

ภาคผนวก ค.

ใบรับรองผลการตรวจวัด

Request No. ATR6809025

Report No. 6809-0625 - 6809-0631

TEST REPORT

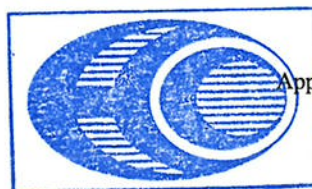
CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณพื้นที่โครงการ (A1)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090625 - A68090631
 TESTED DATE : 24/09/2025-27/09/2025 REPORTED DATE : 14/10/2025

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{/1}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	10-11/09/2025	0.041	0.33	mg/m ³
		11-12/09/2025	0.039	0.33	mg/m ³
		12-13/09/2025	0.058	0.33	mg/m ³
		13-14/09/2025	0.038	0.33	mg/m ³
		14-15/09/2025	0.038	0.33	mg/m ³
		15-16/09/2025	0.035	0.33	mg/m ³
		16-17/09/2025	0.040	0.33	mg/m ³

REMARK:^{/1} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0618 - 6809-0624

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณพื้นที่โครงการ (A1)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090618 - A68090624
 TESTED DATE : 24/09/2025-27/09/2025 REPORTED DATE : 14/10/2025

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹⁾	UNIT
Particulate matter less than or Equal					
10 micrometers (PM 10)	Gravimetric Method	10-11/09/2025	0.026	0.12	mg/m ³
		11-12/09/2025	0.024	0.12	mg/m ³
		12-13/09/2025	0.031	0.12	mg/m ³
		13-14/09/2025	0.028	0.12	mg/m ³
		14-15/09/2025	0.025	0.12	mg/m ³
		15-16/09/2025	0.029	0.12	mg/m ³
		16-17/09/2025	0.017	0.12	mg/m ³

REMARK:

¹⁾ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0632 - 6809-0638

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณพื้นที่โครงการ (A1)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090632 - A68090638
 TESTED DATE : 24/09/2025-07/10/2025 REPORTED DATE : 14/10/2025

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	10-11/09/2025	< 0.0001	mg/m ³
		11-12/09/2025	< 0.0001	mg/m ³
		12-13/09/2025	0.0001	mg/m ³
		13-14/09/2025	0.0006	mg/m ³
		14-15/09/2025	< 0.0001	mg/m ³
		15-16/09/2025	0.0007	mg/m ³
		16-17/09/2025	< 0.0001	mg/m ³

REMARK:

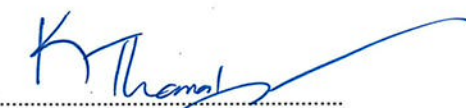
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Miss Thanatporn Klinsopon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0646 - 6809-0652

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง (A2)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090646 - A68090652
 TESTED DATE : 24/09/2025-27/09/2025 REPORTED DATE : 14/10/2025

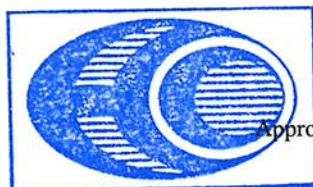
PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹¹	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	10-11/09/2025	0.066	0.33	mg/m ³
		11-12/09/2025	0.070	0.33	mg/m ³
		12-13/09/2025	0.086	0.33	mg/m ³
		13-14/09/2025	0.058	0.33	mg/m ³
		14-15/09/2025	0.067	0.33	mg/m ³
		15-16/09/2025	0.059	0.33	mg/m ³
		16-17/09/2025	0.065	0.33	mg/m ³

REMARK:

¹¹ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0639 - 6809-0645

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง (A2)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090639 - A68090645
 TESTED DATE : 24/09/2025-27/09/2025 REPORTED DATE : 14/10/2025

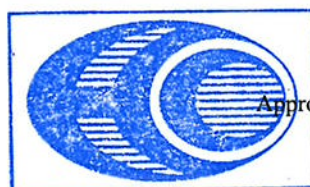
PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Particulate matter less than or Equal					
10 micrometers (PM 10)	Gravimetric Method	10-11/09/2025	0.036	0.12	mg/m ³
		11-12/09/2025	0.036	0.12	mg/m ³
		12-13/09/2025	0.041	0.12	mg/m ³
		13-14/09/2025	0.033	0.12	mg/m ³
		14-15/09/2025	0.034	0.12	mg/m ³
		15-16/09/2025	0.032	0.12	mg/m ³
		16-17/09/2025	0.028	0.12	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0653 - 6809-0659

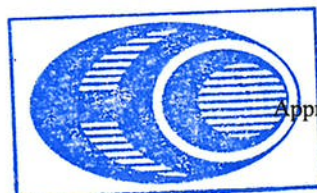
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง (A2)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090653 - A68090659
 TESTED DATE : 24/09/2025-07/10/2025 REPORTED DATE : 14/10/2025

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	10-11/09/2025	< 0.0001	mg/m ³
		11-12/09/2025	< 0.0001	mg/m ³
		12-13/09/2025	0.0003	mg/m ³
		13-14/09/2025	< 0.0001	mg/m ³
		14-15/09/2025	0.0011	mg/m ³
		15-16/09/2025	0.0001	mg/m ³
		16-17/09/2025	0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
 (Sampling By Mr. Saksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0667 - 6809-0673

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง (A3)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090667 - A68090673
 TESTED DATE : 24/09/2025-27/09/2025 REPORTED DATE : 14/10/2025

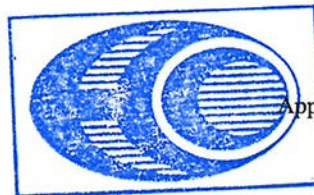
PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	10-11/09/2025	0.070	0.33	mg/m ³
		11-12/09/2025	0.079	0.33	mg/m ³
		12-13/09/2025	0.098	0.33	mg/m ³
		13-14/09/2025	0.064	0.33	mg/m ³
		14-15/09/2025	0.062	0.33	mg/m ³
		15-16/09/2025	0.063	0.33	mg/m ³
		16-17/09/2025	0.058	0.33	mg/m ³

REMARK:

¹ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0660 - 6809-0666

TEST REPORT

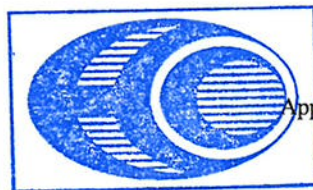
CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง (A3)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090660 - A68090666
 TESTED DATE : 24/09/2025-27/09/2025 REPORTED DATE : 14/10/2025

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹	UNIT
Particulate matter less than or Equal					
10 micrometers (PM 10)	Gravimetric Method	10-11/09/2025	0.027	0.12	mg/m ³
		11-12/09/2025	0.025	0.12	mg/m ³
		12-13/09/2025	0.027	0.12	mg/m ³
		13-14/09/2025	0.031	0.12	mg/m ³
		14-15/09/2025	0.021	0.12	mg/m ³
		15-16/09/2025	0.022	0.12	mg/m ³
		16-17/09/2025	0.019	0.12	mg/m ³

REMARK:¹ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsohon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809025

Report No. 6809-0674 - 6809-0680

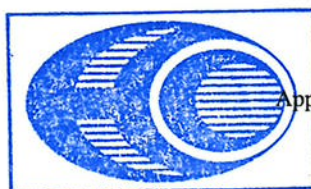
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง (A3)
 RECEIVED DATE : 24/09/2025 SAMPLE NO. : A68090674 - A68090680
 TESTED DATE : 24/09/2025-07/10/2025 REPORTED DATE : 14/10/2025

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	10-11/09/2025	0.0001	mg/m ³
		11-12/09/2025	0.0004	mg/m ³
		12-13/09/2025	0.0013	mg/m ³
		13-14/09/2025	0.0003	mg/m ³
		14-15/09/2025	< 0.0001	mg/m ³
		15-16/09/2025	< 0.0001	mg/m ³
		16-17/09/2025	0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
 (Sampling By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

14/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4831 - R6809-4837

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : บริเวณพื้นที่โครงการ (A1)

PARAMETER* : Nitrogen Dioxide

DETERMINATION METHOD : Chemiluminescence

INSTRUMENT : API Model T200 S/N 2004

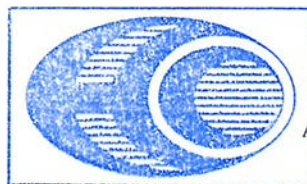
SAMPLE NO. : 34643-34649

SAMPLING DATE : 10-17/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

TIME / DATE	10-11/09/2025	11-12/09/2025	12-13/09/2025	13-14/09/2025	14-15/09/2025	15-16/09/2025	16-17/09/2025	UNIT
09:00 - 10:00 ²	0.007	0.009	0.012	0.014	0.010	0.016	0.019	ppm
10:00 - 11:00	0.007	0.009	0.013	0.011	0.009	0.011	0.016	ppm
11:00 - 12:00	0.007	0.010	0.013	0.011	0.006	0.013	0.015	ppm
12:00 - 13:00	0.007	0.008	0.015	0.013	0.008	0.010	0.013	ppm
13:00 - 14:00	0.007	0.007	0.010	0.010	0.009	0.013	0.010	ppm
14:00 - 15:00	0.006	0.005	0.010	0.009	0.007	0.020	0.008	ppm
15:00 - 16:00	0.007	0.005	0.014	0.009	0.009	0.017	0.007	ppm
16:00 - 17:00	0.010	0.006	0.013	0.012	0.013	0.010	0.009	ppm
17:00 - 18:00	0.011	0.009	0.020	0.019	0.017	0.013	0.008	ppm
18:00 - 19:00	0.012	0.017	0.018	0.026	0.018	0.015	0.013	ppm
19:00 - 20:00	0.013	0.019	0.022	0.027	0.018	0.014	0.016	ppm
20:00 - 21:00	0.012	0.016	0.022	0.026	0.024	0.015	0.019	ppm
21:00 - 22:00	0.012	0.014	0.021	0.024	0.021	0.015	0.016	ppm
22:00 - 23:00	0.011	0.013	0.020	0.024	0.024	0.018	0.014	ppm
23:00 - 00:00	0.011	0.015	0.020	0.025	0.020	0.014	0.015	ppm
00:00 - 01:00	0.010	0.014	0.019	0.024	0.021	0.013	0.015	ppm
01:00 - 02:00	0.007	0.015	0.026	0.022	0.018	0.012	0.015	ppm
02:00 - 03:00	0.010	0.012	0.020	0.015	0.017	0.008	0.014	ppm
03:00 - 04:00	0.012	0.009	0.019	0.011	0.015	0.012	0.013	ppm
04:00 - 05:00	0.009	0.010	0.016	0.012	0.013	0.010	0.010	ppm
05:00 - 06:00	0.009	0.010	0.016	0.012	0.014	0.008	0.012	ppm
06:00 - 07:00	0.011	0.011	0.017	0.014	0.014	0.012	0.016	ppm
07:00 - 08:00	0.013	0.011	0.020	0.015	0.015	0.014	0.019	ppm
08:00 - 09:00	0.014	0.012	0.018	0.013	0.017	0.018	0.016	ppm
Maximum 1 hr.	0.014	0.019	0.026	0.027	0.024	0.020	0.019	ppm
Average 24 hr.	0.010	0.011	0.017	0.017	0.015	0.013	0.014	ppm
Standard (1 hr.) ¹	0.17	0.17	0.17	0.17	0.17	0.17	0.17	ppm

REMARK : ¹ Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)² Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

Approved By.....

(MS. THANATPORN KLINSOPON)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4859 - R6809-4865

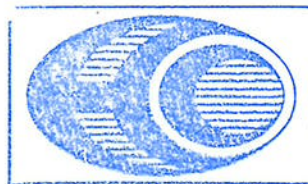
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง (A2)
 PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 34671-34677
 DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 10-17/09/2025
 INSTRUMENT : API Model T200 S/N 7866 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

TIME / DATE	10-11/09/2025	11-12/09/2025	12-13/09/2025	13-14/09/2025	14-15/09/2025	15-16/09/2025	16-17/09/2025	UNIT
08:00 - 09:00 ²	0.005	0.009	0.023	0.011	0.026	0.009	0.014	ppm
09:00 - 10:00	0.005	0.004	0.024	0.013	0.004	0.007	0.013	ppm
10:00 - 11:00	0.003	0.006	0.020	0.018	0.009	0.009	0.008	ppm
11:00 - 12:00	0.006	0.012	0.019	0.014	0.021	0.034	0.016	ppm
12:00 - 13:00	0.008	0.018	0.014	0.017	0.018	0.018	0.020	ppm
13:00 - 14:00	0.007	0.027	0.011	0.014	0.011	0.033	0.016	ppm
14:00 - 15:00	0.010	0.012	0.018	0.012	0.015	0.021	0.016	ppm
15:00 - 16:00	0.011	0.006	0.012	0.012	0.016	0.009	0.015	ppm
16:00 - 17:00	0.012	0.014	0.024	0.023	0.017	0.029	0.016	ppm
17:00 - 18:00	0.013	0.021	0.020	0.022	0.017	0.024	0.019	ppm
18:00 - 19:00	0.012	0.020	0.013	0.021	0.020	0.023	0.017	ppm
19:00 - 20:00	0.011	0.016	0.016	0.028	0.017	0.018	0.021	ppm
20:00 - 21:00	0.010	0.013	0.016	0.024	0.016	0.014	0.018	ppm
21:00 - 22:00	0.010	0.009	0.026	0.016	0.015	0.012	0.015	ppm
22:00 - 23:00	0.009	0.007	0.013	0.024	0.015	0.009	0.015	ppm
23:00 - 00:00	0.008	0.010	0.028	0.022	0.023	0.017	0.015	ppm
00:00 - 01:00	0.010	0.011	0.013	0.021	0.018	0.013	0.016	ppm
01:00 - 02:00	0.009	0.008	0.024	0.020	0.014	0.012	0.011	ppm
02:00 - 03:00	0.012	0.006	0.016	0.017	0.011	0.009	0.015	ppm
03:00 - 04:00	0.009	0.005	0.016	0.015	0.009	0.016	0.013	ppm
04:00 - 05:00	0.005	0.006	0.008	0.011	0.010	0.011	0.012	ppm
05:00 - 06:00	0.006	0.006	0.007	0.009	0.010	0.014	0.014	ppm
06:00 - 07:00	0.016	0.005	0.015	0.006	0.009	0.014	0.013	ppm
07:00 - 08:00	0.012	0.014	0.019	0.007	0.007	0.016	0.009	ppm
Maximum 1 hr.	0.016	0.027	0.028	0.028	0.026	0.034	0.021	ppm
Average 24 hr.	0.009	0.011	0.017	0.017	0.015	0.016	0.015	ppm
Standard (1 hr.) ¹	0.17	0.17	0.17	0.17	0.17	0.17	0.17	ppm

REMARK : ¹ Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)² Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
 (Measurement By Mr. Seksan Pluemwong)



Approved By.....

(MS. THANATPORN KLINSOPON)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4845 - R6809-4851

TEST REPORT

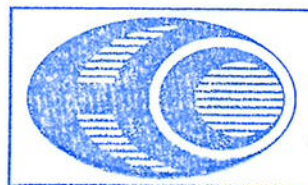
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง (A3)
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model M200E S/N 3999

SAMPLE NO. : 34657-34663
SAMPLING DATE : 10-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME / DATE	10-11/09/2025	11-12/09/2025	12-13/09/2025	13-14/09/2025	14-15/09/2025	15-16/09/2025	16-17/09/2025	UNIT
10:00 - 11:00 ¹²	0.009	0.012	0.015	0.012	0.012	0.016	0.017	ppm
11:00 - 12:00	0.009	0.010	0.014	0.013	0.013	0.018	0.016	ppm
12:00 - 13:00	0.009	0.010	0.015	0.018	0.013	0.017	0.016	ppm
13:00 - 14:00	0.009	0.010	0.013	0.021	0.011	0.018	0.014	ppm
14:00 - 15:00	0.009	0.011	0.015	0.023	0.011	0.015	0.015	ppm
15:00 - 16:00	0.010	0.011	0.018	0.023	0.013	0.017	0.013	ppm
16:00 - 17:00	0.011	0.012	0.018	0.028	0.016	0.015	0.016	ppm
17:00 - 18:00	0.010	0.014	0.019	0.024	0.018	0.017	0.017	ppm
18:00 - 19:00	0.010	0.015	0.019	0.022	0.016	0.018	0.018	ppm
19:00 - 20:00	0.011	0.020	0.024	0.024	0.016	0.015	0.020	ppm
20:00 - 21:00	0.009	0.016	0.022	0.020	0.016	0.014	0.019	ppm
21:00 - 22:00	0.011	0.013	0.017	0.021	0.018	0.012	0.015	ppm
22:00 - 23:00	0.010	0.010	0.020	0.017	0.017	0.012	0.013	ppm
23:00 - 00:00	0.011	0.009	0.017	0.016	0.015	0.011	0.013	ppm
00:00 - 01:00	0.010	0.010	0.015	0.018	0.015	0.011	0.011	ppm
01:00 - 02:00	0.009	0.012	0.013	0.015	0.015	0.010	0.012	ppm
02:00 - 03:00	0.009	0.010	0.011	0.016	0.012	0.011	0.012	ppm
03:00 - 04:00	0.008	0.008	0.011	0.015	0.011	0.012	0.013	ppm
04:00 - 05:00	0.006	0.008	0.011	0.015	0.010	0.009	0.009	ppm
05:00 - 06:00	0.007	0.008	0.012	0.012	0.010	0.009	0.008	ppm
06:00 - 07:00	0.006	0.011	0.013	0.011	0.011	0.011	0.009	ppm
07:00 - 08:00	0.007	0.010	0.012	0.011	0.011	0.012	0.009	ppm
08:00 - 09:00	0.008	0.015	0.017	0.012	0.016	0.017	0.015	ppm
09:00 - 10:00	0.018	0.016	0.022	0.011	0.018	0.015	0.020	ppm
Maximum 1 hr.	0.018	0.020	0.024	0.028	0.018	0.018	0.020	ppm
Average 24 hr.	0.009	0.012	0.016	0.017	0.014	0.014	0.014	ppm
Standard (1 hr.) ¹¹	0.17	0.17	0.17	0.17	0.17	0.17	0.17	ppm

REMARK : ¹¹ Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)¹² Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4824 - R6809-4830

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : บริเวณพื้นที่โครงการ (A1)

PARAMETER* : Sulfur Dioxide

DETERMINATION METHOD : UV-Fluorescence

INSTRUMENT : API Model M100E S/N 640

SAMPLE NO. : 34636-34642

SAMPLING DATE : 10-17/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

TIME / DATE	10-11/09/2025	11-12/09/2025	12-13/09/2025	13-14/09/2025	14-15/09/2025	15-16/09/2025	16-17/09/2025	UNIT
09:00 - 10:00 ³	0.008	0.009	0.011	0.012	0.009	0.010	0.011	ppm
10:00 - 11:00	0.008	0.009	0.008	0.007	0.009	0.011	0.010	ppm
11:00 - 12:00	0.008	0.009	0.008	0.012	0.009	0.011	0.010	ppm
12:00 - 13:00	0.008	0.009	0.008	0.011	0.009	0.010	0.010	ppm
13:00 - 14:00	0.008	0.009	0.008	0.010	0.009	0.011	0.010	ppm
14:00 - 15:00	0.008	0.009	0.008	0.009	0.009	0.010	0.010	ppm
15:00 - 16:00	0.008	0.009	0.008	0.009	0.009	0.010	0.010	ppm
16:00 - 17:00	0.008	0.009	0.008	0.010	0.009	0.010	0.010	ppm
17:00 - 18:00	0.008	0.009	0.008	0.009	0.009	0.010	0.010	ppm
18:00 - 19:00	0.009	0.009	0.008	0.008	0.009	0.010	0.010	ppm
19:00 - 20:00	0.009	0.009	0.008	0.005	0.009	0.010	0.010	ppm
20:00 - 21:00	0.009	0.008	0.008	0.012	0.010	0.011	0.010	ppm
21:00 - 22:00	0.009	0.008	0.008	0.014	0.010	0.011	0.009	ppm
22:00 - 23:00	0.009	0.008	0.009	0.016	0.010	0.010	0.009	ppm
23:00 - 00:00	0.009	0.008	0.008	0.017	0.008	0.009	0.009	ppm
00:00 - 01:00	0.009	0.009	0.008	0.011	0.008	0.010	0.009	ppm
01:00 - 02:00	0.008	0.009	0.014	0.011	0.009	0.010	0.009	ppm
02:00 - 03:00	0.012	0.010	0.012	0.011	0.008	0.014	0.009	ppm
03:00 - 04:00	0.011	0.010	0.013	0.010	0.008	0.012	0.009	ppm
04:00 - 05:00	0.009	0.008	0.012	0.010	0.009	0.011	0.008	ppm
05:00 - 06:00	0.008	0.009	0.012	0.010	0.009	0.012	0.008	ppm
06:00 - 07:00	0.009	0.010	0.011	0.010	0.009	0.010	0.009	ppm
07:00 - 08:00	0.008	0.009	0.012	0.010	0.010	0.010	0.009	ppm
08:00 - 09:00	0.008	0.009	0.015	0.010	0.009	0.010	0.010	ppm
Maximum 1 hr.	0.012	0.010	0.015	0.017	0.010	0.014	0.011	ppm
Average 24 hr.	0.009	0.009	0.010	0.011	0.009	0.011	0.009	ppm
Standard (1 hr.) ¹	0.30	0.30	0.30	0.30	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ²	0.12	0.12	0.12	0.12	0.12	0.12	0.12	ppm

REMARK : ¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(MS. THANATPORN KLINSOPON)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

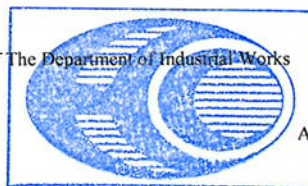
Request No. LA68-R09188

Report No. R6809-4852 - R6809-4858

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง (A2)
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 34664-34670
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 10-17/09/2025
 INSTRUMENT : API Model T100 S/N 5700 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

TIME / DATE	10-11/09/2025	11-12/09/2025	12-13/09/2025	13-14/09/2025	14-15/09/2025	15-16/09/2025	16-17/09/2025	UNIT
08:00 - 09:00 ^{1/3}	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
09:00 - 10:00	0.010	0.009	0.009	0.009	0.014	0.009	0.009	ppm
10:00 - 11:00	0.009	0.009	0.009	0.009	0.010	0.009	0.009	ppm
11:00 - 12:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
12:00 - 13:00	0.011	0.009	0.009	0.009	0.009	0.008	0.009	ppm
13:00 - 14:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
14:00 - 15:00	0.007	0.009	0.008	0.008	0.009	0.009	0.009	ppm
15:00 - 16:00	0.007	0.009	0.009	0.009	0.009	0.009	0.009	ppm
16:00 - 17:00	0.008	0.009	0.009	0.008	0.009	0.009	0.009	ppm
17:00 - 18:00	0.008	0.009	0.009	0.009	0.009	0.009	0.009	ppm
18:00 - 19:00	0.008	0.009	0.009	0.009	0.009	0.009	0.009	ppm
19:00 - 20:00	0.009	0.009	0.009	0.009	0.009	0.009	0.008	ppm
20:00 - 21:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
21:00 - 22:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
22:00 - 23:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
23:00 - 00:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
00:00 - 01:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
01:00 - 02:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
02:00 - 03:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
03:00 - 04:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
04:00 - 05:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
05:00 - 06:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
06:00 - 07:00	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
07:00 - 08:00	0.010	0.009	0.009	0.009	0.009	0.009	0.009	ppm
Maximum 1 hr.	0.011	0.009	0.009	0.009	0.014	0.009	0.009	ppm
Average 24 hr.	0.009	0.009	0.009	0.009	0.009	0.009	0.009	ppm
Standard (1 hr.) ^{1/1}	0.30	0.30	0.30	0.30	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{1/2}	0.12	0.12	0.12	0.12	0.12	0.12	0.12	ppm

REMARK : ^{1/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{1/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

Approved By.....

(MS. THANATPORN KLINSOPON)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

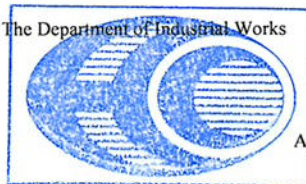
Report No. R6809-4838 - R6809-4844

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตรุกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง (A3)
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model T100 S/N 6458

SAMPLE NO. : 34650-34656
SAMPLING DATE : 10-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME / DATE	10-11/09/2025	11-12/09/2025	12-13/09/2025	13-14/09/2025	14-15/09/2025	15-16/09/2025	16-17/09/2025	UNIT
10:00 - 11:00 ³	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
11:00 - 12:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
12:00 - 13:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
13:00 - 14:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
14:00 - 15:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
15:00 - 16:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
16:00 - 17:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
17:00 - 18:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
18:00 - 19:00	0.005	0.005	0.005	0.004	0.004	0.004	0.004	ppm
19:00 - 20:00	0.005	0.005	0.005	0.004	0.004	0.004	0.004	ppm
20:00 - 21:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
21:00 - 22:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
22:00 - 23:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
23:00 - 00:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
00:00 - 01:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
01:00 - 02:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
02:00 - 03:00	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
03:00 - 04:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
04:00 - 05:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
05:00 - 06:00	0.004	0.004	0.004	0.004	0.004	0.004	0.004	ppm
06:00 - 07:00	0.005	0.005	0.005	0.004	0.004	0.004	0.004	ppm
07:00 - 08:00	0.005	0.005	0.005	0.004	0.004	0.004	0.004	ppm
08:00 - 09:00	0.005	0.005	0.004	0.004	0.004	0.005	0.004	ppm
09:00 - 10:00	0.005	0.005	0.004	0.004	0.004	0.004	0.005	ppm
Maximum 1 hr.	0.005	0.005	0.005	0.004	0.004	0.005	0.005	ppm
Average 24 hr.	0.005	0.004	0.004	0.004	0.004	0.004	0.004	ppm
Standard (1 hr.) ¹	0.30	0.30	0.30	0.30	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ²	0.12	0.12	0.12	0.12	0.12	0.12	0.12	ppm

REMARK : ¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

Approved By.....

(MS. THANATPORN KLINSOPON)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Wind Speed & Wind Direction

Request No. LA68-R09188

Siam Poongsan Metal Co., Ltd.

Sample No. 34713

Sampling Source : บริเวณพื้นที่โครงการ (A1)

Sampling Date : September 10-17, 2025

Time	September 10-11, 2025		September 11-12, 2025		September 12-13, 2025		September 13-14, 2025		September 14-15, 2025		September 15-16, 2025		September 16-17, 2025	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	1.8	SW	0.4	SSW	0	-	0.4	S	0.0	-	0.4	S	0.4	SSW
10:00-11:00	1.8	SW	0.0	-	0.4	SW	0	-	0.4	S	0.4	SSW	0.4	SSW
11:00-12:00	1.8	SW	0.4	SSW	0.4	SW	0.4	S	0.4	SSW	0.4	S	0.4	SW
12:00-13:00	1.8	WSW	0.4	SSW	0.4	SSW	0.4	SSW	0.4	S	0.4	S	0.4	SW
13:00-14:00	1.8	SW	0.4	SSW	0.4	SSW	0.4	S	0.9	S	0.0	-	0.4	SSW
14:00-15:00	1.8	SW	0.4	S	0.4	SSW	0.4	SSW	0.4	S	0.4	S	0.4	S
15:00-16:00	2.2	WSW	0.4	S	0.4	SSW	0.4	SSW	0.4	SSW	0.4	SW	0.4	S
16:00-17:00	1.8	SW	0.4	SSW	0.4	SW	0	-	0.0	-	0.4	S	0.4	S
17:00-18:00	1.3	SW	0.4	SSW	0.0	-	0.4	S	0.4	ENE	0.4	S	0.4	SSW
18:00-19:00	1.3	SSW	0.0	-	0.0	-	0.9	S	0.9	S	0.4	SSW	0.4	SSW
19:00-20:00	0.9	SSW	0.0	-	0.0	-	1.3	S	0.4	S	0.4	SW	0.0	-
20:00-21:00	0.9	SSW	0.0	-	0.0	-	0.9	S	0.0	-	0.4	SW	0.4	SSW
21:00-22:00	0.9	SSW	0.4	SSW	0.4	SSW	0.4	SSW	0.0	-	0.4	S	0.4	SSW
22:00-23:00	0.4	SSW	0.4	S	0.0	-	0.0	-	0.4	S	0.4	S	0.0	-
23:00-00:00	0.4	SSW	0.4	S	0.0	-	0.4	SSW	0.4	SSW	0.4	S	0.4	S
00:00-01:00	1.3	SSW	0.4	S	0.0	-	0.4	SSW	0.4	SSW	0.4	S	0.4	S
01:00-02:00	0.9	WNW	0.4	S	0.0	-	0.4	S	0.4	SSW	0.9	S	0.4	S
02:00-03:00	0.9	WSW	0.4	S	0.4	S	0.4	SSE	0.4	SSW	0.4	S	0.4	S
03:00-04:00	0.0	-	0.4	S	0.0	-	0.4	S	0.4	SSW	0.4	S	0.0	-
04:00-05:00	0.4	ESE	0.4	SSW	0.4	S	0.4	S	0.4	SSW	0.4	S	0.0	-
05:00-06:00	0.9	SE	0.4	S	0.0	-	0.4	S	0.0	-	0.4	SSW	0.0	-
06:00-07:00	0.9	SE	0.4	S	0.4	S	0.4	S	0.4	S	0.4	N	0.0	-
07:00-08:00	0.9	SE	0.4	SSW	0.4	S	0.4	S	0.4	ENE	0.4	N	0.4	S
08:00-09:00	0.9	SE	0.0	-	0.4	S	0.0	-	0.4	S	0.4	SSW	0.4	S

Wind Speed & Wind Direction

Request No. LA68-R09188

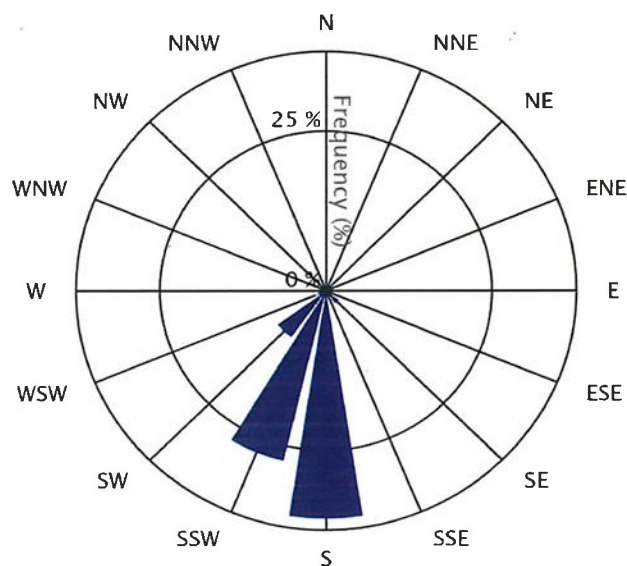
Siam Poongsan Metal Co., Ltd.

Sample No. 34713

Sampling Source : บริเวณพื้นที่โครงการ (A1)

Sampling Date : September 10-17, 2025

Calm 19.6 %



■ 0.4-1.9 ■ 2.0-3.9 ■ 4.0-5.9 ■ 6.0-7.9 ■ 8.0-9.9 ■ > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	1.2	0.0	0.0	0.0	0.0	0.0	1.2
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	1.2	0.0	0.0	0.0	0.0	0.0	1.2
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.6	0.0	0.0	0.0	0.0	0.0	0.6
SE	2.4	0.0	0.0	0.0	0.0	0.0	2.4
SSE	0.6	0.0	0.0	0.0	0.0	0.0	0.6
S	35.7	0.0	0.0	0.0	0.0	0.0	35.7
SSW	27.4	0.0	0.0	0.0	0.0	0.0	27.4
SW	8.9	0.0	0.0	0.0	0.0	0.0	8.9
WSW	1.2	0.6	0.0	0.0	0.0	0.0	1.8
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.6	0.0	0.0	0.0	0.0	0.0	0.6
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	79.8	0.6	0.0	0.0	0.0	0.0	

Request No. LA68-0935

Report No. 6809-0201

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No.1 เตาหลอมโลหะ

SAMPLE NO. : 04271

SAMPLING DATE : 10/09/2025

SAMPLING TIME : 11:10-11:50

RECEIVED DATE : 16/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 16-22/09/2025

STACK DESCRIPTION @

Height : 13.00 m
Diameter : 0.93 m
Temperature : 45.00 °C
Air Velocity : 16.28 m/s
Flow rate³ : 9.91 m³/s
Moisture Content : 3.99 %

Type of Process : Melting Process (Open System)
Type of Fuel : Electricity
Oxygen Content : 20.90 %
Barometric Pressure : 757.75 mmHg
Atmospheric Temperature : 37.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ³	STD ¹	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	11:10-11:50	0.3	320 , 35 ²	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0030 @	0.35 ²	g/s

REMARK:

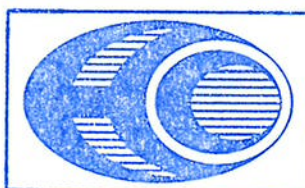
- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² คำมาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- 3.³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
4. Sampling By Mr. Teerapong Naulin (จ-003-ก-0014)
- 5.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ก-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0202

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No.1 เตาหลอมโลหะ

SAMPLE NO. : 04272

SAMPLING DATE : 10/09/2025

SAMPLING TIME : 11:10-11:50

RECEIVED DATE : 16/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 16-24/09/2025

STACK DESCRIPTION

Height : 13.00 m

Diameter : 0.93 m

Temperature : 45.00 °C

Air Velocity : 16.28 m/s

Flow rate² : 9.91 m³/s

Moisture Content : 3.99 %

Type of Process : Melting Process (Open System)

Type of Fuel : Electricity

Oxygen Content : 20.90 %

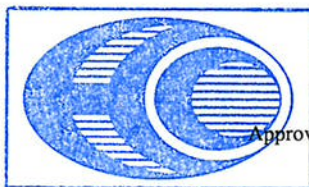
Barometric Pressure : 757.75 mmHg

Atmospheric Temperature : 37.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Zinc Oxide	Isokinetic, Digestion, ICP	11:10-11:50	0.014	21	mg/m ³
	(U.S. EPA Method 29)		0.0001	0.21	g/s

REMARK:

- ¹ คำมาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Teerapong Naulin
- Parameter Outside The Scope of The Registration of The Department of Industrial Works.



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(Mr. Thongchai Boonsak)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0203

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่อง No.2 เตารีดคานขนาด HF12
SAMPLING DATE : 11/09/2025
RECEIVED DATE : 16/09/2025
TESTED DATE : 16-22/09/2025

SAMPLE NO. : 04273-04275
SAMPLING TIME : 08:40-09:55
REPORTED DATE : 26/09/2025

STACK DESCRIPTION @

Height :	30.00	m	Type of Process :	Combustion	
Diameter :	2.00	m	Type of Fuel :	Natural Gas	
Temperature :	230.00	°C	Operation Capacity :	2	piece /hr.
Air Velocity :	8.92	m/s	Oxygen Content :	2.70	%
Flow rate ³ :	15.41	m ³ /s	Barometric Pressure :	757.75	mmHg
Moisture Content :	6.82	%	Atmospheric Temperature :	35.00	°C

PARAMETER	TEST METHOD	TIME	RESULT ³		STD ¹	UNIT
			2.70 % O ₂	7 % O ₂		
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:40-09:20	3.1	2.4	320, 25 ²	mg/m ³
			0.0478 @		0.68 ²	g/s
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin	08:50-09:20	<1.3	<1.0	157	mg/m ³
	Titrimetric (U.S. EPA Method 6)		<0.5	<0.4	60, 5 ²	ppm
			<0.0200 @		0.35 ²	g/s
Oxides of Nitrogen (NO _x as NO ₂)	Absorption, Phenoldisulfonic Acid	09:50-09:55	24.1	18.4	376	mg/m ³
	(U.S. EPA Method 7)		12.8	9.8	200, 30 ²	ppm
			0.3714 @		1.53 ²	g/s

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- 3.³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
4. Sampling By Mr. Teerapong Naulin (1-003-ค-0014)
- 5.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(1-003-ค-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(1-003-ค-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0204

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่อง No.3 ล้างโลหะ PK 01,02
 SAMPLING DATE : 12/09/2025
 RECEIVED DATE : 16/09/2025
 TESTED DATE : 16-22/09/2025
 STACK DESCRIPTION @

Height :	12.00	m	Type of Process :	Exhaust
Diameter :	0.80	m	Type of Fuel :	-
Temperature :	26.00	°C	Oxygen Content :	20.90 %
Air Velocity :	4.46	m/s	Barometric Pressure :	758.50 mmHg
Flow rate ³ :	2.14	m ³ /s	Atmospheric Temperature :	34.00 °C
Moisture Content :	3.99	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD	UNIT
Sulfuric Acid	Isokinetic, Titrimetric	08:30-09:15	<0.05	100 ¹	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25 ¹ , 3 ²	ppm
			<0.0001 [@]	0.04 ²	g/s

REMARK:

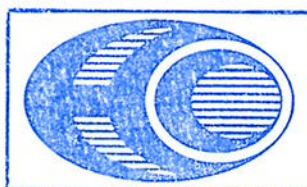
- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Teerapong Naulin (ว-003-ก-0014)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0212

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่อง No.4 ตั้งโลหะ PK 03
SAMPLING DATE : 13/09/2025
RECEIVED DATE : 16/09/2025
TESTED DATE : 16-22/09/2025
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	29.00	°C	Oxygen Content :	20.90 %
Air Velocity :	27.50	m/s	Barometric Pressure :	759.25 mmHg
Flow rate ³ :	10.03	m ³ /s	Atmospheric Temperature :	31.00 °C
Moisture Content :	3.98	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD	UNIT
Sulfuric Acid	Isokinetic, Titrimetric	09:30-10:10	<0.05	100 ¹	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25 ¹ , 3 ²	ppm
			<0.0005 [@]	0.09 ²	g/s

REMARK:

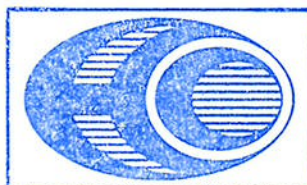
- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Teerapong Naulin (ว-003-ท-0014)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ท-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0211

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่อง No.4 ส้างโลหะ PK 03
 SAMPLING DATE : 13/09/2025
 RECEIVED DATE : 16/09/2025
 TESTED DATE : 16-22/09/2025

SAMPLE NO. : 04287
 SAMPLING TIME : 09:30-10:00
 REPORTED DATE : 26/09/2025

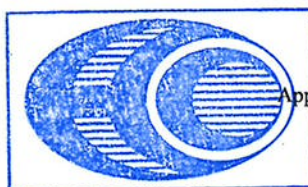
STACK DESCRIPTION

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	29.00	°C	Oxygen Content :	20.90 %
Air Velocity :	27.50	m/s	Barometric Pressure :	759.25 mmHg
Flow rate ² :	10.03	m ³ /s	Atmospheric Temperature :	31.00 °C
Moisture Content :	3.98	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Nitric acid (HNO ₃)	Absorption, Ion Chromatography (U.S.EPA Method 26A)	09:30-10:00	1.001	-	mg/m ³
			0.672	3	ppm
			0.0100	0.06	g/s

REMARK:

- ¹ ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Teerapong Naulin
- Parameter Outside The Scope of The Registration of The Department of Industrial Works.



Approved By



(Mr. Thongchai Boonsak)

26/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0205

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่อง No.6 ตั้งโลหะ AP 02
SAMPLING DATE : 10/09/2025
RECEIVED DATE : 16/09/2025
TESTED DATE : 16-22/09/2025
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.46	m	Type of Fuel :	-
Temperature :	29.00	°C	Oxygen Content :	20.90 %
Air Velocity :	6.99	m/s	Barometric Pressure :	757.75 mmHg
Flow rate ³ :	1.11	m ³ /s	Atmospheric Temperature :	30.00 °C
Moisture Content :	3.34	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD	UNIT
Sulfuric Acid	Isokinetic, Titrimetric	08:40-09:20	<0.05	100 ¹	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25 ¹ , 3 ²	ppm
			<0.0001 [@]	0.02 ²	g/s

REMARK:

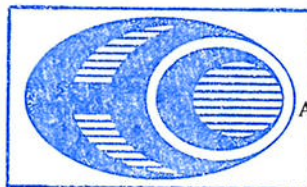
- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- 3.³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 4.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.
5. Sampling By Mr. Teerapong Naulin (จ-003-ค-0014)

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0206

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No.7 หลอมโครม

SAMPLE NO. : 04278

SAMPLING DATE : 12/09/2025

SAMPLING TIME : 10:20-11:05

RECEIVED DATE : 16/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 16-22/09/2025

STACK DESCRIPTION[®]

Height : 5.00 m

Diameter : 0.30 m

Temperature : 38.00 °C

Air Velocity : 10.08 m/s

Flow rate³ : 0.66 m³/s

Moisture Content : 2.81 %

Type of Process : Melting Process (Open System)

Type of Fuel : Electricity

Oxygen Content : 20.90 %

Barometric Pressure : 758.50 mmHg

Atmospheric Temperature : 36.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ³	STD	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	10:20-11:05	0.3	320 ¹ , 10 ²	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0002 [®]	0.02 ²	g/s

REMARK:

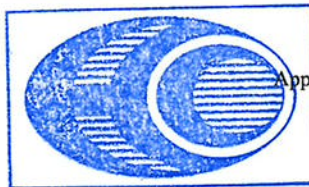
- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Teerapong Naulin (ว-003-ท-0014)
- [®] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ท-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0207

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No.8 ชุดผิวโลหะ SC03

SAMPLE NO. : 04279

SAMPLING DATE : 11/09/2025

SAMPLING TIME : 10:10-10:48

RECEIVED DATE : 16/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 16-22/09/2025

STACK DESCRIPTION @

Height :	7.07	m	Type of Process :	Exhaust
Diameter :	0.55	m	Type of Fuel :	-
Temperature :	40.00	°C	Oxygen Content :	20.90 %
Air Velocity :	8.09	m/s	Barometric Pressure :	757.75 mmHg
Flow rate ³ :	1.77	m ³ /s	Atmospheric Temperature :	38.00 °C
Moisture Content :	3.20	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD ¹	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	10:10-10:48	0.4	400, 10 ²	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0007 @	0.04 ²	g/s

REMARK:

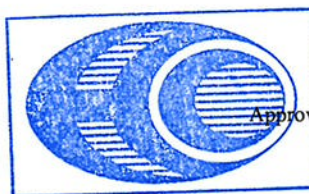
- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² คำมาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- 3.³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
4. Sampling By Mr. Teerapong Naulin (ท-003-ท-0014)
- 5.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ท-003-ท-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ท-003-ท-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0208

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่อง No.9 เตาอบโลหะ HF10
SAMPLING DATE : 10/09/2025
RECEIVED DATE : 16/09/2025
TESTED DATE : 16-22/09/2025
STACK DESCRIPTION @

Height :	12.00 m	Type of Process :	Combustion
Diameter :	0.50 x 0.40 m	Type of Fuel :	Natural Gas
Temperature :	80.00 °C	Operation Capacity :	2 piece /hr.
Air Velocity :	3.97 m/s	Oxygen Content :	8.80 %
Flow rate ³ :	0.64 m ³ /s	Barometric Pressure :	757.75 mmHg
Moisture Content :	4.64 %	Atmospheric Temperature :	36.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ³		STD ¹	UNIT
			8.80 % O ₂	7 % O ₂		
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	10:20-11:00	0.5	0.6	320, 30 ²	mg/m ³
			0.0003 [@]		0.04 ²	g/s
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin	10:30-11:00	<1.3	<1.5	157	mg/m ³
	Titrimetric (U.S. EPA Method 6)		<0.5	<0.6	60, 5 ²	ppm
			<0.0008 [@]		0.02 ²	g/s
Oxides of Nitrogen (NO _x as NO ₂)	Absorption, Phenoldisulfonic Acid	10:50-10:55	11.7	13.4	376	mg/m ³
	(U.S. EPA Method 7)		6.2	7.1	200, 20 ²	ppm
			0.0075 [@]		0.05 ²	g/s

REMARK:

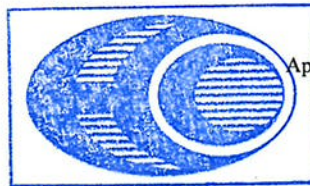
- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- 3.³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
4. Sampling By Mr. Teerapong Naulin (ว-003-ท-0014)
- 5.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ท-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0209

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่อง No.10 เตาอบโลหะ HF13
SAMPLING DATE : 10/09/2025
RECEIVED DATE : 16/09/2025
TESTED DATE : 16-22/09/2025

SAMPLE NO. : 04283-04285
SAMPLING TIME : 09:30-10:15
REPORTED DATE : 26/09/2025

STACK DESCRIPTION @

Height :	12.00 m	Type of Process :	Combustion
Diameter :	0.50 x 0.40 m	Type of Fuel :	Natural Gas
Temperature :	151.00 °C	Operation Capacity :	2 piece /hr.
Air Velocity :	4.32 m/s	Oxygen Content :	10.00 %
Flow rate ³ :	0.58 m ³ /s	Barometric Pressure :	757.75 mmHg
Moisture Content :	5.02 %	Atmospheric Temperature :	33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ³		STD ¹	UNIT
			10.00 % O ₂	7 % O ₂		
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	09:30-10:15	2.8	3.6	320 , 10 ²	mg/m ³
			0.0016 @		0.01 ²	g/s
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin	09:30-10:00	<1.3	<1.7	157	mg/m ³
	Titrimetric (U.S. EPA Method 6)		<0.5	<0.6	60 , 5 ²	ppm
			<0.0008 @		0.01 ²	g/s
Oxides of Nitrogen (NO _x as NO ₂)	Absorption, Phenoldisulfonic Acid	09:40-09:45	3.0	3.8	376	mg/m ³
	(U.S. EPA Method 7)		1.6	2.0	200 , 20 ²	ppm
			0.0017 @		0.04 ²	g/s

REMARK:

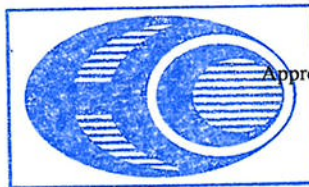
- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Teerapong Naulin (๖-003-๓-0014)
- @ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(๖-003-๓-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(๖-003-๓-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0935

Report No. 6809-0210

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No.11 รีดโลหะ RM03

SAMPLE NO. : 04286

SAMPLING DATE : 12/09/2025

SAMPLING TIME : 09:30-10:10

RECEIVED DATE : 16/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 16-22/09/2025

STACK DESCRIPTION @

Height :	5.00	m	Type of Process :	Exhaust
Diameter :	0.63	m	Type of Fuel :	-
Temperature :	38.00	°C	Oxygen Content :	20.90 %
Air Velocity :	15.25	m/s	Barometric Pressure :	758.50 mmHg
Flow rate ³ :	4.39	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.47	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	09:30-10:10	0.1	400 ¹ , 10 ²	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0004 @	0.04 ²	g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- @ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Teerapong Naulin (ว-003-ค-0014)

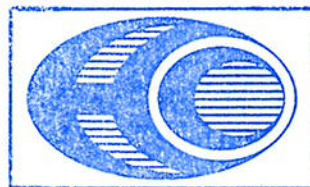
Examined By



(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0929

Report No. 6809-0200

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No.12 รีดโลหะ RM09

SAMPLE NO. : 04214

SAMPLING DATE : 11/09/2025

SAMPLING TIME : 10:25-11:00

RECEIVED DATE : 15/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 15-22/09/2025

STACK DESCRIPTION @

Height :	15.00	m	Type of Process :	Exhaust
Diameter :	1.13	m	Type of Fuel :	-
Temperature :	41.00	°C	Oxygen Content :	20.90 %
Air Velocity :	13.42	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ³ :	12.14	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	3.44	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD ¹	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	10:25-11:00	0.4	400 , 10 ²	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0049	0.19	g/s

REMARK:

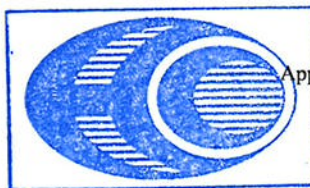
- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Audomsub Jenjobjing (จ-003-จ-0009)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0929

Report No. 6809-0198

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่อง No. 13 วัสดุโลหะ RM04

SAMPLE NO. : 04212

SAMPLING DATE : 11/09/2025

SAMPLING TIME : 08:45-09:25

RECEIVED DATE : 15/09/2025

REPORTED DATE : 26/09/2025

TESTED DATE : 15-22/09/2025

STACK DESCRIPTION @

Height :	9.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	36.00	°C	Oxygen Content :	20.90 %
Air Velocity :	19.28	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ³ :	6.89	m ³ /s	Atmospheric Temperature :	31.00 °C
Moisture Content :	3.05	%		

PARAMETER	TEST METHOD	TIME	RESULT ³	STD	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	08:45-09:25	0.2	400 ¹ , 10 ²	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0014	0.04 ²	g/s

REMARK:

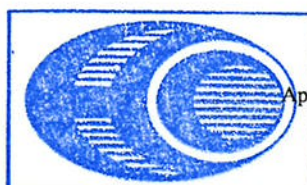
- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Audomsub Jenjobjing (จ-003-จ-0009)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Thongchai Boonsak)

(จ-003-ก-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-0929

Report No. 6809-0199

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่อง No.14 รีดโลหะ RM07
 SAMPLING DATE : 11/09/2025
 RECEIVED DATE : 15/09/2025
 TESTED DATE : 15-22/09/2025
 SAMPLE NO. : 04213
 SAMPLING TIME : 09:30-10:05
 REPORTED DATE : 26/09/2025

