา | ปัจฉิมบุญณ์ |
| ๗. นายพงศ์ศิริ | จักรแก้ว |

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๖ มิถุนายน พ.ศ. ๒๕๗๑

ให้ไว้ ณ วันที่ ๒ มิถุนายน พ.ศ. ๒๕๖๕



(นายศักดิ์ศิลป์ ตูลาธร)
 ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
 อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

รายการเครื่องมือตรวจวัดแนบท้ายใบอนุญาต
 เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง
 ของบริษัท ซีคोट จำกัด
 ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๕-๐๐๔๘

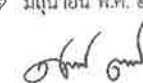
ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
๑	เครื่องวัดเสียง และเครื่องวัดเสียง กระทบหรือเสียงกระทบ	ยี่ห้อ	Cirrus	๑๐
		รุ่น	CR162B	
		Serial No.	G302737	
			G302738	
			G302740	
			G302742	
			G302743	
			G301014	
			G302333	
			G302330	
			G302237	
			G300709	
		มาตรฐาน	IEC 61672-1	๓
		ยี่ห้อ	Cirrus	
		รุ่น	CR162C	
		Serial No.	G300832	
			G300838	๒
			G300841	
		มาตรฐาน	IEC 61672-1	
		ยี่ห้อ	Cirrus	
		รุ่น	CR171B	๑๕
		Serial No.	G303411	
			G303415	
		มาตรฐาน	IEC 61672-1	
		ยี่ห้อ	SCARLET TECH	
		รุ่น	ST-21D	
		Serial No.	820722	
			820723	
			820724	
			820725	
			820726	
			820727	

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
			820728 820729 820730 820731 821078 821079 821080 821081 821082	
		มาตรฐาน	IEC 61672	
๒	เครื่องวัดปริมาณเสียงสะสม	ยี่ห้อ	Cirrus	๒๐
		รุ่น	CR:110A	
		Serial No.	CB1023 CB1025 CB1026 CB1040 CB1041 CB1042 CB1043 CB1047 CB1048 CB1049 CB1050 CB1052 CB1053 CB1054 CB1055 CB1056 CB1101 CB1102 CB1103 CB1104	
		มาตรฐาน	IEC 61252	
		ยี่ห้อ	Pulsar	๑๐
		รุ่น	Model 22R	

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
		Serial No.	PB614 PB617 PB618 PB621 PB632 PB636 PB637 PB638 PB643 PB644	
		มาตรฐาน	IEC 61252	
๓	อุปกรณ์ตรวจสอบความถูกต้อง	ยี่ห้อ	Cirrus	๒
		รุ่น	CR:515	
		Serial No.	94296 97097	
		มาตรฐาน	IEC 60942	
๔	อุปกรณ์ตรวจสอบความถูกต้อง (เสียงสะสม)	ยี่ห้อ	Cirrus	๒
		รุ่น	RC:110A	
		Serial No.	95167 95168	
		มาตรฐาน	IEC 60942	
		ยี่ห้อ	Pulsar	๑
		รุ่น	Model 22R	
		Serial No.	79781	
		มาตรฐาน	IEC 60942	

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๘ ถึงวันที่ ๑๖ มิถุนายน พ.ศ. ๒๕๖๙

ให้ไว้ ณ วันที่ ๒ มิถุนายน พ.ศ. ๒๕๖๘



(นายศักดิ์ศิลป์ ตุลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน



ใบอนุญาต

เป็นนิติบุคคลผู้ให้บริการตรวจวัดระดับความเข้มข้นของสารเคมีอันตราย
ในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย

ใบอนุญาตเลขที่ ๐๒๐๑-๐๓-๒๕๖๕-๐๐๔๙

อนุญาตให้ บริษัท ซีเคอที จำกัด

เลขทะเบียนนิติบุคคล ๐๑๐๕๕๓๖๐๐๐๔๗๖

ตั้งอยู่ เลขที่ ๒๓๙ ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับสารเคมีอันตราย พ.ศ. ๒๕๕๖ ในการเป็นผู้ให้บริการตรวจวัดระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย ประกอบกับกฎกระทรวงการขึ้นทะเบียนและกรอญญาให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๑๕ ราย และรายการเครื่องมือตรวจวัด จำนวน ๕๕ เครื่อง ดังรายละเอียดแนบท้ายใบอนุญาตนี้

ทั้งนี้ ตั้งแต่วันที่ ๑๔ มิถุนายน พ.ศ. ๒๕๖๘ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๗๑