STACK DESCRIPTION @

Height :	9.00 m	Type of Process :	Exhaust
Diameter :	0.50 x 0.50 m	Type of Fuel :	-
Temperature :	35.00 °C	Oxygen Content :	20.90 %
Air Velocity :	19.85 m/s	Barometric Pressure :	754.75 mmHg
Flow rate ^{1/3} :	4.64 m ³ /s	Atmospheric Temperature :	32.00 °C
Moisture Content :	3.05 %		

PARAMETER	TEST METHOD	TIME	RESULT ^{1/3}	STD	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	09:30-10:05	0.6	400 ^{1/1} , 10 ^{2/2}	mg/m ³
(TSP)	(U.S. EPA Method 5)		0.0028	0.04 ^{2/2}	g/s

REMARK:

- 1.^{1/1} Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.^{2/2} ค่ามาตรฐานคุณภาพอากาศจากปล่อง ตามที่กำหนดไว้ในรายงานการวิเคราะห์ผลกระทบสิ่งแวดล้อม (EIA)
- 3.^{3/3} Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
4. Sampling By Mr. Audomsub Jenjobjing (ว-003-จ-0009)
- 5.^{4/4} These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

26/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

26/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4866

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00230995 : Class 1

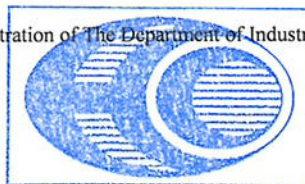
SAMPLE NO. : 34678

MEASURING DATE : 10-11/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

TIME \ DATE	10-11/09/2025 (L_{eq})	10-11/09/2025 (L_{max})	10-11/09/2025 (L_{90})	UNIT
10:00 - 11:00 ^{1/3}	62.3	89.4	56.9	dB(A)
11:00 - 12:00	61.3	82.7	57.8	dB(A)
12:00 - 13:00	69.9	87.3	62.0	dB(A)
13:00 - 14:00	74.2	88.6	64.8	dB(A)
14:00 - 15:00	70.5	89.3	63.8	dB(A)
15:00 - 16:00	72.3	89.7	64.7	dB(A)
16:00 - 17:00	69.9	86.4	63.7	dB(A)
17:00 - 18:00	68.8	88.2	62.1	dB(A)
18:00 - 19:00	61.9	84.6	57.5	dB(A)
19:00 - 20:00	64.6	83.0	58.9	dB(A)
20:00 - 21:00	66.7	87.6	60.1	dB(A)
21:00 - 22:00	59.9	85.9	56.2	dB(A)
22:00 - 23:00	58.6	78.2	55.8	dB(A)
23:00 - 00:00	57.3	76.0	54.8	dB(A)
00:00 - 01:00	56.2	74.4	54.6	dB(A)
01:00 - 02:00	57.4	72.5	55.5	dB(A)
02:00 - 03:00	56.9	79.6	55.1	dB(A)
03:00 - 04:00	56.8	71.3	55.5	dB(A)
04:00 - 05:00	59.3	81.0	55.5	dB(A)
05:00 - 06:00	59.6	87.8	55.6	dB(A)
06:00 - 07:00	62.2	87.8	58.0	dB(A)
07:00 - 08:00	64.4	82.7	60.4	dB(A)
08:00 - 09:00	75.0	91.0	65.9	dB(A)
09:00 - 10:00	78.4	90.4	68.9	dB(A)
L_{eq} 24 hr.	69.3	-	-	dB(A)
L_{dn}	70.4	-	-	dB(A)
Maximum	-	91.0	-	dB(A)
Standard	70 ^{1/1,2}	115 ^{1/1,2}	-	dB(A)

REMARK : ^{1/1} Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Mr. Seksan Pluemwong)

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

 บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4866

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34678
 MEASURING DATE : 10-11/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
10/09/2025	10:00 - 10:05 ^{1/2}	61.9	61.2	56.6	59.6	-3.0
	10:05 - 10:10	61.4	61.2	50.9	59.6	-8.7
	10:10 - 10:15	61.2	61.2	-	59.6	-
	10:15 - 10:20	59.4	61.2	-	59.6	-
	10:20 - 10:25	60.6	61.2	-	59.6	-
	10:25 - 10:30	62.0	61.2	57.3	59.6	-2.3
	10:30 - 10:35	60.9	61.2	-	59.6	-
	10:35 - 10:40	60.7	61.2	-	59.6	-
	10:40 - 10:45	64.1	61.2	64.0	59.6	4.4
	10:45 - 10:50	66.9	61.2	68.5	59.6	8.9
	10:50 - 10:55	61.1	61.2	-	59.6	-
	10:55 - 11:00	61.5	61.2	52.7	59.6	-6.9
	11:00 - 11:05	60.6	61.2	-	59.6	-
	11:05 - 11:10	61.0	61.2	-	59.6	-
	11:10 - 11:15	61.9	61.2	56.6	59.6	-3.0
	11:15 - 11:20	62.5	61.2	59.6	59.6	0.0
	11:20 - 11:25	61.2	61.2	-	59.6	-
	11:25 - 11:30	59.7	61.2	-	59.6	-
	11:30 - 11:35	63.4	61.2	62.4	59.6	2.8
	11:35 - 11:40	61.1	61.2	-	59.6	-
	11:40 - 11:45	60.9	61.2	-	59.6	-
	11:45 - 11:50	61.3	61.2	47.9	59.6	-11.7
	11:50 - 11:55	60.6	61.2	-	59.6	-
	11:55 - 12:00	60.6	61.2	-	59.6	-
	12:00 - 12:05	62.5	61.2	59.6	59.6	0.0
	12:05 - 12:10	63.4	61.2	62.4	59.6	2.8
	12:10 - 12:15	62.8	61.2	60.7	59.6	1.1
	12:15 - 12:20	62.4	61.2	59.2	59.6	-0.4
	12:20 - 12:25	62.5	61.2	59.6	59.6	0.0
	12:25 - 12:30	61.2	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4866

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34678
 MEASURING DATE : 10-11/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
10/09/2025	12:30 - 12:35	61.3	61.2	47.9	59.6	-11.7
	12:35 - 12:40	66.7	61.2	68.3	59.6	8.7
	12:40 - 12:45	67.6	61.2	69.5	59.6	9.9
	12:45 - 12:50	78.3	61.2	81.2	59.6	21.6
	12:50 - 12:55	71.1	61.2	73.6	59.6	14.0
	12:55 - 13:00	71.8	61.2	74.4	59.6	14.8
	13:00 - 13:05	70.0	61.2	72.4	59.6	12.8
	13:05 - 13:10	73.4	61.2	76.1	59.6	16.5
	13:10 - 13:15	70.5	61.2	73.0	59.6	13.4
	13:15 - 13:20	74.0	61.2	76.8	59.6	17.2
	13:20 - 13:25	72.1	61.2	74.7	59.6	15.1
	13:25 - 13:30	72.1	61.2	74.7	59.6	15.1
	13:30 - 13:35	72.6	61.2	75.3	59.6	15.7
	13:35 - 13:40	77.4	61.2	80.3	59.6	20.7
	13:40 - 13:45	71.8	61.2	74.4	59.6	14.8
	13:45 - 13:50	75.9	61.2	78.8	59.6	19.2
	13:50 - 13:55	76.6	61.2	79.5	59.6	19.9
	13:55 - 14:00	75.9	61.2	78.8	59.6	19.2
	14:00 - 14:05	76.9	61.2	79.8	59.6	20.2
	14:05 - 14:10	67.6	61.2	69.5	59.6	9.9
	14:10 - 14:15	68.7	61.2	70.8	59.6	11.2
	14:15 - 14:20	69.2	61.2	71.5	59.6	11.9
	14:20 - 14:25	67.2	61.2	68.9	59.6	9.3
	14:25 - 14:30	69.4	61.2	71.7	59.6	12.1
	14:30 - 14:35	66.9	61.2	68.5	59.6	8.9
	14:35 - 14:40	69.7	61.2	72.0	59.6	12.4
	14:40 - 14:45	70.8	61.2	73.3	59.6	13.7
	14:45 - 14:50	66.6	61.2	68.1	59.6	8.5
	14:50 - 14:55	67.0	61.2	68.7	59.6	9.1
	14:55 - 15:00	71.9	61.2	74.5	59.6	14.9
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188
Report No. R6809-4866

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

SAMPLE NO. : 34678

MEASURING DATE : 10-11/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

S/N 00230995 : Class 1

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
10/09/2025	15:00 - 15:05	76.8	61.2	79.7	59.6	20.1
	15:05 - 15:10	70.5	61.2	73.0	59.6	13.4
	15:10 - 15:15	75.5	61.2	78.3	59.6	18.7
	15:15 - 15:20	77.0	61.2	79.9	59.6	20.3
	15:20 - 15:25	72.4	61.2	75.1	59.6	15.5
	15:25 - 15:30	73.2	61.2	75.9	59.6	16.3
	15:30 - 15:35	67.9	61.2	69.9	59.6	10.3
	15:35 - 15:40	64.2	61.2	64.2	59.6	4.6
	15:40 - 15:45	63.9	61.2	63.6	59.6	4.0
	15:45 - 15:50	63.1	61.2	61.6	59.6	2.0
	15:50 - 15:55	65.6	61.2	66.6	59.6	7.0
	15:55 - 16:00	65.9	61.2	67.1	59.6	7.5
	16:00 - 16:05	65.3	61.2	66.2	59.6	6.6
	16:05 - 16:10	67.7	61.2	69.6	59.6	10.0
	16:10 - 16:15	66.8	61.2	68.4	59.6	8.8
	16:15 - 16:20	69.4	61.2	71.7	59.6	12.1
	16:20 - 16:25	64.9	61.2	65.5	59.6	5.9
	16:25 - 16:30	66.5	61.2	68.0	59.6	8.4
	16:30 - 16:35	63.8	61.2	63.3	59.6	3.7
	16:35 - 16:40	70.2	61.2	72.6	59.6	13.0
	16:40 - 16:45	73.9	61.2	76.7	59.6	17.1
	16:45 - 16:50	73.3	61.2	76.0	59.6	16.4
	16:50 - 16:55	73.2	61.2	75.9	59.6	16.3
	16:55 - 17:00	68.8	61.2	71.0	59.6	11.4
	17:00 - 17:05	66.8	61.2	68.4	59.6	8.8
	17:05 - 17:10	67.7	61.2	69.6	59.6	10.0
	17:10 - 17:15	65.6	61.2	66.6	59.6	7.0
	17:15 - 17:20	72.8	61.2	75.5	59.6	15.9
	17:20 - 17:25	71.0	61.2	73.5	59.6	13.9
	17:25 - 17:30	72.4	61.2	75.1	59.6	15.5
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34678
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
		L _{eq} (dB(A))	L _{eq} (dB(A))			
10/09/2025	17:30 - 17:35	65.3	61.2	66.2	59.6	6.6
	17:35 - 17:40	66.1	61.2	67.4	59.6	7.8
	17:40 - 17:45	64.6	61.2	64.9	59.6	5.3
	17:45 - 17:50	69.7	61.2	72.0	59.6	12.4
	17:50 - 17:55	61.6	61.2	54.0	59.6	-5.6
	17:55 - 18:00	67.5	61.2	69.3	59.6	9.7
	18:00 - 18:05	61.5	61.2	52.7	59.6	-6.9
	18:05 - 18:10	61.2	61.2	-	59.6	-
	18:10 - 18:15	63.7	61.2	63.1	59.6	3.5
	18:15 - 18:20	62.8	61.2	60.7	59.6	1.1
	18:20 - 18:25	60.8	61.2	-	59.6	-
	18:25 - 18:30	61.1	61.2	-	59.6	-
	18:30 - 18:35	61.2	61.2	-	59.6	-
	18:35 - 18:40	62.0	61.2	57.3	59.6	-2.3
	18:40 - 18:45	60.4	61.2	-	59.6	-
	18:45 - 18:50	60.5	61.2	-	59.6	-
	18:50 - 18:55	61.0	61.2	-	59.6	-
	18:55 - 19:00	64.1	61.2	64.0	59.6	4.4
	19:00 - 19:05	65.7	61.2	66.8	59.6	7.2
	19:05 - 19:10	65.7	61.2	66.8	59.6	7.2
	19:10 - 19:15	63.6	61.2	62.9	59.6	3.3
	19:15 - 19:20	62.1	61.2	57.8	59.6	-1.8
	19:20 - 19:25	64.7	61.2	65.1	59.6	5.5
	19:25 - 19:30	65.1	61.2	65.8	59.6	6.2
	19:30 - 19:35	62.5	61.2	59.6	59.6	0.0
	19:35 - 19:40	63.0	61.2	61.3	59.6	1.7
	19:40 - 19:45	65.7	61.2	66.8	59.6	7.2
	19:45 - 19:50	64.0	61.2	63.8	59.6	4.2
	19:50 - 19:55	63.7	61.2	63.1	59.6	3.5
	19:55 - 20:00	66.4	61.2	67.8	59.6	8.2
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34678
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ⁴	ระดับเสียง ⁴	ระดับเสียงขณะมีการรบกวน ⁵	ระดับเสียงพื้นฐาน ⁴	ระดับการรบกวน
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี	การรบกวน			
ของแหล่งกำเนิด	ของแหล่งกำเนิด			dB(A)	L ₉₀ (dB(A))	dB(A)
	L _{eq} (dB(A))	L _{eq} (dB(A))				
10/09/2025	20:00 - 20:05	68.8	61.2	71.0	59.6	11.4
	20:05 - 20:10	70.7	61.2	73.2	59.6	13.6
	20:10 - 20:15	70.3	61.2	72.7	59.6	13.1
	20:15 - 20:20	67.6	61.2	69.5	59.6	9.9
	20:20 - 20:25	66.8	61.2	68.4	59.6	8.8
	20:25 - 20:30	64.6	61.2	64.9	59.6	5.3
	20:30 - 20:35	61.5	61.2	52.7	59.6	-6.9
	20:35 - 20:40	64.1	61.2	64.0	59.6	4.4
	20:40 - 20:45	61.6	61.2	54.0	59.6	-5.6
	20:45 - 20:50	62.9	61.2	61.0	59.6	1.4
	20:50 - 20:55	65.3	61.2	66.2	59.6	6.6
	20:55 - 21:00	61.9	61.2	56.6	59.6	-3.0
	21:00 - 21:05	58.5	61.2	-	59.6	-
	21:05 - 21:10	63.0	61.2	61.3	59.6	1.7
	21:10 - 21:15	58.7	61.2	-	59.6	-
	21:15 - 21:20	59.2	61.2	-	59.6	-
	21:20 - 21:25	58.2	61.2	-	59.6	-
	21:25 - 21:30	58.6	61.2	-	59.6	-
	21:30 - 21:35	60.3	61.2	-	59.6	-
	21:35 - 21:40	60.4	61.2	-	59.6	-
	21:40 - 21:45	61.2	61.2	-	59.6	-
	21:45 - 21:50	59.1	61.2	-	59.6	-
	21:50 - 21:55	57.6	61.2	-	59.6	-
	21:55 - 22:00	61.2	61.2	-	59.6	-
	22:00 - 22:05	57.5	59.1	-	56.3	-
	22:05 - 22:10	62.1	59.1	62.1	56.3	5.8
	22:10 - 22:15	57.5	59.1	-	56.3	-
	22:15 - 22:20	59.7	59.1	53.8	56.3	-2.5
	22:20 - 22:25	56.5	59.1	-	56.3	-
	22:25 - 22:30	57.8	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4866

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34678
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
10/09/2025	22:30 - 22:35	57.9	59.1	-	56.3	-
	22:35 - 22:40	59.2	59.1	45.8	56.3	-10.5
	22:40 - 22:45	57.2	59.1	-	56.3	-
	22:45 - 22:50	57.3	59.1	-	56.3	-
	22:50 - 22:55	59.3	59.1	48.8	56.3	-7.5
	22:55 - 23:00	57.6	59.1	-	56.3	-
	23:00 - 23:05	56.9	59.1	-	56.3	-
	23:05 - 23:10	57.9	59.1	-	56.3	-
	23:10 - 23:15	56.8	59.1	-	56.3	-
	23:15 - 23:20	56.7	59.1	-	56.3	-
	23:20 - 23:25	57.4	59.1	-	56.3	-
	23:25 - 23:30	58.4	59.1	-	56.3	-
	23:30 - 23:35	57.9	59.1	-	56.3	-
	23:35 - 23:40	57.7	59.1	-	56.3	-
	23:40 - 23:45	57.9	59.1	-	56.3	-
	23:45 - 23:50	55.7	59.1	-	56.3	-
	23:50 - 23:55	57.4	59.1	-	56.3	-
	23:55 - 00:00	55.7	59.1	-	56.3	-
11/09/2025	00:00 - 00:05	56.8	59.1	-	56.3	-
	00:05 - 00:10	58.3	59.1	-	56.3	-
	00:10 - 00:15	56.3	59.1	-	56.3	-
	00:15 - 00:20	55.9	59.1	-	56.3	-
	00:20 - 00:25	55.8	59.1	-	56.3	-
	00:25 - 00:30	56.3	59.1	-	56.3	-
	00:30 - 00:35	55.3	59.1	-	56.3	-
	00:35 - 00:40	55.2	59.1	-	56.3	-
	00:40 - 00:45	55.4	59.1	-	56.3	-
	00:45 - 00:50	55.4	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34678
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	01:00 - 01:05	55.9	59.1	-	56.3	-
	01:05 - 01:10	56.1	59.1	-	56.3	-
	01:10 - 01:15	58.5	59.1	-	56.3	-
	01:15 - 01:20	60.3	59.1	57.1	56.3	0.8
	01:20 - 01:25	57.8	59.1	-	56.3	-
	01:25 - 01:30	55.7	59.1	-	56.3	-
	01:30 - 01:35	58.3	59.1	-	56.3	-
	01:35 - 01:40	58.0	59.1	-	56.3	-
	01:40 - 01:45	56.7	59.1	-	56.3	-
	01:45 - 01:50	56.0	59.1	-	56.3	-
	01:50 - 01:55	56.0	59.1	-	56.3	-
	01:55 - 02:00	56.6	59.1	-	56.3	-
	02:00 - 02:05	60.4	59.1	57.5	56.3	1.2
	02:05 - 02:10	57.7	59.1	-	56.3	-
	02:10 - 02:15	56.0	59.1	-	56.3	-
	02:15 - 02:20	57.1	59.1	-	56.3	-
	02:20 - 02:25	57.1	59.1	-	56.3	-
	02:25 - 02:30	55.8	59.1	-	56.3	-
	02:30 - 02:35	55.8	59.1	-	56.3	-
	02:35 - 02:40	56.4	59.1	-	56.3	-
	02:40 - 02:45	56.1	59.1	-	56.3	-
	02:45 - 02:50	55.7	59.1	-	56.3	-
	02:50 - 02:55	55.8	59.1	-	56.3	-
	02:55 - 03:00	55.8	59.1	-	56.3	-
	03:00 - 03:05	56.2	59.1	-	56.3	-
	03:05 - 03:10	56.4	59.1	-	56.3	-
	03:10 - 03:15	57.3	59.1	-	56.3	-
	03:15 - 03:20	57.2	59.1	-	56.3	-
	03:20 - 03:25	56.3	59.1	-	56.3	-
	03:25 - 03:30	57.8	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34678
 MEASURING DATE : 10-11/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	03:30 - 03:35	56.4	59.1	-	56.3	-
	03:35 - 03:40	56.7	59.1	-	56.3	-
	03:40 - 03:45	56.5	59.1	-	56.3	-
	03:45 - 03:50	56.6	59.1	-	56.3	-
	03:50 - 03:55	56.9	59.1	-	56.3	-
	03:55 - 04:00	56.5	59.1	-	56.3	-
	04:00 - 04:05	56.8	59.1	-	56.3	-
	04:05 - 04:10	56.9	59.1	-	56.3	-
	04:10 - 04:15	57.2	59.1	-	56.3	-
	04:15 - 04:20	57.8	59.1	-	56.3	-
	04:20 - 04:25	55.9	59.1	-	56.3	-
	04:25 - 04:30	58.6	59.1	-	56.3	-
	04:30 - 04:35	56.5	59.1	-	56.3	-
	04:35 - 04:40	62.1	59.1	62.1	56.3	5.8
	04:40 - 04:45	60.6	59.1	58.3	56.3	2.0
	04:45 - 04:50	64.6	59.1	66.2	56.3	9.9
	04:50 - 04:55	57.0	59.1	-	56.3	-
	04:55 - 05:00	57.1	59.1	-	56.3	-
	05:00 - 05:05	59.4	59.1	50.6	56.3	-5.7
	05:05 - 05:10	58.7	59.1	-	56.3	-
	05:10 - 05:15	66.3	59.1	68.4	56.3	12.1
	05:15 - 05:20	57.0	59.1	-	56.3	-
	05:20 - 05:25	56.7	59.1	-	56.3	-
	05:25 - 05:30	56.3	59.1	-	56.3	-
	05:30 - 05:35	57.2	59.1	-	56.3	-
	05:35 - 05:40	57.1	59.1	-	56.3	-
	05:40 - 05:45	58.4	59.1	-	56.3	-
	05:45 - 05:50	58.7	59.1	-	56.3	-
	05:50 - 05:55	58.4	59.1	-	56.3	-
	05:55 - 06:00	57.9	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34678
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	06:00 - 06:05	58.0	61.2	-	59.6	-
	06:05 - 06:10	59.3	61.2	-	59.6	-
	06:10 - 06:15	59.4	61.2	-	59.6	-
	06:15 - 06:20	59.8	61.2	-	59.6	-
	06:20 - 06:25	60.2	61.2	-	59.6	-
	06:25 - 06:30	61.1	61.2	-	59.6	-
	06:30 - 06:35	60.4	61.2	-	59.6	-
	06:35 - 06:40	60.7	61.2	-	59.6	-
	06:40 - 06:45	62.7	61.2	60.4	59.6	0.8
	06:45 - 06:50	66.3	61.2	67.7	59.6	8.1
	06:50 - 06:55	65.9	61.2	67.1	59.6	7.5
	06:55 - 07:00	62.8	61.2	60.7	59.6	1.1
	07:00 - 07:05	63.2	61.2	61.9	59.6	2.3
	07:05 - 07:10	63.5	61.2	62.6	59.6	3.0
	07:10 - 07:15	63.4	61.2	62.4	59.6	2.8
	07:15 - 07:20	63.0	61.2	61.3	59.6	1.7
	07:20 - 07:25	63.0	61.2	61.3	59.6	1.7
	07:25 - 07:30	62.3	61.2	58.8	59.6	-0.8
	07:30 - 07:35	64.1	61.2	64.0	59.6	4.4
	07:35 - 07:40	64.0	61.2	63.8	59.6	4.2
	07:40 - 07:45	66.7	61.2	68.3	59.6	8.7
	07:45 - 07:50	66.1	61.2	67.4	59.6	7.8
	07:50 - 07:55	66.3	61.2	67.7	59.6	8.1
	07:55 - 08:00	64.0	61.2	63.8	59.6	4.2
	08:00 - 08:05	67.0	61.2	68.7	59.6	9.1
	08:05 - 08:10	65.4	61.2	66.3	59.6	6.7
	08:10 - 08:15	67.4	61.2	69.2	59.6	9.6
	08:15 - 08:20	65.5	61.2	66.5	59.6	6.9
	08:20 - 08:25	70.4	61.2	72.8	59.6	13.2
	08:25 - 08:30	72.0	61.2	74.6	59.6	15.0
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34678
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	08:30 - 08:35	70.0	61.2	72.4	59.6	12.8
	08:35 - 08:40	77.9	61.2	80.8	59.6	21.2
	08:40 - 08:45	78.8	61.2	81.7	59.6	22.1
	08:45 - 08:50	78.5	61.2	81.4	59.6	21.8
	08:50 - 08:55	76.5	61.2	79.4	59.6	19.8
	08:55 - 09:00	78.5	61.2	81.4	59.6	21.8
	09:00 - 09:05	78.7	61.2	81.6	59.6	22.0
	09:05 - 09:10	77.9	61.2	80.8	59.6	21.2
	09:10 - 09:15	75.4	61.2	78.2	59.6	18.6
	09:15 - 09:20	78.2	61.2	81.1	59.6	21.5
	09:20 - 09:25	79.1	61.2	82.0	59.6	22.4
	09:25 - 09:30	77.3	61.2	80.2	59.6	20.6
	09:30 - 09:35	78.6	61.2	81.5	59.6	21.9
	09:35 - 09:40	80.0	61.2	82.9	59.6	23.3
	09:40 - 09:45	77.3	61.2	80.2	59.6	20.6
	09:45 - 09:50	79.7	61.2	82.6	59.6	23.0
	09:50 - 09:55	79.5	61.2	82.4	59.6	22.8
	09:55 - 10:00	76.7	61.2	79.6	59.6	20.0
มาตรฐานเสียงรบกวน ^{1,2}						10

REMARK :

- ¹ Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)
² Notification of Ministry of the Industry B.E. 2548 (2005)
³ Start Time
⁴ Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)
⁵ Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)
and The Notification of Ministry of the Industry B.E. 2567 (2024)
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4867

TEST REPORT

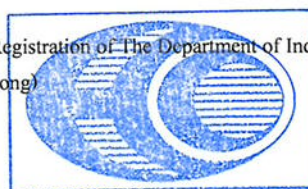
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn} SAMPLE NO. : 34679
 DETERMINATION METHOD : ISO 1996-1:2016 MEASURING DATE : 11-12/09/2025
 INSTRUMENT : Integrated Sound Level Meter RECEIVED DATE : 18/09/2025
 S/N 00230995 : Class 1 REPORTED DATE : 24/09/2025

TIME \ DATE	11-12/09/2025 (L_{eq})	11-12/09/2025 (L_{max})	11-12/09/2025 (L_{90})	UNIT
10:00 - 11:00 ³	78.8	90.6	71.2	dB(A)
11:00 - 12:00	78.7	92.4	70.0	dB(A)
12:00 - 13:00	69.4	92.3	58.9	dB(A)
13:00 - 14:00	72.9	85.2	64.8	dB(A)
14:00 - 15:00	73.8	87.7	66.0	dB(A)
15:00 - 16:00	74.0	91.0	66.6	dB(A)
16:00 - 17:00	72.5	87.1	64.2	dB(A)
17:00 - 18:00	70.4	84.5	63.9	dB(A)
18:00 - 19:00	67.8	83.8	59.3	dB(A)
19:00 - 20:00	66.0	93.3	59.1	dB(A)
20:00 - 21:00	67.7	91.0	59.6	dB(A)
21:00 - 22:00	64.7	77.8	55.9	dB(A)
22:00 - 23:00	65.2	80.5	55.7	dB(A)
23:00 - 00:00	61.5	81.7	55.3	dB(A)
00:00 - 01:00	60.0	79.3	55.0	dB(A)
01:00 - 02:00	62.9	82.4	55.1	dB(A)
02:00 - 03:00	60.1	79.3	55.3	dB(A)
03:00 - 04:00	57.2	76.8	55.1	dB(A)
04:00 - 05:00	58.3	81.3	55.2	dB(A)
05:00 - 06:00	59.4	84.7	55.7	dB(A)
06:00 - 07:00	63.0	88.9	57.5	dB(A)
07:00 - 08:00	65.0	83.5	60.8	dB(A)
08:00 - 09:00	69.6	86.8	62.2	dB(A)
09:00 - 10:00	74.6	87.7	67.6	dB(A)
L_{eq} 24 hr.	71.4	-	-	dB(A)
L_{dn}	72.7	-	-	dB(A)
Maximum	-	93.3	-	dB(A)
Standard	70 ^{1,2}	115 ^{1,2}	-	dB(A)

REMARK : ¹ Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	10:00 - 10:05 ²	78.1	61.2	81.0	59.6	21.4
	10:05 - 10:10	80.5	61.2	83.4	59.6	23.8
	10:10 - 10:15	78.6	61.2	81.5	59.6	21.9
	10:15 - 10:20	77.9	61.2	80.8	59.6	21.2
	10:20 - 10:25	78.9	61.2	81.8	59.6	22.2
	10:25 - 10:30	78.4	61.2	81.3	59.6	21.7
	10:30 - 10:35	78.3	61.2	81.2	59.6	21.6
	10:35 - 10:40	78.4	61.2	81.3	59.6	21.7
	10:40 - 10:45	79.4	61.2	82.3	59.6	22.7
	10:45 - 10:50	77.0	61.2	79.9	59.6	20.3
	10:50 - 10:55	79.5	61.2	82.4	59.6	22.8
	10:55 - 11:00	80.0	61.2	82.9	59.6	23.3
	11:00 - 11:05	77.2	61.2	80.1	59.6	20.5
	11:05 - 11:10	78.2	61.2	81.1	59.6	21.5
	11:10 - 11:15	77.9	61.2	80.8	59.6	21.2
	11:15 - 11:20	79.1	61.2	82.0	59.6	22.4
	11:20 - 11:25	78.7	61.2	81.6	59.6	22.0
	11:25 - 11:30	78.4	61.2	81.3	59.6	21.7
	11:30 - 11:35	79.7	61.2	82.6	59.6	23.0
	11:35 - 11:40	78.1	61.2	81.0	59.6	21.4
	11:40 - 11:45	78.1	61.2	81.0	59.6	21.4
	11:45 - 11:50	79.1	61.2	82.0	59.6	22.4
	11:50 - 11:55	78.6	61.2	81.5	59.6	21.9
	11:55 - 12:00	80.5	61.2	83.4	59.6	23.8
	12:00 - 12:05	79.0	61.2	81.9	59.6	22.3
	12:05 - 12:10	61.0	61.2	-	59.6	-
	12:10 - 12:15	61.8	61.2	55.9	59.6	-3.7
	12:15 - 12:20	61.4	61.2	50.9	59.6	-8.7
	12:20 - 12:25	60.6	61.2	-	59.6	-
	12:25 - 12:30	62.1	61.2	57.8	59.6	-1.8
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	12:30 - 12:35	61.3	61.2	47.9	59.6	-11.7
	12:35 - 12:40	61.3	61.2	47.9	59.6	-11.7
	12:40 - 12:45	61.3	61.2	47.9	59.6	-11.7
	12:45 - 12:50	62.5	61.2	59.6	59.6	0.0
	12:50 - 12:55	67.5	61.2	69.3	59.6	9.7
	12:55 - 13:00	68.7	61.2	70.8	59.6	11.2
	13:00 - 13:05	74.3	61.2	77.1	59.6	17.5
	13:05 - 13:10	69.2	61.2	71.5	59.6	11.9
	13:10 - 13:15	73.1	61.2	75.8	59.6	16.2
	13:15 - 13:20	71.8	61.2	74.4	59.6	14.8
	13:20 - 13:25	71.9	61.2	74.5	59.6	14.9
	13:25 - 13:30	72.4	61.2	75.1	59.6	15.5
	13:30 - 13:35	73.9	61.2	76.7	59.6	17.1
	13:35 - 13:40	70.7	61.2	73.2	59.6	13.6
	13:40 - 13:45	75.1	61.2	77.9	59.6	18.3
	13:45 - 13:50	71.9	61.2	74.5	59.6	14.9
	13:50 - 13:55	74.3	61.2	77.1	59.6	17.5
	13:55 - 14:00	73.4	61.2	76.1	59.6	16.5
	14:00 - 14:05	76.4	61.2	79.3	59.6	19.7
	14:05 - 14:10	74.9	61.2	77.7	59.6	18.1
	14:10 - 14:15	75.8	61.2	78.6	59.6	19.0
	14:15 - 14:20	71.7	61.2	74.3	59.6	14.7
	14:20 - 14:25	70.7	61.2	73.2	59.6	13.6
	14:25 - 14:30	71.3	61.2	73.9	59.6	14.3
	14:30 - 14:35	75.7	61.2	78.5	59.6	18.9
	14:35 - 14:40	72.4	61.2	75.1	59.6	15.5
	14:40 - 14:45	75.7	61.2	78.5	59.6	18.9
	14:45 - 14:50	73.2	61.2	75.9	59.6	16.3
	14:50 - 14:55	66.7	61.2	68.3	59.6	8.7
	14:55 - 15:00	71.7	61.2	74.3	59.6	14.7
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4867

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34679
 MEASURING DATE : 11-12/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	15:00 - 15:05	72.7	61.2	75.4	59.6	15.8
	15:05 - 15:10	73.9	61.2	76.7	59.6	17.1
	15:10 - 15:15	74.3	61.2	77.1	59.6	17.5
	15:15 - 15:20	73.4	61.2	76.1	59.6	16.5
	15:20 - 15:25	81.6	61.2	84.6	59.6	25.0
	15:25 - 15:30	74.8	61.2	77.6	59.6	18.0
	15:30 - 15:35	66.4	61.2	67.8	59.6	8.2
	15:35 - 15:40	68.5	61.2	70.6	59.6	11.0
	15:40 - 15:45	70.0	61.2	72.4	59.6	12.8
	15:45 - 15:50	71.1	61.2	73.6	59.6	14.0
	15:50 - 15:55	63.0	61.2	61.3	59.6	1.7
	15:55 - 16:00	62.4	61.2	59.2	59.6	-0.4
	16:00 - 16:05	66.3	61.2	67.7	59.6	8.1
	16:05 - 16:10	66.9	61.2	68.5	59.6	8.9
	16:10 - 16:15	67.8	61.2	69.7	59.6	10.1
	16:15 - 16:20	63.0	61.2	61.3	59.6	1.7
	16:20 - 16:25	69.0	61.2	71.2	59.6	11.6
	16:25 - 16:30	69.5	61.2	71.8	59.6	12.2
	16:30 - 16:35	75.8	61.2	78.6	59.6	19.0
	16:35 - 16:40	74.4	61.2	77.2	59.6	17.6
	16:40 - 16:45	74.8	61.2	77.6	59.6	18.0
	16:45 - 16:50	75.4	61.2	78.2	59.6	18.6
	16:50 - 16:55	74.8	61.2	77.6	59.6	18.0
	16:55 - 17:00	72.7	61.2	75.4	59.6	15.8
	17:00 - 17:05	72.7	61.2	75.4	59.6	15.8
	17:05 - 17:10	70.9	61.2	73.4	59.6	13.8
	17:10 - 17:15	69.9	61.2	72.3	59.6	12.7
	17:15 - 17:20	72.3	61.2	74.9	59.6	15.3
	17:20 - 17:25	67.8	61.2	69.7	59.6	10.1
	17:25 - 17:30	71.5	61.2	74.1	59.6	14.5
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ^{1/4}	ระดับเสียง	ระดับเสียง	ระดับเสียง	ระดับเสียง
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี	ระดับเสียงขณะมีการรบกวน ⁵	ระดับเสียงพื้นฐาน ⁴	ระดับการรบกวน	
ขณะเกิดเสียง	ของแหล่งกำเนิด	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)	
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))				
11/09/2025	17:30 - 17:35	72.5	61.2	75.2	59.6	15.6
	17:35 - 17:40	72.4	61.2	75.1	59.6	15.5
	17:40 - 17:45	69.7	61.2	72.0	59.6	12.4
	17:45 - 17:50	63.1	61.2	61.6	59.6	2.0
	17:50 - 17:55	61.5	61.2	52.7	59.6	-6.9
	17:55 - 18:00	67.3	61.2	69.1	59.6	9.5
	18:00 - 18:05	69.5	61.2	71.8	59.6	12.2
	18:05 - 18:10	66.2	61.2	67.5	59.6	7.9
	18:10 - 18:15	72.4	61.2	75.1	59.6	15.5
	18:15 - 18:20	66.4	61.2	67.8	59.6	8.2
	18:20 - 18:25	66.5	61.2	68.0	59.6	8.4
	18:25 - 18:30	65.6	61.2	66.6	59.6	7.0
	18:30 - 18:35	66.4	61.2	67.8	59.6	8.2
	18:35 - 18:40	68.1	61.2	70.1	59.6	10.5
	18:40 - 18:45	64.2	61.2	64.2	59.6	4.6
	18:45 - 18:50	67.1	61.2	68.8	59.6	9.2
	18:50 - 18:55	64.4	61.2	64.6	59.6	5.0
	18:55 - 19:00	69.2	61.2	71.5	59.6	11.9
	19:00 - 19:05	67.9	61.2	69.9	59.6	10.3
	19:05 - 19:10	65.1	61.2	65.8	59.6	6.2
	19:10 - 19:15	67.5	61.2	69.3	59.6	9.7
	19:15 - 19:20	62.3	61.2	58.8	59.6	-0.8
	19:20 - 19:25	63.8	61.2	63.3	59.6	3.7
	19:25 - 19:30	62.4	61.2	59.2	59.6	-0.4
	19:30 - 19:35	64.6	61.2	64.9	59.6	5.3
	19:35 - 19:40	67.0	61.2	68.7	59.6	9.1
	19:40 - 19:45	69.0	61.2	71.2	59.6	11.6
	19:45 - 19:50	63.1	61.2	61.6	59.6	2.0
	19:50 - 19:55	66.0	61.2	67.3	59.6	7.7
	19:55 - 20:00	67.2	61.2	68.9	59.6	9.3
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY



Request No. LA68-R09188
Report No. R6809-4867

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1
SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	20:00 - 20:05	73.2	61.2	75.9	59.6	16.3
	20:05 - 20:10	71.5	61.2	74.1	59.6	14.5
	20:10 - 20:15	70.2	61.2	72.6	59.6	13.0
	20:15 - 20:20	67.7	61.2	69.6	59.6	10.0
	20:20 - 20:25	64.4	61.2	64.6	59.6	5.0
	20:25 - 20:30	66.9	61.2	68.5	59.6	8.9
	20:30 - 20:35	61.9	61.2	56.6	59.6	-3.0
	20:35 - 20:40	65.4	61.2	66.3	59.6	6.7
	20:40 - 20:45	63.4	61.2	62.4	59.6	2.8
	20:45 - 20:50	61.4	61.2	50.9	59.6	-8.7
	20:50 - 20:55	62.0	61.2	57.3	59.6	-2.3
	20:55 - 21:00	61.3	61.2	47.9	59.6	-11.7
	21:00 - 21:05	59.5	61.2	-	59.6	-
	21:05 - 21:10	59.8	61.2	-	59.6	-
	21:10 - 21:15	63.0	61.2	61.3	59.6	1.7
	21:15 - 21:20	59.1	61.2	-	59.6	-
	21:20 - 21:25	59.5	61.2	-	59.6	-
	21:25 - 21:30	65.7	61.2	66.8	59.6	7.2
	21:30 - 21:35	65.1	61.2	65.8	59.6	6.2
	21:35 - 21:40	66.6	61.2	68.1	59.6	8.5
	21:40 - 21:45	58.3	61.2	-	59.6	-
	21:45 - 21:50	69.3	61.2	71.6	59.6	12.0
	21:50 - 21:55	63.4	61.2	62.4	59.6	2.8
	21:55 - 22:00	68.5	61.2	70.6	59.6	11.0
	22:00 - 22:05	69.6	59.1	72.2	56.3	15.9
	22:05 - 22:10	70.0	59.1	72.6	56.3	16.3
	22:10 - 22:15	62.1	59.1	62.1	56.3	5.8
	22:15 - 22:20	58.3	59.1	-	56.3	-
	22:20 - 22:25	63.7	59.1	64.9	56.3	8.6
	22:25 - 22:30	56.4	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
11/09/2025	22:30 - 22:35	65.1	59.1	66.8	56.3	10.5
	22:35 - 22:40	64.8	59.1	66.4	56.3	10.1
	22:40 - 22:45	67.4	59.1	69.7	56.3	13.4
	22:45 - 22:50	60.8	59.1	58.9	56.3	2.6
	22:50 - 22:55	60.3	59.1	57.1	56.3	0.8
	22:55 - 23:00	61.3	59.1	60.3	56.3	4.0
	23:00 - 23:05	61.6	59.1	61.0	56.3	4.7
	23:05 - 23:10	66.4	59.1	68.5	56.3	12.2
	23:10 - 23:15	57.9	59.1	-	56.3	-
	23:15 - 23:20	56.8	59.1	-	56.3	-
	23:20 - 23:25	55.9	59.1	-	56.3	-
	23:25 - 23:30	65.4	59.1	67.2	56.3	10.9
	23:30 - 23:35	56.2	59.1	-	56.3	-
	23:35 - 23:40	58.0	59.1	-	56.3	-
	23:40 - 23:45	56.6	59.1	-	56.3	-
	23:45 - 23:50	57.0	59.1	-	56.3	-
	23:50 - 23:55	62.6	59.1	63.0	56.3	6.7
	23:55 - 00:00	63.6	59.1	64.7	56.3	8.4
12/09/2025	00:00 - 00:05	59.2	59.1	45.8	56.3	-10.5
	00:05 - 00:10	56.4	59.1	-	56.3	-
	00:10 - 00:15	59.3	59.1	48.8	56.3	-7.5
	00:15 - 00:20	55.9	59.1	-	56.3	-
	00:20 - 00:25	56.0	59.1	-	56.3	-
	00:25 - 00:30	55.9	59.1	-	56.3	-
	00:30 - 00:35	64.8	59.1	66.4	56.3	10.1
	00:35 - 00:40	56.6	59.1	-	56.3	-
	00:40 - 00:45	56.1	59.1	-	56.3	-
	00:45 - 00:50	66.0	59.1	68.0	56.3	11.7
	00:50 - 00:55	55.4	59.1	-	56.3	-
	00:55 - 01:00	55.9	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ^{1/4}	ระดับเสียง	ระดับเสียง	ระดับเสียง	ระดับเสียง
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี	ระดับเสียงขณะมีการรบกวน ^{1/5}	ระดับเสียงพื้นฐาน ^{1/4}	ระดับการรบกวน	
ขณะเกิดเสียง	ของแหล่งกำเนิด	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)	
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))				
12/09/2025	01:00 - 01:05	58.1	59.1	-	56.3	-
	01:05 - 01:10	56.5	59.1	-	56.3	-
	01:10 - 01:15	66.3	59.1	68.4	56.3	12.1
	01:15 - 01:20	55.8	59.1	-	56.3	-
	01:20 - 01:25	56.1	59.1	-	56.3	-
	01:25 - 01:30	58.4	59.1	-	56.3	-
	01:30 - 01:35	63.9	59.1	65.2	56.3	8.9
	01:35 - 01:40	56.4	59.1	-	56.3	-
	01:40 - 01:45	56.4	59.1	-	56.3	-
	01:45 - 01:50	70.0	59.1	72.6	56.3	16.3
	01:50 - 01:55	64.7	59.1	66.3	56.3	10.0
	01:55 - 02:00	55.9	59.1	-	56.3	-
	02:00 - 02:05	56.9	59.1	-	56.3	-
	02:05 - 02:10	56.0	59.1	-	56.3	-
	02:10 - 02:15	57.3	59.1	-	56.3	-
	02:15 - 02:20	56.2	59.1	-	56.3	-
	02:20 - 02:25	66.6	59.1	68.7	56.3	12.4
	02:25 - 02:30	56.4	59.1	-	56.3	-
	02:30 - 02:35	56.1	59.1	-	56.3	-
	02:35 - 02:40	65.2	59.1	67.0	56.3	10.7
	02:40 - 02:45	57.3	59.1	-	56.3	-
	02:45 - 02:50	57.1	59.1	-	56.3	-
	02:50 - 02:55	56.2	59.1	-	56.3	-
	02:55 - 03:00	55.8	59.1	-	56.3	-
	03:00 - 03:05	55.9	59.1	-	56.3	-
	03:05 - 03:10	55.8	59.1	-	56.3	-
	03:10 - 03:15	58.1	59.1	-	56.3	-
	03:15 - 03:20	56.5	59.1	-	56.3	-
	03:20 - 03:25	55.9	59.1	-	56.3	-
	03:25 - 03:30	61.2	59.1	60.0	56.3	3.7
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะเกิดเสียง	ระดับเสียง ขณะเกิดเสียง	ระดับเสียง ขณะไม่มี การรบกวน	ระดับเสียงขณะมีการรบกวน ^{/5}	ระดับเสียงพื้นฐาน ^{/4}	ระดับการรบกวน
ของระดับเสียง	ของแหล่งกำเนิด	ของแหล่งกำเนิด	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))	L _{eq} (dB(A))			
12/09/2025	03:30 - 03:35	55.9	59.1	-	56.3	-
	03:35 - 03:40	56.3	59.1	-	56.3	-
	03:40 - 03:45	55.7	59.1	-	56.3	-
	03:45 - 03:50	56.1	59.1	-	56.3	-
	03:50 - 03:55	57.2	59.1	-	56.3	-
	03:55 - 04:00	58.1	59.1	-	56.3	-
	04:00 - 04:05	58.3	59.1	-	56.3	-
	04:05 - 04:10	57.6	59.1	-	56.3	-
	04:10 - 04:15	55.9	59.1	-	56.3	-
	04:15 - 04:20	55.7	59.1	-	56.3	-
	04:20 - 04:25	56.5	59.1	-	56.3	-
	04:25 - 04:30	57.0	59.1	-	56.3	-
	04:30 - 04:35	56.0	59.1	-	56.3	-
	04:35 - 04:40	62.8	59.1	63.4	56.3	7.1
	04:40 - 04:45	60.5	59.1	57.9	56.3	1.6
	04:45 - 04:50	58.3	59.1	-	56.3	-
	04:50 - 04:55	57.5	59.1	-	56.3	-
	04:55 - 05:00	57.5	59.1	-	56.3	-
	05:00 - 05:05	58.9	59.1	-	56.3	-
	05:05 - 05:10	61.6	59.1	61.0	56.3	4.7
	05:10 - 05:15	63.2	59.1	64.1	56.3	7.8
	05:15 - 05:20	59.4	59.1	50.6	56.3	-5.7
	05:20 - 05:25	57.5	59.1	-	56.3	-
	05:25 - 05:30	56.9	59.1	-	56.3	-
	05:30 - 05:35	57.5	59.1	-	56.3	-
	05:35 - 05:40	57.3	59.1	-	56.3	-
	05:40 - 05:45	59.8	59.1	54.5	56.3	-1.8
	05:45 - 05:50	57.8	59.1	-	56.3	-
	05:50 - 05:55	59.6	59.1	53.0	56.3	-3.3
	05:55 - 06:00	57.7	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	06:00 - 06:05	61.3	61.2	47.9	59.6	-11.7
	06:05 - 06:10	61.8	61.2	55.9	59.6	-3.7
	06:10 - 06:15	59.6	61.2	-	59.6	-
	06:15 - 06:20	59.1	61.2	-	59.6	-
	06:20 - 06:25	60.2	61.2	-	59.6	-
	06:25 - 06:30	60.0	61.2	-	59.6	-
	06:30 - 06:35	60.7	61.2	-	59.6	-
	06:35 - 06:40	63.1	61.2	61.6	59.6	2.0
	06:40 - 06:45	63.8	61.2	63.3	59.6	3.7
	06:45 - 06:50	69.0	61.2	71.2	59.6	11.6
	06:50 - 06:55	63.1	61.2	61.6	59.6	2.0
	06:55 - 07:00	61.7	61.2	55.1	59.6	-4.5
	07:00 - 07:05	64.6	61.2	64.9	59.6	5.3
	07:05 - 07:10	64.7	61.2	65.1	59.6	5.5
	07:10 - 07:15	64.9	61.2	65.5	59.6	5.9
	07:15 - 07:20	64.0	61.2	63.8	59.6	4.2
	07:20 - 07:25	66.9	61.2	68.5	59.6	8.9
	07:25 - 07:30	64.2	61.2	64.2	59.6	4.6
	07:30 - 07:35	64.4	61.2	64.6	59.6	5.0
	07:35 - 07:40	64.0	61.2	63.8	59.6	4.2
	07:40 - 07:45	65.6	61.2	66.6	59.6	7.0
	07:45 - 07:50	66.0	61.2	67.3	59.6	7.7
	07:50 - 07:55	65.8	61.2	67.0	59.6	7.4
	07:55 - 08:00	64.1	61.2	64.0	59.6	4.4
	08:00 - 08:05	68.0	61.2	70.0	59.6	10.4
	08:05 - 08:10	69.4	61.2	71.7	59.6	12.1
	08:10 - 08:15	69.9	61.2	72.3	59.6	12.7
	08:15 - 08:20	66.0	61.2	67.3	59.6	7.7
	08:20 - 08:25	64.7	61.2	65.1	59.6	5.5
	08:25 - 08:30	65.8	61.2	67.0	59.6	7.4
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

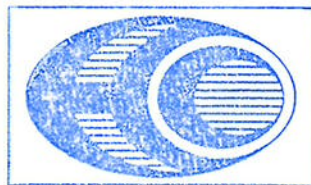
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34679
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	08:30 - 08:35	63.6	61.2	62.9	59.6	3.3
	08:35 - 08:40	63.9	61.2	63.6	59.6	4.0
	08:40 - 08:45	62.5	61.2	59.6	59.6	0.0
	08:45 - 08:50	69.3	61.2	71.6	59.6	12.0
	08:50 - 08:55	77.5	61.2	80.4	59.6	20.8
	08:55 - 09:00	63.6	61.2	62.9	59.6	3.3
	09:00 - 09:05	77.0	61.2	79.9	59.6	20.3
	09:05 - 09:10	74.6	61.2	77.4	59.6	17.8
	09:10 - 09:15	76.4	61.2	79.3	59.6	19.7
	09:15 - 09:20	67.7	61.2	69.6	59.6	10.0
	09:20 - 09:25	66.5	61.2	68.0	59.6	8.4
	09:25 - 09:30	74.1	61.2	76.9	59.6	17.3
	09:30 - 09:35	74.5	61.2	77.3	59.6	17.7
	09:35 - 09:40	74.5	61.2	77.3	59.6	17.7
	09:40 - 09:45	77.3	61.2	80.2	59.6	20.6
	09:45 - 09:50	66.6	61.2	68.1	59.6	8.5
	09:50 - 09:55	71.2	61.2	73.7	59.6	14.1
	09:55 - 10:00	77.5	61.2	80.4	59.6	20.8
มาตรฐานเสียงรบกวน ^{1,2}						10

REMARK :
¹ Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)
² Notification of Ministry of the Industry B.E. 2548 (2005)
³ Start Time
⁴ Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)
⁵ Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)
and The Notification of Ministry of the Industry B.E. 2567 (2024)
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



Approved By...
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4868

TEST REPORT

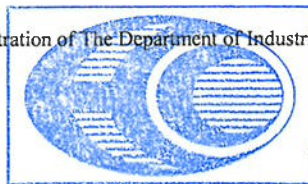
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn} SAMPLE NO. : 34680
 DETERMINATION METHOD : ISO 1996-1:2016 MEASURING DATE : 12-13/09/2025
 INSTRUMENT : Integrated Sound Level Meter RECEIVED DATE : 18/09/2025
 S/N 00230995 : Class 1 REPORTED DATE : 24/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	12-13/09/2025 (L_{90})	UNIT
10:00 - 11:00 ³	71.6	88.5	64.9	dB(A)
11:00 - 12:00	61.0	81.6	56.6	dB(A)
12:00 - 13:00	71.4	84.7	63.8	dB(A)
13:00 - 14:00	73.6	85.5	66.2	dB(A)
14:00 - 15:00	77.3	93.0	69.2	dB(A)
15:00 - 16:00	72.8	91.9	65.4	dB(A)
16:00 - 17:00	64.0	84.9	58.2	dB(A)
17:00 - 18:00	66.7	89.5	59.8	dB(A)
18:00 - 19:00	63.4	84.6	57.0	dB(A)
19:00 - 20:00	65.4	96.5	58.0	dB(A)
20:00 - 21:00	64.8	88.0	58.1	dB(A)
21:00 - 22:00	58.7	81.8	54.5	dB(A)
22:00 - 23:00	57.7	83.8	54.6	dB(A)
23:00 - 00:00	55.8	68.9	54.7	dB(A)
00:00 - 01:00	55.9	68.1	54.9	dB(A)
01:00 - 02:00	57.1	80.0	54.9	dB(A)
02:00 - 03:00	56.0	72.6	54.8	dB(A)
03:00 - 04:00	56.0	78.1	53.9	dB(A)
04:00 - 05:00	56.8	74.6	53.9	dB(A)
05:00 - 06:00	57.7	76.0	54.5	dB(A)
06:00 - 07:00	60.2	80.6	55.8	dB(A)
07:00 - 08:00	64.4	82.3	58.5	dB(A)
08:00 - 09:00	64.1	85.6	58.4	dB(A)
09:00 - 10:00	60.5	79.3	55.4	dB(A)
L_{eq} 24 hr.	68.0	-	-	dB(A)
L_{dn}	69.1	-	-	dB(A)
Maximum	-	96.5	-	dB(A)
Standard	70 ^{1/,2}	115 ^{1/,2}	-	dB(A)

REMARK : ^{1/} Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)^{2/} Notification of Ministry of the Industry B.E. 2548 (2005)^{3/} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	10:00 - 10:05 ³	73.0	61.2	75.7	59.6	16.1
	10:05 - 10:10	68.4	61.2	70.5	59.6	10.9
	10:10 - 10:15	72.7	61.2	75.4	59.6	15.8
	10:15 - 10:20	70.0	61.2	72.4	59.6	12.8
	10:20 - 10:25	68.6	61.2	70.7	59.6	11.1
	10:25 - 10:30	62.9	61.2	61.0	59.6	1.4
	10:30 - 10:35	68.1	61.2	70.1	59.6	10.5
	10:35 - 10:40	76.3	61.2	79.2	59.6	19.6
	10:40 - 10:45	72.4	61.2	75.1	59.6	15.5
	10:45 - 10:50	72.2	61.2	74.8	59.6	15.2
	10:50 - 10:55	73.6	61.2	76.3	59.6	16.7
	10:55 - 11:00	66.6	61.2	68.1	59.6	8.5
	11:00 - 11:05	61.3	61.2	47.9	59.6	-11.7
	11:05 - 11:10	60.8	61.2	-	59.6	-
	11:10 - 11:15	60.9	61.2	-	59.6	-
	11:15 - 11:20	59.0	61.2	-	59.6	-
	11:20 - 11:25	62.4	61.2	59.2	59.6	-0.4
	11:25 - 11:30	60.9	61.2	-	59.6	-
	11:30 - 11:35	60.5	61.2	-	59.6	-
	11:35 - 11:40	59.3	61.2	-	59.6	-
	11:40 - 11:45	59.0	61.2	-	59.6	-
	11:45 - 11:50	62.1	61.2	57.8	59.6	-1.8
	11:50 - 11:55	60.5	61.2	-	59.6	-
	11:55 - 12:00	63.0	61.2	61.3	59.6	1.7
	12:00 - 12:05	61.2	61.2	-	59.6	-
	12:05 - 12:10	61.6	61.2	54.0	59.6	-5.6
	12:10 - 12:15	65.8	61.2	67.0	59.6	7.4
	12:15 - 12:20	62.2	61.2	58.3	59.6	-1.3
	12:20 - 12:25	61.7	61.2	55.1	59.6	-4.5
	12:25 - 12:30	65.7	61.2	66.8	59.6	7.2
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	12:30 - 12:35	71.3	61.2	73.9	59.6	14.3
	12:35 - 12:40	64.8	61.2	65.3	59.6	5.7
	12:40 - 12:45	63.6	61.2	62.9	59.6	3.3
	12:45 - 12:50	77.1	61.2	80.0	59.6	20.4
	12:50 - 12:55	74.2	61.2	77.0	59.6	17.4
	12:55 - 13:00	77.4	61.2	80.3	59.6	20.7
	13:00 - 13:05	69.6	61.2	71.9	59.6	12.3
	13:05 - 13:10	70.2	61.2	72.6	59.6	13.0
	13:10 - 13:15	70.3	61.2	72.7	59.6	13.1
	13:15 - 13:20	78.3	61.2	81.2	59.6	21.6
	13:20 - 13:25	74.3	61.2	77.1	59.6	17.5
	13:25 - 13:30	76.1	61.2	79.0	59.6	19.4
	13:30 - 13:35	75.9	61.2	78.8	59.6	19.2
	13:35 - 13:40	73.7	61.2	76.4	59.6	16.8
	13:40 - 13:45	67.2	61.2	68.9	59.6	9.3
	13:45 - 13:50	72.0	61.2	74.6	59.6	15.0
	13:50 - 13:55	70.4	61.2	72.8	59.6	13.2
	13:55 - 14:00	70.9	61.2	73.4	59.6	13.8
	14:00 - 14:05	70.6	61.2	73.1	59.6	13.5
	14:05 - 14:10	75.3	61.2	78.1	59.6	18.5
	14:10 - 14:15	76.4	61.2	79.3	59.6	19.7
	14:15 - 14:20	76.4	61.2	79.3	59.6	19.7
	14:20 - 14:25	74.6	61.2	77.4	59.6	17.8
	14:25 - 14:30	79.5	61.2	82.4	59.6	22.8
	14:30 - 14:35	78.8	61.2	81.7	59.6	22.1
	14:35 - 14:40	77.3	61.2	80.2	59.6	20.6
	14:40 - 14:45	80.0	61.2	82.9	59.6	23.3
	14:45 - 14:50	75.9	61.2	78.8	59.6	19.2
	14:50 - 14:55	78.4	61.2	81.3	59.6	21.7
	14:55 - 15:00	77.2	61.2	80.1	59.6	20.5
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY



Request No. LA68-R09188
Report No. R6809-4868

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1
SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	15:00 - 15:05	74.7	61.2	77.5	59.6	17.9
	15:05 - 15:10	76.7	61.2	79.6	59.6	20.0
	15:10 - 15:15	75.0	61.2	77.8	59.6	18.2
	15:15 - 15:20	77.2	61.2	80.1	59.6	20.5
	15:20 - 15:25	74.8	61.2	77.6	59.6	18.0
	15:25 - 15:30	69.2	61.2	71.5	59.6	11.9
	15:30 - 15:35	70.7	61.2	73.2	59.6	13.6
	15:35 - 15:40	67.4	61.2	69.2	59.6	9.6
	15:40 - 15:45	61.5	61.2	52.7	59.6	-6.9
	15:45 - 15:50	65.0	61.2	65.7	59.6	6.1
	15:50 - 15:55	64.6	61.2	64.9	59.6	5.3
	15:55 - 16:00	64.9	61.2	65.5	59.6	5.9
	16:00 - 16:05	64.8	61.2	65.3	59.6	5.7
	16:05 - 16:10	63.9	61.2	63.6	59.6	4.0
	16:10 - 16:15	62.0	61.2	57.3	59.6	-2.3
	16:15 - 16:20	61.8	61.2	55.9	59.6	-3.7
	16:20 - 16:25	62.9	61.2	61.0	59.6	1.4
	16:25 - 16:30	66.5	61.2	68.0	59.6	8.4
	16:30 - 16:35	61.6	61.2	54.0	59.6	-5.6
	16:35 - 16:40	62.2	61.2	58.3	59.6	-1.3
	16:40 - 16:45	64.5	61.2	64.8	59.6	5.2
	16:45 - 16:50	63.6	61.2	62.9	59.6	3.3
	16:50 - 16:55	65.2	61.2	66.0	59.6	6.4
	16:55 - 17:00	65.3	61.2	66.2	59.6	6.6
	17:00 - 17:05	69.5	61.2	71.8	59.6	12.2
	17:05 - 17:10	65.3	61.2	66.2	59.6	6.6
	17:10 - 17:15	64.8	61.2	65.3	59.6	5.7
	17:15 - 17:20	65.9	61.2	67.1	59.6	7.5
	17:20 - 17:25	63.4	61.2	62.4	59.6	2.8
	17:25 - 17:30	65.0	61.2	65.7	59.6	6.1
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	17:30 - 17:35	69.0	61.2	71.2	59.6	11.6
	17:35 - 17:40	68.1	61.2	70.1	59.6	10.5
	17:40 - 17:45	69.2	61.2	71.5	59.6	11.9
	17:45 - 17:50	65.3	61.2	66.2	59.6	6.6
	17:50 - 17:55	62.7	61.2	60.4	59.6	0.8
	17:55 - 18:00	64.8	61.2	65.3	59.6	5.7
	18:00 - 18:05	67.0	61.2	68.7	59.6	9.1
	18:05 - 18:10	63.7	61.2	63.1	59.6	3.5
	18:10 - 18:15	63.3	61.2	62.1	59.6	2.5
	18:15 - 18:20	59.6	61.2	-	59.6	-
	18:20 - 18:25	59.9	61.2	-	59.6	-
	18:25 - 18:30	62.1	61.2	57.8	59.6	-1.8
	18:30 - 18:35	64.1	61.2	64.0	59.6	4.4
	18:35 - 18:40	64.4	61.2	64.6	59.6	5.0
	18:40 - 18:45	61.2	61.2	-	59.6	-
	18:45 - 18:50	63.8	61.2	63.3	59.6	3.7
	18:50 - 18:55	62.2	61.2	58.3	59.6	-1.3
	18:55 - 19:00	63.7	61.2	63.1	59.6	3.5
	19:00 - 19:05	64.3	61.2	64.4	59.6	4.8
	19:05 - 19:10	63.5	61.2	62.6	59.6	3.0
	19:10 - 19:15	64.5	61.2	64.8	59.6	5.2
	19:15 - 19:20	64.1	61.2	64.0	59.6	4.4
	19:20 - 19:25	67.4	61.2	69.2	59.6	9.6
	19:25 - 19:30	61.1	61.2	-	59.6	-
	19:30 - 19:35	61.9	61.2	56.6	59.6	-3.0
	19:35 - 19:40	65.6	61.2	66.6	59.6	7.0
	19:40 - 19:45	62.9	61.2	61.0	59.6	1.4
	19:45 - 19:50	65.3	61.2	66.2	59.6	6.6
	19:50 - 19:55	62.7	61.2	60.4	59.6	0.8
	19:55 - 20:00	70.8	61.2	73.3	59.6	13.7
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34680
 MEASURING DATE : 12-13/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	20:00 - 20:05	68.4	61.2	70.5	59.6	10.9
	20:05 - 20:10	67.9	61.2	69.9	59.6	10.3
	20:10 - 20:15	68.2	61.2	70.2	59.6	10.6
	20:15 - 20:20	64.8	61.2	65.3	59.6	5.7
	20:20 - 20:25	61.4	61.2	50.9	59.6	-8.7
	20:25 - 20:30	59.9	61.2	-	59.6	-
	20:30 - 20:35	58.5	61.2	-	59.6	-
	20:35 - 20:40	63.1	61.2	61.6	59.6	2.0
	20:40 - 20:45	67.4	61.2	69.2	59.6	9.6
	20:45 - 20:50	60.0	61.2	-	59.6	-
	20:50 - 20:55	59.7	61.2	-	59.6	-
	20:55 - 21:00	60.1	61.2	-	59.6	-
	21:00 - 21:05	57.7	61.2	-	59.6	-
	21:05 - 21:10	59.7	61.2	-	59.6	-
	21:10 - 21:15	58.2	61.2	-	59.6	-
	21:15 - 21:20	63.8	61.2	63.3	59.6	3.7
	21:20 - 21:25	55.8	61.2	-	59.6	-
	21:25 - 21:30	57.6	61.2	-	59.6	-
	21:30 - 21:35	59.3	61.2	-	59.6	-
	21:35 - 21:40	57.2	61.2	-	59.6	-
	21:40 - 21:45	56.9	61.2	-	59.6	-
	21:45 - 21:50	57.0	61.2	-	59.6	-
	21:50 - 21:55	56.2	61.2	-	59.6	-
	21:55 - 22:00	57.8	61.2	-	59.6	-
	22:00 - 22:05	56.7	59.1	-	56.3	-
	22:05 - 22:10	62.2	59.1	62.3	56.3	6.0
	22:10 - 22:15	56.2	59.1	-	56.3	-
	22:15 - 22:20	60.5	59.1	57.9	56.3	1.6
	22:20 - 22:25	56.9	59.1	-	56.3	-
	22:25 - 22:30	55.3	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
12/09/2025	22:30 - 22:35	56.4	59.1	-	56.3	-
	22:35 - 22:40	56.1	59.1	-	56.3	-
	22:40 - 22:45	56.1	59.1	-	56.3	-
	22:45 - 22:50	56.9	59.1	-	56.3	-
	22:50 - 22:55	55.6	59.1	-	56.3	-
	22:55 - 23:00	56.9	59.1	-	56.3	-
	23:00 - 23:05	55.6	59.1	-	56.3	-
	23:05 - 23:10	56.2	59.1	-	56.3	-
	23:10 - 23:15	55.2	59.1	-	56.3	-
	23:15 - 23:20	55.1	59.1	-	56.3	-
	23:20 - 23:25	55.5	59.1	-	56.3	-
	23:25 - 23:30	55.6	59.1	-	56.3	-
	23:30 - 23:35	56.1	59.1	-	56.3	-
	23:35 - 23:40	55.8	59.1	-	56.3	-
	23:40 - 23:45	56.3	59.1	-	56.3	-
	23:45 - 23:50	55.7	59.1	-	56.3	-
	23:50 - 23:55	55.8	59.1	-	56.3	-
13/09/2025	23:55 - 00:00	56.0	59.1	-	56.3	-
	00:00 - 00:05	57.0	59.1	-	56.3	-
	00:05 - 00:10	56.6	59.1	-	56.3	-
	00:10 - 00:15	55.6	59.1	-	56.3	-
	00:15 - 00:20	55.5	59.1	-	56.3	-
	00:20 - 00:25	55.4	59.1	-	56.3	-
	00:25 - 00:30	55.6	59.1	-	56.3	-
	00:30 - 00:35	55.4	59.1	-	56.3	-
	00:35 - 00:40	56.9	59.1	-	56.3	-
	00:40 - 00:45	55.3	59.1	-	56.3	-
	00:45 - 00:50	55.6	59.1	-	56.3	-
	00:50 - 00:55	55.8	59.1	-	56.3	-
	00:55 - 01:00	55.5	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ⁴	ระดับเสียง	ระดับเสียงพื้นฐาน ⁴	ระดับการรบกวน
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี	ระดับเสียงขณะมีการรบกวน ⁵		
ขณะเกิดเสียง	ของแหล่งกำเนิด	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))			
13/09/2025	01:00 - 01:05	56.0	59.1	-	56.3
	01:05 - 01:10	55.8	59.1	-	56.3
	01:10 - 01:15	56.7	59.1	-	56.3
	01:15 - 01:20	55.7	59.1	-	56.3
	01:20 - 01:25	55.4	59.1	-	56.3
	01:25 - 01:30	56.4	59.1	-	56.3
	01:30 - 01:35	62.3	59.1	62.5	56.3
	01:35 - 01:40	56.2	59.1	-	56.3
	01:40 - 01:45	56.3	59.1	-	56.3
	01:45 - 01:50	56.4	59.1	-	56.3
	01:50 - 01:55	56.5	59.1	-	56.3
	01:55 - 02:00	55.5	59.1	-	56.3
	02:00 - 02:05	55.3	59.1	-	56.3
	02:05 - 02:10	55.7	59.1	-	56.3
	02:10 - 02:15	55.7	59.1	-	56.3
	02:15 - 02:20	55.3	59.1	-	56.3
	02:20 - 02:25	55.5	59.1	-	56.3
	02:25 - 02:30	55.9	59.1	-	56.3
	02:30 - 02:35	55.4	59.1	-	56.3
	02:35 - 02:40	56.1	59.1	-	56.3
	02:40 - 02:45	55.9	59.1	-	56.3
	02:45 - 02:50	56.6	59.1	-	56.3
	02:50 - 02:55	56.2	59.1	-	56.3
	02:55 - 03:00	57.6	59.1	-	56.3
	03:00 - 03:05	58.0	59.1	-	56.3
	03:05 - 03:10	55.0	59.1	-	56.3
	03:10 - 03:15	57.1	59.1	-	56.3
	03:15 - 03:20	56.3	59.1	-	56.3
	03:20 - 03:25	55.9	59.1	-	56.3
	03:25 - 03:30	56.1	59.1	-	56.3
มาตรฐานเสียงรบกวน ^{1,2}					10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{/5} dB(A)	ระดับเสียงพื้นฐาน ^{/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	03:30 - 03:35	54.8	59.1	-	56.3	-
	03:35 - 03:40	54.9	59.1	-	56.3	-
	03:40 - 03:45	54.6	59.1	-	56.3	-
	03:45 - 03:50	55.2	59.1	-	56.3	-
	03:50 - 03:55	57.4	59.1	-	56.3	-
	03:55 - 04:00	55.0	59.1	-	56.3	-
	04:00 - 04:05	56.3	59.1	-	56.3	-
	04:05 - 04:10	55.2	59.1	-	56.3	-
	04:10 - 04:15	55.0	59.1	-	56.3	-
	04:15 - 04:20	54.6	59.1	-	56.3	-
	04:20 - 04:25	55.9	59.1	-	56.3	-
	04:25 - 04:30	55.3	59.1	-	56.3	-
	04:30 - 04:35	55.2	59.1	-	56.3	-
	04:35 - 04:40	56.9	59.1	-	56.3	-
	04:40 - 04:45	59.9	59.1	55.2	56.3	-1.1
	04:45 - 04:50	56.8	59.1	-	56.3	-
	04:50 - 04:55	58.9	59.1	-	56.3	-
	04:55 - 05:00	58.0	59.1	-	56.3	-
	05:00 - 05:05	58.6	59.1	-	56.3	-
	05:05 - 05:10	59.9	59.1	55.2	56.3	-1.1
	05:10 - 05:15	58.1	59.1	-	56.3	-
	05:15 - 05:20	56.9	59.1	-	56.3	-
	05:20 - 05:25	55.9	59.1	-	56.3	-
	05:25 - 05:30	55.2	59.1	-	56.3	-
	05:30 - 05:35	59.3	59.1	48.8	56.3	-7.5
	05:35 - 05:40	57.8	59.1	-	56.3	-
	05:40 - 05:45	57.3	59.1	-	56.3	-
	05:45 - 05:50	55.8	59.1	-	56.3	-
	05:50 - 05:55	58.7	59.1	-	56.3	-
	05:55 - 06:00	56.2	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	06:00 - 06:05	56.9	61.2	-	59.6	-
	06:05 - 06:10	56.7	61.2	-	59.6	-
	06:10 - 06:15	57.0	61.2	-	59.6	-
	06:15 - 06:20	57.8	61.2	-	59.6	-
	06:20 - 06:25	58.3	61.2	-	59.6	-
	06:25 - 06:30	58.2	61.2	-	59.6	-
	06:30 - 06:35	59.1	61.2	-	59.6	-
	06:35 - 06:40	60.3	61.2	-	59.6	-
	06:40 - 06:45	61.9	61.2	56.6	59.6	-3.0
	06:45 - 06:50	64.3	61.2	64.4	59.6	4.8
	06:50 - 06:55	63.2	61.2	61.9	59.6	2.3
	06:55 - 07:00	60.4	61.2	-	59.6	-
	07:00 - 07:05	63.5	61.2	62.6	59.6	3.0
	07:05 - 07:10	64.2	61.2	64.2	59.6	4.6
	07:10 - 07:15	62.9	61.2	61.0	59.6	1.4
	07:15 - 07:20	65.0	61.2	65.7	59.6	6.1
	07:20 - 07:25	62.8	61.2	60.7	59.6	1.1
	07:25 - 07:30	64.9	61.2	65.5	59.6	5.9
	07:30 - 07:35	62.9	61.2	61.0	59.6	1.4
	07:35 - 07:40	63.1	61.2	61.6	59.6	2.0
	07:40 - 07:45	66.8	61.2	68.4	59.6	8.8
	07:45 - 07:50	65.7	61.2	66.8	59.6	7.2
	07:50 - 07:55	65.7	61.2	66.8	59.6	7.2
	07:55 - 08:00	63.4	61.2	62.4	59.6	2.8
	08:00 - 08:05	67.3	61.2	69.1	59.6	9.5
	08:05 - 08:10	68.9	61.2	71.1	59.6	11.5
	08:10 - 08:15	65.6	61.2	66.6	59.6	7.0
	08:15 - 08:20	62.3	61.2	58.8	59.6	-0.8
	08:20 - 08:25	59.9	61.2	-	59.6	-
	08:25 - 08:30	59.7	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

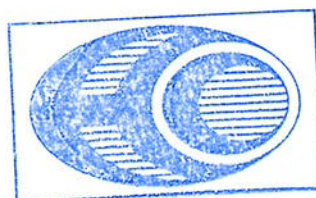
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34680
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	08:30 - 08:35	61.6	61.2	54.0	59.6	-5.6
	08:35 - 08:40	62.3	61.2	58.8	59.6	-0.8
	08:40 - 08:45	65.1	61.2	65.8	59.6	6.2
	08:45 - 08:50	60.8	61.2	-	59.6	-
	08:50 - 08:55	61.2	61.2	-	59.6	-
	08:55 - 09:00	62.3	61.2	58.8	59.6	-0.8
	09:00 - 09:05	60.0	61.2	-	59.6	-
	09:05 - 09:10	61.1	61.2	-	59.6	-
	09:10 - 09:15	60.6	61.2	-	59.6	-
	09:15 - 09:20	60.4	61.2	-	59.6	-
	09:20 - 09:25	58.6	61.2	-	59.6	-
	09:25 - 09:30	59.8	61.2	-	59.6	-
	09:30 - 09:35	61.2	61.2	-	59.6	-
	09:35 - 09:40	60.1	61.2	-	59.6	-
	09:40 - 09:45	61.6	61.2	54.0	59.6	-5.6
	09:45 - 09:50	59.1	61.2	-	59.6	-
09:50 - 09:55	61.8	61.2	55.9	59.6	-3.7	
09:55 - 10:00	61.1	61.2	-	59.6	-	
มาตรฐานเสียงรบกวน ^{1/, 2}						10

REMARK :
¹ Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)
² Notification of Ministry of the Industry B.E. 2548 (2005)
³ Start Time
⁴ Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)
⁵ Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)
and The Notification of Ministry of the Industry B.E. 2567 (2024)
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST-REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4869

TEST REPORT

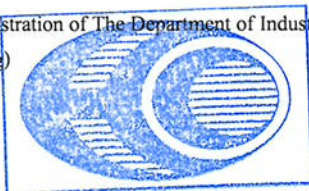
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn} SAMPLE NO. : 34681
 DETERMINATION METHOD : ISO 1996-1:2016 MEASURING DATE : 13-14/09/2025
 INSTRUMENT : Integrated Sound Level Meter RECEIVED DATE : 18/09/2025
 S/N 00230995 : Class 1 REPORTED DATE : 24/09/2025

TIME \ DATE	13-14/09/2025 (L_{eq})	13-14/09/2025 (L_{max})	13-14/09/2025 (L_{90})	UNIT
10:00 - 11:00 ³	60.5	78.2	56.5	dB(A)
11:00 - 12:00	61.8	89.5	55.2	dB(A)
12:00 - 13:00	63.3	91.5	59.6	dB(A)
13:00 - 14:00	60.6	77.6	57.3	dB(A)
14:00 - 15:00	59.6	80.6	55.2	dB(A)
15:00 - 16:00	60.9	81.8	56.5	dB(A)
16:00 - 17:00	61.3	81.4	56.2	dB(A)
17:00 - 18:00	67.5	98.1	57.6	dB(A)
18:00 - 19:00	62.3	88.3	56.0	dB(A)
19:00 - 20:00	62.7	78.7	57.6	dB(A)
20:00 - 21:00	63.4	82.2	57.6	dB(A)
21:00 - 22:00	59.0	82.5	54.4	dB(A)
22:00 - 23:00	56.3	82.8	54.0	dB(A)
23:00 - 00:00	55.9	76.7	54.0	dB(A)
00:00 - 01:00	55.1	70.2	54.0	dB(A)
01:00 - 02:00	54.8	68.8	53.9	dB(A)
02:00 - 03:00	54.5	69.1	53.7	dB(A)
03:00 - 04:00	54.6	67.0	53.6	dB(A)
04:00 - 05:00	57.3	80.4	53.7	dB(A)
05:00 - 06:00	57.7	79.7	53.8	dB(A)
06:00 - 07:00	58.6	80.1	54.4	dB(A)
07:00 - 08:00	62.5	82.8	55.4	dB(A)
08:00 - 09:00	61.2	80.8	55.0	dB(A)
09:00 - 10:00	56.0	76.5	52.7	dB(A)
L_{eq} 24 hr.	60.8	-	-	dB(A)
L_{dn}	64.2	-	-	dB(A)
Maximum	-	98.1	-	dB(A)
Standard	70 ^{1/1,2}	115 ^{1/1,2}	-	dB(A)

REMARK : ^{1/} Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)^{2/} Notification of Ministry of the Industry B.E. 2548 (2005)^{3/} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Mr. Seksan Pluemwong)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน/ เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{/5} dB(A)	ระดับเสียงพื้นฐาน ^{/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	10:00 - 10:05 ^{/3}	61.7	61.2	55.1	59.6	-4.5
	10:05 - 10:10	60.2	61.2	-	59.6	-
	10:10 - 10:15	59.4	61.2	-	59.6	-
	10:15 - 10:20	59.5	61.2	-	59.6	-
	10:20 - 10:25	59.5	61.2	-	59.6	-
	10:25 - 10:30	60.8	61.2	-	59.6	-
	10:30 - 10:35	60.1	61.2	-	59.6	-
	10:35 - 10:40	64.2	61.2	64.2	59.6	4.6
	10:40 - 10:45	59.0	61.2	-	59.6	-
	10:45 - 10:50	59.2	61.2	-	59.6	-
	10:50 - 10:55	60.0	61.2	-	59.6	-
	10:55 - 11:00	59.8	61.2	-	59.6	-
	11:00 - 11:05	58.8	61.2	-	59.6	-
	11:05 - 11:10	61.6	61.2	54.0	59.6	-5.6
	11:10 - 11:15	61.6	61.2	54.0	59.6	-5.6
	11:15 - 11:20	59.7	61.2	-	59.6	-
	11:20 - 11:25	60.5	61.2	-	59.6	-
	11:25 - 11:30	61.1	61.2	-	59.6	-
	11:30 - 11:35	59.6	61.2	-	59.6	-
	11:35 - 11:40	60.1	61.2	-	59.6	-
	11:40 - 11:45	67.8	61.2	69.7	59.6	10.1
	11:45 - 11:50	61.4	61.2	50.9	59.6	-8.7
	11:50 - 11:55	59.2	61.2	-	59.6	-
	11:55 - 12:00	60.5	61.2	-	59.6	-
	12:00 - 12:05	62.2	61.2	58.3	59.6	-1.3
	12:05 - 12:10	62.7	61.2	60.4	59.6	0.8
12:10 - 12:15	61.0	61.2	-	59.6	-	
12:15 - 12:20	62.0	61.2	57.3	59.6	-2.3	
12:20 - 12:25	64.2	61.2	64.2	59.6	4.6	
12:25 - 12:30	68.2	61.2	70.2	59.6	10.6	
มาตรฐานเสียงรบกวน ^{/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	12:30 - 12:35	62.7	61.2	60.4	59.6	0.8
	12:35 - 12:40	62.4	61.2	59.2	59.6	-0.4
	12:40 - 12:45	62.4	61.2	59.2	59.6	-0.4
	12:45 - 12:50	61.1	61.2	-	59.6	-
	12:50 - 12:55	62.5	61.2	59.6	59.6	0.0
	12:55 - 13:00	62.8	61.2	60.7	59.6	1.1
	13:00 - 13:05	61.4	61.2	50.9	59.6	-8.7
	13:05 - 13:10	61.5	61.2	52.7	59.6	-6.9
	13:10 - 13:15	62.0	61.2	57.3	59.6	-2.3
	13:15 - 13:20	60.0	61.2	-	59.6	-
	13:20 - 13:25	61.0	61.2	-	59.6	-
	13:25 - 13:30	62.6	61.2	60.0	59.6	0.4
	13:30 - 13:35	56.8	61.2	-	59.6	-
	13:35 - 13:40	61.0	61.2	-	59.6	-
	13:40 - 13:45	59.1	61.2	-	59.6	-
	13:45 - 13:50	60.2	61.2	-	59.6	-
	13:50 - 13:55	59.2	61.2	-	59.6	-
	13:55 - 14:00	58.9	61.2	-	59.6	-
	14:00 - 14:05	58.7	61.2	-	59.6	-
	14:05 - 14:10	60.2	61.2	-	59.6	-
	14:10 - 14:15	60.9	61.2	-	59.6	-
	14:15 - 14:20	59.3	61.2	-	59.6	-
	14:20 - 14:25	60.5	61.2	-	59.6	-
	14:25 - 14:30	57.7	61.2	-	59.6	-
	14:30 - 14:35	60.7	61.2	-	59.6	-
	14:35 - 14:40	57.7	61.2	-	59.6	-
	14:40 - 14:45	60.9	61.2	-	59.6	-
	14:45 - 14:50	58.7	61.2	-	59.6	-
	14:50 - 14:55	58.2	61.2	-	59.6	-
	14:55 - 15:00	60.3	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1, 2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4869

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34681
 MEASURING DATE : 13-14/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	15:00 - 15:05	62.0	61.2	57.3	59.6	-2.3
	15:05 - 15:10	61.8	61.2	55.9	59.6	-3.7
	15:10 - 15:15	59.2	61.2	-	59.6	-
	15:15 - 15:20	59.0	61.2	-	59.6	-
	15:20 - 15:25	61.9	61.2	56.6	59.6	-3.0
	15:25 - 15:30	60.6	61.2	-	59.6	-
	15:30 - 15:35	58.8	61.2	-	59.6	-
	15:35 - 15:40	58.8	61.2	-	59.6	-
	15:40 - 15:45	59.6	61.2	-	59.6	-
	15:45 - 15:50	64.4	61.2	64.6	59.6	5.0
	15:50 - 15:55	59.7	61.2	-	59.6	-
	15:55 - 16:00	60.7	61.2	-	59.6	-
	16:00 - 16:05	60.4	61.2	-	59.6	-
	16:05 - 16:10	64.8	61.2	65.3	59.6	5.7
	16:10 - 16:15	61.4	61.2	50.9	59.6	-8.7
	16:15 - 16:20	59.9	61.2	-	59.6	-
	16:20 - 16:25	58.9	61.2	-	59.6	-
	16:25 - 16:30	58.7	61.2	-	59.6	-
	16:30 - 16:35	62.0	61.2	57.3	59.6	-2.3
	16:35 - 16:40	59.7	61.2	-	59.6	-
	16:40 - 16:45	61.0	61.2	-	59.6	-
	16:45 - 16:50	62.6	61.2	60.0	59.6	0.4
	16:50 - 16:55	59.9	61.2	-	59.6	-
	16:55 - 17:00	61.6	61.2	54.0	59.6	-5.6
	17:00 - 17:05	76.3	61.2	79.2	59.6	19.6
	17:05 - 17:10	67.6	61.2	69.5	59.6	9.9
	17:10 - 17:15	67.0	61.2	68.7	59.6	9.1
	17:15 - 17:20	63.9	61.2	63.6	59.6	4.0
	17:20 - 17:25	61.8	61.2	55.9	59.6	-3.7
	17:25 - 17:30	59.5	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	17:30 - 17:35	60.7	61.2	-	59.6	-
	17:35 - 17:40	61.7	61.2	55.1	59.6	-4.5
	17:40 - 17:45	64.9	61.2	65.5	59.6	5.9
	17:45 - 17:50	61.8	61.2	55.9	59.6	-3.7
	17:50 - 17:55	61.1	61.2	-	59.6	-
	17:55 - 18:00	57.1	61.2	-	59.6	-
	18:00 - 18:05	59.3	61.2	-	59.6	-
	18:05 - 18:10	60.0	61.2	-	59.6	-
	18:10 - 18:15	60.3	61.2	-	59.6	-
	18:15 - 18:20	59.6	61.2	-	59.6	-
	18:20 - 18:25	59.5	61.2	-	59.6	-
	18:25 - 18:30	59.9	61.2	-	59.6	-
	18:30 - 18:35	62.4	61.2	59.2	59.6	-0.4
	18:35 - 18:40	61.8	61.2	55.9	59.6	-3.7
	18:40 - 18:45	65.5	61.2	66.5	59.6	6.9
	18:45 - 18:50	61.0	61.2	-	59.6	-
	18:50 - 18:55	60.9	61.2	-	59.6	-
	18:55 - 19:00	67.3	61.2	69.1	59.6	9.5
	19:00 - 19:05	62.7	61.2	60.4	59.6	0.8
	19:05 - 19:10	62.4	61.2	59.2	59.6	-0.4
	19:10 - 19:15	63.9	61.2	63.6	59.6	4.0
	19:15 - 19:20	63.2	61.2	61.9	59.6	2.3
	19:20 - 19:25	63.7	61.2	63.1	59.6	3.5
	19:25 - 19:30	61.4	61.2	50.9	59.6	-8.7
	19:30 - 19:35	60.8	61.2	-	59.6	-
	19:35 - 19:40	61.6	61.2	54.0	59.6	-5.6
	19:40 - 19:45	62.2	61.2	58.3	59.6	-1.3
	19:45 - 19:50	63.7	61.2	63.1	59.6	3.5
	19:50 - 19:55	61.5	61.2	52.7	59.6	-6.9
	19:55 - 20:00	64.0	61.2	63.8	59.6	4.2
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	20:00 - 20:05	66.2	61.2	67.5	59.6	7.9
	20:05 - 20:10	66.1	61.2	67.4	59.6	7.8
	20:10 - 20:15	67.9	61.2	69.9	59.6	10.3
	20:15 - 20:20	65.4	61.2	66.3	59.6	6.7
	20:20 - 20:25	59.6	61.2	-	59.6	-
	20:25 - 20:30	62.1	61.2	57.8	59.6	-1.8
	20:30 - 20:35	57.8	61.2	-	59.6	-
	20:35 - 20:40	58.2	61.2	-	59.6	-
	20:40 - 20:45	62.0	61.2	57.3	59.6	-2.3
	20:45 - 20:50	61.5	61.2	52.7	59.6	-6.9
	20:50 - 20:55	58.1	61.2	-	59.6	-
	20:55 - 21:00	58.5	61.2	-	59.6	-
	21:00 - 21:05	57.6	61.2	-	59.6	-
	21:05 - 21:10	64.5	61.2	64.8	59.6	5.2
	21:10 - 21:15	59.8	61.2	-	59.6	-
	21:15 - 21:20	58.1	61.2	-	59.6	-
	21:20 - 21:25	57.1	61.2	-	59.6	-
	21:25 - 21:30	55.0	61.2	-	59.6	-
	21:30 - 21:35	56.3	61.2	-	59.6	-
	21:35 - 21:40	55.5	61.2	-	59.6	-
	21:40 - 21:45	60.1	61.2	-	59.6	-
	21:45 - 21:50	60.7	61.2	-	59.6	-
	21:50 - 21:55	55.1	61.2	-	59.6	-
	21:55 - 22:00	55.0	61.2	-	59.6	-
	22:00 - 22:05	55.2	59.1	-	56.3	-
	22:05 - 22:10	60.8	59.1	58.9	56.3	2.6
	22:10 - 22:15	56.7	59.1	-	56.3	-
	22:15 - 22:20	54.9	59.1	-	56.3	-
	22:20 - 22:25	54.8	59.1	-	56.3	-
	22:25 - 22:30	56.8	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4869

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
13/09/2025	22:30 - 22:35	54.8	59.1	-	56.3	-
	22:35 - 22:40	54.6	59.1	-	56.3	-
	22:40 - 22:45	54.4	59.1	-	56.3	-
	22:45 - 22:50	55.6	59.1	-	56.3	-
	22:50 - 22:55	56.9	59.1	-	56.3	-
	22:55 - 23:00	54.5	59.1	-	56.3	-
	23:00 - 23:05	55.5	59.1	-	56.3	-
	23:05 - 23:10	55.6	59.1	-	56.3	-
	23:10 - 23:15	55.2	59.1	-	56.3	-
	23:15 - 23:20	59.0	59.1	-	56.3	-
	23:20 - 23:25	59.1	59.1	-	56.3	-
	23:25 - 23:30	55.2	59.1	-	56.3	-
	23:30 - 23:35	54.7	59.1	-	56.3	-
	23:35 - 23:40	54.5	59.1	-	56.3	-
	23:40 - 23:45	54.6	59.1	-	56.3	-
	23:45 - 23:50	54.7	59.1	-	56.3	-
	23:50 - 23:55	54.2	59.1	-	56.3	-
	23:55 - 00:00	54.4	59.1	-	56.3	-
14/09/2025	00:00 - 00:05	54.7	59.1	-	56.3	-
	00:05 - 00:10	55.7	59.1	-	56.3	-
	00:10 - 00:15	55.0	59.1	-	56.3	-
	00:15 - 00:20	56.7	59.1	-	56.3	-
	00:20 - 00:25	55.0	59.1	-	56.3	-
	00:25 - 00:30	54.3	59.1	-	56.3	-
	00:30 - 00:35	54.5	59.1	-	56.3	-
	00:35 - 00:40	54.4	59.1	-	56.3	-
	00:40 - 00:45	55.0	59.1	-	56.3	-
	00:45 - 00:50	54.9	59.1	-	56.3	-
	00:50 - 00:55	55.3	59.1	-	56.3	-
	00:55 - 01:00	55.4	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34681
 MEASURING DATE : 13-14/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	01:00 - 01:05	54.9	59.1	-	56.3	-
	01:05 - 01:10	54.5	59.1	-	56.3	-
	01:10 - 01:15	54.4	59.1	-	56.3	-
	01:15 - 01:20	56.8	59.1	-	56.3	-
	01:20 - 01:25	54.3	59.1	-	56.3	-
	01:25 - 01:30	54.5	59.1	-	56.3	-
	01:30 - 01:35	54.8	59.1	-	56.3	-
	01:35 - 01:40	54.7	59.1	-	56.3	-
	01:40 - 01:45	54.7	59.1	-	56.3	-
	01:45 - 01:50	54.2	59.1	-	56.3	-
	01:50 - 01:55	54.5	59.1	-	56.3	-
	01:55 - 02:00	54.4	59.1	-	56.3	-
	02:00 - 02:05	54.3	59.1	-	56.3	-
	02:05 - 02:10	54.8	59.1	-	56.3	-
	02:10 - 02:15	54.4	59.1	-	56.3	-
	02:15 - 02:20	54.2	59.1	-	56.3	-
	02:20 - 02:25	54.2	59.1	-	56.3	-
	02:25 - 02:30	54.4	59.1	-	56.3	-
	02:30 - 02:35	55.8	59.1	-	56.3	-
	02:35 - 02:40	54.2	59.1	-	56.3	-
	02:40 - 02:45	54.4	59.1	-	56.3	-
	02:45 - 02:50	54.3	59.1	-	56.3	-
	02:50 - 02:55	54.2	59.1	-	56.3	-
	02:55 - 03:00	54.4	59.1	-	56.3	-
	03:00 - 03:05	55.1	59.1	-	56.3	-
	03:05 - 03:10	54.2	59.1	-	56.3	-
	03:10 - 03:15	54.4	59.1	-	56.3	-
	03:15 - 03:20	54.8	59.1	-	56.3	-
	03:20 - 03:25	54.4	59.1	-	56.3	-
	03:25 - 03:30	53.9	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

SAMPLE NO. : 34681

MEASURING DATE : 13-14/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

S/N 00230995 : Class 1

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	03:30 - 03:35	54.1	59.1	-	56.3	-
	03:35 - 03:40	54.0	59.1	-	56.3	-
	03:40 - 03:45	54.0	59.1	-	56.3	-
	03:45 - 03:50	54.5	59.1	-	56.3	-
	03:50 - 03:55	56.2	59.1	-	56.3	-
	03:55 - 04:00	55.5	59.1	-	56.3	-
	04:00 - 04:05	54.3	59.1	-	56.3	-
	04:05 - 04:10	54.8	59.1	-	56.3	-
	04:10 - 04:15	55.8	59.1	-	56.3	-
	04:15 - 04:20	56.2	59.1	-	56.3	-
	04:20 - 04:25	54.5	59.1	-	56.3	-
	04:25 - 04:30	57.6	59.1	-	56.3	-
	04:30 - 04:35	57.1	59.1	-	56.3	-
	04:35 - 04:40	56.2	59.1	-	56.3	-
	04:40 - 04:45	60.0	59.1	55.7	56.3	-0.6
	04:45 - 04:50	62.1	59.1	62.1	56.3	5.8
	04:50 - 04:55	56.0	59.1	-	56.3	-
	04:55 - 05:00	54.9	59.1	-	56.3	-
	05:00 - 05:05	61.7	59.1	61.2	56.3	4.9
	05:05 - 05:10	60.4	59.1	57.5	56.3	1.2
	05:10 - 05:15	56.2	59.1	-	56.3	-
	05:15 - 05:20	54.9	59.1	-	56.3	-
	05:20 - 05:25	55.8	59.1	-	56.3	-
	05:25 - 05:30	55.0	59.1	-	56.3	-
	05:30 - 05:35	55.0	59.1	-	56.3	-
	05:35 - 05:40	61.0	59.1	59.5	56.3	3.2
	05:40 - 05:45	56.6	59.1	-	56.3	-
	05:45 - 05:50	54.4	59.1	-	56.3	-
	05:50 - 05:55	56.1	59.1	-	56.3	-
	05:55 - 06:00	55.1	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ⁴	ระดับเสียงขณะมีการรบกวน ⁵	ระดับเสียงพื้นฐาน ⁴	ระดับการรบกวน
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี			
ของเกิดเสียง	ของแหล่งกำเนิด	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))			
14/09/2025	06:00 - 06:05	57.9	61.2	-	59.6
	06:05 - 06:10	57.0	61.2	-	59.6
	06:10 - 06:15	58.3	61.2	-	59.6
	06:15 - 06:20	61.3	61.2	47.9	59.6
	06:20 - 06:25	56.9	61.2	-	59.6
	06:25 - 06:30	58.0	61.2	-	59.6
	06:30 - 06:35	56.8	61.2	-	59.6
	06:35 - 06:40	60.4	61.2	-	59.6
	06:40 - 06:45	59.3	61.2	-	59.6
	06:45 - 06:50	58.5	61.2	-	59.6
	06:50 - 06:55	57.6	61.2	-	59.6
	06:55 - 07:00	59.0	61.2	-	59.6
	07:00 - 07:05	62.7	61.2	60.4	59.6
	07:05 - 07:10	60.2	61.2	-	59.6
	07:10 - 07:15	61.2	61.2	-	59.6
	07:15 - 07:20	61.7	61.2	55.1	59.6
	07:20 - 07:25	63.6	61.2	62.9	59.6
	07:25 - 07:30	58.6	61.2	-	59.6
	07:30 - 07:35	60.2	61.2	-	59.6
	07:35 - 07:40	60.1	61.2	-	59.6
	07:40 - 07:45	68.0	61.2	70.0	59.6
	07:45 - 07:50	62.7	61.2	60.4	59.6
	07:50 - 07:55	61.2	61.2	-	59.6
	07:55 - 08:00	60.1	61.2	-	59.6
	08:00 - 08:05	64.5	61.2	64.8	59.6
	08:05 - 08:10	66.6	61.2	68.1	59.6
	08:10 - 08:15	62.5	61.2	59.6	59.6
	08:15 - 08:20	59.3	61.2	-	59.6
	08:20 - 08:25	60.8	61.2	-	59.6
	08:25 - 08:30	59.5	61.2	-	59.6
มาตรฐานเสียงรบกวน ^{1,2}					10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

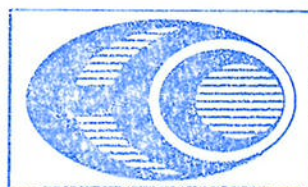
SAMPLE NO. : 34681
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ⁴	ระดับเสียงขณะมีการรบกวน ⁵	ระดับเสียงพื้นฐาน ⁴	ระดับการรบกวน
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี			
ของแหล่งกำเนิด	ของแหล่งกำเนิด	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))			
14/09/2025	08:30 - 08:35	56.6	61.2	-	59.6
	08:35 - 08:40	59.2	61.2	-	59.6
	08:40 - 08:45	58.4	61.2	-	59.6
	08:45 - 08:50	58.8	61.2	-	59.6
	08:50 - 08:55	57.5	61.2	-	59.6
	08:55 - 09:00	55.9	61.2	-	59.6
	09:00 - 09:05	56.3	61.2	-	59.6
	09:05 - 09:10	59.2	61.2	-	59.6
	09:10 - 09:15	55.6	61.2	-	59.6
	09:15 - 09:20	53.8	61.2	-	59.6
	09:20 - 09:25	56.0	61.2	-	59.6
	09:25 - 09:30	54.0	61.2	-	59.6
	09:30 - 09:35	55.5	61.2	-	59.6
	09:35 - 09:40	53.6	61.2	-	59.6
	09:40 - 09:45	55.5	61.2	-	59.6
	09:45 - 09:50	57.8	61.2	-	59.6
	09:50 - 09:55	54.5	61.2	-	59.6
	09:55 - 10:00	56.8	61.2	-	59.6
มาตรฐานเสียงรบกวน ^{1,2}					10

REMARK :

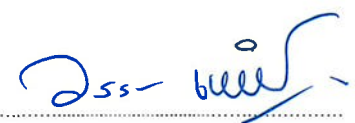
¹ Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time⁴ Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)⁵ Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)

and The Notification of Ministry of the Industry B.E. 2567 (2024)

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4870

TEST REPORT

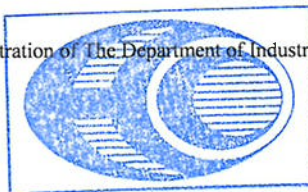
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn} SAMPLE NO. : 34682
 DETERMINATION METHOD : ISO 1996-1:2016 MEASURING DATE : 14-15/09/2025
 INSTRUMENT : Integrated Sound Level Meter RECEIVED DATE : 18/09/2025
 S/N 00230995 : Class 1 REPORTED DATE : 24/09/2025

TIME \ DATE	14-15/09/2025 (L_{eq})	14-15/09/2025 (L_{max})	14-15/09/2025 (L_{90})	UNIT
10:00 - 11:00 ³	56.9	80.4	52.9	dB(A)
11:00 - 12:00	55.3	71.8	52.6	dB(A)
12:00 - 13:00	55.2	70.3	52.4	dB(A)
13:00 - 14:00	55.4	75.9	51.9	dB(A)
14:00 - 15:00	58.2	90.0	52.3	dB(A)
15:00 - 16:00	57.3	77.2	53.5	dB(A)
16:00 - 17:00	57.5	76.2	54.5	dB(A)
17:00 - 18:00	59.6	83.6	54.6	dB(A)
18:00 - 19:00	57.3	77.7	54.0	dB(A)
19:00 - 20:00	59.9	83.3	54.4	dB(A)
20:00 - 21:00	61.3	85.0	54.7	dB(A)
21:00 - 22:00	55.6	73.2	53.9	dB(A)
22:00 - 23:00	54.7	65.5	53.9	dB(A)
23:00 - 00:00	54.8	66.0	54.0	dB(A)
00:00 - 01:00	54.6	65.2	53.9	dB(A)
01:00 - 02:00	54.5	67.2	53.8	dB(A)
02:00 - 03:00	54.9	74.8	53.6	dB(A)
03:00 - 04:00	54.1	69.4	53.3	dB(A)
04:00 - 05:00	54.3	71.4	53.3	dB(A)
05:00 - 06:00	58.2	83.8	53.9	dB(A)
06:00 - 07:00	61.5	80.5	56.6	dB(A)
07:00 - 08:00	64.3	82.7	59.2	dB(A)
08:00 - 09:00	63.6	85.5	57.6	dB(A)
09:00 - 10:00	62.3	89.9	56.2	dB(A)
L_{eq} 24 hr.	58.8	-	-	dB(A)
L_{dn}	63.6	-	-	dB(A)
Maximum	-	90.0	-	dB(A)
Standard	70 ^{1/1,2}	115 ^{1/1,2}	-	dB(A)