เรื่อง ฌ. วันที่ ๒๓ พฤษภาคม พ.ศ. ๒๕๖๘

(นายศักดิ์ศิลป์ จุลารุ)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

เลขทะเบียนควบคุม

ନି-୩୩-୦୭୦୩-୦୫୦-୦୧-ବି

(ลงนาม)..... (นายทะเบียน)

(นางสาวสุดี ทวีสุข)

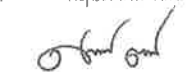
ผู้อำนวยการกองความปลอดภัยแรงงาน

รายชื่อบุคลากรแนบท้ายใบอนุญาต
 เป็นนิติบุคคลผู้ให้บริการตรวจวัดระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน
 และสถานที่เก็บรักษาสารเคมีอันตราย
 ของบริษัท ซีคอน จำกัด
 ใบอนุญาตเลขที่ ๐๒๐๑-๐๓-๒๕๖๕-๐๐๔๙

- | | |
|--------------------|-------------|
| ๑. นายชิตพล | สมประสงค์ |
| ๒. นายอนิวัฒน์ | พิมพ์นา |
| ๓. นายศิวะนนท์ | กุลวงษ์ |
| ๔. นายธนโชติ | ช่างหล่อ |
| ๕. นายกิตติพงศ์ | ทะเกิงสุข |
| ๖. นายจิรวุฒิ | โคตรคำหาญ |
| ๗. นายศุภกิจ | ติงมูกา |
| ๘. นางสาวทิพย์สุตา | วรรณการ |
| ๙. นายธนาวุฒิ | ด้วนแสง |
| ๑๐. นางสาวศลิษา | อินริย์ |
| ๑๑. นางสาววิระยา | ปัจฉิมบุรณ์ |
| ๑๒. นายณัฐดนัย | กฤษณะโสม |
| ๑๓. นายณัฐชัย | ไชยโคตร |
| ๑๔. นายพงศ์ศิริ | จักรแก้ว |
| ๑๕. นายอรรถชัย | นวนนัม |

ทั้งนี้ ตั้งแต่วันที่ ๑๔ มิถุนายน พ.ศ. ๒๕๖๘ ถึงวันที่ ๓๓ มิถุนายน พ.ศ. ๒๕๗๑

ให้ไว้ ณ วันที่ ๒๗ พฤษภาคม พ.ศ. ๒๕๖๘



(นายศักดิ์ศิลป์ ตูลาธร)

ผู้ทรงอำนาจการกรม ปฏิบัติราชการแทน
 อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

รายการเครื่องมือตรวจวัดแนบท้ายใบอนุญาต
 เป็นนิติบุคคลผู้ให้บริการตรวจวัดระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน
 และสถานที่เก็บรักษาสารเคมีอันตราย
 ของบริษัท ซีคอน จำกัด
 ใบอนุญาตเลขที่ ๐๒๐๑-๐๓-๒๕๖๕-๐๐๔๙

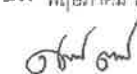
ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
๑	เครื่องมือเก็บตัวอย่างอากาศ (Personal Air Sampling Pump)	ยี่ห้อ รุ่น Serial No.	Sensidyne Gilian BDX II 20190401002 20190401003 20190401006 20190401007 20190401008 20190401013 20190401014 20190401015 20190401019 20190504021 20190504022 20190504023 20190504025 20190504027 20190504028 20190504029 20190504032 20190504034 20190504039 20190504040 20190504042 20190504044 20210602054 20210602055 20210701039 20210701078 20210701079 20210701081	๔๖

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
	เครื่องมือเก็บตัวอย่างอากาศ (ต่อ) (Personal Air Sampling Pump)		20210701082 20210701086 20210701093 20210904100 20211201089 20211201090 20220104039 20220104042 20220104045 20220104086 20220104087 20220104088 20220104089 20220104090 20220104098 20220104099 20220104100 20220104104	
		ยี่ห้อ รุ่น Serial No.	SKC Pocket Pump TOUCH 220-1000TC 221217 221218 221219 221222 221245	๕
	๒ เครื่องมือและอุปกรณ์สำหรับ ปรับความถูกต้อง (Pump calibrator)	ยี่ห้อ รุ่น Serial No.	Mesa Labs Defender 520-L 160100	๑
		ยี่ห้อ รุ่น Serial No.	Mesa Labs Defender 520-H 114069	๑
		ยี่ห้อ รุ่น Serial No.	SKC Chek-mate 375-0550 N 22552891	๑