REMARK : ^{1/} Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)^{2/} Notification of Ministry of the Industry B.E. 2548 (2005)^{3/} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4870

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34682
 MEASURING DATE : 14-15/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	10:00 - 10:05 ³	56.0	61.2	-	59.6	-
	10:05 - 10:10	56.0	61.2	-	59.6	-
	10:10 - 10:15	55.9	61.2	-	59.6	-
	10:15 - 10:20	59.2	61.2	-	59.6	-
	10:20 - 10:25	60.4	61.2	-	59.6	-
	10:25 - 10:30	54.4	61.2	-	59.6	-
	10:30 - 10:35	58.3	61.2	-	59.6	-
	10:35 - 10:40	54.9	61.2	-	59.6	-
	10:40 - 10:45	56.3	61.2	-	59.6	-
	10:45 - 10:50	54.2	61.2	-	59.6	-
	10:50 - 10:55	56.5	61.2	-	59.6	-
	10:55 - 11:00	55.6	61.2	-	59.6	-
	11:00 - 11:05	57.3	61.2	-	59.6	-
	11:05 - 11:10	55.0	61.2	-	59.6	-
	11:10 - 11:15	55.2	61.2	-	59.6	-
	11:15 - 11:20	54.8	61.2	-	59.6	-
	11:20 - 11:25	56.3	61.2	-	59.6	-
	11:25 - 11:30	56.2	61.2	-	59.6	-
	11:30 - 11:35	54.6	61.2	-	59.6	-
	11:35 - 11:40	54.9	61.2	-	59.6	-
	11:40 - 11:45	54.7	61.2	-	59.6	-
	11:45 - 11:50	55.2	61.2	-	59.6	-
	11:50 - 11:55	54.0	61.2	-	59.6	-
	11:55 - 12:00	53.8	61.2	-	59.6	-
	12:00 - 12:05	54.1	61.2	-	59.6	-
	12:05 - 12:10	56.8	61.2	-	59.6	-
	12:10 - 12:15	57.4	61.2	-	59.6	-
	12:15 - 12:20	56.8	61.2	-	59.6	-
	12:20 - 12:25	55.8	61.2	-	59.6	-
	12:25 - 12:30	53.6	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34682
 MEASURING DATE : 14-15/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	12:30 - 12:35	55.6	61.2	-	59.6	-
	12:35 - 12:40	54.0	61.2	-	59.6	-
	12:40 - 12:45	53.6	61.2	-	59.6	-
	12:45 - 12:50	54.0	61.2	-	59.6	-
	12:50 - 12:55	54.6	61.2	-	59.6	-
	12:55 - 13:00	53.9	61.2	-	59.6	-
	13:00 - 13:05	53.4	61.2	-	59.6	-
	13:05 - 13:10	53.5	61.2	-	59.6	-
	13:10 - 13:15	53.7	61.2	-	59.6	-
	13:15 - 13:20	55.8	61.2	-	59.6	-
	13:20 - 13:25	53.2	61.2	-	59.6	-
	13:25 - 13:30	53.3	61.2	-	59.6	-
	13:30 - 13:35	56.5	61.2	-	59.6	-
	13:35 - 13:40	52.9	61.2	-	59.6	-
	13:40 - 13:45	57.1	61.2	-	59.6	-
	13:45 - 13:50	57.0	61.2	-	59.6	-
	13:50 - 13:55	59.0	61.2	-	59.6	-
	13:55 - 14:00	53.4	61.2	-	59.6	-
	14:00 - 14:05	54.8	61.2	-	59.6	-
	14:05 - 14:10	56.1	61.2	-	59.6	-
	14:10 - 14:15	54.9	61.2	-	59.6	-
	14:15 - 14:20	55.0	61.2	-	59.6	-
	14:20 - 14:25	54.4	61.2	-	59.6	-
	14:25 - 14:30	52.9	61.2	-	59.6	-
	14:30 - 14:35	54.8	61.2	-	59.6	-
	14:35 - 14:40	56.7	61.2	-	59.6	-
	14:40 - 14:45	54.7	61.2	-	59.6	-
	14:45 - 14:50	59.1	61.2	-	59.6	-
	14:50 - 14:55	55.3	61.2	-	59.6	-
	14:55 - 15:00	66.0	61.2	67.3	59.6	7.7
มาตรฐานเสียงรบกวน ^{1/, 2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	15:00 - 15:05	55.9	61.2	-	59.6
	15:05 - 15:10	55.4	61.2	-	59.6
	15:10 - 15:15	58.4	61.2	-	59.6
	15:15 - 15:20	56.0	61.2	-	59.6
	15:20 - 15:25	54.9	61.2	-	59.6
	15:25 - 15:30	57.2	61.2	-	59.6
	15:30 - 15:35	56.9	61.2	-	59.6
	15:35 - 15:40	59.9	61.2	-	59.6
	15:40 - 15:45	57.0	61.2	-	59.6
	15:45 - 15:50	56.1	61.2	-	59.6
	15:50 - 15:55	57.9	61.2	-	59.6
	15:55 - 16:00	58.6	61.2	-	59.6
	16:00 - 16:05	56.8	61.2	-	59.6
	16:05 - 16:10	59.9	61.2	-	59.6
	16:10 - 16:15	56.9	61.2	-	59.6
	16:15 - 16:20	59.4	61.2	-	59.6
	16:20 - 16:25	55.5	61.2	-	59.6
	16:25 - 16:30	57.1	61.2	-	59.6
	16:30 - 16:35	56.7	61.2	-	59.6
	16:35 - 16:40	58.4	61.2	-	59.6
	16:40 - 16:45	56.7	61.2	-	59.6
	16:45 - 16:50	57.7	61.2	-	59.6
	16:50 - 16:55	55.8	61.2	-	59.6
	16:55 - 17:00	57.1	61.2	-	59.6
	17:00 - 17:05	58.5	61.2	-	59.6
	17:05 - 17:10	64.9	61.2	65.5	59.6
	17:10 - 17:15	61.9	61.2	56.6	59.6
	17:15 - 17:20	56.5	61.2	-	59.6
	17:20 - 17:25	57.3	61.2	-	59.6
	17:25 - 17:30	57.7	61.2	-	59.6
มาตรฐานเสียงรบกวน ^{1/,2}					10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ⁴	ระดับเสียง	ระดับเสียงขณะมีการรบกวน ⁵	ระดับเสียงพื้นฐาน ⁴	ระดับการรบกวน
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี	ระดับเสียง			
ของแหล่งกำเนิด	ของแหล่งกำเนิด	การรบกวน	dB(A)		L ₉₀ (dB(A))	dB(A)
	L _{eq} (dB(A))	L _{eq} (dB(A))				
14/09/2025	17:30 - 17:35	59.3	61.2	-	59.6	-
	17:35 - 17:40	57.6	61.2	-	59.6	-
	17:40 - 17:45	58.7	61.2	-	59.6	-
	17:45 - 17:50	58.1	61.2	-	59.6	-
	17:50 - 17:55	58.9	61.2	-	59.6	-
	17:55 - 18:00	55.7	61.2	-	59.6	-
	18:00 - 18:05	56.6	61.2	-	59.6	-
	18:05 - 18:10	59.4	61.2	-	59.6	-
	18:10 - 18:15	56.5	61.2	-	59.6	-
	18:15 - 18:20	55.8	61.2	-	59.6	-
	18:20 - 18:25	56.6	61.2	-	59.6	-
	18:25 - 18:30	58.2	61.2	-	59.6	-
	18:30 - 18:35	57.3	61.2	-	59.6	-
	18:35 - 18:40	56.7	61.2	-	59.6	-
	18:40 - 18:45	57.6	61.2	-	59.6	-
	18:45 - 18:50	56.4	61.2	-	59.6	-
	18:50 - 18:55	57.1	61.2	-	59.6	-
	18:55 - 19:00	57.9	61.2	-	59.6	-
	19:00 - 19:05	57.8	61.2	-	59.6	-
	19:05 - 19:10	60.6	61.2	-	59.6	-
	19:10 - 19:15	58.0	61.2	-	59.6	-
	19:15 - 19:20	59.5	61.2	-	59.6	-
	19:20 - 19:25	59.7	61.2	-	59.6	-
	19:25 - 19:30	58.5	61.2	-	59.6	-
	19:30 - 19:35	58.1	61.2	-	59.6	-
	19:35 - 19:40	57.7	61.2	-	59.6	-
	19:40 - 19:45	59.8	61.2	-	59.6	-
	19:45 - 19:50	58.2	61.2	-	59.6	-
	19:50 - 19:55	59.7	61.2	-	59.6	-
	19:55 - 20:00	65.0	61.2	65.7	59.6	6.1
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4870

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34682
 MEASURING DATE : 14-15/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	20:00 - 20:05	59.4	61.2	-	59.6	-
	20:05 - 20:10	68.1	61.2	70.1	59.6	10.5
	20:10 - 20:15	63.8	61.2	63.3	59.6	3.7
	20:15 - 20:20	57.0	61.2	-	59.6	-
	20:20 - 20:25	55.7	61.2	-	59.6	-
	20:25 - 20:30	56.5	61.2	-	59.6	-
	20:30 - 20:35	55.4	61.2	-	59.6	-
	20:35 - 20:40	57.9	61.2	-	59.6	-
	20:40 - 20:45	64.7	61.2	65.1	59.6	5.5
	20:45 - 20:50	55.7	61.2	-	59.6	-
	20:50 - 20:55	55.8	61.2	-	59.6	-
	20:55 - 21:00	55.6	61.2	-	59.6	-
	21:00 - 21:05	56.2	61.2	-	59.6	-
	21:05 - 21:10	58.4	61.2	-	59.6	-
	21:10 - 21:15	56.1	61.2	-	59.6	-
	21:15 - 21:20	55.1	61.2	-	59.6	-
	21:20 - 21:25	55.7	61.2	-	59.6	-
	21:25 - 21:30	54.8	61.2	-	59.6	-
	21:30 - 21:35	54.8	61.2	-	59.6	-
	21:35 - 21:40	54.5	61.2	-	59.6	-
	21:40 - 21:45	54.6	61.2	-	59.6	-
	21:45 - 21:50	54.7	61.2	-	59.6	-
	21:50 - 21:55	56.2	61.2	-	59.6	-
	21:55 - 22:00	54.4	61.2	-	59.6	-
	22:00 - 22:05	54.6	59.1	-	56.3	-
	22:05 - 22:10	55.1	59.1	-	56.3	-
	22:10 - 22:15	54.2	59.1	-	56.3	-
	22:15 - 22:20	54.2	59.1	-	56.3	-
	22:20 - 22:25	54.3	59.1	-	56.3	-
	22:25 - 22:30	54.6	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
14/09/2025	22:30 - 22:35	54.7	59.1	-	56.3	-
	22:35 - 22:40	55.1	59.1	-	56.3	-
	22:40 - 22:45	54.5	59.1	-	56.3	-
	22:45 - 22:50	55.4	59.1	-	56.3	-
	22:50 - 22:55	54.7	59.1	-	56.3	-
	22:55 - 23:00	54.5	59.1	-	56.3	-
	23:00 - 23:05	54.8	59.1	-	56.3	-
	23:05 - 23:10	55.7	59.1	-	56.3	-
	23:10 - 23:15	54.5	59.1	-	56.3	-
	23:15 - 23:20	55.1	59.1	-	56.3	-
	23:20 - 23:25	54.7	59.1	-	56.3	-
	23:25 - 23:30	54.6	59.1	-	56.3	-
	23:30 - 23:35	54.5	59.1	-	56.3	-
	23:35 - 23:40	54.5	59.1	-	56.3	-
	23:40 - 23:45	54.4	59.1	-	56.3	-
	23:45 - 23:50	54.7	59.1	-	56.3	-
	23:50 - 23:55	54.9	59.1	-	56.3	-
	23:55 - 00:00	54.7	59.1	-	56.3	-
15/09/2025	00:00 - 00:05	55.2	59.1	-	56.3	-
	00:05 - 00:10	54.8	59.1	-	56.3	-
	00:10 - 00:15	54.4	59.1	-	56.3	-
	00:15 - 00:20	54.6	59.1	-	56.3	-
	00:20 - 00:25	54.8	59.1	-	56.3	-
	00:25 - 00:30	54.6	59.1	-	56.3	-
	00:30 - 00:35	54.6	59.1	-	56.3	-
	00:35 - 00:40	54.5	59.1	-	56.3	-
	00:40 - 00:45	54.6	59.1	-	56.3	-
	00:45 - 00:50	54.4	59.1	-	56.3	-
	00:50 - 00:55	54.9	59.1	-	56.3	-
	00:55 - 01:00	54.2	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	01:00 - 01:05	54.5	59.1	-	56.3	-
	01:05 - 01:10	54.9	59.1	-	56.3	-
	01:10 - 01:15	54.4	59.1	-	56.3	-
	01:15 - 01:20	55.6	59.1	-	56.3	-
	01:20 - 01:25	54.5	59.1	-	56.3	-
	01:25 - 01:30	54.2	59.1	-	56.3	-
	01:30 - 01:35	54.4	59.1	-	56.3	-
	01:35 - 01:40	54.6	59.1	-	56.3	-
	01:40 - 01:45	54.3	59.1	-	56.3	-
	01:45 - 01:50	54.3	59.1	-	56.3	-
	01:50 - 01:55	54.3	59.1	-	56.3	-
	01:55 - 02:00	54.2	59.1	-	56.3	-
	02:00 - 02:05	54.4	59.1	-	56.3	-
	02:05 - 02:10	55.7	59.1	-	56.3	-
	02:10 - 02:15	56.7	59.1	-	56.3	-
	02:15 - 02:20	54.2	59.1	-	56.3	-
	02:20 - 02:25	54.4	59.1	-	56.3	-
	02:25 - 02:30	54.1	59.1	-	56.3	-
	02:30 - 02:35	54.1	59.1	-	56.3	-
	02:35 - 02:40	55.5	59.1	-	56.3	-
	02:40 - 02:45	54.3	59.1	-	56.3	-
	02:45 - 02:50	56.2	59.1	-	56.3	-
	02:50 - 02:55	54.1	59.1	-	56.3	-
	02:55 - 03:00	54.1	59.1	-	56.3	-
	03:00 - 03:05	54.2	59.1	-	56.3	-
	03:05 - 03:10	54.2	59.1	-	56.3	-
	03:10 - 03:15	54.1	59.1	-	56.3	-
	03:15 - 03:20	53.9	59.1	-	56.3	-
	03:20 - 03:25	53.9	59.1	-	56.3	-
	03:25 - 03:30	54.2	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4870

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	03:30 - 03:35	54.4	59.1	-	56.3	-
	03:35 - 03:40	53.8	59.1	-	56.3	-
	03:40 - 03:45	53.8	59.1	-	56.3	-
	03:45 - 03:50	53.6	59.1	-	56.3	-
	03:50 - 03:55	55.0	59.1	-	56.3	-
	03:55 - 04:00	53.8	59.1	-	56.3	-
	04:00 - 04:05	53.9	59.1	-	56.3	-
	04:05 - 04:10	53.4	59.1	-	56.3	-
	04:10 - 04:15	53.8	59.1	-	56.3	-
	04:15 - 04:20	54.1	59.1	-	56.3	-
	04:20 - 04:25	53.9	59.1	-	56.3	-
	04:25 - 04:30	54.5	59.1	-	56.3	-
	04:30 - 04:35	54.2	59.1	-	56.3	-
	04:35 - 04:40	54.1	59.1	-	56.3	-
	04:40 - 04:45	56.5	59.1	-	56.3	-
	04:45 - 04:50	53.9	59.1	-	56.3	-
	04:50 - 04:55	54.1	59.1	-	56.3	-
	04:55 - 05:00	54.6	59.1	-	56.3	-
	05:00 - 05:05	54.2	59.1	-	56.3	-
	05:05 - 05:10	57.3	59.1	-	56.3	-
	05:10 - 05:15	54.9	59.1	-	56.3	-
	05:15 - 05:20	59.2	59.1	45.8	56.3	-10.5
	05:20 - 05:25	55.1	59.1	-	56.3	-
	05:25 - 05:30	55.3	59.1	-	56.3	-
	05:30 - 05:35	54.4	59.1	-	56.3	-
	05:35 - 05:40	59.8	59.1	54.5	56.3	-1.8
	05:40 - 05:45	55.9	59.1	-	56.3	-
	05:45 - 05:50	55.7	59.1	-	56.3	-
	05:50 - 05:55	57.7	59.1	-	56.3	-
	05:55 - 06:00	64.5	59.1	66.0	56.3	9.7
มาตรฐานเสียงรบกวน ^{1/2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	06:00 - 06:05	56.0	61.2	-	59.6	-
	06:05 - 06:10	58.9	61.2	-	59.6	-
	06:10 - 06:15	56.8	61.2	-	59.6	-
	06:15 - 06:20	58.4	61.2	-	59.6	-
	06:20 - 06:25	59.2	61.2	-	59.6	-
	06:25 - 06:30	61.3	61.2	47.9	59.6	-11.7
	06:30 - 06:35	61.8	61.2	55.9	59.6	-3.7
	06:35 - 06:40	60.6	61.2	-	59.6	-
	06:40 - 06:45	63.5	61.2	62.6	59.6	3.0
	06:45 - 06:50	64.7	61.2	65.1	59.6	5.5
	06:50 - 06:55	63.9	61.2	63.6	59.6	4.0
	06:55 - 07:00	63.5	61.2	62.6	59.6	3.0
	07:00 - 07:05	62.7	61.2	60.4	59.6	0.8
	07:05 - 07:10	64.2	61.2	64.2	59.6	4.6
	07:10 - 07:15	63.2	61.2	61.9	59.6	2.3
	07:15 - 07:20	64.6	61.2	64.9	59.6	5.3
	07:20 - 07:25	64.5	61.2	64.8	59.6	5.2
	07:25 - 07:30	64.1	61.2	64.0	59.6	4.4
	07:30 - 07:35	65.0	61.2	65.7	59.6	6.1
	07:35 - 07:40	66.2	61.2	67.5	59.6	7.9
	07:40 - 07:45	65.9	61.2	67.1	59.6	7.5
	07:45 - 07:50	63.7	61.2	63.1	59.6	3.5
	07:50 - 07:55	62.3	61.2	58.8	59.6	-0.8
	07:55 - 08:00	63.2	61.2	61.9	59.6	2.3
	08:00 - 08:05	66.6	61.2	68.1	59.6	8.5
	08:05 - 08:10	64.8	61.2	65.3	59.6	5.7
	08:10 - 08:15	63.2	61.2	61.9	59.6	2.3
	08:15 - 08:20	63.1	61.2	61.6	59.6	2.0
	08:20 - 08:25	62.7	61.2	60.4	59.6	0.8
	08:25 - 08:30	60.1	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

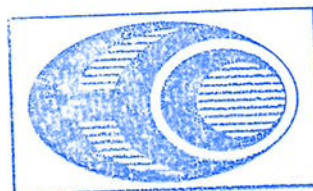
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34682
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	08:30 - 08:35	62.8	61.2	60.7	59.6	1.1
	08:35 - 08:40	62.9	61.2	61.0	59.6	1.4
	08:40 - 08:45	66.7	61.2	68.3	59.6	8.7
	08:45 - 08:50	62.7	61.2	60.4	59.6	0.8
	08:50 - 08:55	61.7	61.2	55.1	59.6	-4.5
	08:55 - 09:00	60.4	61.2	-	59.6	-
	09:00 - 09:05	61.9	61.2	56.6	59.6	-3.0
	09:05 - 09:10	61.1	61.2	-	59.6	-
	09:10 - 09:15	64.9	61.2	65.5	59.6	5.9
	09:15 - 09:20	63.2	61.2	61.9	59.6	2.3
	09:20 - 09:25	64.8	61.2	65.3	59.6	5.7
	09:25 - 09:30	62.8	61.2	60.7	59.6	1.1
	09:30 - 09:35	61.1	61.2	-	59.6	-
	09:35 - 09:40	60.1	61.2	-	59.6	-
	09:40 - 09:45	61.4	61.2	50.9	59.6	-8.7
	09:45 - 09:50	63.0	61.2	61.3	59.6	1.7
	09:50 - 09:55	59.5	61.2	-	59.6	-
	09:55 - 10:00	59.6	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1/1, 2}						10

REMARK :

- ¹ Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)
² Notification of Ministry of the Industry B.E. 2548 (2005)
³ Start Time
⁴ Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)
⁵ Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)
and The Notification of Ministry of the Industry B.E. 2567 (2024)
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST-REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

Request No. LA68-R09188

Report No. R6809-4871

TEST REPORT

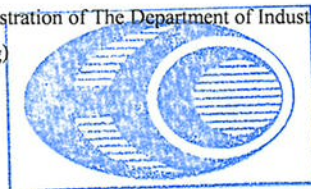
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn} SAMPLE NO. : 34683
 DETERMINATION METHOD : ISO 1996-1:2016 MEASURING DATE : 15-16/09/2025
 INSTRUMENT : Integrated Sound Level Meter RECEIVED DATE : 18/09/2025
 S/N 00230995 : Class 1 REPORTED DATE : 24/09/2025

TIME \ DATE	15-16/09/2025 (L_{eq})	15-16/09/2025 (L_{max})	15-16/09/2025 (L_{90})	UNIT
10:00 - 11:00 ^{1/3}	63.2	82.7	59.3	dB(A)
11:00 - 12:00	63.2	88.3	57.9	dB(A)
12:00 - 13:00	64.0	77.4	61.7	dB(A)
13:00 - 14:00	64.2	85.7	61.5	dB(A)
14:00 - 15:00	60.9	85.8	55.2	dB(A)
15:00 - 16:00	62.0	83.5	55.1	dB(A)
16:00 - 17:00	64.4	88.2	56.6	dB(A)
17:00 - 18:00	66.4	87.6	59.3	dB(A)
18:00 - 19:00	64.5	86.4	56.9	dB(A)
19:00 - 20:00	65.1	86.8	58.4	dB(A)
20:00 - 21:00	67.3	93.7	59.5	dB(A)
21:00 - 22:00	58.2	75.0	54.9	dB(A)
22:00 - 23:00	57.7	76.7	54.9	dB(A)
23:00 - 00:00	57.1	74.4	54.9	dB(A)
00:00 - 01:00	56.6	75.0	54.2	dB(A)
01:00 - 02:00	65.2	78.8	59.3	dB(A)
02:00 - 03:00	66.5	82.9	64.7	dB(A)
03:00 - 04:00	57.6	68.6	56.6	dB(A)
04:00 - 05:00	61.4	89.5	56.9	dB(A)
05:00 - 06:00	60.6	86.5	54.8	dB(A)
06:00 - 07:00	63.5	86.6	57.5	dB(A)
07:00 - 08:00	65.4	81.0	60.6	dB(A)
08:00 - 09:00	63.9	83.9	57.7	dB(A)
09:00 - 10:00	58.9	75.4	54.2	dB(A)
L_{eq} 24 hr.	63.4	-	-	dB(A)
L_{dn}	68.9	-	-	dB(A)
Maximum	-	93.7	-	dB(A)
Standard	70 ^{1/1,2}	115 ^{1/1,2}	-	dB(A)

REMARK : ^{1/1} Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Mr. Seksan Pluemwong)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188
Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1
SAMPLE NO. : 34683
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	10:00 - 10:05 ^{1/3}	63.0	61.2	61.3	59.6	1.7
	10:05 - 10:10	60.0	61.2	-	59.6	-
	10:10 - 10:15	61.5	61.2	52.7	59.6	-6.9
	10:15 - 10:20	61.7	61.2	55.1	59.6	-4.5
	10:20 - 10:25	63.8	61.2	63.3	59.6	3.7
	10:25 - 10:30	64.0	61.2	63.8	59.6	4.2
	10:30 - 10:35	63.3	61.2	62.1	59.6	2.5
	10:35 - 10:40	64.9	61.2	65.5	59.6	5.9
	10:40 - 10:45	62.3	61.2	58.8	59.6	-0.8
	10:45 - 10:50	63.7	61.2	63.1	59.6	3.5
	10:50 - 10:55	62.3	61.2	58.8	59.6	-0.8
	10:55 - 11:00	65.0	61.2	65.7	59.6	6.1
	11:00 - 11:05	63.5	61.2	62.6	59.6	3.0
	11:05 - 11:10	66.6	61.2	68.1	59.6	8.5
	11:10 - 11:15	62.1	61.2	57.8	59.6	-1.8
	11:15 - 11:20	60.7	61.2	-	59.6	-
	11:20 - 11:25	61.7	61.2	55.1	59.6	-4.5
	11:25 - 11:30	61.0	61.2	-	59.6	-
	11:30 - 11:35	59.9	61.2	-	59.6	-
	11:35 - 11:40	58.9	61.2	-	59.6	-
	11:40 - 11:45	63.0	61.2	61.3	59.6	1.7
	11:45 - 11:50	66.7	61.2	68.3	59.6	8.7
	11:50 - 11:55	62.1	61.2	57.8	59.6	-1.8
	11:55 - 12:00	64.2	61.2	64.2	59.6	4.6
	12:00 - 12:05	65.3	61.2	66.2	59.6	6.6
	12:05 - 12:10	62.9	61.2	61.0	59.6	1.4
	12:10 - 12:15	62.1	61.2	57.8	59.6	-1.8
	12:15 - 12:20	62.8	61.2	60.7	59.6	1.1
	12:20 - 12:25	64.2	61.2	64.2	59.6	4.6
	12:25 - 12:30	65.2	61.2	66.0	59.6	6.4
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34683
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{/5} dB(A)	ระดับเสียงพื้นฐาน ^{/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	12:30 - 12:35	63.8	61.2	63.3	59.6	3.7
	12:35 - 12:40	64.1	61.2	64.0	59.6	4.4
	12:40 - 12:45	64.0	61.2	63.8	59.6	4.2
	12:45 - 12:50	63.0	61.2	61.3	59.6	1.7
	12:50 - 12:55	64.0	61.2	63.8	59.6	4.2
	12:55 - 13:00	65.0	61.2	65.7	59.6	6.1
	13:00 - 13:05	63.6	61.2	62.9	59.6	3.3
	13:05 - 13:10	63.8	61.2	63.3	59.6	3.7
	13:10 - 13:15	67.4	61.2	69.2	59.6	9.6
	13:15 - 13:20	65.3	61.2	66.2	59.6	6.6
	13:20 - 13:25	64.7	61.2	65.1	59.6	5.5
	13:25 - 13:30	66.0	61.2	67.3	59.6	7.7
	13:30 - 13:35	64.0	61.2	63.8	59.6	4.2
	13:35 - 13:40	63.7	61.2	63.1	59.6	3.5
	13:40 - 13:45	63.7	61.2	63.1	59.6	3.5
	13:45 - 13:50	62.3	61.2	58.8	59.6	-0.8
	13:50 - 13:55	60.7	61.2	-	59.6	-
	13:55 - 14:00	60.2	61.2	-	59.6	-
	14:00 - 14:05	61.9	61.2	56.6	59.6	-3.0
	14:05 - 14:10	59.6	61.2	-	59.6	-
	14:10 - 14:15	61.9	61.2	56.6	59.6	-3.0
	14:15 - 14:20	60.8	61.2	-	59.6	-
	14:20 - 14:25	58.2	61.2	-	59.6	-
	14:25 - 14:30	60.2	61.2	-	59.6	-
	14:30 - 14:35	60.7	61.2	-	59.6	-
	14:35 - 14:40	61.5	61.2	52.7	59.6	-6.9
	14:40 - 14:45	62.1	61.2	57.8	59.6	-1.8
	14:45 - 14:50	61.6	61.2	54.0	59.6	-5.6
14:50 - 14:55	60.7	61.2	-	59.6	-	
14:55 - 15:00	59.7	61.2	-	59.6	-	
มาตรฐานเสียงรบกวน ^{/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34683
 MEASURING DATE : 15-16/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง	ระดับเสียง ^{1/4}	ระดับเสียง ^{1/4}	ระดับเสียงขณะมีการรบกวน ⁵	ระดับเสียงพื้นฐาน ^{1/4}	ระดับการรบกวน
ของระดับเสียง	ขณะเกิดเสียง	ขณะไม่มี	การรบกวน	dB(A)	L ₉₀ (dB(A))	dB(A)
ของแหล่งกำเนิด	ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))			
15/09/2025	15:00 - 15:05	62.4	61.2	59.2	59.6	-0.4
	15:05 - 15:10	62.5	61.2	59.6	59.6	0.0
	15:10 - 15:15	59.9	61.2	-	59.6	-
	15:15 - 15:20	61.9	61.2	56.6	59.6	-3.0
	15:20 - 15:25	62.7	61.2	60.4	59.6	0.8
	15:25 - 15:30	65.8	61.2	67.0	59.6	7.4
	15:30 - 15:35	60.0	61.2	-	59.6	-
	15:35 - 15:40	59.6	61.2	-	59.6	-
	15:40 - 15:45	60.7	61.2	-	59.6	-
	15:45 - 15:50	60.6	61.2	-	59.6	-
	15:50 - 15:55	62.5	61.2	59.6	59.6	0.0
	15:55 - 16:00	61.4	61.2	50.9	59.6	-8.7
	16:00 - 16:05	66.3	61.2	67.7	59.6	8.1
	16:05 - 16:10	63.3	61.2	62.1	59.6	2.5
	16:10 - 16:15	62.7	61.2	60.4	59.6	0.8
	16:15 - 16:20	62.3	61.2	58.8	59.6	-0.8
	16:20 - 16:25	64.2	61.2	64.2	59.6	4.6
	16:25 - 16:30	64.8	61.2	65.3	59.6	5.7
	16:30 - 16:35	60.9	61.2	-	59.6	-
	16:35 - 16:40	61.8	61.2	55.9	59.6	-3.7
	16:40 - 16:45	66.4	61.2	67.8	59.6	8.2
	16:45 - 16:50	67.8	61.2	69.7	59.6	10.1
	16:50 - 16:55	63.7	61.2	63.1	59.6	3.5
	16:55 - 17:00	63.0	61.2	61.3	59.6	1.7
	17:00 - 17:05	64.8	61.2	65.3	59.6	5.7
	17:05 - 17:10	67.6	61.2	69.5	59.6	9.9
	17:10 - 17:15	68.8	61.2	71.0	59.6	11.4
	17:15 - 17:20	68.0	61.2	70.0	59.6	10.4
	17:20 - 17:25	63.1	61.2	61.6	59.6	2.0
	17:25 - 17:30	67.6	61.2	69.5	59.6	9.9
มาตรฐานเสียงรบกวน ^{11,12}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY



Request No. LA68-R09188
Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungbukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1
SAMPLE NO. : 34683
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	17:30 - 17:35	65.7	61.2	66.8	59.6	7.2
	17:35 - 17:40	68.6	61.2	70.7	59.6	11.1
	17:40 - 17:45	65.6	61.2	66.6	59.6	7.0
	17:45 - 17:50	65.5	61.2	66.5	59.6	6.9
	17:50 - 17:55	63.4	61.2	62.4	59.6	2.8
	17:55 - 18:00	63.2	61.2	61.9	59.6	2.3
	18:00 - 18:05	68.3	61.2	70.4	59.6	10.8
	18:05 - 18:10	62.9	61.2	61.0	59.6	1.4
	18:10 - 18:15	62.4	61.2	59.2	59.6	-0.4
	18:15 - 18:20	63.4	61.2	62.4	59.6	2.8
	18:20 - 18:25	61.3	61.2	47.9	59.6	-11.7
	18:25 - 18:30	60.6	61.2	-	59.6	-
	18:30 - 18:35	61.7	61.2	55.1	59.6	-4.5
	18:35 - 18:40	67.8	61.2	69.7	59.6	10.1
	18:40 - 18:45	65.7	61.2	66.8	59.6	7.2
	18:45 - 18:50	61.1	61.2	-	59.6	-
	18:50 - 18:55	64.6	61.2	64.9	59.6	5.3
	18:55 - 19:00	65.1	61.2	65.8	59.6	6.2
	19:00 - 19:05	64.2	61.2	64.2	59.6	4.6
	19:05 - 19:10	65.7	61.2	66.8	59.6	7.2
	19:10 - 19:15	65.3	61.2	66.2	59.6	6.6
	19:15 - 19:20	63.1	61.2	61.6	59.6	2.0
	19:20 - 19:25	63.1	61.2	61.6	59.6	2.0
	19:25 - 19:30	62.0	61.2	57.3	59.6	-2.3
	19:30 - 19:35	61.6	61.2	54.0	59.6	-5.6
	19:35 - 19:40	65.9	61.2	67.1	59.6	7.5
	19:40 - 19:45	67.8	61.2	69.7	59.6	10.1
	19:45 - 19:50	66.5	61.2	68.0	59.6	8.4
	19:50 - 19:55	64.2	61.2	64.2	59.6	4.6
	19:55 - 20:00	67.0	61.2	68.7	59.6	9.1
มาตรฐานเสียงรบกวน ^{1, 2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34683
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	20:00 - 20:05	69.3	61.2	71.6	59.6	12.0
	20:05 - 20:10	73.0	61.2	75.7	59.6	16.1
	20:10 - 20:15	68.9	61.2	71.1	59.6	11.5
	20:15 - 20:20	67.9	61.2	69.9	59.6	10.3
	20:20 - 20:25	67.4	61.2	69.2	59.6	9.6
	20:25 - 20:30	64.0	61.2	63.8	59.6	4.2
	20:30 - 20:35	62.3	61.2	58.8	59.6	-0.8
	20:35 - 20:40	65.5	61.2	66.5	59.6	6.9
	20:40 - 20:45	66.3	61.2	67.7	59.6	8.1
	20:45 - 20:50	63.1	61.2	61.6	59.6	2.0
	20:50 - 20:55	62.9	61.2	61.0	59.6	1.4
	20:55 - 21:00	59.2	61.2	-	59.6	-
	21:00 - 21:05	58.4	61.2	-	59.6	-
	21:05 - 21:10	61.7	61.2	55.1	59.6	-4.5
	21:10 - 21:15	59.6	61.2	-	59.6	-
	21:15 - 21:20	58.0	61.2	-	59.6	-
	21:20 - 21:25	57.0	61.2	-	59.6	-
	21:25 - 21:30	57.1	61.2	-	59.6	-
	21:30 - 21:35	57.8	61.2	-	59.6	-
	21:35 - 21:40	57.8	61.2	-	59.6	-
	21:40 - 21:45	58.1	61.2	-	59.6	-
	21:45 - 21:50	57.1	61.2	-	59.6	-
	21:50 - 21:55	56.4	61.2	-	59.6	-
	21:55 - 22:00	55.4	61.2	-	59.6	-
	22:00 - 22:05	56.3	59.1	-	56.3	-
	22:05 - 22:10	59.9	59.1	55.2	56.3	-1.1
	22:10 - 22:15	58.6	59.1	-	56.3	-
	22:15 - 22:20	57.6	59.1	-	56.3	-
	22:20 - 22:25	57.5	59.1	-	56.3	-
	22:25 - 22:30	58.0	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188
Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

SAMPLE NO. : 34683

MEASURING DATE : 15-16/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

S/N 00230995 : Class 1

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
15/09/2025	22:30 - 22:35	58.1	59.1	-	56.3	-
	22:35 - 22:40	56.1	59.1	-	56.3	-
	22:40 - 22:45	56.6	59.1	-	56.3	-
	22:45 - 22:50	57.9	59.1	-	56.3	-
	22:50 - 22:55	56.6	59.1	-	56.3	-
	22:55 - 23:00	57.2	59.1	-	56.3	-
	23:00 - 23:05	58.9	59.1	-	56.3	-
	23:05 - 23:10	57.5	59.1	-	56.3	-
	23:10 - 23:15	55.9	59.1	-	56.3	-
	23:15 - 23:20	55.4	59.1	-	56.3	-
	23:20 - 23:25	57.1	59.1	-	56.3	-
	23:25 - 23:30	57.0	59.1	-	56.3	-
	23:30 - 23:35	56.4	59.1	-	56.3	-
	23:35 - 23:40	57.4	59.1	-	56.3	-
	23:40 - 23:45	59.1	59.1	-	56.3	-
	23:45 - 23:50	55.6	59.1	-	56.3	-
	23:50 - 23:55	56.5	59.1	-	56.3	-
	23:55 - 00:00	56.3	59.1	-	56.3	-
16/09/2025	00:00 - 00:05	56.3	59.1	-	56.3	-
	00:05 - 00:10	58.9	59.1	-	56.3	-
	00:10 - 00:15	56.1	59.1	-	56.3	-
	00:15 - 00:20	56.1	59.1	-	56.3	-
	00:20 - 00:25	56.9	59.1	-	56.3	-
	00:25 - 00:30	55.0	59.1	-	56.3	-
	00:30 - 00:35	54.9	59.1	-	56.3	-
	00:35 - 00:40	57.0	59.1	-	56.3	-
	00:40 - 00:45	58.2	59.1	-	56.3	-
	00:45 - 00:50	57.8	59.1	-	56.3	-
	00:50 - 00:55	55.0	59.1	-	56.3	-
	00:55 - 01:00	55.1	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{11,12}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34683
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	01:00 - 01:05	53.7	59.1	-	56.3	-
	01:05 - 01:10	62.1	59.1	62.1	56.3	5.8
	01:10 - 01:15	65.7	59.1	67.6	56.3	11.3
	01:15 - 01:20	56.2	59.1	-	56.3	-
	01:20 - 01:25	58.9	59.1	-	56.3	-
	01:25 - 01:30	71.5	59.1	74.2	56.3	17.9
	01:30 - 01:35	69.1	59.1	71.6	56.3	15.3
	01:35 - 01:40	68.9	59.1	71.4	56.3	15.1
	01:40 - 01:45	59.7	59.1	53.8	56.3	-2.5
	01:45 - 01:50	56.3	59.1	-	56.3	-
	01:50 - 01:55	57.4	59.1	-	56.3	-
	01:55 - 02:00	60.9	59.1	59.2	56.3	2.9
	02:00 - 02:05	65.3	59.1	67.1	56.3	10.8
	02:05 - 02:10	58.3	59.1	-	56.3	-
	02:10 - 02:15	64.3	59.1	65.7	56.3	9.4
	02:15 - 02:20	70.8	59.1	73.5	56.3	17.2
	02:20 - 02:25	69.8	59.1	72.4	56.3	16.1
	02:25 - 02:30	67.2	59.1	69.5	56.3	13.2
	02:30 - 02:35	65.1	59.1	66.8	56.3	10.5
	02:35 - 02:40	64.4	59.1	65.9	56.3	9.6
	02:40 - 02:45	65.6	59.1	67.5	56.3	11.2
	02:45 - 02:50	68.4	59.1	70.9	56.3	14.6
	02:50 - 02:55	63.7	59.1	64.9	56.3	8.6
	02:55 - 03:00	61.9	59.1	61.7	56.3	5.4
	03:00 - 03:05	59.2	59.1	45.8	56.3	-10.5
	03:05 - 03:10	58.4	59.1	-	56.3	-
	03:10 - 03:15	59.8	59.1	54.5	56.3	-1.8
	03:15 - 03:20	58.4	59.1	-	56.3	-
	03:20 - 03:25	57.2	59.1	-	56.3	-
	03:25 - 03:30	56.5	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34683
 MEASURING DATE : 15-16/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L_{90} (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	03:30 - 03:35	56.5	59.1	-	56.3	-
	03:35 - 03:40	55.8	59.1	-	56.3	-
	03:40 - 03:45	56.1	59.1	-	56.3	-
	03:45 - 03:50	57.9	59.1	-	56.3	-
	03:50 - 03:55	57.1	59.1	-	56.3	-
	03:55 - 04:00	56.5	59.1	-	56.3	-
	04:00 - 04:05	57.8	59.1	-	56.3	-
	04:05 - 04:10	58.0	59.1	-	56.3	-
	04:10 - 04:15	60.4	59.1	57.5	56.3	1.2
	04:15 - 04:20	60.0	59.1	55.7	56.3	-0.6
	04:20 - 04:25	61.2	59.1	60.0	56.3	3.7
	04:25 - 04:30	59.9	59.1	55.2	56.3	-1.1
	04:30 - 04:35	57.9	59.1	-	56.3	-
	04:35 - 04:40	56.2	59.1	-	56.3	-
	04:40 - 04:45	68.1	59.1	70.5	56.3	14.2
	04:45 - 04:50	62.0	59.1	61.9	56.3	5.6
	04:50 - 04:55	58.5	59.1	-	56.3	-
	04:55 - 05:00	60.6	59.1	58.3	56.3	2.0
	05:00 - 05:05	60.5	59.1	57.9	56.3	1.6
	05:05 - 05:10	59.6	59.1	53.0	56.3	-3.3
	05:10 - 05:15	57.7	59.1	-	56.3	-
	05:15 - 05:20	57.5	59.1	-	56.3	-
	05:20 - 05:25	59.5	59.1	51.9	56.3	-4.4
	05:25 - 05:30	59.2	59.1	45.8	56.3	-10.5
	05:30 - 05:35	58.5	59.1	-	56.3	-
	05:35 - 05:40	58.2	59.1	-	56.3	-
	05:40 - 05:45	57.2	59.1	-	56.3	-
	05:45 - 05:50	57.5	59.1	-	56.3	-
	05:50 - 05:55	67.3	59.1	69.6	56.3	13.3
	05:55 - 06:00	59.7	59.1	53.8	56.3	-2.5
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY



Request No. LA68-R09188
Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1
SAMPLE NO. : 34683
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ^{1/5} dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	06:00 - 06:05	59.6	61.2	-	59.6	-
	06:05 - 06:10	61.8	61.2	55.9	59.6	-3.7
	06:10 - 06:15	60.0	61.2	-	59.6	-
	06:15 - 06:20	58.8	61.2	-	59.6	-
	06:20 - 06:25	61.6	61.2	54.0	59.6	-5.6
	06:25 - 06:30	64.2	61.2	64.2	59.6	4.6
	06:30 - 06:35	60.9	61.2	-	59.6	-
	06:35 - 06:40	60.4	61.2	-	59.6	-
	06:40 - 06:45	68.1	61.2	70.1	59.6	10.5
	06:45 - 06:50	65.6	61.2	66.6	59.6	7.0
	06:50 - 06:55	65.5	61.2	66.5	59.6	6.9
	06:55 - 07:00	63.9	61.2	63.6	59.6	4.0
	07:00 - 07:05	63.9	61.2	63.6	59.6	4.0
	07:05 - 07:10	63.7	61.2	63.1	59.6	3.5
	07:10 - 07:15	63.4	61.2	62.4	59.6	2.8
	07:15 - 07:20	64.8	61.2	65.3	59.6	5.7
	07:20 - 07:25	64.4	61.2	64.6	59.6	5.0
	07:25 - 07:30	65.0	61.2	65.7	59.6	6.1
	07:30 - 07:35	64.8	61.2	65.3	59.6	5.7
	07:35 - 07:40	66.6	61.2	68.1	59.6	8.5
	07:40 - 07:45	64.9	61.2	65.5	59.6	5.9
	07:45 - 07:50	66.8	61.2	68.4	59.6	8.8
	07:50 - 07:55	66.5	61.2	68.0	59.6	8.4
	07:55 - 08:00	67.5	61.2	69.3	59.6	9.7
	08:00 - 08:05	66.7	61.2	68.3	59.6	8.7
	08:05 - 08:10	69.2	61.2	71.5	59.6	11.9
	08:10 - 08:15	65.5	61.2	66.5	59.6	6.9
	08:15 - 08:20	64.0	61.2	63.8	59.6	4.2
	08:20 - 08:25	60.4	61.2	-	59.6	-
	08:25 - 08:30	60.6	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1/1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188
Report No. R6809-4871

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00230995 : Class 1

SAMPLE NO. : 34683

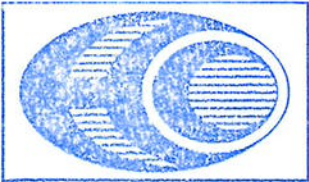
MEASURING DATE : 15-16/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	08:30 - 08:35	60.8	61.2	-	59.6	-
	08:35 - 08:40	59.9	61.2	-	59.6	-
	08:40 - 08:45	63.7	61.2	63.1	59.6	3.5
	08:45 - 08:50	61.7	61.2	55.1	59.6	-4.5
	08:50 - 08:55	61.1	61.2	-	59.6	-
	08:55 - 09:00	59.0	61.2	-	59.6	-
	09:00 - 09:05	59.0	61.2	-	59.6	-
	09:05 - 09:10	57.2	61.2	-	59.6	-
	09:10 - 09:15	58.0	61.2	-	59.6	-
	09:15 - 09:20	59.5	61.2	-	59.6	-
	09:20 - 09:25	59.2	61.2	-	59.6	-
	09:25 - 09:30	57.8	61.2	-	59.6	-
	09:30 - 09:35	59.9	61.2	-	59.6	-
	09:35 - 09:40	58.1	61.2	-	59.6	-
	09:40 - 09:45	57.6	61.2	-	59.6	-
	09:45 - 09:50	60.9	61.2	-	59.6	-
	09:50 - 09:55	59.3	61.2	-	59.6	-
	09:55 - 10:00	59.2	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REMARK :
^{1/} Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)
^{2/} Notification of Ministry of the Industry B.E. 2548 (2005)
^{3/} Start Time
^{4/} Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)
^{5/} Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)
and The Notification of Ministry of the Industry B.E. 2567 (2024)
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4872

TEST REPORT

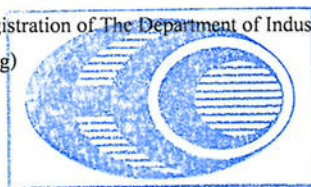
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} & L_{dn} SAMPLE NO. : 34684
 DETERMINATION METHOD : ISO 1996-1:2016 MEASURING DATE : 16-17/09/2025
 INSTRUMENT : Integrated Sound Level Meter RECEIVED DATE : 18/09/2025
 S/N 00230995 : Class 1 REPORTED DATE : 24/09/2025

TIME \ DATE	16-17/09/2025 (L_{eq})	16-17/09/2025 (L_{max})	16-17/09/2025 (L_{90})	UNIT
10:00 - 11:00 ³	60.0	88.0	54.4	dB(A)
11:00 - 12:00	60.7	83.8	55.3	dB(A)
12:00 - 13:00	59.2	83.3	53.2	dB(A)
13:00 - 14:00	58.7	85.8	53.4	dB(A)
14:00 - 15:00	60.9	80.5	54.5	dB(A)
15:00 - 16:00	60.2	79.7	56.2	dB(A)
16:00 - 17:00	64.2	84.6	60.8	dB(A)
17:00 - 18:00	65.6	86.6	58.5	dB(A)
18:00 - 19:00	63.0	85.4	56.1	dB(A)
19:00 - 20:00	64.9	85.2	58.0	dB(A)
20:00 - 21:00	68.3	95.4	58.8	dB(A)
21:00 - 22:00	62.2	89.8	54.0	dB(A)
22:00 - 23:00	57.3	77.5	53.8	dB(A)
23:00 - 00:00	55.4	76.9	53.6	dB(A)
00:00 - 01:00	55.1	73.3	53.6	dB(A)
01:00 - 02:00	55.0	68.1	53.4	dB(A)
02:00 - 03:00	54.7	68.9	52.7	dB(A)
03:00 - 04:00	54.8	72.7	53.2	dB(A)
04:00 - 05:00	55.8	73.6	53.1	dB(A)
05:00 - 06:00	56.7	78.2	53.4	dB(A)
06:00 - 07:00	61.2	81.7	56.1	dB(A)
07:00 - 08:00	66.3	91.0	60.7	dB(A)
08:00 - 09:00	66.4	85.2	62.1	dB(A)
09:00 - 10:00	60.7	83.2	57.1	dB(A)
L_{eq} 24 hr.	62.2	-	-	dB(A)
L_{dn}	65.1	-	-	dB(A)
Maximum	-	95.4	-	dB(A)
Standard	70 ^{1,2}	115 ^{1,2}	-	dB(A)

REMARK : ^{1/} Notification of Office of The National Environmental Board Volume 15 B.E. 2540 (1997)^{2/} Notification of Ministry of the Industry B.E. 2548 (2005)^{3/} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Mr. Seksan Pluemwong)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188
Report No. R6809-4872