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
	เครื่องมือและอุปกรณ์สำหรับ ปรับความถูกต้อง (ต่อ) (Pump calibrator)	ยี่ห้อ รุ่น Serial No.	SKC Chek-mate 375-00205 N 21552177	๑

ทั้งนี้ ตั้งแต่วันที่ ๑๔ มิถุนายน พ.ศ. ๒๕๖๘ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๗๑

ให้ไว้ ณ วันที่ ๒๓ พฤษภาคม พ.ศ. ๒๕๖๘



(นายศักดิ์ศิลป์ ตูลารัณ)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน



แบบ ก.ภ.บ.ญ
นิติบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน
ใบอนุญาต
เป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตราย
ในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย

ใบอนุญาตเลขที่ ๐๒๐๒-๐๓-๒๕๖๕-๐๐๓๙

อนุญาตให้ นริศ หัสศิริกุล จำกัด

เลขทะเบียนนิติบุคคล ๐๑๑๕๕๓๖๐๐๐๙๗๖
ตั้งอยู่ เลขที่ ๒๓๙ ถนนริมคลองประปา 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 ๑๐ ราย และรายการเครื่องมือวิเคราะห์ จำนวน ๙ เครื่อง ดังรายละเอียด
แนบท้ายใบอนุญาตนี้

ทั้งนี้ ตั้งแต่วันที่ ๑๙ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๗๑

ให้ไว้ ณ วันที่ ๒๓ พฤษภาคม พ.ศ. ๒๕๖๕

(นายศักดิ์ศิรป์ ตูตาร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

เลขทะเบียนควบคุม

๓-๑๑-๐๒๐๒-๐๓๕-๐๒-๖๘

(ลงนาม).....(นายทะเบียน)

(นางสาวสุวดี ทวีสุข)

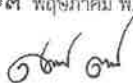
ผู้อำนวยการกองความปลอดภัยแรงงาน

รายชื่อบุคลากรแนบท้ายใบอนุญาต
 เป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน
 และสถานที่เก็บรักษาสารเคมีอันตราย
 ของบริษัท ซีคोट จำกัด
 ใบอนุญาตเลขที่ ๐๒๐๒-๐๓-๒๕๖๕-๐๐๓๔

๑. นางสาวนริสา ภูธรเพ็ชร์
๒. นางอารยา ทิพักษ์
๓. นางสาวศิริวรรณ นิมสง่า
๔. นางสาวสุธาทิพย์ เทียนเคี้ยว
๕. นางสาวพรนภา บุตรธรรม
๖. นางสาวธาริณี อาจปลิว
๗. นางสาวณิสดา กุ้ยอ่อน
๘. นางสาวจุฑารัตน์ แจ่มเรือน
๙. นางสาวสุตาพร สุนทร
๑๐. นางสาวปวีศา มากภักดิ์

ทั้งนี้ ตั้งแต่วันที่ ๑๔ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๗๑

ให้ไว้ ณ วันที่ ๒๗ พฤษภาคม พ.ศ. ๒๕๖๕



(นายศักดิ์ศิลป์ ตูลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
 อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

รายการเครื่องมือวิเคราะห์ที่แนบท้ายใบอนุญาต
 เป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน
 และสถานที่เก็บรักษาสารเคมีอันตราย
 ของบริษัท ซีคोट จำกัด
 ใบอนุญาตเลขที่ ๐๒๐๒-๐๓-๒๕๖๕-๐๐๓๔

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
๑	Atomic Absorption Spectrophotometer (AAS)	ยี่ห้อ รุ่น Serial No.	Perkin Elmer PinAAcle 900T PTDS23051001	๑
๒	Inductively Coupled Plasma (ICP-OES)	ยี่ห้อ รุ่น Serial No.	Agilent 5110 MY16230003	๑
๓	Gas Chromatograph Flame Ionization Detector (GC-FID)	ยี่ห้อ รุ่น Serial No.	Agilent 7890 B CN 15346147	๑
		ยี่ห้อ รุ่น Serial No.	Agilent 7890 A US10943001	๑
๔	Ion Chromatography	ยี่ห้อ รุ่น Serial No.	Dionex ICS-1000 04090295	๑
๕	Electronic Balance	ยี่ห้อ รุ่น Serial No.	Sartorius ME5, 6 digits SWB26602268	๑
		ยี่ห้อ รุ่น Serial No.	Mettler Toledo AG245, 5 digits 1117293916	๑
		ยี่ห้อ รุ่น Serial No.	Mettler Toledo AB204-S, 4 digits 1123163292	๑

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
๒	UV/Vis Spectrophotometer	ยี่ห้อ รุ่น Serial No.	Thermo Scientific GENESYS 150 UV-Vis 9A5Y332022	๑

ทั้งนี้ ตั้งแต่วันที่ ๑๔ มิถุนายน พ.ศ. ๒๕๖๘ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๖๙

ให้ไว้ ณ วันที่ ๒๗ พฤษภาคม พ.ศ. ๒๕๖๘

(นายศักดิ์ศิลป์ ตุลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน



ที่ รง ๐๕๐๘/ ๗๕๖๘

กรมสวัสดิการและคุ้มครองแรงงาน
ถนนมิตรไมตรี ดินแดง กรุงเทพฯ ๑๐๕๐๐

๒๐ สิงหาคม ๒๕๖๘

เรื่อง การขอเพิ่มเติมเครื่องมือวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงาน
และสถานที่เก็บรักษาสารเคมีอันตราย

เรียน กรรมการผู้จัดการบริษัท ซีคอต จำกัด

อ้างถึง หนังสือบริษัท ซีคอต จำกัด ที่ ชค. (๒) ๐๐๒๔/๒๕๖๘ ลงวันที่ ๑๘ มิถุนายน ๒๕๖๘

สิ่งที่ส่งมาด้วย รายการเครื่องมือ (เพิ่มเติม) แบบท่ายาโยนุญาตเป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้น
ของสารเคมีอันตรายฯ ลงวันที่ ๒๐ สิงหาคม พ.ศ. ๒๕๖๘ จำนวน ๑ ชุด

ตามหนังสือที่อ้างถึง บริษัท ซีคอต จำกัด ขออนุมัติเพิ่มเติมเครื่องมือวิเคราะห์ระดับความเข้มข้น
ของสารเคมีอันตรายในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย จำนวน ๑ เครื่อง
สำหรับการเป็นผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตรายฯ ตามกฎกระทรวงการขึ้นทะเบียน
และการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน
พ.ศ. ๒๕๖๔ เพื่อให้กรมสวัสดิการและคุ้มครองแรงงานพิจารณา ความละเอียดแจ้งแล้ว นั้น

กรมสวัสดิการและคุ้มครองแรงงานพิจารณาแล้วเห็นว่า เครื่องมือวิเคราะห์ระดับความเข้มข้น
ของสารเคมีอันตรายฯ ที่ขออนุมัติเพิ่มเติม เป็นไปตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการ
เพื่อส่งเสริมความปลอดภัยฯ ประกอบกับกฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการ
ด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับสารเคมีอันตราย พ.ศ. ๒๕๕๖
จึงอนุมัติให้บริษัท ซีคอต จำกัด เพิ่มเติมเครื่องมือวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตรายฯ ดังกล่าว
รายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย ทั้งนี้ ขอให้บริษัทฯ ปฏิบัติตามกฎหมายการขึ้นทะเบียนและการอนุญาต
ให้บริการเพื่อส่งเสริมความปลอดภัยฯ อย่างเคร่งครัด

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายศักดิ์ศิลป์ ตุลาธร)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

กองความปลอดภัยแรงงาน

โทรศัพท์ ๐ ๒๔๔๘ ๙๑๒๘ - ๓๔ ต่อ ๗๐๖

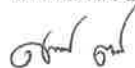
ไปรษณีย์อิเล็กทรอนิกส์ Safetyofficer@labour.mail.go.th

รายการเครื่องมือ (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการวิเคราะห์ระดับความเข้มข้นของสารเคมีอันตราย
ในบรรยากาศของสถานที่ทำงานและสถานที่เก็บรักษาสารเคมีอันตราย
ของบริษัท ซีคอฟ จำกัด
ใบอนุญาตเลขที่ ๐๒๐๒-๐๓-๒๕๖๕-๐๐๓๔

ลำดับที่	รายการเครื่องมือ	รายละเอียด		จำนวน (เครื่อง)
๑	CO Gas Detector	ยี่ห้อ รุ่น Serial No.	Q-Trak 7575 7575X2017002	๑

ทั้งนี้ ตั้งแต่วันที่ ๒๐ สิงหาคม พ.ศ. ๒๕๖๕ ถึงวันที่ ๑๓ มิถุนายน พ.ศ. ๒๕๖๖

ให้ไว้ ณ วันที่ ๒๐ สิงหาคม พ.ศ. ๒๕๖๕



(นายศักดิ์ศิลป์ ตูลาธร)
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