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00230995 : Class 1

SAMPLE NO. : 34684

MEASURING DATE : 16-17/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	10:00 - 10:05 ^Δ	60.9	61.2	-	59.6	-
	10:05 - 10:10	60.0	61.2	-	59.6	-
	10:10 - 10:15	62.0	61.2	57.3	59.6	-2.3
	10:15 - 10:20	58.4	61.2	-	59.6	-
	10:20 - 10:25	59.1	61.2	-	59.6	-
	10:25 - 10:30	59.6	61.2	-	59.6	-
	10:30 - 10:35	57.9	61.2	-	59.6	-
	10:35 - 10:40	59.5	61.2	-	59.6	-
	10:40 - 10:45	58.8	61.2	-	59.6	-
	10:45 - 10:50	58.0	61.2	-	59.6	-
	10:50 - 10:55	59.7	61.2	-	59.6	-
	10:55 - 11:00	62.7	61.2	60.4	59.6	0.8
	11:00 - 11:05	63.3	61.2	62.1	59.6	2.5
	11:05 - 11:10	59.7	61.2	-	59.6	-
	11:10 - 11:15	60.6	61.2	-	59.6	-
	11:15 - 11:20	59.5	61.2	-	59.6	-
	11:20 - 11:25	60.0	61.2	-	59.6	-
	11:25 - 11:30	61.2	61.2	-	59.6	-
	11:30 - 11:35	63.1	61.2	61.6	59.6	2.0
	11:35 - 11:40	59.9	61.2	-	59.6	-
	11:40 - 11:45	57.7	61.2	-	59.6	-
	11:45 - 11:50	61.9	61.2	56.6	59.6	-3.0
	11:50 - 11:55	58.4	61.2	-	59.6	-
	11:55 - 12:00	58.4	61.2	-	59.6	-
	12:00 - 12:05	60.4	61.2	-	59.6	-
	12:05 - 12:10	57.8	61.2	-	59.6	-
	12:10 - 12:15	61.4	61.2	50.9	59.6	-8.7
	12:15 - 12:20	57.8	61.2	-	59.6	-
	12:20 - 12:25	59.7	61.2	-	59.6	-
	12:25 - 12:30	63.3	61.2	62.1	59.6	2.5
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34684
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	12:30 - 12:35	59.9	61.2	-	59.6	-
	12:35 - 12:40	55.7	61.2	-	59.6	-
	12:40 - 12:45	56.8	61.2	-	59.6	-
	12:45 - 12:50	57.9	61.2	-	59.6	-
	12:50 - 12:55	54.9	61.2	-	59.6	-
	12:55 - 13:00	57.6	61.2	-	59.6	-
	13:00 - 13:05	58.5	61.2	-	59.6	-
	13:05 - 13:10	58.0	61.2	-	59.6	-
	13:10 - 13:15	58.1	61.2	-	59.6	-
	13:15 - 13:20	57.5	61.2	-	59.6	-
	13:20 - 13:25	58.4	61.2	-	59.6	-
	13:25 - 13:30	56.7	61.2	-	59.6	-
	13:30 - 13:35	57.2	61.2	-	59.6	-
	13:35 - 13:40	63.4	61.2	62.4	59.6	2.8
	13:40 - 13:45	57.4	61.2	-	59.6	-
	13:45 - 13:50	58.0	61.2	-	59.6	-
	13:50 - 13:55	59.4	61.2	-	59.6	-
	13:55 - 14:00	56.5	61.2	-	59.6	-
	14:00 - 14:05	59.0	61.2	-	59.6	-
	14:05 - 14:10	59.0	61.2	-	59.6	-
	14:10 - 14:15	60.0	61.2	-	59.6	-
	14:15 - 14:20	60.9	61.2	-	59.6	-
	14:20 - 14:25	65.2	61.2	66.0	59.6	6.4
	14:25 - 14:30	61.8	61.2	55.9	59.6	-3.7
	14:30 - 14:35	60.4	61.2	-	59.6	-
	14:35 - 14:40	60.4	61.2	-	59.6	-
	14:40 - 14:45	59.3	61.2	-	59.6	-
	14:45 - 14:50	62.3	61.2	58.8	59.6	-0.8
	14:50 - 14:55	59.5	61.2	-	59.6	-
	14:55 - 15:00	56.6	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34684
 MEASURING DATE : 16-17/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด	ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	15:00 - 15:05	58.9	61.2	-	59.6	-
	15:05 - 15:10	59.6	61.2	-	59.6	-
	15:10 - 15:15	59.6	61.2	-	59.6	-
	15:15 - 15:20	58.0	61.2	-	59.6	-
	15:20 - 15:25	60.5	61.2	-	59.6	-
	15:25 - 15:30	58.7	61.2	-	59.6	-
	15:30 - 15:35	56.3	61.2	-	59.6	-
	15:35 - 15:40	59.4	61.2	-	59.6	-
	15:40 - 15:45	57.6	61.2	-	59.6	-
	15:45 - 15:50	61.1	61.2	-	59.6	-
	15:50 - 15:55	61.7	61.2	55.1	59.6	-4.5
	15:55 - 16:00	64.5	61.2	64.8	59.6	5.2
	16:00 - 16:05	63.8	61.2	63.3	59.6	3.7
	16:05 - 16:10	64.3	61.2	64.4	59.6	4.8
	16:10 - 16:15	63.1	61.2	61.6	59.6	2.0
	16:15 - 16:20	63.2	61.2	61.9	59.6	2.3
	16:20 - 16:25	63.2	61.2	61.9	59.6	2.3
	16:25 - 16:30	62.6	61.2	60.0	59.6	0.4
	16:30 - 16:35	63.6	61.2	62.9	59.6	3.3
	16:35 - 16:40	66.2	61.2	67.5	59.6	7.9
	16:40 - 16:45	68.0	61.2	70.0	59.6	10.4
	16:45 - 16:50	63.0	61.2	61.3	59.6	1.7
	16:50 - 16:55	63.3	61.2	62.1	59.6	2.5
	16:55 - 17:00	61.4	61.2	50.9	59.6	-8.7
	17:00 - 17:05	62.1	61.2	57.8	59.6	-1.8
	17:05 - 17:10	67.4	61.2	69.2	59.6	9.6
	17:10 - 17:15	69.2	61.2	71.5	59.6	11.9
	17:15 - 17:20	65.8	61.2	67.0	59.6	7.4
	17:20 - 17:25	63.6	61.2	62.9	59.6	3.3
	17:25 - 17:30	61.6	61.2	54.0	59.6	-5.6
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34684
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L_{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L_{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L_{90} (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	17:30 - 17:35	67.6	61.2	69.5	59.6	9.9
	17:35 - 17:40	66.5	61.2	68.0	59.6	8.4
	17:40 - 17:45	65.4	61.2	66.3	59.6	6.7
	17:45 - 17:50	61.3	61.2	47.9	59.6	-11.7
	17:50 - 17:55	61.3	61.2	47.9	59.6	-11.7
	17:55 - 18:00	65.8	61.2	67.0	59.6	7.4
	18:00 - 18:05	61.5	61.2	52.7	59.6	-6.9
	18:05 - 18:10	60.9	61.2	-	59.6	-
	18:10 - 18:15	63.2	61.2	61.9	59.6	2.3
	18:15 - 18:20	61.0	61.2	-	59.6	-
	18:20 - 18:25	59.0	61.2	-	59.6	-
	18:25 - 18:30	66.1	61.2	67.4	59.6	7.8
	18:30 - 18:35	61.3	61.2	47.9	59.6	-11.7
	18:35 - 18:40	63.4	61.2	62.4	59.6	2.8
	18:40 - 18:45	62.0	61.2	57.3	59.6	-2.3
	18:45 - 18:50	66.2	61.2	67.5	59.6	7.9
	18:50 - 18:55	63.0	61.2	61.3	59.6	1.7
	18:55 - 19:00	62.4	61.2	59.2	59.6	-0.4
	19:00 - 19:05	64.9	61.2	65.5	59.6	5.9
	19:05 - 19:10	64.9	61.2	65.5	59.6	5.9
	19:10 - 19:15	63.4	61.2	62.4	59.6	2.8
	19:15 - 19:20	65.2	61.2	66.0	59.6	6.4
	19:20 - 19:25	63.5	61.2	62.6	59.6	3.0
	19:25 - 19:30	64.4	61.2	64.6	59.6	5.0
	19:30 - 19:35	61.9	61.2	56.6	59.6	-3.0
	19:35 - 19:40	63.7	61.2	63.1	59.6	3.5
	19:40 - 19:45	65.8	61.2	67.0	59.6	7.4
	19:45 - 19:50	66.3	61.2	67.7	59.6	8.1
	19:50 - 19:55	65.7	61.2	66.8	59.6	7.2
	19:55 - 20:00	66.9	61.2	68.5	59.6	8.9
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4872

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34684
 MEASURING DATE : 16-17/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ⁴ ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	20:00 - 20:05	68.6	61.2	70.7	59.6	11.1
	20:05 - 20:10	75.5	61.2	78.3	59.6	18.7
	20:10 - 20:15	70.1	61.2	72.5	59.6	12.9
	20:15 - 20:20	67.9	61.2	69.9	59.6	10.3
	20:20 - 20:25	66.9	61.2	68.5	59.6	8.9
	20:25 - 20:30	63.9	61.2	63.6	59.6	4.0
	20:30 - 20:35	63.1	61.2	61.6	59.6	2.0
	20:35 - 20:40	64.6	61.2	64.9	59.6	5.3
	20:40 - 20:45	66.7	61.2	68.3	59.6	8.7
	20:45 - 20:50	62.6	61.2	60.0	59.6	0.4
	20:50 - 20:55	60.7	61.2	-	59.6	-
	20:55 - 21:00	60.6	61.2	-	59.6	-
	21:00 - 21:05	57.8	61.2	-	59.6	-
	21:05 - 21:10	67.0	61.2	68.7	59.6	9.1
	21:10 - 21:15	59.2	61.2	-	59.6	-
	21:15 - 21:20	59.3	61.2	-	59.6	-
	21:20 - 21:25	56.9	61.2	-	59.6	-
	21:25 - 21:30	68.0	61.2	70.0	59.6	10.4
	21:30 - 21:35	63.8	61.2	63.3	59.6	3.7
	21:35 - 21:40	57.4	61.2	-	59.6	-
	21:40 - 21:45	55.7	61.2	-	59.6	-
	21:45 - 21:50	54.8	61.2	-	59.6	-
	21:50 - 21:55	56.3	61.2	-	59.6	-
	21:55 - 22:00	63.0	61.2	61.3	59.6	1.7
	22:00 - 22:05	55.7	59.1	-	56.3	-
	22:05 - 22:10	59.5	59.1	51.9	56.3	-4.4
	22:10 - 22:15	58.1	59.1	-	56.3	-
	22:15 - 22:20	55.3	59.1	-	56.3	-
	22:20 - 22:25	57.0	59.1	-	56.3	-
	22:25 - 22:30	55.4	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00230995 : Class 1

SAMPLE NO. : 34684

MEASURING DATE : 16-17/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
16/09/2025	22:30 - 22:35	58.3	59.1	-	56.3	-
	22:35 - 22:40	57.1	59.1	-	56.3	-
	22:40 - 22:45	56.4	59.1	-	56.3	-
	22:45 - 22:50	59.5	59.1	51.9	56.3	-4.4
	22:50 - 22:55	56.4	59.1	-	56.3	-
	22:55 - 23:00	55.8	59.1	-	56.3	-
	23:00 - 23:05	58.2	59.1	-	56.3	-
	23:05 - 23:10	55.2	59.1	-	56.3	-
	23:10 - 23:15	55.0	59.1	-	56.3	-
	23:15 - 23:20	54.9	59.1	-	56.3	-
	23:20 - 23:25	54.1	59.1	-	56.3	-
	23:25 - 23:30	55.4	59.1	-	56.3	-
	23:30 - 23:35	54.8	59.1	-	56.3	-
	23:35 - 23:40	54.8	59.1	-	56.3	-
	23:40 - 23:45	55.3	59.1	-	56.3	-
	23:45 - 23:50	55.3	59.1	-	56.3	-
	23:50 - 23:55	56.3	59.1	-	56.3	-
	23:55 - 00:00	54.0	59.1	-	56.3	-
17/09/2025	00:00 - 00:05	55.7	59.1	-	56.3	-
	00:05 - 00:10	55.2	59.1	-	56.3	-
	00:10 - 00:15	53.9	59.1	-	56.3	-
	00:15 - 00:20	55.5	59.1	-	56.3	-
	00:20 - 00:25	54.6	59.1	-	56.3	-
	00:25 - 00:30	54.6	59.1	-	56.3	-
	00:30 - 00:35	53.9	59.1	-	56.3	-
	00:35 - 00:40	54.4	59.1	-	56.3	-
	00:40 - 00:45	54.5	59.1	-	56.3	-
	00:45 - 00:50	55.4	59.1	-	56.3	-
	00:50 - 00:55	55.1	59.1	-	56.3	-
	00:55 - 01:00	57.2	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1/,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4872

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)

PARAMETER* : ระดับการรบกวน

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00230995 : Class 1

SAMPLE NO. : 34684

MEASURING DATE : 16-17/09/2025

RECEIVED DATE : 18/09/2025

REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ^{1/4} L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
17/09/2025	01:00 - 01:05	55.7	59.1	-	56.3	-
	01:05 - 01:10	54.3	59.1	-	56.3	-
	01:10 - 01:15	54.0	59.1	-	56.3	-
	01:15 - 01:20	55.1	59.1	-	56.3	-
	01:20 - 01:25	55.0	59.1	-	56.3	-
	01:25 - 01:30	55.9	59.1	-	56.3	-
	01:30 - 01:35	55.3	59.1	-	56.3	-
	01:35 - 01:40	57.2	59.1	-	56.3	-
	01:40 - 01:45	54.5	59.1	-	56.3	-
	01:45 - 01:50	53.9	59.1	-	56.3	-
	01:50 - 01:55	53.3	59.1	-	56.3	-
	01:55 - 02:00	53.9	59.1	-	56.3	-
	02:00 - 02:05	54.4	59.1	-	56.3	-
	02:05 - 02:10	56.1	59.1	-	56.3	-
	02:10 - 02:15	55.2	59.1	-	56.3	-
	02:15 - 02:20	53.6	59.1	-	56.3	-
	02:20 - 02:25	53.8	59.1	-	56.3	-
	02:25 - 02:30	55.1	59.1	-	56.3	-
	02:30 - 02:35	52.9	59.1	-	56.3	-
	02:35 - 02:40	53.7	59.1	-	56.3	-
	02:40 - 02:45	56.0	59.1	-	56.3	-
	02:45 - 02:50	56.1	59.1	-	56.3	-
	02:50 - 02:55	53.7	59.1	-	56.3	-
	02:55 - 03:00	54.2	59.1	-	56.3	-
	03:00 - 03:05	54.3	59.1	-	56.3	-
	03:05 - 03:10	53.7	59.1	-	56.3	-
	03:10 - 03:15	53.5	59.1	-	56.3	-
	03:15 - 03:20	54.8	59.1	-	56.3	-
	03:20 - 03:25	57.0	59.1	-	56.3	-
	03:25 - 03:30	53.5	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09188

Report No. R6809-4872

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
 PARAMETER* : ระดับการรบกวน
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00230995 : Class 1

SAMPLE NO. : 34684
 MEASURING DATE : 16-17/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
17/09/2025	03:30 - 03:35	54.0	59.1	-	56.3	-
	03:35 - 03:40	54.3	59.1	-	56.3	-
	03:40 - 03:45	54.4	59.1	-	56.3	-
	03:45 - 03:50	53.7	59.1	-	56.3	-
	03:50 - 03:55	54.2	59.1	-	56.3	-
	03:55 - 04:00	57.7	59.1	-	56.3	-
	04:00 - 04:05	54.1	59.1	-	56.3	-
	04:05 - 04:10	53.5	59.1	-	56.3	-
	04:10 - 04:15	53.5	59.1	-	56.3	-
	04:15 - 04:20	53.9	59.1	-	56.3	-
	04:20 - 04:25	54.8	59.1	-	56.3	-
	04:25 - 04:30	53.3	59.1	-	56.3	-
	04:30 - 04:35	55.9	59.1	-	56.3	-
	04:35 - 04:40	56.0	59.1	-	56.3	-
	04:40 - 04:45	57.9	59.1	-	56.3	-
	04:45 - 04:50	59.1	59.1	-	56.3	-
	04:50 - 04:55	56.9	59.1	-	56.3	-
	04:55 - 05:00	55.3	59.1	-	56.3	-
	05:00 - 05:05	58.0	59.1	-	56.3	-
	05:05 - 05:10	58.1	59.1	-	56.3	-
	05:10 - 05:15	56.4	59.1	-	56.3	-
	05:15 - 05:20	57.2	59.1	-	56.3	-
	05:20 - 05:25	55.1	59.1	-	56.3	-
	05:25 - 05:30	55.2	59.1	-	56.3	-
	05:30 - 05:35	56.6	59.1	-	56.3	-
	05:35 - 05:40	56.2	59.1	-	56.3	-
	05:40 - 05:45	56.1	59.1	-	56.3	-
	05:45 - 05:50	56.1	59.1	-	56.3	-
	05:50 - 05:55	58.2	59.1	-	56.3	-
	05:55 - 06:00	55.9	59.1	-	56.3	-
มาตรฐานเสียงรบกวน ^{1,2}						10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34684
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา	ระดับเสียง ขณะเกิดเสียง	ระดับเสียง ขณะไม่มี การรบกวน	ระดับเสียงขณะมีการรบกวน ^{1/5}	ระดับเสียงพื้นฐาน ^{1/4}	ระดับการรบกวน
ของระดับเสียง	ของแหล่งกำเนิด	ของแหล่งกำเนิด	dB(A)	L ₉₀ (dB(A))	dB(A)
ของแหล่งกำเนิด	L _{eq} (dB(A))	L _{eq} (dB(A))			
17/09/2025	06:00 - 06:05	56.1	61.2	-	59.6
	06:05 - 06:10	57.3	61.2	-	59.6
	06:10 - 06:15	57.9	61.2	-	59.6
	06:15 - 06:20	57.8	61.2	-	59.6
	06:20 - 06:25	60.1	61.2	-	59.6
	06:25 - 06:30	61.7	61.2	55.1	59.6
	06:30 - 06:35	63.5	61.2	62.6	59.6
	06:35 - 06:40	59.9	61.2	-	59.6
	06:40 - 06:45	62.2	61.2	58.3	59.6
	06:45 - 06:50	63.0	61.2	61.3	59.6
	06:50 - 06:55	63.9	61.2	63.6	59.6
	06:55 - 07:00	62.9	61.2	61.0	59.6
	07:00 - 07:05	61.6	61.2	54.0	59.6
	07:05 - 07:10	62.5	61.2	59.6	59.6
	07:10 - 07:15	62.0	61.2	57.3	59.6
	07:15 - 07:20	62.7	61.2	60.4	59.6
	07:20 - 07:25	63.1	61.2	61.6	59.6
	07:25 - 07:30	64.1	61.2	64.0	59.6
	07:30 - 07:35	63.8	61.2	63.3	59.6
	07:35 - 07:40	66.3	61.2	67.7	59.6
	07:40 - 07:45	69.1	61.2	71.3	59.6
	07:45 - 07:50	65.7	61.2	66.8	59.6
	07:50 - 07:55	70.6	61.2	73.1	59.6
	07:55 - 08:00	69.8	61.2	72.2	59.6
	08:00 - 08:05	70.6	61.2	73.1	59.6
	08:05 - 08:10	66.8	61.2	68.4	59.6
	08:10 - 08:15	69.7	61.2	72.0	59.6
	08:15 - 08:20	66.3	61.2	67.7	59.6
	08:20 - 08:25	62.6	61.2	60.0	59.6
	08:25 - 08:30	65.7	61.2	66.8	59.6
มาตรฐานเสียงรบกวน ^{1/2}					10

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : วิทยาลัยเทคโนโลยีวิศวกรรมแหลมฉบัง (ด้านทิศใต้ของโครงการ) (AN1)
PARAMETER* : ระดับการรบกวน
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00230995 : Class 1

SAMPLE NO. : 34684
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

วัน / เวลา ของระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด		ระดับเสียง ขณะเกิดเสียง ของแหล่งกำเนิด L _{eq} (dB(A))	ระดับเสียง ^{1/4} ขณะไม่มี การรบกวน L _{eq} (dB(A))	ระดับเสียงขณะมีการรบกวน ⁵ dB(A)	ระดับเสียงพื้นฐาน ⁴ L ₉₀ (dB(A))	ระดับการรบกวน dB(A)
17/09/2025	08:30 - 08:35	66.9	61.2	68.5	59.6	8.9
	08:35 - 08:40	63.2	61.2	61.9	59.6	2.3
	08:40 - 08:45	63.2	61.2	61.9	59.6	2.3
	08:45 - 08:50	66.1	61.2	67.4	59.6	7.8
	08:50 - 08:55	62.7	61.2	60.4	59.6	0.8
	08:55 - 09:00	61.4	61.2	50.9	59.6	-8.7
	09:00 - 09:05	61.8	61.2	55.9	59.6	-3.7
	09:05 - 09:10	60.9	61.2	-	59.6	-
	09:10 - 09:15	61.6	61.2	54.0	59.6	-5.6
	09:15 - 09:20	60.9	61.2	-	59.6	-
	09:20 - 09:25	60.8	61.2	-	59.6	-
	09:25 - 09:30	59.8	61.2	-	59.6	-
	09:30 - 09:35	61.0	61.2	-	59.6	-
	09:35 - 09:40	57.9	61.2	-	59.6	-
	09:40 - 09:45	61.4	61.2	50.9	59.6	-8.7
	09:45 - 09:50	58.9	61.2	-	59.6	-
	09:50 - 09:55	60.9	61.2	-	59.6	-
	09:55 - 10:00	60.6	61.2	-	59.6	-
มาตรฐานเสียงรบกวน ^{1/,2}						10

REMARK :

- ^{1/} Notification of Office of The National Environmental Board Volume 29 B.E. 2550 (2007)
^{2/} Notification of Ministry of the Industry B.E. 2548 (2005)
^{3/} Start Time
^{4/} Measuring Date and Time : 17/09/2025 (Day Time : 12:35 - 12:40, Night Time 22:50 - 22:55)
^{5/} Measurement Follow The Announcement of The Pollution Control Board B.E. 2565 (2022)
and The Notification of Ministry of the Industry B.E. 2567 (2024)
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)



Approved By.....

(Signature)
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

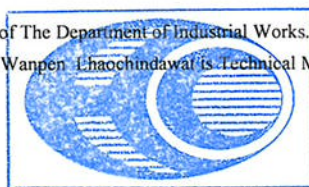
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34685
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	10-11/09/2025 (L_{eq})	10-11/09/2025 (L_{max})	10-11/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	68.5	93.0	66.1	dB(A)
11:00 - 12:00	66.1	80.3	64.9	dB(A)
12:00 - 13:00	66.1	73.4	64.9	dB(A)
13:00 - 14:00	66.0	74.4	64.9	dB(A)
14:00 - 15:00	66.0	85.5	64.8	dB(A)
15:00 - 16:00	66.5	83.5	65.0	dB(A)
16:00 - 17:00	66.0	71.6	65.0	dB(A)
17:00 - 18:00	66.4	72.2	65.4	dB(A)
18:00 - 19:00	66.9	92.5	65.1	dB(A)
19:00 - 20:00	66.4	82.5	65.4	dB(A)
20:00 - 21:00	67.9	92.0	65.7	dB(A)
21:00 - 22:00	66.9	87.7	65.7	dB(A)
22:00 - 23:00	68.0	96.4	65.8	dB(A)
23:00 - 00:00	67.5	91.8	65.4	dB(A)
00:00 - 01:00	67.3	94.2	65.4	dB(A)
01:00 - 02:00	66.6	70.8	65.8	dB(A)
02:00 - 03:00	67.0	88.2	65.8	dB(A)
03:00 - 04:00	65.9	75.6	65.5	dB(A)
04:00 - 05:00	65.8	69.4	65.3	dB(A)
05:00 - 06:00	66.6	81.0	65.5	dB(A)
06:00 - 07:00	66.9	76.4	66.1	dB(A)
07:00 - 08:00	67.0	76.9	65.8	dB(A)
08:00 - 09:00	67.5	89.3	65.2	dB(A)
09:00 - 10:00	66.4	78.0	65.3	dB(A)
L_{eq} 24 hr.	66.8	-	-	dB(A)
$L_{dn\#}$	73.3	-	-	dB(A)
Maximum	-	96.4	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34686
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	11-12/09/2025 (L_{eq})	11-12/09/2025 (L_{max})	11-12/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	67.3	88.6	65.3	dB(A)
11:00 - 12:00	65.7	73.9	64.8	dB(A)
12:00 - 13:00	66.1	86.2	64.9	dB(A)
13:00 - 14:00	67.2	91.9	65.2	dB(A)
14:00 - 15:00	66.2	78.3	65.2	dB(A)
15:00 - 16:00	67.0	85.3	65.1	dB(A)
16:00 - 17:00	67.2	95.2	64.9	dB(A)
17:00 - 18:00	66.5	79.2	65.2	dB(A)
18:00 - 19:00	66.6	86.8	65.1	dB(A)
19:00 - 20:00	66.5	84.9	65.3	dB(A)
20:00 - 21:00	68.4	93.5	66.2	dB(A)
21:00 - 22:00	67.0	85.4	66.0	dB(A)
22:00 - 23:00	66.8	74.7	66.1	dB(A)
23:00 - 00:00	66.7	86.7	65.4	dB(A)
00:00 - 01:00	66.2	78.7	65.6	dB(A)
01:00 - 02:00	66.4	77.0	65.7	dB(A)
02:00 - 03:00	65.8	80.3	65.3	dB(A)
03:00 - 04:00	65.8	81.1	65.2	dB(A)
04:00 - 05:00	66.1	81.1	65.3	dB(A)
05:00 - 06:00	66.5	82.4	65.4	dB(A)
06:00 - 07:00	66.4	80.0	65.5	dB(A)
07:00 - 08:00	67.1	79.1	65.6	dB(A)
08:00 - 09:00	67.9	90.5	65.8	dB(A)
09:00 - 10:00	66.4	79.5	65.4	dB(A)
L_{eq} 24 hr.	66.7	-	-	dB(A)
$L_{dn\#}$	72.8	-	-	dB(A)
Maximum	-	95.2	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

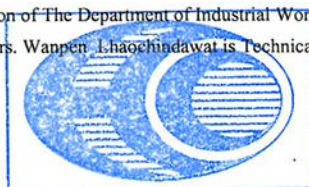
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34687
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	12-13/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	67.4	85.9	65.7	dB(A)
11:00 - 12:00	66.4	79.6	65.1	dB(A)
12:00 - 13:00	66.3	79.0	65.1	dB(A)
13:00 - 14:00	68.2	95.5	65.6	dB(A)
14:00 - 15:00	67.5	87.1	65.5	dB(A)
15:00 - 16:00	66.2	77.0	65.3	dB(A)
16:00 - 17:00	67.1	87.2	65.2	dB(A)
17:00 - 18:00	66.2	75.6	64.9	dB(A)
18:00 - 19:00	65.7	77.2	64.7	dB(A)
19:00 - 20:00	65.9	73.7	64.9	dB(A)
20:00 - 21:00	67.8	93.5	65.4	dB(A)
21:00 - 22:00	66.4	75.9	65.5	dB(A)
22:00 - 23:00	66.2	73.3	65.6	dB(A)
23:00 - 00:00	67.0	85.2	65.7	dB(A)
00:00 - 01:00	66.4	80.5	65.6	dB(A)
01:00 - 02:00	66.3	75.4	65.8	dB(A)
02:00 - 03:00	65.6	69.1	65.2	dB(A)
03:00 - 04:00	66.0	81.9	65.2	dB(A)
04:00 - 05:00	65.6	69.2	65.2	dB(A)
05:00 - 06:00	66.5	85.0	65.3	dB(A)
06:00 - 07:00	66.4	78.5	65.5	dB(A)
07:00 - 08:00	66.7	78.0	65.5	dB(A)
08:00 - 09:00	68.9	85.3	66.1	dB(A)
09:00 - 10:00	71.2	86.0	66.3	dB(A)
L_{eq} 24 hr.	67.0	-	-	dB(A)
$L_{dn\#}$	72.8	-	-	dB(A)
Maximum	-	95.5	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

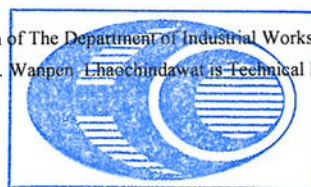
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั้วโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016#
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34688
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	13-14/09/2025 (L_{eq})	13-14/09/2025 (L_{max})	13-14/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	71.0	91.3	66.2	dB(A)
11:00 - 12:00	65.8	84.0	64.6	dB(A)
12:00 - 13:00	65.3	70.2	64.5	dB(A)
13:00 - 14:00	69.6	87.4	66.1	dB(A)
14:00 - 15:00	69.9	83.3	66.2	dB(A)
15:00 - 16:00	68.1	81.8	66.3	dB(A)
16:00 - 17:00	72.1	94.1	66.7	dB(A)
17:00 - 18:00	70.0	86.1	66.6	dB(A)
18:00 - 19:00	66.5	77.8	65.8	dB(A)
19:00 - 20:00	67.3	91.3	66.1	dB(A)
20:00 - 21:00	68.0	73.6	67.5	dB(A)
21:00 - 22:00	67.9	77.8	67.3	dB(A)
22:00 - 23:00	67.7	76.4	67.1	dB(A)
23:00 - 00:00	67.6	77.3	67.1	dB(A)
00:00 - 01:00	67.6	77.9	67.1	dB(A)
01:00 - 02:00	68.4	94.8	67.1	dB(A)
02:00 - 03:00	67.4	74.6	67.0	dB(A)
03:00 - 04:00	66.9	76.5	66.5	dB(A)
04:00 - 05:00	66.9	75.8	66.4	dB(A)
05:00 - 06:00	66.7	73.2	66.3	dB(A)
06:00 - 07:00	67.5	81.4	66.7	dB(A)
07:00 - 08:00	65.1	74.2	64.1	dB(A)
08:00 - 09:00	63.6	92.6	59.6	dB(A)
09:00 - 10:00	61.5	80.4	59.8	dB(A)
L_{eq} 24 hr.	68.0	-	-	dB(A)
$L_{dn\#}$	74.0	-	-	dB(A)
Maximum	-	94.8	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34689
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	14-15/09/2025 (L_{eq})	14-15/09/2025 (L_{max})	14-15/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	61.3	69.5	60.0	dB(A)
11:00 - 12:00	61.3	73.1	59.9	dB(A)
12:00 - 13:00	61.5	71.7	60.3	dB(A)
13:00 - 14:00	62.8	88.7	60.5	dB(A)
14:00 - 15:00	62.3	73.5	59.8	dB(A)
15:00 - 16:00	60.6	71.3	59.8	dB(A)
16:00 - 17:00	60.1	69.5	59.3	dB(A)
17:00 - 18:00	60.9	76.0	59.1	dB(A)
18:00 - 19:00	60.5	76.9	58.8	dB(A)
19:00 - 20:00	66.5	73.4	66.1	dB(A)
20:00 - 21:00	67.4	89.9	66.0	dB(A)
21:00 - 22:00	67.2	72.1	66.0	dB(A)
22:00 - 23:00	67.0	84.8	66.2	dB(A)
23:00 - 00:00	66.7	72.8	66.2	dB(A)
00:00 - 01:00	66.6	70.6	66.2	dB(A)
01:00 - 02:00	66.6	69.5	66.2	dB(A)
02:00 - 03:00	66.6	69.3	66.2	dB(A)
03:00 - 04:00	66.7	69.6	66.3	dB(A)
04:00 - 05:00	66.7	69.2	66.3	dB(A)
05:00 - 06:00	66.8	71.2	66.4	dB(A)
06:00 - 07:00	67.3	76.5	66.5	dB(A)
07:00 - 08:00	67.0	75.7	66.0	dB(A)
08:00 - 09:00	66.6	85.3	65.3	dB(A)
09:00 - 10:00	67.0	82.5	66.0	dB(A)
L_{eq} 24 hr.	65.5	-	-	dB(A)
$L_{dn\#}$	72.9	-	-	dB(A)
Maximum	-	89.9	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsonon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34690
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	15-16/09/2025 (L_{eq})	15-16/09/2025 (L_{max})	15-16/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	67.0	73.0	65.9	dB(A)
11:00 - 12:00	66.8	77.2	65.7	dB(A)
12:00 - 13:00	67.1	80.5	66.1	dB(A)
13:00 - 14:00	66.7	74.2	65.9	dB(A)
14:00 - 15:00	67.6	90.5	65.6	dB(A)
15:00 - 16:00	67.7	91.6	65.7	dB(A)
16:00 - 17:00	66.3	77.0	65.4	dB(A)
17:00 - 18:00	67.0	82.6	65.5	dB(A)
18:00 - 19:00	67.9	95.3	65.8	dB(A)
19:00 - 20:00	66.6	78.3	65.5	dB(A)
20:00 - 21:00	66.9	78.5	65.8	dB(A)
21:00 - 22:00	66.4	76.3	65.5	dB(A)
22:00 - 23:00	66.5	83.5	65.7	dB(A)
23:00 - 00:00	66.4	73.1	65.8	dB(A)
00:00 - 01:00	65.6	73.1	65.0	dB(A)
01:00 - 02:00	70.6	77.9	67.8	dB(A)
02:00 - 03:00	71.0	78.6	69.8	dB(A)
03:00 - 04:00	67.4	70.8	66.9	dB(A)
04:00 - 05:00	67.0	70.7	66.6	dB(A)
05:00 - 06:00	67.5	93.5	65.9	dB(A)
06:00 - 07:00	66.9	77.6	66.1	dB(A)
07:00 - 08:00	67.3	76.4	66.2	dB(A)
08:00 - 09:00	68.5	93.8	66.5	dB(A)
09:00 - 10:00	67.6	87.1	65.9	dB(A)
L_{eq} 24 hr.	67.5	-	-	dB(A)
$L_{dn\#}$	74.4	-	-	dB(A)
Maximum	-	95.3	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluenwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รังผึ้งโรงงานด้านทิศเหนือ (N1)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34691
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	16-17/09/2025 (L_{eq})	16-17/09/2025 (L_{max})	16-17/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	67.3	77.8	65.8	dB(A)
11:00 - 12:00	66.1	79.3	64.8	dB(A)
12:00 - 13:00	66.3	74.6	65.3	dB(A)
13:00 - 14:00	68.6	94.7	65.5	dB(A)
14:00 - 15:00	69.4	78.0	65.7	dB(A)
15:00 - 16:00	69.6	92.5	65.5	dB(A)
16:00 - 17:00	68.1	78.2	65.4	dB(A)
17:00 - 18:00	68.3	78.3	65.5	dB(A)
18:00 - 19:00	69.5	76.3	65.5	dB(A)
19:00 - 20:00	66.4	77.8	65.2	dB(A)
20:00 - 21:00	67.6	91.3	65.7	dB(A)
21:00 - 22:00	67.6	91.5	65.9	dB(A)
22:00 - 23:00	66.4	76.4	65.9	dB(A)
23:00 - 00:00	67.6	94.1	66.3	dB(A)
00:00 - 01:00	66.6	69.9	66.1	dB(A)
01:00 - 02:00	65.8	73.2	65.3	dB(A)
02:00 - 03:00	65.6	70.4	65.0	dB(A)
03:00 - 04:00	65.9	75.7	65.3	dB(A)
04:00 - 05:00	65.8	79.7	65.1	dB(A)
05:00 - 06:00	65.9	70.9	65.3	dB(A)
06:00 - 07:00	66.6	76.0	65.4	dB(A)
07:00 - 08:00	69.0	90.3	66.9	dB(A)
08:00 - 09:00	71.9	81.1	68.6	dB(A)
09:00 - 10:00	70.3	91.0	67.0	dB(A)
L_{eq} 24 hr.	67.9	-	-	dB(A)
$L_{dn\#}$	73.1	-	-	dB(A)
Maximum	-	94.7	-	dB(A)
Standard	$70^1, 70^2$	$115^1, 115^2$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
² Notification of Ministry of the Industry B.E. 2548 (2005)
³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluenwong)
** These Data are Non Laboratory Data



Approved By 
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED, TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

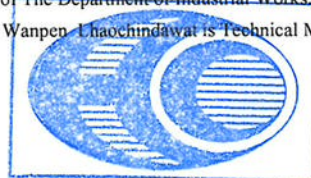
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั้วโรงงานด้านทิศตะวันออก (N2)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34692
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	10-11/09/2025 (L_{eq})	10-11/09/2025 (L_{max})	10-11/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	62.1	86.0	61.4	dB(A)
11:00 - 12:00	59.4	63.8	58.9	dB(A)
12:00 - 13:00	59.4	64.0	58.7	dB(A)
13:00 - 14:00	62.5	87.1	61.2	dB(A)
14:00 - 15:00	62.7	83.6	61.4	dB(A)
15:00 - 16:00	62.0	78.7	61.5	dB(A)
16:00 - 17:00	61.6	81.3	60.9	dB(A)
17:00 - 18:00	58.3	75.2	57.4	dB(A)
18:00 - 19:00	61.5	68.7	61.2	dB(A)
19:00 - 20:00	56.8	63.6	56.3	dB(A)
20:00 - 21:00	61.3	68.4	60.8	dB(A)
21:00 - 22:00	62.1	87.4	61.5	dB(A)
22:00 - 23:00	61.8	64.0	61.5	dB(A)
23:00 - 00:00	62.1	66.7	61.6	dB(A)
00:00 - 01:00	62.1	74.8	61.7	dB(A)
01:00 - 02:00	62.1	67.0	61.7	dB(A)
02:00 - 03:00	61.6	65.0	61.3	dB(A)
03:00 - 04:00	60.0	65.3	59.6	dB(A)
04:00 - 05:00	56.0	59.1	55.6	dB(A)
05:00 - 06:00	60.3	63.8	59.6	dB(A)
06:00 - 07:00	61.4	63.8	60.9	dB(A)
07:00 - 08:00	54.9	63.0	54.2	dB(A)
08:00 - 09:00	64.2	94.0	61.2	dB(A)
09:00 - 10:00	62.7	87.6	61.3	dB(A)
L_{eq} 24 hr.	61.3	-	-	dB(A)
$L_{dn\#}$	67.6	-	-	dB(A)
Maximum	-	94.0	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้ว โรงงานด้านทิศตะวันออก (N2)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34693
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	11-12/09/2025 (L_{eq})	11-12/09/2025 (L_{max})	11-12/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	62.1	72.2	61.5	dB(A)
11:00 - 12:00	62.3	87.1	59.2	dB(A)
12:00 - 13:00	58.8	66.0	57.9	dB(A)
13:00 - 14:00	62.4	78.5	61.3	dB(A)
14:00 - 15:00	62.3	80.8	61.3	dB(A)
15:00 - 16:00	62.9	87.5	61.4	dB(A)
16:00 - 17:00	59.5	77.6	57.4	dB(A)
17:00 - 18:00	57.5	72.8	56.1	dB(A)
18:00 - 19:00	61.1	88.4	59.3	dB(A)
19:00 - 20:00	55.9	65.7	55.5	dB(A)
20:00 - 21:00	59.8	67.9	59.4	dB(A)
21:00 - 22:00	62.0	81.4	61.6	dB(A)
22:00 - 23:00	61.8	71.0	61.5	dB(A)
23:00 - 00:00	61.7	72.8	61.4	dB(A)
00:00 - 01:00	61.8	70.2	61.5	dB(A)
01:00 - 02:00	61.8	79.2	61.4	dB(A)
02:00 - 03:00	61.5	67.2	61.2	dB(A)
03:00 - 04:00	61.4	65.5	61.0	dB(A)
04:00 - 05:00	61.1	63.5	60.7	dB(A)
05:00 - 06:00	61.2	64.8	60.8	dB(A)
06:00 - 07:00	61.6	80.2	61.0	dB(A)
07:00 - 08:00	57.9	82.1	56.5	dB(A)
08:00 - 09:00	60.2	83.3	58.2	dB(A)
09:00 - 10:00	62.8	80.1	61.5	dB(A)
L_{eq} 24 hr.	61.2	-	-	dB(A)
$L_{dn\#}$	67.9	-	-	dB(A)
Maximum	-	88.4	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory

^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997

¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)

¹² Notification of Ministry of the Industry B.E. 2548 (2005)

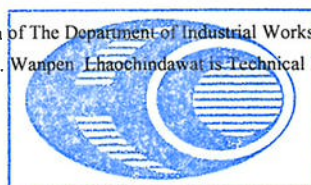
¹³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)

(Measurement By Mr. Seksan Pluemwong)

** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

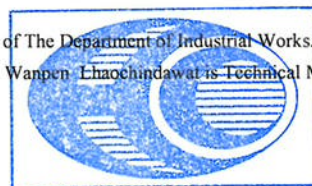
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันออก (N2)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34694
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	12-13/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	62.5	83.3	61.7	dB(A)
11:00 - 12:00	60.3	81.4	59.3	dB(A)
12:00 - 13:00	59.7	78.5	58.3	dB(A)
13:00 - 14:00	62.3	70.7	61.7	dB(A)
14:00 - 15:00	62.1	71.1	61.4	dB(A)
15:00 - 16:00	62.5	75.9	61.5	dB(A)
16:00 - 17:00	58.5	75.0	56.2	dB(A)
17:00 - 18:00	56.8	75.5	55.4	dB(A)
18:00 - 19:00	57.0	85.1	55.4	dB(A)
19:00 - 20:00	55.8	64.5	55.5	dB(A)
20:00 - 21:00	60.7	71.5	60.2	dB(A)
21:00 - 22:00	61.6	69.2	61.3	dB(A)
22:00 - 23:00	61.6	68.2	61.3	dB(A)
23:00 - 00:00	61.6	65.7	61.3	dB(A)
00:00 - 01:00	61.8	67.8	61.5	dB(A)
01:00 - 02:00	61.7	82.7	61.2	dB(A)
02:00 - 03:00	61.6	66.6	61.3	dB(A)
03:00 - 04:00	61.4	64.4	61.1	dB(A)
04:00 - 05:00	59.3	64.3	58.8	dB(A)
05:00 - 06:00	60.2	64.0	59.7	dB(A)
06:00 - 07:00	61.8	79.9	61.1	dB(A)
07:00 - 08:00	57.4	87.9	55.7	dB(A)
08:00 - 09:00	60.9	85.3	59.2	dB(A)
09:00 - 10:00	62.7	78.9	61.8	dB(A)
L_{eq} 24 hr.	60.9	-	-	dB(A)
$L_{dn\#}$	67.6	-	-	dB(A)
Maximum	-	87.9	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluenwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
 SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันออก (N2)**
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
 DETERMINATION METHOD : ISO 1996-1:2016##
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00741218 : Class 1

SAMPLE NO. : 34695
 MEASURING DATE : 13-14/09/2025
 RECEIVED DATE : 18/09/2025
 REPORTED DATE : 24/09/2025

TIME \ DATE	13-14/09/2025 (L_{eq})	13-14/09/2025 (L_{max})	13-14/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	62.5	80.3	61.6	dB(A)
11:00 - 12:00	62.4	92.3	60.3	dB(A)
12:00 - 13:00	58.9	74.1	58.1	dB(A)
13:00 - 14:00	62.2	69.0	61.7	dB(A)
14:00 - 15:00	63.8	90.7	62.0	dB(A)
15:00 - 16:00	63.1	79.7	62.3	dB(A)
16:00 - 17:00	62.3	69.5	61.7	dB(A)
17:00 - 18:00	60.3	83.5	59.4	dB(A)
18:00 - 19:00	62.4	90.0	61.7	dB(A)
19:00 - 20:00	57.0	64.8	56.6	dB(A)
20:00 - 21:00	61.6	68.4	61.1	dB(A)
21:00 - 22:00	61.9	72.6	61.5	dB(A)
22:00 - 23:00	61.9	68.2	61.5	dB(A)
23:00 - 00:00	61.9	66.8	61.5	dB(A)
00:00 - 01:00	62.0	68.2	61.7	dB(A)
01:00 - 02:00	62.1	84.9	61.6	dB(A)
02:00 - 03:00	61.9	65.9	61.6	dB(A)
03:00 - 04:00	59.9	63.9	59.5	dB(A)
04:00 - 05:00	56.9	60.9	56.6	dB(A)
05:00 - 06:00	60.4	63.9	59.9	dB(A)
06:00 - 07:00	61.9	78.1	61.3	dB(A)
07:00 - 08:00	57.2	87.7	55.2	dB(A)
08:00 - 09:00	58.8	82.0	57.2	dB(A)
09:00 - 10:00	60.9	67.6	60.4	dB(A)
L_{eq} 24 hr.	61.4	-	-	dB(A)
$L_{dn\#}$	67.7	-	-	dB(A)
Maximum	-	92.3	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
 ## ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
 * Parameter Outside The Scope of The Registration of The Department of Industrial Works
 (Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
 (Measurement By Mr. Seksan Pluemwong)
 ** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
 (MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

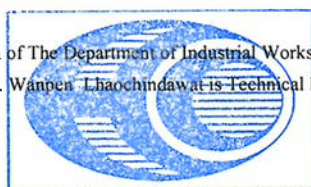
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันออก (N2)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

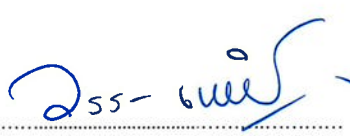
SAMPLE NO. : 34696
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	14-15/09/2025 (L_{eq})	14-15/09/2025 (L_{max})	14-15/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	60.8	67.8	60.4	dB(A)
11:00 - 12:00	56.6	66.6	56.2	dB(A)
12:00 - 13:00	56.3	63.0	55.8	dB(A)
13:00 - 14:00	62.2	82.8	61.4	dB(A)
14:00 - 15:00	62.1	68.1	61.7	dB(A)
15:00 - 16:00	62.2	69.4	61.8	dB(A)
16:00 - 17:00	61.5	68.1	60.9	dB(A)
17:00 - 18:00	59.7	86.3	58.8	dB(A)
18:00 - 19:00	62.3	86.7	61.7	dB(A)
19:00 - 20:00	55.9	63.4	55.4	dB(A)
20:00 - 21:00	58.5	64.9	57.9	dB(A)
21:00 - 22:00	61.7	66.4	61.4	dB(A)
22:00 - 23:00	61.5	64.3	61.0	dB(A)
23:00 - 00:00	61.4	66.3	61.0	dB(A)
00:00 - 01:00	61.4	66.6	60.9	dB(A)
01:00 - 02:00	61.1	78.7	60.6	dB(A)
02:00 - 03:00	60.9	63.2	60.5	dB(A)
03:00 - 04:00	59.6	63.8	59.0	dB(A)
04:00 - 05:00	55.3	59.7	54.8	dB(A)
05:00 - 06:00	60.4	66.7	59.9	dB(A)
06:00 - 07:00	61.5	80.3	60.8	dB(A)
07:00 - 08:00	57.7	67.9	56.9	dB(A)
08:00 - 09:00	63.2	95.0	57.1	dB(A)
09:00 - 10:00	63.2	80.4	62.0	dB(A)
L_{eq} 24 hr.	60.8	-	-	dB(A)
$L_{dn\#}$	67.1	-	-	dB(A)
Maximum	-	95.0	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By 
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันออก (N2)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34697
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	15-16/09/2025 (L_{eq})	15-16/09/2025 (L_{max})	15-16/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	63.7	86.1	61.9	dB(A)
11:00 - 12:00	62.7	94.3	60.7	dB(A)
12:00 - 13:00	61.7	90.8	60.3	dB(A)
13:00 - 14:00	62.9	76.5	62.3	dB(A)
14:00 - 15:00	62.6	71.9	62.1	dB(A)
15:00 - 16:00	63.3	90.9	61.8	dB(A)
16:00 - 17:00	65.8	99.5	61.4	dB(A)
17:00 - 18:00	60.1	71.3	59.1	dB(A)
18:00 - 19:00	62.2	82.8	61.6	dB(A)
19:00 - 20:00	60.6	76.7	60.1	dB(A)
20:00 - 21:00	59.7	66.4	59.0	dB(A)
21:00 - 22:00	63.3	94.5	61.9	dB(A)
22:00 - 23:00	62.1	67.2	61.8	dB(A)
23:00 - 00:00	62.0	70.7	61.7	dB(A)
00:00 - 01:00	62.2	78.1	61.8	dB(A)
01:00 - 02:00	65.7	80.9	63.6	dB(A)
02:00 - 03:00	66.0	81.2	65.0	dB(A)
03:00 - 04:00	63.7	67.4	63.4	dB(A)
04:00 - 05:00	62.4	67.4	61.9	dB(A)
05:00 - 06:00	62.0	71.0	61.5	dB(A)
06:00 - 07:00	62.6	86.2	61.8	dB(A)
07:00 - 08:00	57.6	67.6	56.7	dB(A)
08:00 - 09:00	62.9	79.1	61.6	dB(A)
09:00 - 10:00	65.1	96.5	62.0	dB(A)
L_{eq} 24 hr.	63.0	-	-	dB(A)
$L_{dn\#}$	69.8	-	-	dB(A)
Maximum	-	99.5	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory

^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997

¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)

¹² Notification of Ministry of the Industry B.E. 2548 (2005)

¹³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)

(Measurement By Mr. Seksan Pluemwong)

** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันออก (N2)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741218 : Class 1

SAMPLE NO. : 34698
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	16-17/09/2025 (L_{eq})	16-17/09/2025 (L_{max})	16-17/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ^{/3}	62.3	74.3	61.9	dB(A)
11:00 - 12:00	61.7	91.8	59.5	dB(A)
12:00 - 13:00	59.4	74.1	58.6	dB(A)
13:00 - 14:00	63.1	93.7	61.7	dB(A)
14:00 - 15:00	63.1	86.7	61.7	dB(A)
15:00 - 16:00	62.4	79.1	61.6	dB(A)
16:00 - 17:00	62.3	73.1	61.6	dB(A)
17:00 - 18:00	60.8	79.1	59.7	dB(A)
18:00 - 19:00	61.7	89.0	60.5	dB(A)
19:00 - 20:00	56.8	83.7	56.1	dB(A)
20:00 - 21:00	60.8	72.8	60.2	dB(A)
21:00 - 22:00	64.2	97.4	61.9	dB(A)
22:00 - 23:00	62.2	67.0	61.8	dB(A)
23:00 - 00:00	62.1	74.4	61.7	dB(A)
00:00 - 01:00	62.1	72.5	61.7	dB(A)
01:00 - 02:00	62.2	66.2	61.8	dB(A)
02:00 - 03:00	62.3	66.2	62.0	dB(A)
03:00 - 04:00	62.1	67.1	61.7	dB(A)
04:00 - 05:00	56.6	66.5	56.3	dB(A)
05:00 - 06:00	59.7	67.0	59.3	dB(A)
06:00 - 07:00	62.4	84.8	61.6	dB(A)
07:00 - 08:00	60.7	73.5	58.2	dB(A)
08:00 - 09:00	63.5	83.4	61.6	dB(A)
09:00 - 10:00	63.3	81.1	62.3	dB(A)
L_{eq} 24 hr.	61.9	-	-	dB(A)
$L_{dn\#}$	68.1	-	-	dB(A)
Maximum	-	97.4	-	dB(A)
Standard	$70^{/1}, 70^{/2}$	$115^{/1}, 115^{/2}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} # & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34699
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	10-11/09/2025 (L_{eq})	10-11/09/2025 (L_{max})	10-11/09/2025 (L_{90})#	UNIT
10:00 - 11:00 ¹³	61.5	80.1	56.5	dB(A)
11:00 - 12:00	61.0	75.5	55.8	dB(A)
12:00 - 13:00	60.8	81.4	55.7	dB(A)
13:00 - 14:00	59.8	71.8	55.7	dB(A)
14:00 - 15:00	60.1	73.7	56.1	dB(A)
15:00 - 16:00	60.6	77.9	56.4	dB(A)
16:00 - 17:00	60.8	73.1	56.3	dB(A)
17:00 - 18:00	64.0	80.8	59.2	dB(A)
18:00 - 19:00	60.8	75.9	56.7	dB(A)
19:00 - 20:00	62.7	78.2	58.1	dB(A)
20:00 - 21:00	62.8	79.9	58.6	dB(A)
21:00 - 22:00	59.3	78.1	55.7	dB(A)
22:00 - 23:00	58.8	71.6	56.8	dB(A)
23:00 - 00:00	58.5	71.9	55.8	dB(A)
00:00 - 01:00	57.8	78.1	54.2	dB(A)
01:00 - 02:00	60.0	73.2	57.0	dB(A)
02:00 - 03:00	57.4	68.1	54.7	dB(A)
03:00 - 04:00	56.6	70.1	54.2	dB(A)
04:00 - 05:00	56.2	68.7	53.8	dB(A)
05:00 - 06:00	59.9	80.1	54.1	dB(A)
06:00 - 07:00	61.0	75.1	55.5	dB(A)
07:00 - 08:00	64.8	80.1	59.3	dB(A)
08:00 - 09:00	61.4	81.1	56.0	dB(A)
09:00 - 10:00	60.5	80.8	55.6	dB(A)
L_{eq} 24 hr.	60.8	-	-	dB(A)
L_{dn} #	65.7	-	-	dB(A)
Maximum	-	81.4	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34700
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	11-12/09/2025 (L_{eq})	11-12/09/2025 (L_{max})	11-12/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	59.9	74.7	55.2	dB(A)
11:00 - 12:00	60.3	76.7	55.3	dB(A)
12:00 - 13:00	59.4	79.1	54.5	dB(A)
13:00 - 14:00	59.3	80.7	54.3	dB(A)
14:00 - 15:00	58.8	68.8	54.5	dB(A)
15:00 - 16:00	59.4	76.3	54.6	dB(A)
16:00 - 17:00	60.0	74.5	55.0	dB(A)
17:00 - 18:00	63.7	78.8	58.4	dB(A)
18:00 - 19:00	61.0	81.0	55.6	dB(A)
19:00 - 20:00	63.0	84.1	57.5	dB(A)
20:00 - 21:00	63.7	83.3	58.6	dB(A)
21:00 - 22:00	60.3	75.8	56.0	dB(A)
22:00 - 23:00	58.9	68.5	55.6	dB(A)
23:00 - 00:00	57.9	67.4	54.9	dB(A)
00:00 - 01:00	56.7	74.4	54.4	dB(A)
01:00 - 02:00	57.1	68.5	54.0	dB(A)
02:00 - 03:00	58.5	72.5	56.0	dB(A)
03:00 - 04:00	57.9	79.3	53.9	dB(A)
04:00 - 05:00	56.2	70.6	53.4	dB(A)
05:00 - 06:00	60.5	81.9	55.2	dB(A)
06:00 - 07:00	62.0	80.1	56.1	dB(A)
07:00 - 08:00	65.3	78.9	59.7	dB(A)
08:00 - 09:00	61.3	80.0	55.8	dB(A)
09:00 - 10:00	60.1	74.9	55.5	dB(A)
L_{eq} 24 hr.	60.7	-	-	dB(A)
$L_{dn\#}$	65.7	-	-	dB(A)
Maximum	-	84.1	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory

^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997

¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)

¹² Notification of Ministry of the Industry B.E. 2548 (2005)

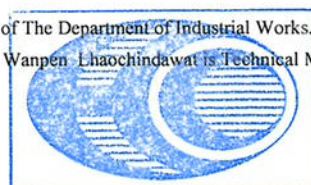
¹³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Ms. Thanatporn Klinsopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)

(Measurement By Mr. Seksan Pluemwong)

** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

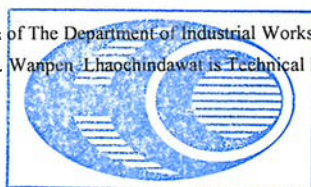
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั้วโรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34701
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	12-13/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ^{/3}	60.4	74.3	55.6	dB(A)
11:00 - 12:00	60.5	78.2	55.5	dB(A)
12:00 - 13:00	65.0	83.1	54.7	dB(A)
13:00 - 14:00	60.9	85.9	55.0	dB(A)
14:00 - 15:00	59.5	72.0	54.8	dB(A)
15:00 - 16:00	59.4	75.1	54.6	dB(A)
16:00 - 17:00	61.4	75.0	55.6	dB(A)
17:00 - 18:00	63.3	82.1	58.0	dB(A)
18:00 - 19:00	61.6	79.4	55.2	dB(A)
19:00 - 20:00	62.8	80.9	56.6	dB(A)
20:00 - 21:00	62.2	82.3	56.7	dB(A)
21:00 - 22:00	58.0	77.0	54.0	dB(A)
22:00 - 23:00	57.5	71.9	54.0	dB(A)
23:00 - 00:00	57.8	75.4	54.3	dB(A)
00:00 - 01:00	56.1	69.9	54.1	dB(A)
01:00 - 02:00	55.9	69.4	53.5	dB(A)
02:00 - 03:00	55.7	69.4	53.8	dB(A)
03:00 - 04:00	55.1	68.5	53.6	dB(A)
04:00 - 05:00	55.0	67.4	53.1	dB(A)
05:00 - 06:00	60.2	78.2	54.6	dB(A)
06:00 - 07:00	60.9	79.3	55.5	dB(A)
07:00 - 08:00	64.8	87.0	57.3	dB(A)
08:00 - 09:00	61.3	85.5	54.8	dB(A)
09:00 - 10:00	59.4	81.7	54.1	dB(A)
L_{eq} 24 hr.	60.7	-	-	dB(A)
$L_{dn\#}$	65.0	-	-	dB(A)
Maximum	-	87.0	-	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	115 ^{/1} , 115 ^{/2}	-	dB(A)

REMARK : # Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

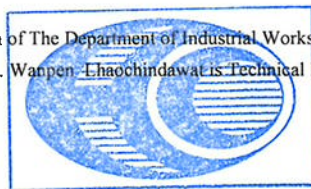
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้ว โรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34702
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	13-14/09/2025 (L_{eq})	13-14/09/2025 (L_{max})	13-14/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ^{/3}	60.1	79.3	54.5	dB(A)
11:00 - 12:00	59.7	82.6	54.1	dB(A)
12:00 - 13:00	58.7	75.4	53.0	dB(A)
13:00 - 14:00	59.2	85.4	53.5	dB(A)
14:00 - 15:00	59.4	75.5	54.0	dB(A)
15:00 - 16:00	60.9	79.2	56.4	dB(A)
16:00 - 17:00	60.4	71.8	55.7	dB(A)
17:00 - 18:00	62.5	79.1	57.9	dB(A)
18:00 - 19:00	58.4	75.3	55.0	dB(A)
19:00 - 20:00	61.3	73.3	57.0	dB(A)
20:00 - 21:00	60.7	80.1	56.8	dB(A)
21:00 - 22:00	56.8	69.1	54.8	dB(A)
22:00 - 23:00	56.2	66.9	54.6	dB(A)
23:00 - 00:00	55.8	68.4	54.4	dB(A)
00:00 - 01:00	55.9	75.8	53.9	dB(A)
01:00 - 02:00	55.3	68.5	54.0	dB(A)
02:00 - 03:00	55.0	67.6	54.0	dB(A)
03:00 - 04:00	54.7	66.5	53.6	dB(A)
04:00 - 05:00	54.1	66.0	53.1	dB(A)
05:00 - 06:00	57.5	68.8	54.0	dB(A)
06:00 - 07:00	59.3	82.6	54.7	dB(A)
07:00 - 08:00	61.3	78.5	54.5	dB(A)
08:00 - 09:00	64.5	82.2	54.0	dB(A)
09:00 - 10:00	65.6	78.9	56.4	dB(A)
L_{eq} 24 hr.	60.0	-	-	dB(A)
$L_{dn\#}$	63.8	-	-	dB(A)
Maximum	-	85.4	-	dB(A)
Standard	$70^{/1}, 70^{/2}$	$115^{/1}, 115^{/2}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsopon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

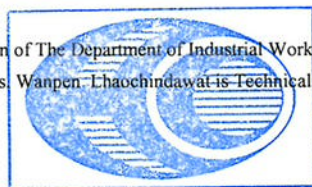
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั้วโรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34703
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	14-15/09/2025 (L_{eq})	14-15/09/2025 (L_{max})	14-15/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	56.4	73.4	53.1	dB(A)
11:00 - 12:00	57.0	77.0	53.1	dB(A)
12:00 - 13:00	58.1	75.3	53.4	dB(A)
13:00 - 14:00	57.6	79.3	53.5	dB(A)
14:00 - 15:00	56.2	72.8	53.7	dB(A)
15:00 - 16:00	57.0	78.0	53.7	dB(A)
16:00 - 17:00	57.0	75.5	54.0	dB(A)
17:00 - 18:00	60.4	78.6	55.4	dB(A)
18:00 - 19:00	58.3	78.7	53.9	dB(A)
19:00 - 20:00	57.6	71.5	54.6	dB(A)
20:00 - 21:00	58.5	79.2	54.2	dB(A)
21:00 - 22:00	55.0	68.6	53.9	dB(A)
22:00 - 23:00	57.0	74.1	54.2	dB(A)
23:00 - 00:00	56.2	79.7	54.2	dB(A)
00:00 - 01:00	54.5	65.0	53.7	dB(A)
01:00 - 02:00	54.7	69.4	53.9	dB(A)
02:00 - 03:00	54.7	66.1	53.6	dB(A)
03:00 - 04:00	53.8	64.9	53.1	dB(A)
04:00 - 05:00	54.6	69.3	53.2	dB(A)
05:00 - 06:00	56.4	70.1	54.0	dB(A)
06:00 - 07:00	60.7	77.8	55.4	dB(A)
07:00 - 08:00	64.1	80.4	58.1	dB(A)
08:00 - 09:00	60.7	83.2	55.2	dB(A)
09:00 - 10:00	59.2	72.9	54.8	dB(A)
L_{eq} 24 hr.	58.1	-	-	dB(A)
$L_{dn\#}$	63.3	-	-	dB(A)
Maximum	-	83.2	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั่วโรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34704
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	15-16/09/2025 (L_{eq})	15-16/09/2025 (L_{max})	15-16/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	59.7	73.5	54.7	dB(A)
11:00 - 12:00	62.2	87.4	56.3	dB(A)
12:00 - 13:00	60.9	73.3	56.8	dB(A)
13:00 - 14:00	61.3	72.2	57.1	dB(A)
14:00 - 15:00	61.8	79.5	57.8	dB(A)
15:00 - 16:00	59.8	72.8	55.3	dB(A)
16:00 - 17:00	60.5	77.2	55.2	dB(A)
17:00 - 18:00	64.1	81.9	58.6	dB(A)
18:00 - 19:00	63.2	86.0	57.1	dB(A)
19:00 - 20:00	63.4	81.7	57.9	dB(A)
20:00 - 21:00	62.7	79.7	58.4	dB(A)
21:00 - 22:00	58.4	73.0	55.1	dB(A)
22:00 - 23:00	56.4	68.5	54.2	dB(A)
23:00 - 00:00	56.6	70.5	54.2	dB(A)
00:00 - 01:00	56.0	73.8	53.9	dB(A)
01:00 - 02:00	68.1	76.4	63.9	dB(A)
02:00 - 03:00	68.3	80.1	66.4	dB(A)
03:00 - 04:00	59.1	70.5	57.6	dB(A)
04:00 - 05:00	59.4	70.0	57.3	dB(A)
05:00 - 06:00	60.2	78.8	55.1	dB(A)
06:00 - 07:00	61.4	74.3	56.0	dB(A)
07:00 - 08:00	64.8	82.6	59.4	dB(A)
08:00 - 09:00	61.6	81.4	55.6	dB(A)
09:00 - 10:00	59.9	79.7	54.8	dB(A)
L_{eq} 24 hr.	62.5	-	-	dB(A)
$L_{dn\#}$	69.4	-	-	dB(A)
Maximum	-	87.4	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

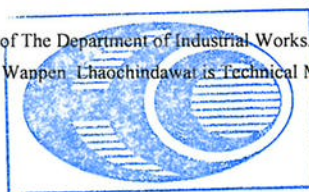
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั้วโรงงานด้านทิศตะวันตก (N3)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N G300957 : Class 2

SAMPLE NO. : 34705
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	16-17/09/2025 (L_{eq})	16-17/09/2025 (L_{max})	16-17/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	60.1	81.3	54.9	dB(A)
11:00 - 12:00	60.8	79.0	55.0	dB(A)
12:00 - 13:00	60.0	77.9	54.7	dB(A)
13:00 - 14:00	59.8	74.0	55.9	dB(A)
14:00 - 15:00	60.2	74.5	55.8	dB(A)
15:00 - 16:00	59.7	74.5	54.9	dB(A)
16:00 - 17:00	60.6	83.9	55.4	dB(A)
17:00 - 18:00	63.6	82.6	57.7	dB(A)
18:00 - 19:00	60.9	77.2	55.8	dB(A)
19:00 - 20:00	64.0	83.1	58.1	dB(A)
20:00 - 21:00	62.4	82.5	57.9	dB(A)
21:00 - 22:00	58.5	80.9	54.7	dB(A)
22:00 - 23:00	56.5	68.7	54.4	dB(A)
23:00 - 00:00	57.3	73.1	54.2	dB(A)
00:00 - 01:00	57.3	69.4	55.3	dB(A)
01:00 - 02:00	56.3	70.0	54.6	dB(A)
02:00 - 03:00	55.9	76.9	53.8	dB(A)
03:00 - 04:00	54.7	69.6	53.2	dB(A)
04:00 - 05:00	55.8	69.1	53.2	dB(A)
05:00 - 06:00	59.1	74.7	54.6	dB(A)
06:00 - 07:00	61.8	79.7	56.5	dB(A)
07:00 - 08:00	66.7	79.1	61.5	dB(A)
08:00 - 09:00	67.4	78.3	63.8	dB(A)
09:00 - 10:00	62.0	76.3	58.0	dB(A)
L_{eq} 24 hr.	61.4	-	-	dB(A)
$L_{dn\#}$	65.3	-	-	dB(A)
Maximum	-	83.9	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wapen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)
24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

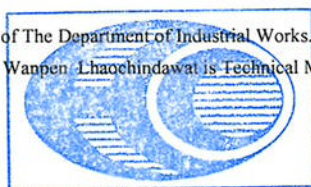
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34706
MEASURING DATE : 10-11/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	10-11/09/2025 (L_{eq})	10-11/09/2025 (L_{max})	10-11/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	58.4	69.1	55.9	dB(A)
11:00 - 12:00	58.9	76.7	55.1	dB(A)
12:00 - 13:00	57.1	72.4	54.6	dB(A)
13:00 - 14:00	64.0	96.5	55.1	dB(A)
14:00 - 15:00	59.1	76.0	55.4	dB(A)
15:00 - 16:00	60.1	80.2	55.9	dB(A)
16:00 - 17:00	58.9	78.5	55.7	dB(A)
17:00 - 18:00	59.0	75.7	56.3	dB(A)
18:00 - 19:00	57.8	71.5	53.8	dB(A)
19:00 - 20:00	57.9	71.9	53.5	dB(A)
20:00 - 21:00	66.5	100.2	53.8	dB(A)
21:00 - 22:00	55.9	74.5	52.9	dB(A)
22:00 - 23:00	54.8	68.5	53.0	dB(A)
23:00 - 00:00	53.9	63.2	52.7	dB(A)
00:00 - 01:00	66.2	99.7	52.7	dB(A)
01:00 - 02:00	56.3	68.2	54.7	dB(A)
02:00 - 03:00	54.8	71.8	53.4	dB(A)
03:00 - 04:00	54.4	65.4	53.2	dB(A)
04:00 - 05:00	51.5	63.4	50.5	dB(A)
05:00 - 06:00	55.5	72.7	51.9	dB(A)
06:00 - 07:00	58.5	74.4	54.7	dB(A)
07:00 - 08:00	60.0	73.9	55.3	dB(A)
08:00 - 09:00	61.6	82.4	56.2	dB(A)
09:00 - 10:00	64.0	88.3	56.9	dB(A)
L_{eq} 24 hr.	60.3	-	-	dB(A)
$L_{dn\#}$	65.7	-	-	dB(A)
Maximum	-	100.2	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

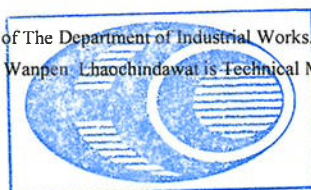
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , L_{90} # & L_{dn} #
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34707
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	11-12/09/2025 (L_{eq})	11-12/09/2025 (L_{max})	11-12/09/2025 (L_{90})#	UNIT
10:00 - 11:00 ^{1/3}	59.3	74.8	56.4	dB(A)
11:00 - 12:00	57.9	75.5	55.2	dB(A)
12:00 - 13:00	56.6	70.5	54.6	dB(A)
13:00 - 14:00	59.6	79.5	55.4	dB(A)
14:00 - 15:00	65.8	99.0	55.5	dB(A)
15:00 - 16:00	58.4	77.4	55.7	dB(A)
16:00 - 17:00	60.0	74.4	56.4	dB(A)
17:00 - 18:00	59.5	72.2	57.0	dB(A)
18:00 - 19:00	60.6	77.5	57.1	dB(A)
19:00 - 20:00	58.1	75.7	54.3	dB(A)
20:00 - 21:00	58.0	75.3	55.7	dB(A)
21:00 - 22:00	56.8	77.8	54.4	dB(A)
22:00 - 23:00	54.7	67.6	53.5	dB(A)
23:00 - 00:00	54.5	63.4	53.7	dB(A)
00:00 - 01:00	54.8	67.3	53.6	dB(A)
01:00 - 02:00	57.9	86.0	53.5	dB(A)
02:00 - 03:00	55.3	77.4	53.5	dB(A)
03:00 - 04:00	54.3	69.8	53.3	dB(A)
04:00 - 05:00	51.5	61.5	50.6	dB(A)
05:00 - 06:00	56.6	76.7	52.5	dB(A)
06:00 - 07:00	59.5	79.2	55.1	dB(A)
07:00 - 08:00	61.7	79.5	55.4	dB(A)
08:00 - 09:00	60.8	78.6	54.1	dB(A)
09:00 - 10:00	59.5	75.3	55.0	dB(A)
L_{eq} 24 hr.	59.1	-	-	dB(A)
L_{dn} #	63.3	-	-	dB(A)
Maximum	-	99.0	-	dB(A)
Standard	70 ^{1/1} , 70 ^{2/2}	115 ^{1/1} , 115 ^{2/2}	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{1/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Ms. Thanatporn Klinsonon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

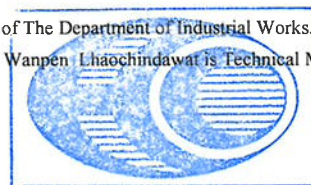
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34708
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	12-13/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ^{/3}	59.4	78.5	55.7	dB(A)
11:00 - 12:00	58.8	73.0	55.5	dB(A)
12:00 - 13:00	56.9	75.7	55.0	dB(A)
13:00 - 14:00	66.2	97.4	57.4	dB(A)
14:00 - 15:00	60.9	77.0	56.6	dB(A)
15:00 - 16:00	60.5	75.8	57.1	dB(A)
16:00 - 17:00	61.7	77.2	56.9	dB(A)
17:00 - 18:00	59.0	71.7	56.5	dB(A)
18:00 - 19:00	60.0	81.7	56.5	dB(A)
19:00 - 20:00	58.4	75.6	54.5	dB(A)
20:00 - 21:00	56.7	75.9	53.1	dB(A)
21:00 - 22:00	65.5	97.3	53.9	dB(A)
22:00 - 23:00	55.6	69.0	53.7	dB(A)
23:00 - 00:00	56.1	76.3	53.9	dB(A)
00:00 - 01:00	56.0	74.6	54.3	dB(A)
01:00 - 02:00	54.9	70.5	54.1	dB(A)
02:00 - 03:00	54.8	64.7	54.2	dB(A)
03:00 - 04:00	54.4	63.1	53.8	dB(A)
04:00 - 05:00	52.0	65.9	51.1	dB(A)
05:00 - 06:00	54.2	70.5	52.4	dB(A)
06:00 - 07:00	58.9	74.0	55.2	dB(A)
07:00 - 08:00	60.5	78.8	55.0	dB(A)
08:00 - 09:00	59.0	78.5	53.6	dB(A)
09:00 - 10:00	57.3	72.5	53.9	dB(A)
L_{eq} 24 hr.	59.7	-	-	dB(A)
$L_{dn\#}$	63.3	-	-	dB(A)
Maximum	-	97.4	-	dB(A)
Standard	$70^{/1}, 70^{/2}$	$115^{/1}, 115^{/2}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34709
MEASURING DATE : 13-14/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	13-14/09/2025 (L_{eq})	13-14/09/2025 (L_{max})	13-14/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	56.2	70.6	53.6	dB(A)
11:00 - 12:00	56.9	72.4	52.9	dB(A)
12:00 - 13:00	55.0	76.0	51.8	dB(A)
13:00 - 14:00	58.8	78.0	55.1	dB(A)
14:00 - 15:00	67.7	98.4	55.7	dB(A)
15:00 - 16:00	61.9	90.5	56.9	dB(A)
16:00 - 17:00	59.0	73.8	56.0	dB(A)
17:00 - 18:00	60.1	76.6	55.5	dB(A)
18:00 - 19:00	58.7	75.5	54.7	dB(A)
19:00 - 20:00	58.3	72.6	55.0	dB(A)
20:00 - 21:00	65.9	98.1	54.2	dB(A)
21:00 - 22:00	53.7	67.9	52.7	dB(A)
22:00 - 23:00	53.9	68.8	52.3	dB(A)
23:00 - 00:00	52.6	61.5	51.9	dB(A)
00:00 - 01:00	53.1	66.4	51.9	dB(A)
01:00 - 02:00	53.3	67.2	52.3	dB(A)
02:00 - 03:00	53.9	72.1	51.9	dB(A)
03:00 - 04:00	52.2	69.7	51.1	dB(A)
04:00 - 05:00	50.3	67.1	49.4	dB(A)
05:00 - 06:00	55.0	77.1	50.1	dB(A)
06:00 - 07:00	58.0	82.2	52.9	dB(A)
07:00 - 08:00	58.7	71.6	53.8	dB(A)
08:00 - 09:00	57.9	78.9	52.0	dB(A)
09:00 - 10:00	61.6	91.2	53.8	dB(A)
L_{eq} 24 hr.	59.6	-	-	dB(A)
$L_{dn\#}$	62.5	-	-	dB(A)
Maximum	-	98.4	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory

^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997

¹¹ Notification of The National Environmental Board Volume 15 B.E: 2540 (1997)

¹² Notification of Ministry of the Industry B.E. 2548 (2005)

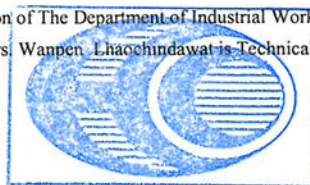
¹³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)

(Measurement By Mr. Seksan Pluemwong)

** These Data are Non Laboratory Data



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

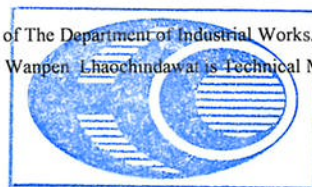
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : รีมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34710
MEASURING DATE : 14-15/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	14-15/09/2025 (L_{eq})	14-15/09/2025 (L_{max})	14-15/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	56.8	82.6	52.4	dB(A)
11:00 - 12:00	54.7	70.6	51.1	dB(A)
12:00 - 13:00	55.0	80.6	51.5	dB(A)
13:00 - 14:00	57.0	76.9	51.2	dB(A)
14:00 - 15:00	52.2	67.1	49.8	dB(A)
15:00 - 16:00	63.0	96.1	50.5	dB(A)
16:00 - 17:00	54.2	66.8	52.3	dB(A)
17:00 - 18:00	55.0	74.8	52.2	dB(A)
18:00 - 19:00	56.0	76.4	52.9	dB(A)
19:00 - 20:00	54.3	70.5	50.8	dB(A)
20:00 - 21:00	53.7	73.2	51.2	dB(A)
21:00 - 22:00	53.0	65.6	51.6	dB(A)
22:00 - 23:00	53.5	66.8	52.0	dB(A)
23:00 - 00:00	55.2	74.6	52.0	dB(A)
00:00 - 01:00	55.2	84.1	51.8	dB(A)
01:00 - 02:00	53.8	71.6	52.0	dB(A)
02:00 - 03:00	53.2	67.8	52.0	dB(A)
03:00 - 04:00	52.8	70.7	51.2	dB(A)
04:00 - 05:00	51.3	65.2	50.2	dB(A)
05:00 - 06:00	55.4	75.7	50.9	dB(A)
06:00 - 07:00	58.5	80.4	53.5	dB(A)
07:00 - 08:00	61.3	84.6	56.5	dB(A)
08:00 - 09:00	60.9	78.4	56.6	dB(A)
09:00 - 10:00	59.8	72.5	57.2	dB(A)
L_{eq} 24 hr.	56.9	-	-	dB(A)
$L_{dn\#}$	61.8	-	-	dB(A)
Maximum	-	96.1	-	dB(A)
Standard	$70^{11}, 70^{12}$	$115^{11}, 115^{12}$	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsonon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

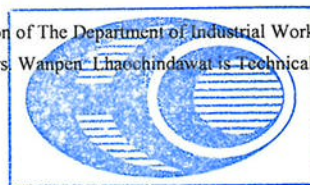
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34711
MEASURING DATE : 15-16/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	15-16/09/2025 (L_{eq})	15-16/09/2025 (L_{max})	15-16/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ¹³	58.8	75.3	56.1	dB(A)
11:00 - 12:00	61.4	85.9	56.5	dB(A)
12:00 - 13:00	59.3	74.7	56.8	dB(A)
13:00 - 14:00	60.9	78.3	55.7	dB(A)
14:00 - 15:00	59.2	78.4	55.1	dB(A)
15:00 - 16:00	59.6	82.8	54.5	dB(A)
16:00 - 17:00	66.1	94.1	54.4	dB(A)
17:00 - 18:00	58.9	77.9	52.8	dB(A)
18:00 - 19:00	59.6	78.4	54.2	dB(A)
19:00 - 20:00	57.8	69.9	53.9	dB(A)
20:00 - 21:00	56.9	71.7	54.2	dB(A)
21:00 - 22:00	56.6	75.1	53.9	dB(A)
22:00 - 23:00	54.6	66.9	53.1	dB(A)
23:00 - 00:00	53.9	69.5	52.8	dB(A)
00:00 - 01:00	66.0	99.6	52.7	dB(A)
01:00 - 02:00	64.7	76.6	59.1	dB(A)
02:00 - 03:00	66.2	77.2	64.2	dB(A)
03:00 - 04:00	55.5	68.7	54.4	dB(A)
04:00 - 05:00	56.4	67.2	55.0	dB(A)
05:00 - 06:00	66.2	99.5	52.1	dB(A)
06:00 - 07:00	58.9	80.3	54.0	dB(A)
07:00 - 08:00	62.1	83.6	57.4	dB(A)
08:00 - 09:00	60.9	78.3	57.4	dB(A)
09:00 - 10:00	61.2	77.5	56.9	dB(A)
L_{eq} 24 hr.	61.6	-	-	dB(A)
$L_{dn\#}$	69.0	-	-	dB(A)
Maximum	-	99.6	-	dB(A)
Standard	70 ¹¹ , 70 ¹²	115 ¹¹ , 115 ¹²	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
¹¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
¹² Notification of Ministry of the Industry B.E. 2548 (2005)
¹³ Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsonon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

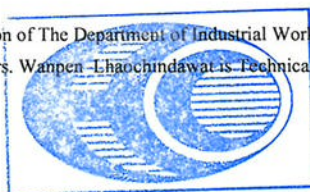
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.**
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230**
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.**
SAMPLE POINT : ริมรั้วโรงงานด้านทิศใต้ (N4)**
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., L_{max} , $L_{90\#}$ & $L_{dn\#}$
DETERMINATION METHOD : ISO 1996-1:2016##
INSTRUMENT : Integrated Sound Level Meter
S/N 00741219 : Class 1

SAMPLE NO. : 34712
MEASURING DATE : 16-17/09/2025
RECEIVED DATE : 18/09/2025
REPORTED DATE : 24/09/2025

TIME \ DATE	16-17/09/2025 (L_{eq})	16-17/09/2025 (L_{max})	16-17/09/2025 ($L_{90\#}$)	UNIT
10:00 - 11:00 ^{/3}	59.9	77.0	56.1	dB(A)
11:00 - 12:00	58.4	76.6	55.6	dB(A)
12:00 - 13:00	57.1	73.0	55.1	dB(A)
13:00 - 14:00	58.1	76.9	55.6	dB(A)
14:00 - 15:00	60.3	78.3	56.2	dB(A)
15:00 - 16:00	68.9	101.4	56.3	dB(A)
16:00 - 17:00	60.0	76.4	56.4	dB(A)
17:00 - 18:00	60.8	79.9	56.6	dB(A)
18:00 - 19:00	60.1	79.2	55.3	dB(A)
19:00 - 20:00	57.8	73.6	53.9	dB(A)
20:00 - 21:00	56.9	77.0	53.8	dB(A)
21:00 - 22:00	56.6	72.6	54.0	dB(A)
22:00 - 23:00	55.8	78.8	53.4	dB(A)
23:00 - 00:00	55.2	72.2	54.0	dB(A)
00:00 - 01:00	55.7	71.1	53.8	dB(A)
01:00 - 02:00	66.2	97.5	53.8	dB(A)
02:00 - 03:00	54.9	69.7	53.5	dB(A)
03:00 - 04:00	56.0	82.6	53.4	dB(A)
04:00 - 05:00	51.8	62.1	50.7	dB(A)
05:00 - 06:00	56.8	75.0	52.8	dB(A)
06:00 - 07:00	58.6	74.4	54.4	dB(A)
07:00 - 08:00	63.8	77.0	59.3	dB(A)
08:00 - 09:00	63.8	80.0	60.7	dB(A)
09:00 - 10:00	57.8	70.6	54.2	dB(A)
L_{eq} 24 hr.	60.8	-	-	dB(A)
$L_{dn\#}$	66.0	-	-	dB(A)
Maximum	-	101.4	-	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	115 ^{/1} , 115 ^{/2}	-	dB(A)

REMARK : [#] Test Report/Sampling marked 'Not TISI Accredited' in this report are not included in the TISI Accreditation Schedule for our laboratory
^{##} ISO 1996-1:2016, Notification of The Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Level 24-Hour Average and Maximum Noise Level From Factory B.E. 2567 (2024), Dated February 21, 2024, Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on The General Noise Level Standards, Dated April 3, 1997, Notification of The Pollution Control Department on The Calculation of The Noise Level, Dated November 25, 1997
^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)
^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)
^{/3} Start Time
* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Ms. Thanatporn Klinsoon is Section Head, Mrs. Wanpen Lhaochindawat is Technical Management)
(Measurement By Mr. Seksan Pluemwong)
** These Data are Non Laboratory Data



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6807347

Report No : 6807-1365

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68071217

Sample Name : น้ำทิ้งจากห้องน้ำ-ห้องส้วม **

Sampling Date : 10/07/2025 **

Sampling By : ETC **

Sampling Time : 10:10 AM **

Sampling Method : Grab **

Received Date : 11/07/2025

Tested Date : 11/07/2025 - 18/07/2025

Reported Date : 21/07/2025

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	59.9	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	177	≤750
Oil and Grease *	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	3.6	≤10
pH (on site) *		Electrometric Method	7.8	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	32	≤45
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	368	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	22	≤200

Physical Apperance : 1. Sample : yellow , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. # = ISO/IEC 17025:2017 Accredited by DSS, SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

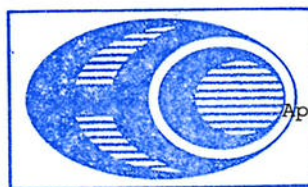
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ท-0017) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
21/07/2025



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
21/07/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6808258

Report No : 6808-1221

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68080793

Sample Name : น้ำทิ้งจากห้องน้ำ-ห้องส้วม **

Sampling Date : 08/08/2025 **

Sampling By : ETC **

Sampling Time : 12:45 PM **

Sampling Method : Grab **

Received Date : 09/08/2025

Tested Date : 09/08/2025 - 20/08/2025

Reported Date : 22/08/2025

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	11.4	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	172	≤750
Oil and Grease *	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.5	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	31	≤45
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	2,636	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200

Physical Apperance : 1. Sample : yellow , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. # = ISO/IEC 17025:2017 Accredited by DSS, SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

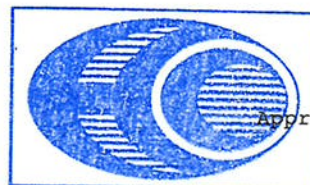
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwan (จ-003-ค-0016) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ค-0007)
22/08/2025



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ค-0005)
22/08/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6809367

Report No : 6809-2021

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68091227

Sample Name : น้ำทิ้งจากห้องน้ำ-ห้องส้วม **

Sampling Date : 11/09/2025 **

Sampling By : ETC **

Sampling Time : 12:05 PM **

Sampling Method : Grab **

Received Date : 12/09/2025

Tested Date : 12/09/2025 - 19/09/2025

Reported Date : 29/09/2025

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	62.1	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	132	≤750
Oil and Grease @	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	6.5	≤10
pH (on site) *		Electrometric Method	7.3	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	31	≤45
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	676	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	15	≤200

Physical Apperance : 1. Sample : Wastewater (yellow, lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwan (จ-003-ท-0016) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

29/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

29/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6810480, W6811390

Report No : 6810-2017-1, 6811-1489

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68101536, W68111218

Sample Name : น้ำทิ้งจากห้องน้ำ-ห้องส้วม **

Sampling Date : 16/10/2025, 14/11/2025 **

Sampling By : ETC **

Sampling Time : 10:10 AM, 11:15 AM **

Sampling Method : Grab **

Received Date : 17/10/2025, 15/11/2025

Tested Date : 17/10/2025 - 29/10/2025

Reported Date : 25/11/2025

Parameter	Unit	Method	Result	Standard/ ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	75.9	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	240	≤750
Oil and Grease @/2	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	3.5	≤10
pH (on site) *		Electrometric Method	7.0	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	30	≤45
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	350	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	20	≤200

Physical Apperance : 1. Sample : Wastewater (yellow, lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. /2 Sample No. W68111218 : Sampling Date 14/11/2025 (11:15 AM) : Tested Date 15/11/2025 – 21/11/2025

4. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

5. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ค-0036) *

6. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

25/11/2025

SUPPLEMENT TO TEST REPORT NO. 6810-2017



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

25/11/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6811398

Report No : 6811-1791

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68111228

Sample Name : น้ำทิ้งจากห้องน้ำ-ห้องส้วม **

Sampling Date : 14/11/2025 **

Sampling By : ETC **

Sampling Time : 11:20 AM **

Sampling Method : Grab **

Received Date : 15/11/2025

Tested Date : 17/11/2025 - 26/11/2025

Reported Date : 28/11/2025

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	30.0	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	92	≤750
Oil and Grease @	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	4.4	≤10
pH (on site) *		Electrometric Method	7.1	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	32	≤45
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	418	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	26	≤200

Physical Apperance : 1. Sample : Wastewater (yellow, lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ค-0031) *

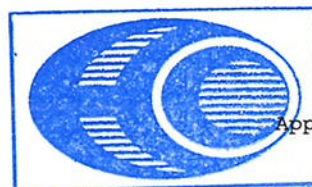
5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

28/11/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

28/11/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6812388, W6901345
Report No : 6812-1755-1, 6901-1470

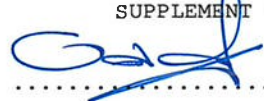
Customer : Siam Poongsan Metal Co.,Ltd. **
Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tung Sukla, A. Sriracha, Chonburi 20230 **
Sampling Source : Siam Poongsan Metal Co.,Ltd. **
Sample Name : น้ำทิ้งจากห้องน้ำ-ห้องส้วม **
Sampling By : ETC **
Sampling Method : Grab **
Tested Date : 15/12/2025 - 24/12/2025

Sample No : W 68121201, W69011128
Sampling Date : 12/12/2025, 16/01/2026 **
Sampling Time : 9:10 AM, 11:30 AM **
Received Date : 13/12/2025 17/01/2026
Reported Date : 24/01/2026

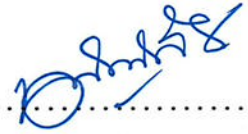
Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand #	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	122	≤500
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	291	≤750
Oil and Grease @/2	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	6.5	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	28	≤45
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	380	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	101	≤200

Physical Apperance : 1. Sample : Wastewater (yellow, turbid)
2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

- Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)
2. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,
SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.
3. /2 Sample No. W69011128 : Sampling Date 16/01/2026 (11:30 AM) : Tested Date 17/01/2026 – 23/01/2026
4. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.
5. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ก-0036) *
6. ** = These data are non laboratory data.

Examined By : 
(Miss Apiradee Chuen-arom)
(จ-003-ก-0007)
24/01/2026



Approved By : 
(Miss Nunnaphat Bakhuntod)
(จ-003-ก-0005)
24/01/2026

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6807347

Report No : 6807-1366

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68071218

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 10/07/2025 **

Sampling By : ETC **

Sampling Time : 10:00 AM **

Sampling Method : Grab **

Received Date : 11/07/2025

Tested Date : 11/07/2025 - 18/07/2025

Reported Date : 21/07/2025

Parameter	Unit	Method	Result	Standard ¹
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	< 40	≤ 750
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.73	≤ 2
Nickel *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤ 1
Oil and Grease *	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤ 10
pH (on site) *		Electrometric Method	7.0	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	33	≤ 45

Physical Appearance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. # = ISO/IEC 17025:2017 Accredited by DSS, SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

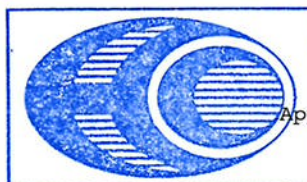
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ท-0017) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
21/07/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
21/07/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6807347

Report No : 6807-1366

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68071218

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 10/07/2025 **

Sampling By : ETC **

Sampling Time : 10:00 AM **

Sampling Method : Grab **

Received Date : 11/07/2025

Tested Date : 11/07/2025 - 18/07/2025

Reported Date : 21/07/2025

Parameter	Unit	Method	Result	Standard/ ¹
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	2,504	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc *	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.55	≤5

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. # = ISO/IEC 17025:2017 Accredited by DSS, SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

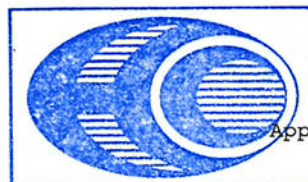
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Parkpoom Buasawad (จ-003-ท-0017) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
21/07/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
21/07/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6808258

Report No : 6808-1222

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68080794

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 08/08/2025 **

Sampling By : ETC **

Sampling Time : 11:50 AM **

Sampling Method : Grab **

Received Date : 09/08/2025

Tested Date : 09/08/2025 - 20/08/2025

Reported Date : 22/08/2025

Parameter	Unit	Method	Result	Standard ¹
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	< 40	≤750
Copper *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.53	≤2
Nickel *	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease *	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.5	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	30	≤45

Physical Appearance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, G 1.0 L]

Remark : 1. /I Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. # = ISO/IEC 17025:2017 Accredited by DSS, SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwuan (๖-๐๐3-๓-๐๐16) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(๖-๐๐3-๓-๐๐๐7)
22/08/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(๖-๐๐3-๓-๐๐๐5)
22/08/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6808258

Report No : 6808-1222

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68080794

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 08/08/2025 **

Sampling By : ETC **

Sampling Time : 11:50 AM **

Sampling Method : Grab **

Received Date : 09/08/2025

Tested Date : 09/08/2025 - 20/08/2025

Reported Date : 22/08/2025

Parameter	Unit	Method	Result	Standard ¹
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	1,672	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc *	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.36	≤5

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. # = ISO/IEC 17025:2017 Accredited by DSS, SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

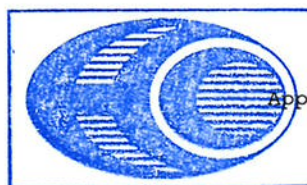
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwuan (ว-003-ท-0016) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(ว-003-ท-0007)
22/08/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(ว-003-ท-0005)
22/08/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6809367

Report No : 6809-2020

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68091226

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 11/09/2025 **

Sampling By : ETC **

Sampling Time : 12:00 PM **

Sampling Method : Grab **

Received Date : 12/09/2025

Tested Date : 12/09/2025 - 19/09/2025

Reported Date : 29/09/2025

Parameter	Unit	Method	Result	Standard ¹
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	56	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.70	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.6	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	28	≤45

Physical Appearance : 1. Sample : Wastewater (yellow, lightly SS)

2. Container : Normal [PE 0.5 L (3 Bottle), PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

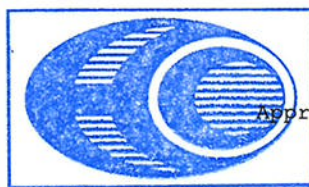
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwan (ว-003-ค-0016) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(ว-003-ค-0007)
29/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(ว-003-ค-0005)
29/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6809367

Report No : 6809-2020

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68091226

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 11/09/2025 **

Sampling By : ETC **

Sampling Time : 12:00 PM **

Sampling Method : Grab **

Received Date : 12/09/2025

Tested Date : 12/09/2025 - 19/09/2025

Reported Date : 29/09/2025

Parameter	Unit	Method	Result	Standard/ ¹
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	1,794	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	5	≤200
Zinc @	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.74	≤5

Physical Apperance : 1. Sample : Wastewater (yellow , lightly SS)

2. Container : Normal [PE 0.5 L (3 Bottle), PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI, # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

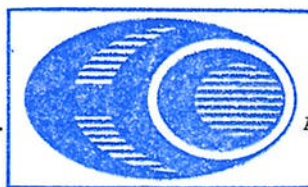
3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Songpon Phiwan (จ-003-ท-0016) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
29/09/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
29/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6810480

Report No : 6810-2018

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68101537

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 16/10/2025 **

Sampling By : ETC **

Sampling Time : 10:20 AM **

Sampling Method : Grab **

Received Date : 17/10/2025

Tested Date : 17/10/2025 - 29/10/2025

Reported Date : 31/10/2025

Parameter	Unit	Method	Result	Standard ¹
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	54	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	1.02	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	6.7	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	30	≤45

Physical Appearance : 1. Sample : Wastewater (yellowish, lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ท-0036) *

5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

31/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

31/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6810480

Report No : 6810-2018

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68101537

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 16/10/2025 **

Sampling By : ETC **

Sampling Time : 10:20 AM **

Sampling Method : Grab **

Received Date : 17/10/2025

Tested Date : 17/10/2025 - 29/10/2025

Reported Date : 31/10/2025

Parameter	Unit	Method	Result	Standard ¹
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	1,808	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc @	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.60	≤5

Physical Apperance : 1. Sample : Wastewater (yellowish, lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pompinan Viriyakusolkul (จ-003-ค-0036) *

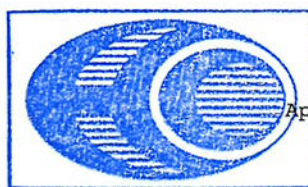
5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

31/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

31/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6811398

Report No : 6811-1792

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68111229

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 14/11/2025 **

Sampling By : ETC **

Sampling Time : 11:05 AM **

Sampling Method : Grab **

Received Date : 15/11/2025

Tested Date : 17/11/2025 - 26/11/2025

Reported Date : 28/11/2025

Parameter	Unit	Method	Result	Standard ¹
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	< 40	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.41	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	7.3	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	32	≤45

Physical Apperance : 1. Sample : Wastewater (lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ท-0031) *

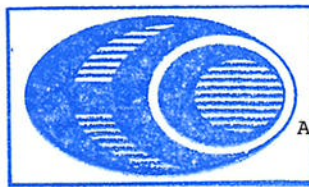
5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

28/11/2025




บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

28/11/2025



REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6811398

Report No : 6811-1792

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68111229

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 14/11/2025 **

Sampling By : ETC **

Sampling Time : 11:05 AM **

Sampling Method : Grab **

Received Date : 15/11/2025

Tested Date : 17/11/2025 - 26/11/2025

Reported Date : 28/11/2025

Parameter	Unit	Method	Result	Standard ¹
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	668	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.40	≤5

Physical Apperance : 1. Sample : Wastewater (lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Miss Nunnaphat Bakhuntod is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Mr. Supharerk Phatklang (จ-003-ค-0031) *

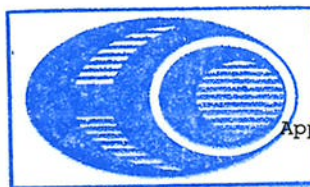
5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

28/11/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

28/11/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6812388

Report No : 6812-1756

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68121202

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 12/12/2025 **

Sampling By : ETC **

Sampling Time : 9:20 AM **

Sampling Method : Grab **

Received Date : 13/12/2025

Tested Date : 15/12/2025 - 24/12/2025

Reported Date : 26/12/2025

Parameter	Unit	Method	Result	Standard ¹
Chemical Oxygen Demand #	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	< 40	≤750
Copper @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.45	≤2
Nickel @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease @	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site) *		Electrometric Method	6.6	5.5-9.0
Temperature *	°C	Laboratory and Field Method (SM:2550 B)	29	≤45

Physical Appearance : 1. Sample : Wastewater (lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Mr. Kawee Suthasub is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ท-0036) *

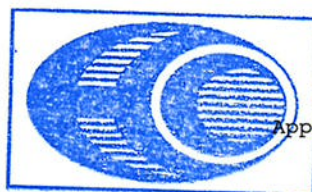
5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

26/12/2025



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Mr. Kawee Suthasub)

(จ-003-ท-0004)

26/12/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Test Report

Request No : W6812388

Report No : 6812-1756

Customer : Siam Poongsan Metal Co.,Ltd. **

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230 **

Sampling Source : Siam Poongsan Metal Co.,Ltd. **

Sample No : W 68121202

Sample Name : น้ำเสียอุตสาหกรรมหลังการบำบัด (Effluent) **

Sampling Date : 12/12/2025 **

Sampling By : ETC **

Sampling Time : 9:20 AM **

Sampling Method : Grab **

Received Date : 13/12/2025

Tested Date : 15/12/2025 - 24/12/2025

Reported Date : 26/12/2025

Parameter	Unit	Method	Result	Standard ¹
Total Dissolved Solids #	mg/L	Dried at 180 degree celsius (SM:2540C)	1,676	≤3000
Total Suspended Solids #	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc @	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.53	≤5

Physical Apperance : 1. Sample : Wastewater (lightly SS)

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. @ = ISO/IEC 17025:2017 Accredited by TISI., # = ISO/IEC 17025:2017 Accredited by DSS,

SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Miss Apiradee Chuen-arom is Section Head / Mr. Kawee Suthasub is Technical Management.

4. * = Test Report/Sampling marked Not Accredited, Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ก-0036) *

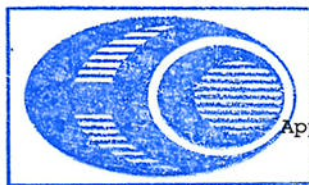
5. ** = These data are non laboratory data.

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

26/12/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Mr. Kawee Suthasub)

(จ-003-ก-0004)

26/12/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungasukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณ Melting (NN1)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322753 : Class 2

SAMPLE NO. : 33898
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	UNIT
09:10 - 10:10 ^{/4}	82.2	100.2	dB(A)
10:10 - 11:10	82.7	99.3	dB(A)
11:10 - 12:10	79.9	94.4	dB(A)
12:10 - 13:10	79.8	95.5	dB(A)
13:10 - 14:10	82.0	102.1	dB(A)
14:10 - 15:10	83.5	99.1	dB(A)
15:10 - 16:10	79.2	93.1	dB(A)
16:10 - 17:10	78.7	87.5	dB(A)
17:10 - 18:10	83.2	99.0	dB(A)
18:10 - 19:10	79.3	89.5	dB(A)
19:10 - 20:10	79.2	92.7	dB(A)
20:10 - 21:10	79.6	89.4	dB(A)
21:10 - 22:10	80.2	95.4	dB(A)
22:10 - 23:10	79.0	89.5	dB(A)
23:10 - 00:10	79.5	92.4	dB(A)
00:10 - 01:10	79.8	94.0	dB(A)
01:10 - 02:10	78.6	90.8	dB(A)
02:10 - 03:10	78.3	91.6	dB(A)
03:10 - 04:10	80.2	87.8	dB(A)
04:10 - 05:10	79.4	91.7	dB(A)
05:10 - 06:10	80.4	100.1	dB(A)
06:10 - 07:10	79.2	93.4	dB(A)
07:10 - 08:10	80.0	93.2	dB(A)
08:10 - 09:10	80.0	90.8	dB(A)
L_{eq} 24 hr.	80.4	-	dB(A)
Maximum	-	102.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:10 - 17:10 น. = 81	17:10 - 01:10 น. = 80	01:10 - 09:10 น. = 79
L_{eq} 8 hr. (TWA) ^{**/2}	09:10 - 17:10 น. = 81	17:10 - 01:10 น. = 80	01:10 - 09:10 น. = 79
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}		dB(A)
Maximum	09:10 - 17:10 น. = 102.1	17:10 - 01:10 น. = 99	01:10 - 09:10 น. = 100.1
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}		dB(A)

REMARK : 1. ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)

2. ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

3. ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)

4. ^{/4} Start Time

5. * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

6. ** Based on Criteria 90 dB(A); 5 dB Exchange Rate

7. Measurement By Ms. Duangchai Yaemprakhon



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4089

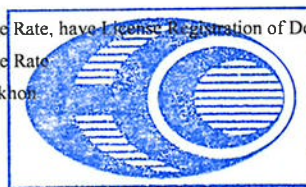
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณ Casting (NN2)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322744 : Class 2

SAMPLE NO. : 33897
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	11-12/09/2025 (L _{eq})	11-12/09/2025 (L _{max})	UNIT	
09:15 - 10:15 ^{/4}	80.8	89.3	dB(A)	
10:15 - 11:15	80.8	89.1	dB(A)	
11:15 - 12:15	80.4	87.6	dB(A)	
12:15 - 13:15	80.4	89.0	dB(A)	
13:15 - 14:15	81.1	92.3	dB(A)	
14:15 - 15:15	80.4	90.4	dB(A)	
15:15 - 16:15	79.1	89.8	dB(A)	
16:15 - 17:15	79.1	83.0	dB(A)	
17:15 - 18:15	79.2	87.1	dB(A)	
18:15 - 19:15	80.0	99.3	dB(A)	
19:15 - 20:15	79.5	88.8	dB(A)	
20:15 - 21:15	86.6	101.2	dB(A)	
21:15 - 22:15	87.5	96.0	dB(A)	
22:15 - 23:15	83.9	110.6	dB(A)	
23:15 - 00:15	80.4	84.0	dB(A)	
00:15 - 01:15	80.7	87.5	dB(A)	
01:15 - 02:15	80.7	91.8	dB(A)	
02:15 - 03:15	80.1	84.1	dB(A)	
03:15 - 04:15	80.2	89.1	dB(A)	
04:15 - 05:15	80.0	85.0	dB(A)	
05:15 - 06:15	80.0	84.1	dB(A)	
06:15 - 07:15	80.1	84.4	dB(A)	
07:15 - 08:15	80.5	92.4	dB(A)	
08:15 - 09:15	81.7	91.9	dB(A)	
L _{eq} 24 hr.	81.7	-	dB(A)	
Maximum	-	110.6	dB(A)	
L _{eq} 8 hr. (TWA) ^{*/1}	09:15 - 17:15 น. = 80	17:15 - 01:15 น. = 83	01:15 - 09:15 น. = 80	dB(A)
L _{eq} 8 hr. (TWA) ^{**/.2}	09:15 - 17:15 น. = 80	17:15 - 01:15 น. = 82	01:15 - 09:15 น. = 80	dB(A)
Standard L _{eq} 8 hr.	85 ^{/1} , 90 ^{/2}			dB(A)
Maximum	09:15 - 17:15 น. = 92.3	17:15 - 01:15 น. = 110.6	01:15 - 09:15 น. = 92.4	dB(A)
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}			dB(A)

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Ms. Duangchai Yaemprakhon



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4088

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณ RM01 (MC#9) (NN3)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322757 : Class 2

SAMPLE NO. : 33896
MEASURING DATE : 11-12/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	11-12/09/2025 (L_{eq})	11-12/09/2025 (L_{max})	UNIT
09:20 - 10:20 ^{/4}	80.2	91.1	dB(A)
10:20 - 11:20	78.3	93.3	dB(A)
11:20 - 12:20	79.0	90.7	dB(A)
12:20 - 13:20	79.3	91.5	dB(A)
13:20 - 14:20	79.6	93.9	dB(A)
14:20 - 15:20	80.1	92.2	dB(A)
15:20 - 16:20	80.5	92.4	dB(A)
16:20 - 17:20	78.9	91.6	dB(A)
17:20 - 18:20	79.9	90.3	dB(A)
18:20 - 19:20	79.0	88.7	dB(A)
19:20 - 20:20	80.2	90.3	dB(A)
20:20 - 21:20	81.7	90.5	dB(A)
21:20 - 22:20	81.6	92.6	dB(A)
22:20 - 23:20	80.9	89.8	dB(A)
23:20 - 00:20	81.4	97.6	dB(A)
00:20 - 01:20	82.1	97.8	dB(A)
01:20 - 02:20	80.7	96.6	dB(A)
02:20 - 03:20	79.4	92.7	dB(A)
03:20 - 04:20	78.9	90.5	dB(A)
04:20 - 05:20	78.8	81.5	dB(A)
05:20 - 06:20	80.0	85.9	dB(A)
06:20 - 07:20	79.1	87.6	dB(A)
07:20 - 08:20	79.3	86.3	dB(A)
08:20 - 09:20	79.3	87.3	dB(A)
L_{eq} 24 hr.	80.0	-	dB(A)
Maximum	-	97.8	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:20 - 17:20 น. = 79	17:20 - 01:20 น. = 80	01:20 - 09:20 น. = 79
L_{eq} 8 hr. (TWA) ^{**/2}	09:20 - 17:20 น. = 79	17:20 - 01:20 น. = 80	01:20 - 09:20 น. = 79
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}		dB(A)
Maximum	09:20 - 17:20 น. = 93.9	17:20 - 01:20 น. = 97.8	01:20 - 09:20 น. = 96.6
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}		dB(A)

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Ms. Duangchai Yaemprakhon



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4087

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณ Blanking (BK06) (NN4)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322752 : Class 2

SAMPLE NO. : 33895
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	12-13/09/2025 (L _{eq})	12-13/09/2025 (L _{max})	UNIT	
09:00 - 10:00 ^{/4}	87.3	89.7	dB(A)	
10:00 - 11:00	83.7	88.5	dB(A)	
11:00 - 12:00	80.6	88.6	dB(A)	
12:00 - 13:00	86.8	96.1	dB(A)	
13:00 - 14:00	87.3	89.3	dB(A)	
14:00 - 15:00	87.3	89.8	dB(A)	
15:00 - 16:00	84.5	95.3	dB(A)	
16:00 - 17:00	80.9	88.6	dB(A)	
17:00 - 18:00	85.8	89.0	dB(A)	
18:00 - 19:00	74.9	86.4	dB(A)	
19:00 - 20:00	73.4	83.6	dB(A)	
20:00 - 21:00	73.9	84.0	dB(A)	
21:00 - 22:00	74.4	91.3	dB(A)	
22:00 - 23:00	74.1	89.0	dB(A)	
23:00 - 00:00	73.1	84.1	dB(A)	
00:00 - 01:00	73.2	79.5	dB(A)	
01:00 - 02:00	72.6	84.5	dB(A)	
02:00 - 03:00	72.6	83.5	dB(A)	
03:00 - 04:00	71.6	83.2	dB(A)	
04:00 - 05:00	71.6	74.9	dB(A)	
05:00 - 06:00	73.5	83.4	dB(A)	
06:00 - 07:00	73.1	83.0	dB(A)	
07:00 - 08:00	86.6	89.2	dB(A)	
08:00 - 09:00	87.8	89.7	dB(A)	
L _{eq} 24 hr.	82.8	-	dB(A)	
Maximum	-	96.1	dB(A)	
L _{eq} 8 hr. (TWA) ^{*,/1}	09:00 - 17:00 น. = 85	17:00 - 01:00 น. = 78	01:00 - 09:00 น. = 81	dB(A)
L _{eq} 8 hr. (TWA) ^{**,/2}	09:00 - 17:00 น. = 85	17:00 - 01:00 น. = 76	01:00 - 09:00 น. = 79	dB(A)
Standard L _{eq} 8 hr.	85 ^{/1} , 90 ^{/2}			dB(A)
Maximum	09:00 - 17:00 น. = 96.1	17:00 - 01:00 น. = 91.3	01:00 - 09:00 น. = 89.7	dB(A)
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}			dB(A)

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Ms. Duangchai Yaemprakhon



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

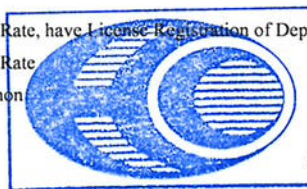
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณ Pickling (PK07) (NNS)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322751 : Class 2

SAMPLE NO. : 33899
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	12-13/09/2025 (L _{eq})	12-13/09/2025 (L _{max})	UNIT	
09:00 - 10:00 ^{/4}	79.8	91.4	dB(A)	
10:00 - 11:00	78.3	90.8	dB(A)	
11:00 - 12:00	78.6	87.0	dB(A)	
12:00 - 13:00	80.5	91.9	dB(A)	
13:00 - 14:00	79.4	90.1	dB(A)	
14:00 - 15:00	78.7	88.4	dB(A)	
15:00 - 16:00	78.4	90.1	dB(A)	
16:00 - 17:00	74.8	80.8	dB(A)	
17:00 - 18:00	73.0	87.5	dB(A)	
18:00 - 19:00	68.8	78.6	dB(A)	
19:00 - 20:00	73.0	86.5	dB(A)	
20:00 - 21:00	70.8	81.2	dB(A)	
21:00 - 22:00	73.2	91.9	dB(A)	
22:00 - 23:00	72.4	87.0	dB(A)	
23:00 - 00:00	73.4	88.6	dB(A)	
00:00 - 01:00	73.2	86.8	dB(A)	
01:00 - 02:00	70.4	76.6	dB(A)	
02:00 - 03:00	69.2	79.4	dB(A)	
03:00 - 04:00	67.0	69.4	dB(A)	
04:00 - 05:00	68.8	74.3	dB(A)	
05:00 - 06:00	72.5	88.2	dB(A)	
06:00 - 07:00	74.0	88.5	dB(A)	
07:00 - 08:00	80.2	91.7	dB(A)	
08:00 - 09:00	80.1	83.7	dB(A)	
L _{eq} 24 hr.	76.3	-	dB(A)	
Maximum	-	91.9	dB(A)	
L _{eq} 8 hr. (TWA) ^{*/1}	09:00 - 17:00 น. = 78	17:00 - 01:00 น. = 72	01:00 - 09:00 น. = 75	dB(A)
L _{eq} 8 hr. (TWA) ^{**/2}	09:00 - 17:00 น. = 78	17:00 - 01:00 น. = 72	01:00 - 09:00 น. = 74	dB(A)
Standard L _{eq} 8 hr.	85 ^{/1} , 90 ^{/2}			dB(A)
Maximum	09:00 - 17:00 น. = 91.9	17:00 - 01:00 น. = 91.9	01:00 - 09:00 น. = 91.7	dB(A)
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}			dB(A)

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Ms. Duangchai Yaemprakhon



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1154

Report No. R6811-1819

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณติดตั้งโลหะ (NN6)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322750 : Class 2

SAMPLE NO. : 45027
MEASURING DATE : 13-14/11/2025
RECEIVED DATE : 14/11/2025
REPORTED DATE : 19/11/2025

TIME \ DATE	13-14/11/2025 (L_{eq})	13-14/11/2025 (L_{max})	UNIT
08:20 - 09:20 ^{/4}	77.5	87.0	dB(A)
09:20 - 10:20	78.2	85.9	dB(A)
10:20 - 11:20	76.0	84.0	dB(A)
11:20 - 12:20	74.7	84.9	dB(A)
12:20 - 13:20	76.1	85.2	dB(A)
13:20 - 14:20	74.4	82.7	dB(A)
14:20 - 15:20	75.2	85.4	dB(A)
15:20 - 16:20	75.6	84.8	dB(A)
16:20 - 17:20	75.6	84.0	dB(A)
17:20 - 18:20	75.7	82.6	dB(A)
18:20 - 19:20	76.2	85.6	dB(A)
19:20 - 20:20	76.4	83.3	dB(A)
20:20 - 21:20	76.1	81.9	dB(A)
21:20 - 22:20	76.7	85.8	dB(A)
22:20 - 23:20	76.7	83.7	dB(A)
23:20 - 00:20	76.7	84.2	dB(A)
00:20 - 01:20	77.3	85.3	dB(A)
01:20 - 02:20	76.7	83.8	dB(A)
02:20 - 03:20	77.5	84.4	dB(A)
03:20 - 04:20	77.1	85.0	dB(A)
04:20 - 05:20	76.7	83.8	dB(A)
05:20 - 06:20	76.8	84.2	dB(A)
06:20 - 07:20	77.3	85.8	dB(A)
07:20 - 08:20	77.1	85.5	dB(A)
L_{eq} 24 hr.	76.5	-	dB(A)
Maximum	-	87.0	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	08:20 - 16:20 น. = 76	16:20 - 00:20 น. = 76	00:20 - 08:20 น. = 77
L_{eq} 8 hr. (TWA) ^{**,/2}	08:20 - 16:20 น. = 76	16:20 - 00:20 น. = 76	00:20 - 08:20 น. = 77
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}		dB(A)
Maximum	08:20 - 16:20 น. = 78.2	16:20 - 00:20 น. = 76.7	00:20 - 08:20 น. = 77.5
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}		dB(A)

REMARK : 1. ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)2. ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)3. ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)4. ^{/4} Start Time

5. * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

6. ** Based on Criteria 90 dB(A); 5 dB Exchange Rate

7. (Measurement By Mr. Supachai Parakan)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

19/11/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4086

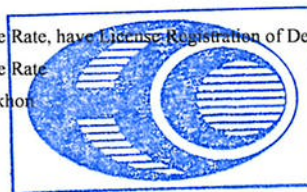
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณจุดผิวโลหะ (SC03) (NN7)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 01147299 : Class 2

SAMPLE NO. : 33894
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	UNIT
09:05 - 10:05 ^{/4}	89.3	106.5	dB(A)
10:05 - 11:05	82.2	94.2	dB(A)
11:05 - 12:05	82.6	91.3	dB(A)
12:05 - 13:05	82.9	93.3	dB(A)
13:05 - 14:05	88.5	109.4	dB(A)
14:05 - 15:05	90.4	106.4	dB(A)
15:05 - 16:05	91.1	106.0	dB(A)
16:05 - 17:05	85.0	94.7	dB(A)
17:05 - 18:05	89.3	105.4	dB(A)
18:05 - 19:05	83.5	97.8	dB(A)
19:05 - 20:05	91.3	107.9	dB(A)
20:05 - 21:05	93.5	109.2	dB(A)
21:05 - 22:05	92.5	107.7	dB(A)
22:05 - 23:05	92.2	106.7	dB(A)
23:05 - 00:05	92.2	100.6	dB(A)
00:05 - 01:05	92.8	108.6	dB(A)
01:05 - 02:05	84.6	96.9	dB(A)
02:05 - 03:05	82.4	94.9	dB(A)
03:05 - 04:05	78.6	90.8	dB(A)
04:05 - 05:05	80.2	88.1	dB(A)
05:05 - 06:05	92.6	107.9	dB(A)
06:05 - 07:05	81.3	92.5	dB(A)
07:05 - 08:05	90.3	104.1	dB(A)
08:05 - 09:05	91.6	105.7	dB(A)
L_{eq} 24 hr.	89.5	-	dB(A)
Maximum	-	109.4	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:05 - 17:05 น. = 87	17:05 - 01:05 น. = 91	01:05 - 09:05 น. = 88
L_{eq} 8 hr. (TWA) ^{**/2}	09:05 - 17:05 น. = 87	17:05 - 01:05 น. = 91	01:05 - 09:05 น. = 87
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}		dB(A)
Maximum	09:05 - 17:05 น. = 109.4	17:05 - 01:05 น. = 109.2	01:05 - 09:05 น. = 107.9
Standard	- ^{/1} , 140 ^{/2} , 115 ^{/3}		dB(A)

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Ms. Duangchai Yaemprakhon



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1001

Report No. R6810-0011

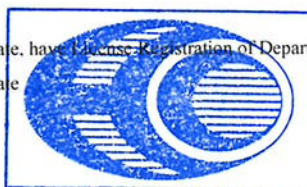
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเครื่องปั๊มแผ่นดิสก์ (NN8)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00222594 : Class 2

SAMPLE NO. : 37196
MEASURING DATE : 26-27/09/2025
RECEIVED DATE : 27/09/2025
REPORTED DATE : 02/10/2025

TIME \ DATE	26-27/09/2025 (L _{eq})	26-27/09/2025 (L _{max})	UNIT	
08:55 - 09:55 ^{/4}	88.4	100.2	dB(A)	
09:55 - 10:55	89.6	100.1	dB(A)	
10:55 - 11:55	76.3	87.0	dB(A)	
11:55 - 12:55	78.0	93.2	dB(A)	
12:55 - 13:55	90.2	100.3	dB(A)	
13:55 - 14:55	87.5	99.6	dB(A)	
14:55 - 15:55	86.6	99.5	dB(A)	
15:55 - 16:55	87.0	100.3	dB(A)	
16:55 - 17:55	85.1	102.8	dB(A)	
17:55 - 18:55	88.1	100.2	dB(A)	
18:55 - 19:55	74.6	79.1	dB(A)	
19:55 - 20:55	77.2	86.7	dB(A)	
20:55 - 21:55	79.2	88.9	dB(A)	
21:55 - 22:55	78.4	85.0	dB(A)	
22:55 - 23:55	77.5	96.8	dB(A)	
23:55 - 00:55	78.9	85.3	dB(A)	
00:55 - 01:55	76.6	89.3	dB(A)	
01:55 - 02:55	72.7	84.2	dB(A)	
02:55 - 03:55	73.5	89.0	dB(A)	
03:55 - 04:55	72.5	80.5	dB(A)	
04:55 - 05:55	72.7	84.7	dB(A)	
05:55 - 06:55	73.4	85.9	dB(A)	
06:55 - 07:55	72.0	78.3	dB(A)	
07:55 - 08:55	87.8	100.3	dB(A)	
L _{eq} 24 hr.	84.2	-	dB(A)	
Maximum	-	102.8	dB(A)	
L _{eq} 8 hr. (TWA) ^{*,/1}	08:55 - 16:55 น. = 87	16:55 - 00:55 น. = 82	00:55 - 08:55 น. = 79	dB(A)
L _{eq} 8 hr. (TWA) ^{**,/2}	08:55 - 16:55 น. = 86	16:55 - 00:55 น. = 81	00:55 - 08:55 น. = 77	dB(A)
Standard L _{eq} 8 hr.		85 ^{/1} , 90 ^{/2}		dB(A)
Maximum	08:55 - 16:55 น. = 100.3	16:55 - 00:55 น. = 102.8	00:55 - 08:55 น. = 100.3	dB(A)
Standard		- ^{/1} , 140 ^{/2} , 115 ^{/3}		dB(A)

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Mr. Supachai Parakan



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By: 
(MRS. WANPEN LHAOCHINDAWAT)

02/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4092

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณอาคารตออส (NN9)
PARAMETER : L_{eq} 1 hr., L_{eq} 8 hr., L_{eq} 24 hr. & L_{max}
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322745 : Class 2

SAMPLE NO. : 33900
MEASURING DATE : 12-13/09/2025
RECEIVED DATE : 13/09/2025
REPORTED DATE : 23/09/2025

TIME \ DATE	12-13/09/2025 (L_{eq})	12-13/09/2025 (L_{max})	UNIT
09:05 - 10:05 ^{/4}	79.0	95.5	dB(A)
10:05 - 11:05	78.6	99.3	dB(A)
11:05 - 12:05	77.2	101.3	dB(A)
12:05 - 13:05	72.2	83.7	dB(A)
13:05 - 14:05	78.3	98.7	dB(A)
14:05 - 15:05	78.7	94.2	dB(A)
15:05 - 16:05	77.9	89.3	dB(A)
16:05 - 17:05	78.4	96.7	dB(A)
17:05 - 18:05	67.5	80.7	dB(A)
18:05 - 19:05	66.6	71.8	dB(A)
19:05 - 20:05	79.3	99.8	dB(A)
20:05 - 21:05	78.6	96.3	dB(A)
21:05 - 22:05	78.3	97.7	dB(A)
22:05 - 23:05	79.8	99.5	dB(A)
23:05 - 00:05	78.2	93.0	dB(A)
00:05 - 01:05	78.4	96.1	dB(A)
01:05 - 02:05	77.2	92.5	dB(A)
02:05 - 03:05	71.2	74.0	dB(A)
03:05 - 04:05	71.0	72.9	dB(A)
04:05 - 05:05	66.9	67.6	dB(A)
05:05 - 06:05	67.3	68.2	dB(A)
06:05 - 07:05	72.1	85.8	dB(A)
07:05 - 08:05	76.0	91.5	dB(A)
08:05 - 09:05	79.4	97.0	dB(A)
L_{eq} 24 hr.	77.0	-	dB(A)
Maximum	-	101.3	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:05 - 17:05 น. = 77	17:05 - 01:05 น. = 77	01:05 - 09:05 น. = 74
L_{eq} 8 hr. (TWA) ^{**/2}	09:05 - 17:05 น. = 77	17:05 - 01:05 น. = 77	01:05 - 09:05 น. = 73
Standard L_{eq} 8 hr.	$85^{/1}, 90^{/2}$		
Maximum	09:05 - 17:05 น. = 101.3	17:05 - 01:05 น. = 99.8	01:05 - 09:05 น. = 97
Standard	$-^{/1}, 140^{/2}, 115^{/3}$		

- REMARK :**
- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018) (Published in the Government Gazette on January 26, 2018)
 - ^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)
 - ^{/3} Regulation of The Ministry of Labour B.E. 2559 (2016)
 - ^{/4} Start Time
 - * Based on Criteria 85 dB(A); 3 dB Exchange Rate, have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 - ** Based on Criteria 90 dB(A); 5 dB Exchange Rate
 - Measurement By Ms. Duangchai Yaemprakhon



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

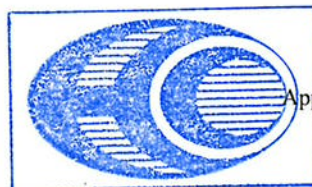
Report No. R6809-4059

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Melting (NN1) (จุดสนใจ ใจยอด)
 MEASURING DATE : 11/09/2025 SAMPLE NO. : 33867
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0955 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	82.8	85 ^{/1}	dB(A)
8 Hour dose	59.59	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4060

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Melting (NN1) (คุณพจน์ ใจมา)
 MEASURING DATE : 11/09/2025 SAMPLE NO. : 33868
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1499 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	84.5	85 ^{/1}	dB(A)
8 Hour dose	88.56	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09195

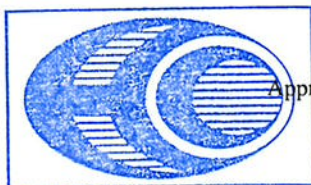
Report No. R6809-5138

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Melting (NN1) (คุณสมบัติของเหล็ก)
 MEASURING DATE : 19/09/2025 SAMPLE NO. : 34958
 RECEIVED DATE : 19/09/2025 SAMPLING TIME : 08:30-16:30
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CA8879 REPORTED DATE : 24/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	83.8	85 ^{/1}	dB(A)
8 Hour dose	75.65	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Mr. Supachai Parakan)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09234

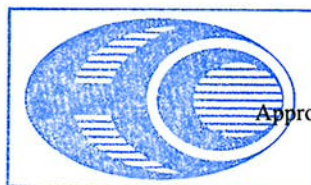
Report No. R6809-6002

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Melting (NN1) (คูณคระนองเคช สมาพงศ์)
 MEASURING DATE : 24/09/2025 SAMPLE NO. : 35828
 RECEIVED DATE : 24/09/2025 SAMPLING TIME : 08:30-16:30
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0642 REPORTED DATE : 29/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	84.8	85 ^{/1}	dB(A)
8 Hour dose	95.29	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

29/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1072

Report No. R6810-3098

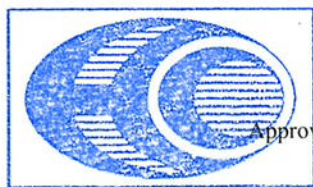
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Melting (NN1) (คุณรัชตะ เชื้อดี)
 MEASURING DATE : 08/10/2025 SAMPLE NO. : 40515
 RECEIVED DATE : 08/10/2025 SAMPLING TIME : 08:20-16:20
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1499 REPORTED DATE : 10/10/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	80.0	85 ^{/1}	dB(A)
8 Hour dose	31.64	100 ^{/2}	%

REMARK :

- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
- ^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
- [#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
- * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Thanatporn Klinsopon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

10/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

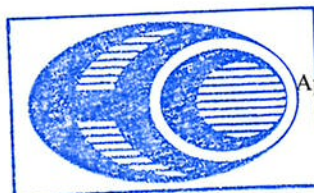
Report No. R6809-4062

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Casting (NN2) (คุณวันชัย บัวใส)
 MEASURING DATE : 11/09/2025 SAMPLE NO. : 33870
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0640 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	81.9	85 ^{/1}	dB(A)
8 Hour dose	48.54	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

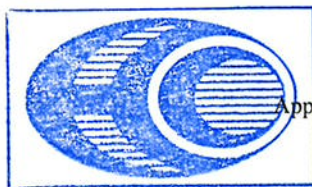
Report No. R6809-4064

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Casting (NN2) (คุณถาวร พรหมภักดี)
 MEASURING DATE : 11/09/2025 SAMPLE NO. : 33872
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1365 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	84.8	85 ^{/1}	dB(A)
8 Hour dose	95.81	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09195

Report No. R6809-5140

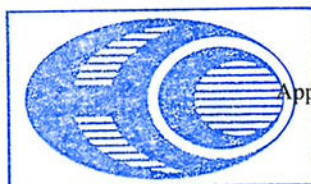
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Casting (NN2) (คุณธมลเดช เตชะ)
 MEASURING DATE : 19/09/2025 SAMPLE NO. : 34960
 RECEIVED DATE : 19/09/2025 SAMPLING TIME : 08:30-16:30
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CA8887 REPORTED DATE : 24/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	73.2	85 ^{/1}	dB(A)
8 Hour dose	6.63	100 ^{/2}	%

REMARK :

- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
- ^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
- [#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
- * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Mr. Supachai Parakan)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09195

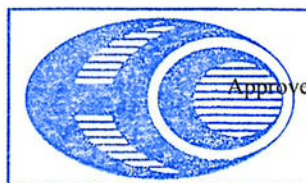
Report No. R6809-5141

TEST REPORT

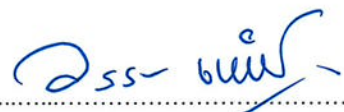
CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Casting (NN2) (จุดพีดักดี แก้วอยู่)
 MEASURING DATE : 19/09/2025 SAMPLE NO. : 34961
 RECEIVED DATE : 19/09/2025 SAMPLING TIME : 08:30-16:30
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0955 REPORTED DATE : 24/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	79.7	85 ^{/1}	dB(A)
8 Hour dose	29.59	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Mr. Supachai Parakan)



Approved By.....



(MRS. WANPEN LHAOCHINDAWAT)

24/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09234

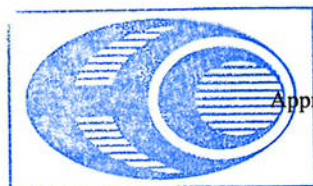
Report No. R6809-6003

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ RM01 (MC #9) (ถนนมงคล คงพลปาน)
 MEASURING DATE : 24/09/2025 SAMPLE NO. : 35829
 RECEIVED DATE : 24/09/2025 SAMPLING TIME : 08:30-16:30
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0955 REPORTED DATE : 29/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	73.6	85 ^{/1}	dB(A)
8 Hour dose	7.27	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

29/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09234

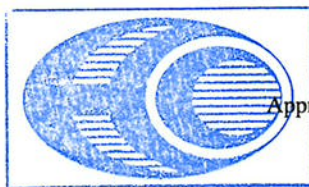
Report No. R6809-6004

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ RM01 (MC #9) (NN3) (คุณอรรถชัย พลเกิด)
 MEASURING DATE : 24/09/2025 SAMPLE NO. : 35830
 RECEIVED DATE : 24/09/2025 SAMPLING TIME : 08:30-16:30
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0957 REPORTED DATE : 29/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	77.6	85 ^{/1}	dB(A)
8 Hour dose	18.27	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

29/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4072

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Pickling (PK07) (NN5) (คุณกิตติพงษ์ เนื่องพุก)
 MEASURING DATE : 12/09/2025 SAMPLE NO. : 33880
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1497 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	81.3	85 ^{/1}	dB(A)
8 Hour dose	42.53	100 ^{/2}	%

REMARK :

- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
- ^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
- [#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
- * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
 REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

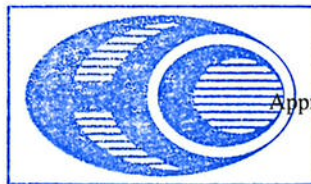
Report No. R6809-4066

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ SC03 (NN7) (จุดประยูทรี พลชีฟ)
 MEASURING DATE : 11/09/2025 SAMPLE NO. : 33874
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0954 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	82.8	85 ^{/1}	dB(A)
8 Hour dose	60.08	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1072

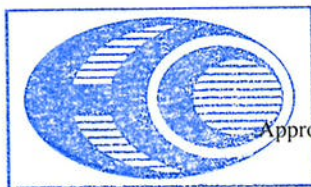
Report No. R6810-3099

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณชุดผิวโลหะ (SC03) (NN7) (คุณสมบัติโนนสูง)
MEASURING DATE : 08/10/2025 SAMPLE NO. : 40516
RECEIVED DATE : 08/10/2025 SAMPLING TIME : 08:20-16:20
SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1498 REPORTED DATE : 10/10/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	83.0	85 ^{/1}	dB(A)
8 Hour dose	62.89	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
* Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Thanatporn Klinsopon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

10/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1072

Report No. R6810-3100

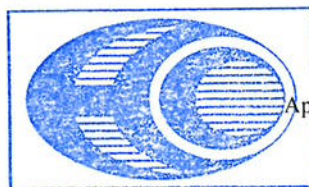
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณชุดผิวโลหะ (SC03) (NN7) (คุณสมบัติที่ รัดแน่น)
MEASURING DATE : 08/10/2025 SAMPLE NO. : 40517
RECEIVED DATE : 08/10/2025 SAMPLING TIME : 08:20-16:20
SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1500 REPORTED DATE : 10/10/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	79.1	85 ^{/1}	dB(A)
8 Hour dose	25.84	100 ^{/2}	%

REMARK :

- ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
- ^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
- [#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
- * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Thanatporn Klinsopon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

10/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

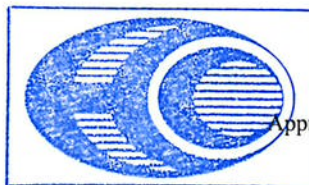
Report No. R6809-4068

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณอาคารครอส (NN9) (จุดวัดฝั่งซ้าย แก้วดี)
 MEASURING DATE : 12/09/2025 SAMPLE NO. : 33876
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1365 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	83.8	85 ^{/1}	dB(A)
8 Hour dose	76.22	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

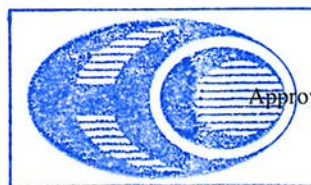
Report No. R6809-4069

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณอาคารครอส (NN9) (คุณรัช พุฒจันทร์)
 MEASURING DATE : 12/09/2025 SAMPLE NO. : 33877
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 08:00-16:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB1499 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	83.1	85 ^{/1}	dB(A)
8 Hour dose	64.15	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

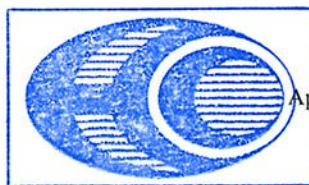
Report No. R6809-4071

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณอาคารคอรอส (NN9) (คุณณัฐพงษ์ โนนสว่าง)
 MEASURING DATE : 12-13/09/2025 SAMPLE NO. : 33879
 RECEIVED DATE : 13/09/2025 SAMPLING TIME : 20:00-04:00
 SAMPLING INSTRUMENT : Noise dosimeter : S/N CB0958 REPORTED DATE : 23/09/2025

PARAMETER*	RESULT	STANDARD	UNIT
Time weighted average level (8-hr TWA) [#]	82.1	85 ^{/1}	dB(A)
8 Hour dose	51.33	100 ^{/2}	%

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
^{/2} Standard of National Institute for Occupational Safety and Health, Occupational Noise Exposure Revised Criteria 1998
[#] Based on Criteria 85 dB(A) ; 3 dB Exchange Rate
 * Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

23/09/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0449

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : Casting Area
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090449
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:30-10:30
 SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 18/09/2025-26/09/2025
 Serial No. 20200403079 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.078	5	mg/m ³

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
 (Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
 No.0202-03-2564-0005.
 (Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0450

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : Melting Area
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090450
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:35-10:35
 SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 18/09/2025-26/09/2025
 Serial No. 20200403080 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.085	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
 (Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
 No.0202-03-2564-0005.
 (Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0453

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : PK 01-PK 02
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090453
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:45-09:45
 SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/09/2025-22/09/2025
 Serial No. 218408 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

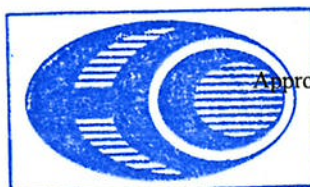
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsoon)

03/10/2025



Approved By

(Mr. Kawee Suthasub)

03/10/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0452

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : PK03
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090452
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:40-09:40
 SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/09/2025-22/09/2025
 Serial No. 218405 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0451

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : PK03
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090451
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:40-09:40
 SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/09/2025-22/09/2025
 Serial No. 218405 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	0.087	5	mg/m ³
		0.034	2	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0454

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : PK07
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090454
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:50-09:50
 SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/09/2025-22/09/2025
 Serial No. 218412 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0455

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : AP02
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090455
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 08:55-09:55
 SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/09/2025-22/09/2025
 Serial No. 218388 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6809018

Report No. 6809-0456

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
 ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
 SAMPLE NAME : Storage WWT
 SAMPLING DATE : 10/09/2025 SAMPLE NO. : A68090456
 RECEIVED DATE : 18/09/2025 SAMPLING TIME : 09:00-10:00
 SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 18/09/2025-22/09/2025
 Serial No. 218391 REPORTED DATE : 03/10/2025

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

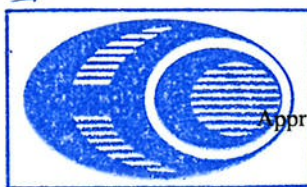
No.0202-03-2564-0005.

(Sampling By Mr. Witchawan Singto)

Examined By

(Miss Thanatporn Klinsopon)

03/10/2025



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

03/10/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
 THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
 WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4073 - R6809-4075

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณ Melting (H1) SAMPLE NO. : 33881-33883
MEASURING DATE : 11/09/2025 RECEIVED DATE : 13/09/2025
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/09/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TPL060040, TEU080012, TPQ030024

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	31.1	31.7	31.9	31.5	31.6
บริเวณ Melting (H1) - หน้าเตาหลอม						
Heat Stress	09:00 - 11:00	28.0	28.4	28.2	28.4	28.2
บริเวณ Melting (H1) - พื้นที่ทำงานทั่วไป						
Heat Stress	09:00 - 11:00	18.0	17.7	18.6	18.6	18.2
บริเวณ Melting (H1) - ห้องพักพนักงาน						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	28.6
STANDARD		-	-	-	-	32.0 ^{1,2}

REMARK :

Work Load = 221.30 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

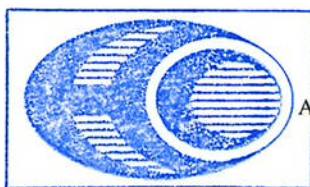
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

08/04/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09155

Report No. R6809-4076 - R6809-4078

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณ Casting (H2) SAMPLE NO. : 33884-33886
 MEASURING DATE : 11/09/2025 RECEIVED DATE : 13/09/2025
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 23/09/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TPL090016, TEU080014, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:30 - 11:30	31.1	31.7	31.9	31.5	31.6
บริเวณ Casting (H2) - หน้าเตาหลอม						
Heat Stress	09:30 - 11:30	29.1	29.0	29.3	29.8	29.3
บริเวณ Casting (H2) - พื้นที่ทำงานทั่วไป						
Heat Stress	09:30 - 11:30	18.7	19.3	19.3	19.5	19.2
บริเวณ Casting (H2) - ห้องพักพนักงาน						
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	29.2
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 221.30 Kcal/hr.

^{1/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{1/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

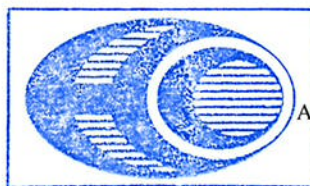
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Duangchai Yaemprakhon)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

08/04/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R09234

Report No. R6809-6008 - R6809-6010

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : บริเวณเครื่องรีดร้อน (Hot Rolling) (H3) SAMPLE NO. : 35834-35836

MEASURING DATE : 24/09/2025 RECEIVED DATE : 24/09/2025

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 29/09/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TPQ030024, TPL060039, TPI050069

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	10:00 - 12:00	25.3	25.2	25.3	25.3	25.3
บริเวณเครื่องรีดร้อน (Hot Rolling) (H3) - (Control Room)						
Heat Stress	10:00 - 12:00	28.4	28.7	28.7	29.1	28.7
บริเวณเครื่องรีดร้อน (Hot Rolling) (H3) - พื้นที่วางแท่ง Slab						
Heat Stress	10:00 - 12:00	28.2	28.3	28.4	28.6	28.4
บริเวณเครื่องรีดร้อน (Hot Rolling) (H3) - จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab						
WBGT AVERAGE	10:00 - 12:00	-	-	-	-	27.5
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 118.00 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

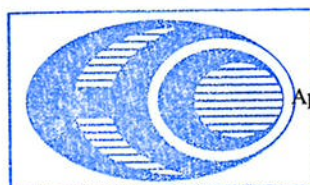
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

08/04/2025

บริษัท อีสเทิร์นไทยคอนซัลต์ติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1184

Report No. R6811-2560 - R6811-2562

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณเตาอบ HF10 (H4) SAMPLE NO. : 45758-45760
 MEASURING DATE : 21/11/2025 RECEIVED DATE : 21/11/2025
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 26/11/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080013, TPQ030024, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	10:00 - 12:00	25.3	24.9	25.0	25.2	25.1
บริเวณเตาหลอม HF10 (H4) - หน้าเตาอบ						
Heat Stress	10:00 - 12:00	25.5	25.7	26.0	25.9	25.8
บริเวณเตาหลอม HF10 (H4) - พื้นที่ทำงานทั่วไป						
Heat Stress	10:00 - 12:00	22.2	22.4	22.8	22.6	22.5
บริเวณเตาหลอม HF10 (H4) - Control Room						
WBGT AVERAGE	10:00 - 12:00	-	-	-	-	24.6
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 128.0 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

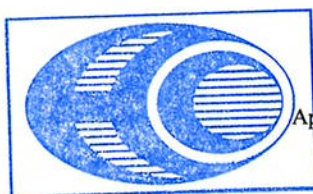
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Ratmanee Nakket)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1154

Report No. R6811-1816 - R6811-1818

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : บริเวณเตาอบ HF12 (H6) SAMPLE NO. : 45024-45026

MEASURING DATE : 12/11/2025 RECEIVED DATE : 14/11/2025

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 19/11/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080013, TEU080015, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:30 - 11:30	28.7	29.2	29.1	29.8	29.2
บริเวณเตาอบ HF12 (H6) - พื้นที่วาง Pick Coil						
Heat Stress	09:30 - 11:30	30.1	29.7	29.8	29.8	29.9
บริเวณเตาอบ HF12 (H6) - พื้นที่วางชิ้นงาน, พื้นที่หน้าเตาอบ						
Heat Stress	09:30 - 11:30	26.2	25.8	26.1	26.1	26.0
บริเวณเตาอบ HF12 (H6) - Control Room						
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	28.4
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 138.0 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

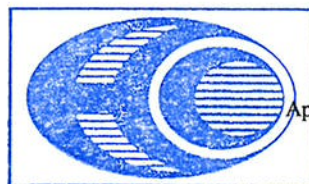
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Mr. Supachai Parakan)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

19/11/2025

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R1001

Report No. R6810-0008 - R6810-0010

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : บริเวณเตาอบ HF13 (H7) SAMPLE NO. : 37193-37195

MEASURING DATE : 26/09/2025 RECEIVED DATE : 27/09/2025

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 02/10/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080015, TEU080013, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	10:00 - 12:00	31.0	31.4	32.1	32.4	31.7
บริเวณเตาอบ HF13 (H7) - พื้นที่วางชิ้นงาน, หน้าเตาอบ						
Heat Stress	10:00 - 12:00	29.0	29.3	30.0	30.5	29.7
บริเวณเตาอบ HF13 (H7) - พื้นที่ทำงานทั่วไป, DX Gas						
Heat Stress	10:00 - 12:00	22.6	22.6	22.5	22.5	22.5
บริเวณเตาอบ HF13 (H7) - Control Room						
WBGT AVERAGE	10:00 - 12:00	-	-	-	-	28.1
STANDARD		-	-	-	-	34.0 ^{/1,2}

REMARK :

Work Load = 106.5 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

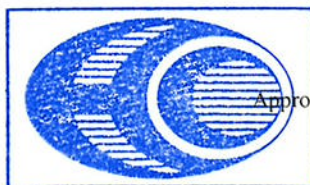
NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

02/10/2025

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. LA68-R10101

Report No. R6810-4195 - R6810-4197

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : บริเวณเตาหลอมโครอส (H8) SAMPLE NO. : 41629-41631

MEASURING DATE : 20/10/2025 RECEIVED DATE : 20/10/2025

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 22/10/2025

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080015, TEU080011, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	30.5	30.6	30.7	30.9	30.7
บริเวณเตาหลอมโครอส (H8) - หน้าเตาหลอม						
Heat Stress	09:00 - 11:00	28.9	29.0	29.7	29.8	29.3
บริเวณเตาหลอมโครอส (H8) - พื้นที่ทำงานทั่วไป						
Heat Stress	09:00 - 11:00	28.9	29.3	29.6	29.8	29.4
บริเวณเตาหลอมโครอส (H8) - พื้นที่พักพนักงาน						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	30.0
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 176.30 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

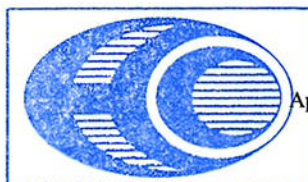
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Duangchai Yaemprakhon)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

22/10/2025

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL

WITHOUT THE WRITTEN APPROVAL LABORATORY

ภาคผนวก ง.

ใบรับรองสอบเทียบเครื่องมือ

ANALYTICAL BALANCE (DU)

Model : XS205DU


Serial No. : 1126323724

Mettler-Toledo (Thailand) Ltd.
846/4 - 846/5846/4 - 846/5 Lasalle Rd., Bangna Tai
Bangna District, Bangkok 10260
+66 2723 0382
MT-TH.ServiceSupport@mtl.com



Accuracy Calibration Certificate

Customer

Company: EASTERN THAI CONSULTING 1992 CO., LTD.
Address: 683 Moo 11, Sukhaphiban 8 Rd., Nong Kham
City: Sriracha Contact: Sasiporn Nakin
Zip / Postal: 20230
State / Province: Chonburi
Order Number: 

Weighing Device



Manufacturer: Mettler Toledo Instrument Type: Weighing Instrument
Model: XS205DU Asset Number: LABE 05/1
Serial No.: 1126323724 Terminal Model: SAT
Building: Laboratory Terminal Serial No.: 1126323724
Floor: 1 Terminal Asset No.: N/A
Room: Analytical Balance

Range	Max. Capacity	Readability (d)
1	81 g	0.00001 g
2	220 g	0.0001 g

Procedure

Calibration Guideline: EURAMET cg-18 v. 4.0 (11/2015)
METTLER TOLEDO Work Instruction: CP/W002/20
This calibration certificate contains measurements for As Found calibration. No As Left calibration was performed because the device was not modified after As Found calibration. Therefore, results for As Left correspond to As Found.
The sensitivity/span of the weighing instrument was adjusted before calibration with a built-in weight.
In accordance with EURAMET cg-18 (11/2015), the test loads were selected to reflect the specific use of the weighing device or to accommodate specific calibration conditions.

	Temperature		Humidity	
As Found	Start: 25.7 °C	End: 25.8 °C	Start: 50.9 %	End: 50.6 %

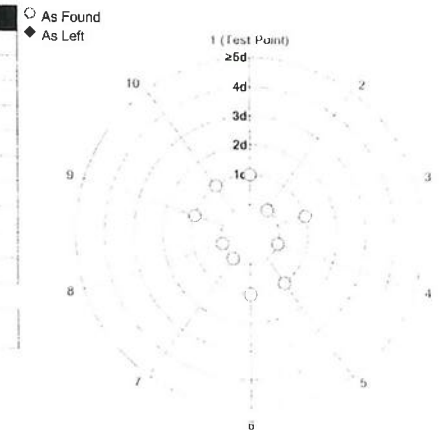
As Found Calibration Date: 09-Dec-2024 Calibrator: 
As Left Calibration Date: N/A
Issue Date: 11-Dec-2024 Somsak Sattanaco
Approved Signatory: 
Technical Manager / Head of Calibration Center

Measurement Results

Repeatability

Test Load: 70 g

	As Found	As Left
1	70.00004 g	N/A
2	70.00005 g	N/A
3	70.00004 g	N/A
4	70.00005 g	N/A
5	70.00006 g	N/A
6	70.00004 g	N/A
7	70.00005 g	N/A
8	70.00005 g	N/A
9	70.00006 g	N/A
10	70.00006 g	N/A
Standard Deviation	0.000008 g	N/A



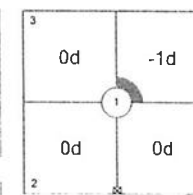
The "d" in the graph represents the readability of the range/interval in which the test was performed.

The results of this graph are based upon the absolute values of the differences from the mean value.

Eccentricity

Test Load: 100 g

Position	As Found	As Left
1	100.0000 g	N/A
2	100.0000 g	N/A
3	100.0000 g	N/A
4	99.9999 g	N/A
5	100.0000 g	N/A
Maximum Deviation	0.0001 g	N/A



As Found

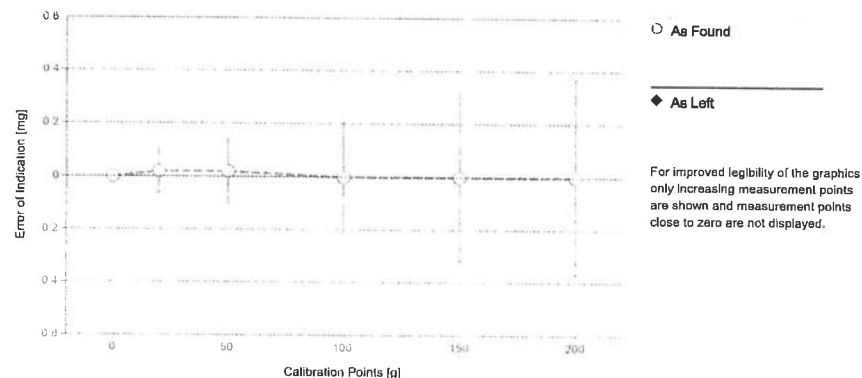
The "d" in the graph represents the readability of the range/interval in which the test was performed.

Error of Indication

As Found

	Reference Value	Indication	Error of Indication	Expanded Uncertainty	k
1	0.00000 g	0.00000 g	0.00000 g	0.017 mg	2
2	0.01000 g	0.01000 g	0.00000 g	0.020 mg	2
3	0.10000 g	0.10000 g	0.00000 g	0.023 mg	2
4	1.00000 g	1.00000 g	0.00000 g	0.032 mg	2
5	4.99998 g	5.00000 g	0.00002 g	0.048 mg	2
6	10.00001 g	10.00001 g	0.00000 g	0.061 mg	2
7	19.99999 g	20.00001 g	0.00002 g	0.082 mg	2
8	50.00003 g	50.00005 g	0.00002 g	0.12 mg	2
9	100.00000 g	100.00000 g	0.00000 g	0.21 mg	2
10	150.00000 g	150.00000 g	0.00000 g	0.32 mg	2
11	200.00000 g	200.00000 g	0.00000 g	0.37 mg	2

*The calculated uncertainty was replaced by the CMC (Calibration and Measurement Capabilities) value because the calculated uncertainty was smaller than the CMC value.



The expanded measurement uncertainty is reported as the standard measurement uncertainty multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95 %.

The user is responsible for maintaining environmental conditions and the settings of the weighing instrument when it was calibrated.
The results of this calibration certificate relate only to the calibrated item.

COPY

Test Equipment

All weights used for metrological testing are traceable to national or international standards. The weights were calibrated and certified by an accredited calibration laboratory.

Weight Set 1: OIML E2

Weight Set No.:	WS37	Date of Issue:	17-Jun-2024
Certificate Number:	186753-1	Calibration Due Date:	20-Jan-2025

Weight Set 2: OIML E2

Weight Set No.:	WS87	Date of Issue:	04-Jul-2023
Certificate Number:	186520	Calibration Due Date:	02-Jan-2025

Thermo Hygrometer

Equipment No.:	IN279	Date of Issue:	19-Jun-2024
Certificate Number:	SG-H-00577/67	Calibration Due Date:	17-Jun-2025

Remarks

FACT adjustment functionality activated
Equipment condition: Good
Next calibration according to customer's procedure
Calibration data not decide by calibration laboratory

End of Accredited Section

The information below and any attachments to this calibration certificate are not part of the accredited calibration.

COPY

Measurement Uncertainty of the Weighing Instrument in Use

Stated is the expanded uncertainty with $k=2$ in use. The formula shall be used for the estimation of the uncertainty under consideration of the errors of indication. The value R represents the net load indication in the unit of measure of the device.

Temperature coefficient for the evaluation of the measurement uncertainty in use: $1.5 \cdot 10^{-6} / K$

Temperature range on site for the evaluation of the measurement uncertainty in use: 3 K

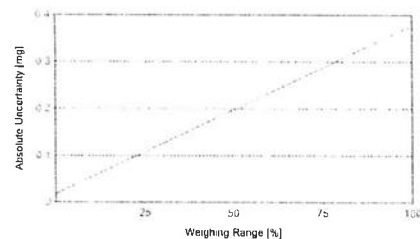
Linearization of Uncertainty Equation

	Range		As Found	As Left
	d	Max		
1	0.00001 g	81 g	$U_1 = 0.018 \text{ mg} + 0.00444 \text{ mg/g} \cdot R$	N/A
2	0.0001 g	220 g	$U_2 = 0.06 \text{ mg} + 0.00439 \text{ mg/g} \cdot R$	N/A

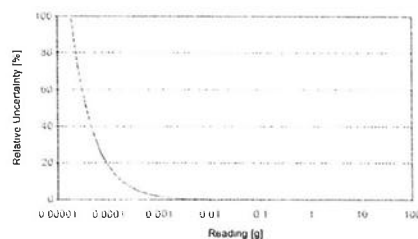
To optimize the stability of the linearization, besides of the zero load only increasing measurement points with a test load of 5% of the measurement range or larger are taken for the calculation of the linear equation.

Absolute and Relative Measurement Uncertainty in Use for Various Net Indications (Examples)

Net Indication	As Found		As Left	
0.00220 g	0.018 mg	0.82%	N/A	N/A
0.02200 g	0.018 mg	0.082%	N/A	N/A
0.22000 g	0.019 mg	0.0086%	N/A	N/A
2.20000 g	0.028 mg	0.0013%	N/A	N/A
220.0000 g	1.0 mg	0.00047%	N/A	N/A



As Found



As Left

The weighing range shown in the absolute uncertainty graph refers to the first interval/range of the device.

COPY

GWP® Certificate



As
Found



As
Left



The weighing device meets the given process requirements.

The weighing device meets the given process requirements.

Tests Performed: ☒ As Found ☐ As Left ☒ No adjustments/modifications made. As Left results correspond to As Found.

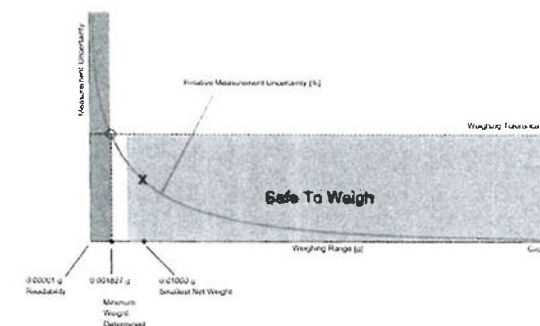
Process Requirements

Weighing Tolerance: 1%

Smallest Net Weight: 0.01000 g

Safety Factor: 2

Safe Weighing Range



While the values in this graph reflect the actual calibration results, the measurement uncertainty curves are simply a visual representation. This graph reflects As Left testing, unless only As Found was performed.

COPY

Minimum Weight

As Found Minimum Weight Table

Range 1

Minimum weights for different weighing tolerances and safety factors					
Tolerance	Safety Factor				
	1	2	3	5	10
0.1%	0.018339 g	0.036842 g	0.055511 g	0.093358 g	0.191052 g
0.2%	0.009149 g	0.018339 g	0.027570 g	0.046156 g	0.093358 g
0.5%	0.003655 g	0.007316 g	0.010984 g	0.018339 g	0.036842 g
1%	0.001827 g	0.003655 g	0.005485 g	0.009149 g	0.018339 g
2%	0.000913 g	0.001827 g	0.002740 g	0.004569 g	0.009149 g
5%	0.000365 g	0.000730 g	0.001096 g	0.001827 g	0.003655 g

The minimum weight table applies to the fine range of the weighing device.

✓ Pass: The determined minimum weight meets the requirement for the smallest net weight.

As Left Minimum Weight Table

Range 1

Minimum weights for different weighing tolerances and safety factors					
Tolerance	Safety Factor				
	1	2	3	5	10
0.1%	0.018339 g	0.036842 g	0.055511 g	0.093358 g	0.191052 g
0.2%	0.009149 g	0.018339 g	0.027570 g	0.046156 g	0.093358 g
0.5%	0.003655 g	0.007316 g	0.010984 g	0.018339 g	0.036842 g
1%	0.001827 g	0.003655 g	0.005485 g	0.009149 g	0.018339 g
2%	0.000913 g	0.001827 g	0.002740 g	0.004569 g	0.009149 g
5%	0.000365 g	0.000730 g	0.001096 g	0.001827 g	0.003655 g

The minimum weight table applies to the fine range of the weighing device.

✓ Pass: The determined minimum weight meets the requirement for the smallest net weight.

At these net minimum weight values, the measurement uncertainty of the weighing device is equal to or less than 1/1 (no safety factor), 1/2, 1/3, 1/5, or 1/10 of the required tolerance. The values are calculated with $k = 2$ and based on the linear formula of the measurement uncertainty of the weighing device in use.

The safety factor for As Found is always 1. This implies no safety factor. As Found testing looks at the behavior of the instrument from the past until test occurred. For the past, it is necessary to know that the tolerance was met, but not the safety factor. The safety factor is a proactive measure to apply for future measurements.

Notes on minimum weight values in above table:

1. If "N/A" is shown above, no appropriate value could be calculated.
2. METTLER TOLEDO is not responsible for the definition of the process requirements.

COPY

Measurement Results

Results Summary

	Repeatability	Eccentricity	Error of Indication
As Found	✓	✓	✓
As Left	✓	✓	✓

✓ = Passed

✗ = Failed

⚠ = Safety Factor not met

Repeatability

Test Load: 70 g

Tolerance	Control Limit	As Found		As Left	
		Std. Deviation	Result	Std. Deviation	Result
0.1%	0.000005 g	0.000008 g	✗	0.000008 g	✗
0.2%	0.000010 g		✓		⚠
0.5%	0.000025 g		✓		✓
1%	0.000050 g		✓		✓
2%	0.000100 g		✓		✓
5%	0.000250 g		✓		✓

The weighing tolerance is met if the standard deviation is less than or equal to the corresponding control limit.

Eccentricity

Test Load: 100 g

Tolerance	Control Limit	As Found		As Left	
		Deviation	Result	Deviation	Result
0.1%	0.0500 g	0.0001 g	✓	0.0001 g	✓
0.2%	0.1000 g		✓		✓
0.5%	0.2500 g		✓		✓
1%	0.5000 g		✓		✓
2%	1.0000 g		✓		✓
5%	2.5000 g		✓		✓

The weighing tolerance is met if the deviation is less than or equal to the corresponding control limit.

COPY

Error of Indication

As Found

Reference Value	Error	Control limits for various weighing tolerances					
		0.1%	0.2%	0.5%	1%	2%	5%
0.00000 g	0.00000 g	N/A	N/A	N/A	N/A	N/A	N/A
19.99999 g	0.00002 g	0.01000 g	0.02000 g	0.05000 g	0.10000 g	0.20000 g	0.50000 g
50.00003 g	0.00002 g	0.02500 g	0.05000 g	0.12500 g	0.25000 g	0.50000 g	1.25000 g
100.00000 g	0.00000 g	0.05000 g	0.10000 g	0.25000 g	0.50000 g	1.00000 g	2.50000 g
150.00000 g	0.00000 g	0.07500 g	0.15000 g	0.37500 g	0.75000 g	1.50000 g	3.75000 g
200.00000 g	0.00000 g	0.10000 g	0.20000 g	0.50000 g	1.00000 g	2.00000 g	5.00000 g
Result		✓	✓	✓	✓	✓	✓

As Left

Reference Value	Error	Control limits for various weighing tolerances					
		0.1%	0.2%	0.5%	1%	2%	5%
0.00000 g	0.00000 g	N/A	N/A	N/A	N/A	N/A	N/A
19.99999 g	0.00002 g	0.01000 g	0.02000 g	0.05000 g	0.10000 g	0.20000 g	0.50000 g
50.00003 g	0.00002 g	0.02500 g	0.05000 g	0.12500 g	0.25000 g	0.50000 g	1.25000 g
100.00000 g	0.00000 g	0.05000 g	0.10000 g	0.25000 g	0.50000 g	1.00000 g	2.50000 g
150.00000 g	0.00000 g	0.07500 g	0.15000 g	0.37500 g	0.75000 g	1.50000 g	3.75000 g
200.00000 g	0.00000 g	0.10000 g	0.20000 g	0.50000 g	1.00000 g	2.00000 g	5.00000 g
Result		✓	✓	✓	✓	✓	✓

The weighing tolerance is met if the error (of indication) for each test point is less than or equal to the corresponding control limit for that particular weighing tolerance. Results at or close to the zero point cannot be assessed.

COPY

BAROMETER

Serial No. : N/A[S41020124]



CALIBRATION LABORATORY Co., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



CERTIFICATE OF CALIBRATION

FOR

NOMENCLATURE : BAROMETER
MANUFACTURER : BARIO
MODEL / TYPE : N/A
SERIAL NO. : N/A[S41020124]
CLID. NO. : 212500828
JOB CONTROL NO. : 250507051351
CALIBRATION SERVICE : ☒ IN-LABORATORY ☐ ON-SITE

CUSTOMER : EASTERN THAI CONSULTING 1992 CO., LTD.
683 MOO 11, SUKHAPIBARN 8 RD,
NONGKHAM, SRIRACHA, CHONBURI 20230

DATE OF RECEIVED : 07 May 2025

DATE OF ISSUED : 09 May 2025

The report of calibration shall not be reproduced except in full without approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Sittipong Pimdee
Calibration Engineer

Approved By : Mongkol Yotsoontorn
Authorized Signatory
09 May 2025



This Calibration Certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI)

Certificate No. Q25051351

F3-011-05/12-23

page 1 of 3

COPY



@clccalibration



CALIBRATION LABORATORY Co., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



REPORT OF CALIBRATION

FOR

NOMENCLATURE : BAROMETER
MANUFACTURER : BARIO
MODEL / TYPE : N/A
SERIAL NO. : N/A[S41020124]
DATE OF CALIBRATION : 08 May 2025

ENVIRONMENT CONDITIONS :

Temperature : (23 ± 2) °C

Relative Humidity : (55 ± 10) %RH

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPPP-08 according to DKD-R 6-1 as calibration guidelines.

The calibration was performed by direct measurement with Reference Pressure Monitor which maintained by the Calibration Laboratory Co., Ltd.

REFERENCE STANDARD USED :

Reference Pressure Monitor, Fluke Model RPM3 S/N. 829.

TRACEABILITY :

The measurements are traceable to International System of Units (SI), through National Institute of Metrology (Thailand).

Certificate No. MP-0245-24, Due Date 11 November 2025.

UNCERTAINTY :

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor of $k = 2$. It has been evaluated according to the "Calibration of Pressure Gauges (DKD-R 6-1)" which provides a level of confidence approximately 95%.

Certificate No. Q25051351

F3-011-05/12-23

page 2 of 3

COPY



@clccalibration



CALIBRATION LABORATORY CO., LTD.

2/10-11,14,15 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel: 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : RECEIVED IN GOOD OPERATIONAL CONDITION

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The DUC was exercised by applying a known pressure from its zero to full scale 1 times. Then 2 series of known gauge pressure were applied. The STD reading were recorded and the means value were reported in the table below.

CALIBRATION DATA

CORRECTION OF PRESSURE

DUC Test point (hPa)	STD Reading (hPa)		Correction (hPa)	
	Up	Down	Up	Down
990	990.7	990.7	+0.7	+0.7
1000	1000.7	1000.8	+0.7	+0.8
1010	1010.8	1010.8	+0.8	+0.8
1020	1020.8	1020.9	+0.8	+0.9
1030	1030.9	1030.9	+0.9	+0.9

Uncertainty of measurement = 0.7 hPa

Transmitting fluid : Air.

Note. The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 015 Page 44 of 68

This report is valid for the above stated instrument/s only.

End of Certificate

Certificate No. Q25051351

F3-011-05/12-23

COPY



@calibration

DRY GAS METER XC-572-V

Serial No. : 1110070

Certificate Of Calibration

Method 5 Pre-Test Console Calibration - Cubic meter (m3)

Meter Console Information

Console Model : XC-572-V
Console serial : 1110070
DGM Model #: SK25EX
DGM Serial #: 00010036

Calibration Condition

Cal. Date: 30-Jul-25
Due Date: 30-Jul-26
Cal. Report No.: WDS-SV6806004
Ambient Temp (°C): 25
Pressure (mm Hg): 758
Relative Humidity (%): 60

Factors/Conversion

Std. Temp. (°K): 298
Std. Pressure (mm Hg): 760
K₁ (K/mm Hg): 0.3857

Reference Equipment

WTM Model: W-NKoDa-5B WTM Cal. Due Date: Dec. 2026
WTM Serial: 600245 Gamma: 1.0000

UIT Meter (DGM)

Run Time (minutes)	DGM Orifice (mm H ₂ O)	Volume		Outlet Temp		Volume		Outlet Temp	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final
a	P _{m(g)}	V _{int}	V _{ext}	t _{int}	t _{ext}	V _{int}	V _{ext}	t _{int}	t _{ext}
15.00	13.0	2.1638	2.3279	28	28	126.27216	126.43261	26	26
10.00	25.0	2.3396	2.4977	28	28	126.44405	126.59853	27	27
8.00	50.0	2.5143	2.6957	29	29	126.61477	126.79196	27	27
7.00	80.0	2.7083	2.9147	29	29	126.80434	127.00613	27	27
5.00	120.0	2.9325	3.1125	31	31	127.02345	127.19970	27	27

Reference Meter (WTM)

Standardized Data

Test Meter		Reference Meter		Correction Factor		Flow Rate	ΔH@ (mm H ₂ O)	
Std. Volume	Std. Flow Rate	Std. Volume	Std. Flow Rate	"Gamma"	Variation	Std & Corr	0.0212 SCMM	Variation
V _{m(std)} (m ³)	Q _{m(std)} m ³ /min	V _{w(std)} (m ³)	Q _{w(std)} m ³ /min	(Y)	(ΔY)	Q _{m(std)} (corr)	ΔH _e	ΔΔH _e
0.160	0.011	0.157	0.010	0.983	0.003	0.010	52.228	4.584
0.154	0.015	0.150	0.015	0.977	-0.002	0.015	48.640	0.997
0.176	0.022	0.173	0.022	0.979	-0.001	0.022	47.347	-0.296
0.201	0.029	0.197	0.028	0.977	-0.003	0.028	44.980	-2.663
0.175	0.035	0.172	0.034	0.982	0.003	0.034	45.022	-2.622

0.980 = Y Avg.

47.644 = ΔH@ Avg.

Pass/Fail Result: Pass

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is ±0.02.

Note: For ΔH_e, orifice pressure differential that equates to 0.75cfm (0.0212m³/min) at standard temperature and pressure, acceptable tolerance of individual values from the average is ±0.2inches (5.1mm) H₂O.

Approved By:

Palpasu Chaisana
(Palpasu Chaisana)
Service Manager

Date: 30-Jul-25

COPY

Certificate of Calibration - Supplemental

METHOD 5 PRE-TEST CONSOLE CALIBRATION

Nomenclature

P_a - Barometric Pressure
DGM - Dry Gas Meter
K₁ - Constant based on standard temp and press
Θ - Run time, in minutes
P_m - ΔH (Meter Pressure, gauge)
V_m - Volume collected by test meter, corrected for STP
Q_{m(std)} - Calculated flow rate of test meter
K' - Critical orifice coefficient
P_w - Measured pressure of reference meter
t_w - Temperature measured in reference meter
t_m - Temperature measured in test meter
Y - Ratio of volume collected from test meter and orifice
sc - Scaling Factor
Counts_{std} - Number of pulse counts, standardized
Counts_{raw} - Number of raw pulse counts of a calibration run

Equations

$$V_{w(std)} = Y * K_1 \frac{V_w * (P_{bar} + \frac{P_{m(g)}}{13.6})}{T_w}$$

$$V_{m(std)} = Counts_{std} * Y_{sc(avg)}$$

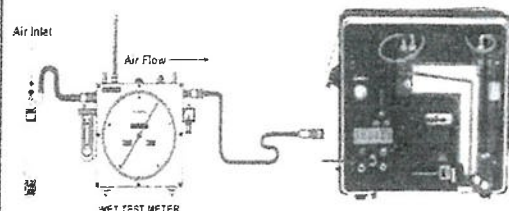
$$Counts_{std} = K_1 \frac{C_{total} * (P_{bar} + \frac{P_{m(g)}}{13.6})}{T_m}$$

$$Q_{w(std)} = \frac{V_{w(std)}}{\Theta} \quad Y_{sc} = \frac{V_{w(std)}}{Counts_{std}}$$

$$K_1 = \frac{T_{std}}{P_{std}} \quad Y = \frac{V_{w(std)}}{V_{m(std)}}$$

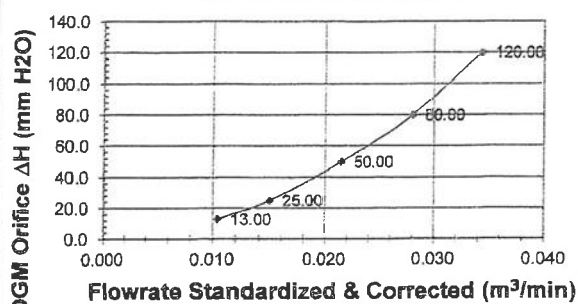
$$Metric \Delta H_a = \frac{P_{m(g)} * 0.0011696 * (P_{bar} + \frac{P_{m(g)}}{13.6})}{T_m} * \left(\frac{T_w * \Theta}{V_w * P_{bar}} \right)^2$$

Calibration Train



Calibration Graphs

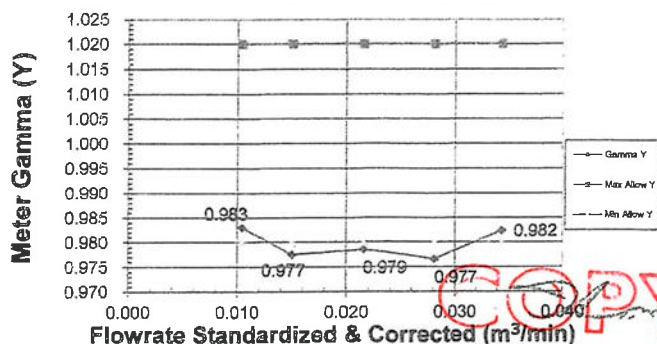
Meter Pressure vs Flowrate



Console Serial: 1110070

Console Model: XC-572-V

Meter Gamma vs Flowrate



Console Serial: 1110070

Console Model: XC-572-V

TEMPERATURE DISPLAY CALIBRATION

Meter Console Information

Console Model : XC-572-V
Console Serial : 1110070
Temp Indicator Model : 765-KF
Temp Indicator Serial : JC20668

Calibration Conditions

Cal. Date : 30-Jul-25
Due Date : 30-Jul-26
Cal. Report No. : WDS-SV6806004
Ambient Temp. (°C) : 25
Pressure (mm Hg) : 758
Humidity (%) : 60

Reference Equipment

Temp. Meter Model : Fluke 714B
Serial No. : 60580035
Cal. Date : 07-Apr-25
Temp Meter Model : Fluke 179
Serial No. : 58620112
Cal. Date : 06-Feb-25

Temperature Sensor Calibration

Reference Point	Ref. Thermometer Temperature	Thermocouple Display Temperature	Temperature Difference
#	°C	°C	°C
1	-18.0	-18.0	0.0
2	38.0	38.0	0.0
3	83.0	83.0	0.0
4	149.0	149.0	0.0
5	260.0	260.0	0.0
6	371.0	371.0	0.0
7	482.0	482.0	0.0
8	593.0	593.0	0.0
9	816.0	817.0	-1.0
10	1038.0	1039.0	-1.0
Maximum ¹			1.0

PASS

Note

¹ For valid test results, the maximum difference between temperature readings should $\leq 1.0^{\circ}\text{C}$ (EPA Method 5, Section 6.1.1.8). Perform all TC Channel calibrations. Except meter (DGM) channel

DGM Out Temperature Sensor Calibration

Temperature point	Ref. Thermometer Temperature	Thermocouple Display Temperature	Temperature Difference
#	°C	°C	°C
Ice	0.0	0.0	0.0
Ambient	26.5	27.0	-0.5
Heat	109.8	110.0	-0.2

Difference Range

Temp. Difference $\pm 2^{\circ}\text{F}$ or $\pm 1.1^{\circ}\text{C}$

PASS

Note

The temperatures of the thermocouple and reference thermometers shall agree to within $\pm 2^{\circ}\text{F}$. (EPA Method 5, section 10.5)

Approved By :


(Patpasu Chaisana)
Service Manager

COPY

Flue gas Analyzer

Testo 350XL

Serial No. 01807527/002

Certificate No: G 680406

Date of issue : 24-Jun-25

Instrument description : Flue Gas Analyzer
Instrument model : Testo 350XL
Instrument serial no. : 01807527/002
Control unit serial no. : 01794619/002
ID no. or control no. : -
Manufacturer : Testo SE & Co. KGaA
Probe description : -
Probe model : -
Probe serial no. : -
Customer name : Eastern Thai Consulting 1992 Company Limited
Customer address : 683 Moo 11, Sukhaphibarn 8 Road, Nongkham, Si Racha, Chon Buri 20280

Total pages of certificate : 3 Pages

Receiving no. : L-252289

Receiving date. : 20-Jun-25

Parameter of calibration : Gas Calibration(Oxygen 2.50, 9.984, 21.01 %vol, Carbon Monoxide 80.45, 300.9, 1007 ppm, Nitrogen Dioxide 30.68, 81.8, 202.6 ppm, Nitric Oxide 30.0, 151.8, 322.5 ppm, Sulphur Dioxide 50.36, 100.7, 600.8 ppm)

Condition of UUC. : Used

Ambient condition : All of the Measurement were carried out the stabilized laboratory

Temperature : 23 ± 5 °C

Humidity : 55 ± 15 %RH

Calibration place : 17/121 Soi Ngamwongwan 47 Yaek 48, Toongsonghong, Laksi, Bangkok 10210 THAILAND

Calibration procedure no. : This Instrument was calibrated by comparison with Standard gas mixture according to calibration Work Instruction no. WI-CL-28-C

The calibration certificate expanded uncertainty of measurement is stated as the standard uncertainty of measurement Multiplied by coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

This certificate is applied only to item under test Environmental condition.

This Calibration Certificate may not be reproduced other than in full except with the permission of the issuing laboratory.

Calibration certificates without signature and seal not valid and The results relate only to the items tested/calibrated.

This calibration certificate documents are traceability to national standards, which realize measurement according to the International System of Units (SI).

Date of calibration : 24-Jun-25

Kwanchai Khamdoun

Mr. Kwanchai Khamdoun

Calibration Technician

Nongluck Wongsettee

Mrs. Nongluck Wongsettee

Technical Manager

COPY

Certificate No.: G 680406

Standard References (Table 1)

Standard	Certificate No.	Vendor	Due date
Oxygen (O2) 2.50 % Vol	2412/23	Linde	27-Aug-27
Oxygen (O2) 9.984 % Vol	CG-0113-24	Nimt	01-Aug-29
Oxygen (O2) 21.01 % Vol	CG-0112-24	Nimt	01-Aug-29
Carbon monoxide (CO) 80.45 ppm	CG-0132-24	Nimt	10-Sep-29
Carbon monoxide (CO) 300.9 ppm	1422/25	Linde	21-May-29
Carbon monoxide (CO) 1007 ppm	1870/24	Linde	17-Jun-26
Nitrogen Dioxide (NO2) 30.68 ppm	2832/24	Linde	08-Sep-26
Nitrogen Dioxide (NO2) 81.8 ppm	2330/24	Linde	01-Aug-26
Nitrogen Dioxide (NO2) 202.6 ppm	3794/24	Linde	23-Dec-26
Nitric Oxide (NO) 30.0 ppm	CG-0065-24	Nimt	06-May-26
Nitric Oxide (NO) 151.8 ppm	0404/25	Linde	09-Feb-27
Nitric Oxide (NO) 322.5 ppm	1974/23	Linde	17-Jul-25
Sulphur Dioxide (SO2) 50.36 ppm	2004/23	Linde	17-Jul-25
Sulphur Dioxide (SO2) 100.7 ppm	2662/24	Linde	25-Aug-26
Sulphur Dioxide (SO2) 600.8 ppm	2003/23	Linde	17-Jul-25

Measured room conditions

Temperature : 22.8 °C Humidity : 67.4 %RH Pressure : 1009.7 mbar

Calibration conditions

Gas Temperature : 23 °C Flow rate : 1,100 ml/min Gas pressure : 1013.9 mbar

Calibration Results (Before adjustment) (Table 2)

Parameter of Standard	Standard Values	Mean of UUC	Error	Uncertainty (±)
O2 (%Vol)	2.50	2.44	-0.06	0.15
O2 (%Vol)	9.984	9.89	-0.094	0.20
O2 (%Vol)	21.01	20.94	-0.07	0.30
CO (ppm)	80.45	81	0.55	3.5
CO (ppm)	300.9	302	1.1	6.6
CO (ppm)	1007	1004	-3	12
NO2 (ppm)	30.68	23.3	-7.38	8.6
NO2 (ppm)	81.8	69.4	-12.4	15
NO2 (ppm)	202.6	178.1	-24.5	29
NO (ppm)	30.0	33	3.0	11
NO (ppm)	151.8	171	19.2	28
NO (ppm)	322.5	334	11.5	15
SO2 (ppm)	50.36	50	-0.36	6.0
SO2 (ppm)	100.7	100	-0.7	6.0
SO2 (ppm)	600.8	599	-1.8	13

COPY

Calibration Results (After adjustment) (Table 3)

Parameter of Standard	Standard Values	Mean of UUC	Error	Uncertainty (±)
NO ₂ (ppm)	30.68	29.8	-0.88	8.0
NO ₂ (ppm)	81.8	79.7	-2.1	8.0
NO ₂ (ppm)	203	200.1	-2.5	12
NO (ppm)	30.0	31	1.0	8.0
NO (ppm)	151.8	153	1.2	8.0
NO (ppm)	322.5	325	2.5	12

Remark : 1 cmol/mol = 1 %vol. 1 µmol/mol = 1 ppm., No adjustment Sensor(O₂,CO,SO₂).

End of Report

COPY

GAS CHROMATOGRAPH

MODEL : GC-2010 Plus AF

S/N : C12095200986

SHIMADZU GAS CHROMATOGRAPH SYSTEM GC-2010Plus Series

Operational Qualification

Operational Qualification Report

System Name

System ID No. Gas Chromatograph LABE 04/3

Installation Site Instrument Room GC/IC

The undersigned performer reports that the Operational Qualification Protocol has been successfully completed for the system stated above.

• Performer

Signature *Natdanai*

Date

Print Natdanai Aeksomthun

14 / 08 / 2025

Title Service Engineer

Company Bova Scientific Co., Ltd.

The undersigned reviewer and manager report that the performer has completed the Operational Qualification Protocol successfully.

• Reviewer

Signature *Pannong*

Date

Print Pannong Bunnongros

14 / 08 / 2025

Title Scientist

Company Eastern Thai Consulting 1992 Co., Ltd.

• Manager

Signature *Nannaphat*

Date

Print Nannaphat Bakhutod

14 / 08 / 2025

Title HS

Company Eastern Thai Consulting 1992 Co., Ltd.

COPY

Operational Qualification

Operational Qualification Record

3. Operational Qualification Record

If the unit is included in the system to be inspected, place a checkmark in the "Applicable" box. If the unit is not included in the system, place a checkmark in the "Not Applicable" box. Enter a diagonal line in the Pass/Fail checkbox for "Not applicable" items.

Here, inspection results are recorded along the procedure of Chapter 4 in Operational Qualification Protocol.

3-1 Gas Chromatograph GC-2010Plus ☒ Applicable ☐ Not Applicable

Component ID		Model Name		GC-2010Plus AF	
Serial Number (S/N)		LAB 04/3			
No.	Item	Criteria		Results	Pass/Fail
1	Display, LED test	Verify the display and LED operation.	All LEDs light. Screen contrast adjustment is possible.	LED Display	<input checked="" type="checkbox"/> <input type="checkbox"/>
2	Standard self-diagnostic test	Verify the status and operation of all parts.	"Good" displayed as the result of the self-diagnostic test.	Good	<input checked="" type="checkbox"/> <input type="checkbox"/>
3	Firmware version check	Verify the program version.	Version number and build number are displayed. The version No. and build No. matches the controlled version number.	Ver. Controlled Ver. No.	<input checked="" type="checkbox"/> <input type="checkbox"/>
4	Temperature test	Verify that temperature control is normal.	TEMP LED lights green. Displayed actual values agree in the set values within $\pm 1.0^\circ\text{C}$.	Temperature controller (Name) Set value Measured value	<input checked="" type="checkbox"/> <input type="checkbox"/>
			<input checked="" type="checkbox"/> COL Column	50.0 °C 50.0 °C	
			<input checked="" type="checkbox"/> INJ1 SPL 1	50.0 °C 50.0 °C	
			<input type="checkbox"/> INJ2	°C °C	
			<input checked="" type="checkbox"/> DET1 FID 1	50.0 °C 50.0 °C	
			<input type="checkbox"/> DET2	°C °C	
			<input type="checkbox"/> AUX3	°C °C	
			<input type="checkbox"/> AUX4	°C °C	
			<input type="checkbox"/> AUX5	°C °C	
5	Column inlet pressure test	Verify the accuracy of the column inlet pressure.	Inspection pressure gauge reading <input checked="" type="checkbox"/> 10.0 \pm 3.0 kPa	Pressure gauge correction value Pressure gauge reading Post-correction reading	<input checked="" type="checkbox"/> <input type="checkbox"/>
			Inspection pressure gauge reading <input checked="" type="checkbox"/> 200.0 \pm 20.0 kPa	Pressure gauge correction value Pressure gauge reading Post-correction reading	
			Inspection pressure gauge reading <input checked="" type="checkbox"/> 500.0 \pm 35.0 kPa	Pressure gauge correction value Pressure gauge reading Post-correction reading	

Performer (signature): *Natdanai*

Date: 14 / 08 / 2025

Reviewer (signature): *Pannong*

Date: 14 / 8 / 2025

COPY

Operational Qualification

Operational Qualification Record

No.	Item	Criteria	Results	Pass	Fail
6	Pressure program test	Verify that the pressure program operates normally.	Monitored pressure 6 minutes after start 250.0 ± 5.0 kPa Inspection pressure gauge reading 8 minutes after start 250.0 ± 20.0 kPa	2 4 3.4 kPa 2 4 7.5 kPa	<input checked="" type="checkbox"/> <input type="checkbox"/>
7	Flowrate test	Verify the accuracy of the full-flow and septum purging	Septum purge vent measured flow rate 3.0 ± 1.0 mL/min Total of septum purge and split vent flow rate values 10.0 ± 3.0 mL/min Total of septum purge and split vent flow rate values 200 ± 20 mL/min Total of septum purge and split vent flow rate values 300 ± 28 mL/min (Carrier gas: N ₂) Total of septum purge and split vent flow rate values 500 ± 35 mL/min (Carrier gas: He)	Septum purge 3.0 mL/min Split vent 7.0 mL/min Total 10.0 mL/min Split vent 198 mL/min Total 201 mL/min Split vent 495 mL/min Total 498 mL/min	<input checked="" type="checkbox"/> <input type="checkbox"/>
8	Column oven test	Verify the accuracy of the column oven temperature.	Inspection temperature sensor displayed value 50.0 ± 3.2 °C Inspection temperature sensor displayed value 150.0 ± 4.2 °C Inspection temperature sensor displayed value 280.0 ± 5.5 °C	Temp. correction value - 0.1 °C Temp. sensor reading 49.1 °C Corrected temp. value 49.2 °C Temp. correction value - 0.2 °C Temp. sensor reading 150.9 °C Corrected temp. value 150.9 °C Temp. correction value 0.9 °C Temp. sensor reading 281.3 °C Corrected temp. value 282.2 °C	<input checked="" type="checkbox"/> <input type="checkbox"/>
9	Temperature program test	Verify that the column temperature program operates normally.	Monitored temperature 6 minutes after start 200 ± 1 °C Inspection temperature reading 8 minutes after start 200.0 ± 4.7 °C Using a temperature sensor with 1 °C minimum display increment 200 ± 3 °C	200 °C 201.4 °C °C	<input checked="" type="checkbox"/> <input type="checkbox"/>
10	Sensitivity test	Verify the detector sensitivity.	FID (<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable) Calculated S value Inj. unit () Make-up gas: N ₂ 10.0 × 10 ⁻³ C/g min. Make-up gas: He 7.00 × 10 ⁻³ C/g min. TCD (<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not Applicable) Calculated S value Inj. unit () 4.00 × 10 ⁻³ mV·mL/mg min.	C _{in} AREA value 45,781 μV·s Calculated S value × 10 ⁻³ C/g C _{in} AREA value μV·s Flowrate at vent mL/min Calculated S value × 10 ⁻³ mV·mL/mg	<input checked="" type="checkbox"/> <input type="checkbox"/>

Performer (signature):

Date: 14 / 08 / 2025

Reviewer (signature):

Date: 14 / 8 / 2025

COPY

Operational Qualification

Operational Qualification Record

3-2 AOC-20i Auto Injector

☒ Applicable ☐ Not Applicable☒ Single ☐ Dual system, main injector

Component ID		Model Name		AOC-20i	
Serial No. (S/N)		LAF 04/3		2 1 2 1 2 5 4 1 0 8 0 9	
No.	Item	Criteria	Results	Pass	Fail
1	Display, LED test	Verify the display and LED operation.	All LEDs light, except decimal point	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	ROM, RAM self diagnosis	Verify that ROM and RAM memory operates normally.	Display shows "000"	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Firmware version check	Verify the program version.	Version number is displayed. The version number matches the controlled version number.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Basic operation test	Verify that the auto injector basic operation is correct.	Sample injected into the GC and GC operation starts.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

☒ Not Applicable ☐ Dual system, sub injector

Component ID		Model Name		AOC-20i	
Serial No. (S/N)					
No.	Item	Criteria	Results	Pass	Fail
1	Display, LED test	Verify the display and LED operation.	All LEDs light, except decimal point.	<input type="checkbox"/>	<input type="checkbox"/>
2	ROM, RAM self diagnosis	Verify that ROM and RAM memory operates normally.	Display shows "000"	<input type="checkbox"/>	<input type="checkbox"/>
3	Firmware version check	Verify the program version.	Version number is displayed. The version number matches the controlled version number.	<input type="checkbox"/>	<input type="checkbox"/>
4	Basic operation test	Verify that the auto injector basic operation is correct.	Sample No.1 transferred to the main injector, sample No. 2 transferred to the sub-injector. Sub-injector injects into the GC simultaneously with the main AOC.	<input type="checkbox"/>	<input type="checkbox"/>

Performer (signature):

Date: 14 / 08 / 2025

Reviewer (signature):

Date: 14 / 8 / 2025

COPY

3-3 AOC-20s Auto Sampler

☒ Applicable ☐ Not Applicable

Model Name		AOC-20s			
Component ID		LABE 04/3			
Serial No. (S/N)		C 1 2 1 2 5 4 1 0 8 0 9			
No.	Item	Criteria	Results	Pass	Fail
1	Initial operation test	Verify that the auto sampler basic operation is correct.	LED lights green, not red.		
2	Firmware version check	Verify the program version.	Version number is displayed.	Version No. 3.5	
		The version number matches the controlled version number.	Controlled Ver. No. 3.5		

Performer (signature): MS Date: 14 / 08 / 2025
Reviewer (signature): MS Date: 14 / 8 / 2025

3-4 SPL-2010Plus Split/Splitless Injection Unit

☐ Applicable ☒ Not Applicable

Model Name		SPL-2010Plus			
Component ID					
Serial No. (S/N)					
No.	Item	Criteria	Results	Pass	Fail
1	Column inlet pressure test	Verify the accuracy of the column inlet pressure.	Inspection pressure gauge reading <input type="checkbox"/> 10.0±3.0kPa Pressure gauge correction value Pressure gauge reading Post-correction reading	kPa kPa kPa	
			Inspection pressure gauge reading <input type="checkbox"/> 200.0±20.0kPa Pressure gauge correction value Pressure gauge reading Post-correction reading	kPa kPa kPa	
			Inspection pressure gauge reading <input type="checkbox"/> 500.0±35.0kPa Pressure gauge correction value Pressure gauge reading Post-correction reading	kPa kPa kPa	
2	Pressure program test	Verify that the pressure program operates normally	Monitored pressure 6 minutes after start 250.0 ± 5.0 kPa Inspection pressure gauge reading 8 minutes after start 250.0 ± 20.0 kPa	kPa kPa	
3	Flowrate test	Verify the accuracy of the full-flow septum purging	Septum purge vent measured flow rate 3.0 ± 1.0mL/min <input type="checkbox"/> Total of septum purge and split vent flow rate values 10.0±3.0mL/min <input type="checkbox"/> Total of septum purge and split vent flow rate values 200±20mL/min <input type="checkbox"/> Total of septum purge and split vent flow rate values 300± 28mL/min(Carrier gas:N ₂) <input type="checkbox"/> Total of septum purge and split vent flow rate values 500± 35mL/min(Carrier gas:He)	Septum purge mL/min Split vent mL/min Total mL/min Split vent mL/min Total mL/min Split vent mL/min Total mL/min	

Performer (signature): MS Date: 14 / 08 / 2025
Reviewer (signature): MS Date: 14 / 8 / 2025

Hot Air Oven

Model : UFE 500

Serial No. : G511.0182

NSC-TISI-TIS17025
CALIBRATION 0152

Page 1 of 3

CERTIFICATE OF CALIBRATION

Certificate No. : 24-164691

Sample Code : 24-67405-001

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Hot Lab)

Equipment : Temperature controlled enclosures (Hot air oven)

Manufacturer : Memmert Model : UFE 500

Serial No. : G511.0182 ID No. : LABE 17/4

Date of Receipt : 19 December 2024 Date of Calibration : 19 December 2024

Condition of Calibration

1. Environment
- | | |
|---------------------------|---|
| 1.1 Ambient temperature | : Maximum 32.0 °C ; Minimum 31.0 °C |
| 1.2 Relative humidity | : Maximum 48.5 % ; Minimum 43.5 % |
| 1.3 Line voltage supplied | : Maximum 226.3 VAC ; Minimum 222.0 VAC |

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-Pt100)	LB-DA-11 (RTD-138 to RTD-146)	24-040191	07 April 2025

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by Mr. Nophanon Anusak
Scientist

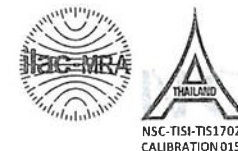
Approved by (Mr. Somchai Neampunt)
Signed for Director

Issue date 20 December 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation schema which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

NSC-TISI-TIS17025
CALIBRATION 0152

Page 2 of 3

REPORT OF CALIBRATION

Certificate No. : 24-164691

Sample Code : 24-67405-001

Results of Calibration

Resolution : 0.5 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)									Uncertainty ± (°C)	Coverage factor k
			# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9 ^{ref}		
104	103.5	103.5	104.14	104.15	103.80	104.15	104.09	104.19	103.85	103.65	104.22	0.47	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
104	0.07	0.63	0.69

Notes

- UUC* = Unit Under Calibration

Calibrated by Mr. Nophanon Anusak
Scientist

Approved by (Mr. Somchai Neampunt)
Signed for Director

Issue date 20 December 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation schema which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).



REPORT OF CALIBRATION

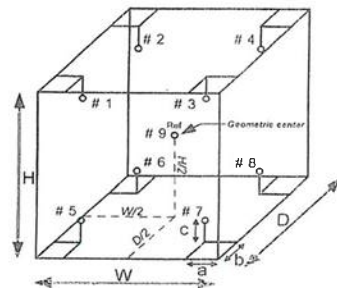
Certificate No. : 24-164691

Sample Code : 24-67405-001

Results of Calibration

Notes

1. Sensor installation locations
 - 1.1 All sensors at any corners or walls should be positioned 5 cm (a x b x c) from the wall.
 - 1.2 The reference sensor is preferably located of the geometric center of the chamber.
2. Interior dimensions approx of chamber :
W = 56 cm ; D = 40 cm ; H = 48 cm
3. Air valve or fresh air level : Off
4. Fan level : Open
5. The quoted uncertainty includes "Stability of chamber and loading effect in chamber at 20% of uniformity".
6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.
8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.
9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.
10. Calibration results without adjustment.

Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

- End of Report -

COPY

Primary Flow Calibrator

Serial No. : 110619 , 207510



CALIBRATION LABORATORY Co.,LTD.

2/10-11 14, 55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel: 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



CERTIFICATE OF CALIBRATION

FOR

NOMENCLATURE : FLOW METER
MANUFACTURER : BIOS INTERNATIONAL
MODEL / TYPE : DEFENDER 510-L
SERIAL NO. : 110619
CLID. NO. : 212500238
JOB CONTROL NO. : 250128010260
CALIBRATION SERVICE : ☒ IN-LABORATORY ☐ ON-SITE

CUSTOMER : EASTERN THAI CONSULTING 1992 CO., LTD.
683 MOO 11, SUKHAPIBARN 8 RD,
NONGKHAM, SRIRACHA, CHONBURI 20230

DATE OF RECEIVED : 28 January 2025

DATE OF ISSUED : 31 January 2025

The report of calibration shall not be reproduced except in full without approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Suphakit Sakuntaharn
Calibration Engineer



Approved By : Mongkol Yotsoontorn
Authorized Signatory
31 January 2025

This Calibration Certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI)

Certificate No. Q25010260

F3-011-05/12-23



CALIBRATION LABORATORY Co.,LTD.

2/10-11 14, 55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel: 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



REPORT OF CALIBRATION

FOR

NOMENCLATURE : FLOW METER
MANUFACTURER : BIOS INTERNATIONAL
MODEL / TYPE : DEFENDER 510-L
SERIAL NO. : 110619
DATE OF CALIBRATION : 29 January 2025

ENVIRONMENT CONDITIONS :

Temperature : $(23 \pm 2) ^\circ\text{C}$ Relative Humidity : $(55 \pm 10) \% \text{ RH}$

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPPF-03. The calibration was performed by comparison with Gas Flow Meter which refers to the standard condition of 101.325 kPa and 0 $^\circ\text{C}$.

REFERENCE STANDARD USED :

Gas Flow Meter, Alicat Scientific Model M-500SCCM-D-DB15 S/N. 261329.

TRACEABILITY :

The measurements are traceable to International System of Units (SI), through Chell Instrument Ltd.
Certificate No. N037063, Due Date 26 February 2025.

UNCERTAINTY :

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor complies with the table which for a normal distribution corresponds to a coverage probability of approximately 95 %.
It has been evaluated according to the "Evaluation of the Uncertainty of Measurement in Calibration (EA-4/02 M:2022)"

Certificate No. Q25010260

F3-011-05/12-23





CALIBRATION LABORATORY Co., LTD.

2/10-11,14,55 Soi Prasert Manukul 29 Yaek 4 Prasert Manukul Rd., Ladphrao, Bangkok 10230
Tel 02-578-0353-4 Fax 02-578-2672 www.cal-laboratory.com E-mail : sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : RECEIVED IN GOOD OPERATIONAL CONDITION

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The table in the following gives the calibration results and associated measurement uncertainties of the measuring flow meter.

CALIBRATION DATA

FLOW METER RESULT

Nominal Value (cc/min)	STD Applied (cc/min)	DUC Reading (cc/min)	Correction (cc/min)	Uncertainty ± (cc/min)
0	0.00	0.00	0.00	-
50	50.00	48.75	+1.25	2.10
100	100.00	97.66	+2.34	2.10
200	200.00	195.22	+4.78	2.10
300	300.00	292.56	+7.44	2.10
400	400.00	390.82	+9.18	2.10
500	500.00	490.04	+9.96	2.10

Technical Note. Media of Gas : Air

Setting Temperature 0 ° C ; Pressure 101.3 kPa

Note. The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 014 Page 49 of 68

This report is valid for the above stated instrument/s only.

End of Certificate

Certificate No. Q25010260

F3-011-05/12-23





CALIBRATION LABORATORY Co., LTD.

2/10-11 14, 55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel: 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



CERTIFICATE OF CALIBRATION

FOR

NOMENCLATURE : FLOW METER
MANUFACTURER : MESALABS
MODEL / TYPE : DEFENDER 510-M
SERIAL NO. : 207510
CLID. NO. : 212500237
JOB CONTROL NO. : 250128010259
CALIBRATION SERVICE : ☒ IN-LABORATORY ☐ ON-SITE

CUSTOMER : EASTERN THAI CONSULTING 1992 CO., LTD.
683 MOO 11, SUKHAPIBARN 8 RD,
NONGKHAM, SRIRACHA, CHONBURI 20230

DATE OF RECEIVED : 28 January 2025

DATE OF ISSUED : 31 January 2025

The report of calibration shall not be reproduced except in full without approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Supphakit Sakuntaharn
Calibration Engineer

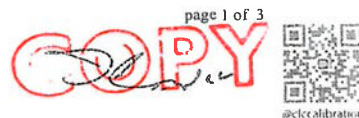


Approved By : Mongkol Yotsoontorn
Authorized Signatory
31 January 2025

This Calibration Certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI)

Certificate No. Q25010259

F3-011-05/12-23



CALIBRATION LABORATORY Co., LTD.

2/10-11 14, 55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel: 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



REPORT OF CALIBRATION

FOR

NOMENCLATURE : FLOW METER
MANUFACTURER : MESALABS
MODEL / TYPE : DEFENDER 510-M
SERIAL NO. : 207510
DATE OF CALIBRATION : 29 January 2025

ENVIRONMENT CONDITIONS :

Temperature : $(23 \pm 2) ^\circ\text{C}$

Relative Humidity : $(55 \pm 10) \% \text{ RH}$

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPPF-03. The calibration was performed by comparison with Gas Flow Meter which refers to the standard condition of 101.325 kPa and $0 ^\circ\text{C}$.

REFERENCE STANDARD USED :

Gas Flow Meter, Alicat Scientific Model M-500SCCM-D-DB15 S/N. 261329.

TRACEABILITY :

The measurements are traceable to International System of Units (SI), through Chell Instrument Ltd.

Certificate No. N037063, Due Date 26 February 2025.

UNCERTAINTY :

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor complies with the table which for a normal distribution corresponds to a coverage probability of approximately 95 %.

It has been evaluated according to the "Evaluation of the Uncertainty of Measurement in Calibration (EA-4/02 M:2022)"

Certificate No. Q25010259

F3-011-05/12-23





CALIBRATION LABORATORY Co., LTD.

2/10-11, 14-55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd, Ladphrao Bangkok 10230
Tel 02-578-0353-4 Fax 02-578-2672 www.cali-laboratory.com E-mail sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : RECEIVED IN GOOD OPERATIONAL CONDITION

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The table in the following gives the calibration results and associated measurement uncertainties of the measuring flow meter.

CALIBRATION DATA

FLOW METER RESULT

Nominal Value (cc/min)	STD Applied (cc/min)	DUC Reading (cc/min)	Correction (cc/min)	Uncertainty \pm (cc/min)
0	0.00	0.00	0.00	-
50	50.00	45.81	+4.19	2.10
100	100.00	99.10	+0.90	2.10
200	200.00	198.03	+1.97	2.10
300	300.00	298.30	+1.70	2.10
400	400.00	396.50	+3.50	2.10
500	500.00	495.31	+4.69	2.10

Technical Note. Media of Gas : Air

Setting Temperature 0 ° C ; Pressure 101.3 kPa

Note. The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 014 Page 49 of 68

This report is valid for the above stated instrument/s only.

End of Certificate

Certificate No. Q25010259

F3-011-05/12-23



SOUND LEVEL CALIBRATOR

MODEL : NC-75

SERIAL No. : 34302326

SITHIPORN ASSOCIATES CO., LTD.
CALIBRATION LABORATORY

451-451/1 Sirinthorn Road, Bangbunru, Bangplud, Bangkok, 10700 Thailand
Tel. +66 2433 8331 Email : calibration@sithiphom.com

SITHIPORN



Cert. No. : ACC25018

Pages : 1 of 3

Calibration Certificate

Equipment : SOUND CALIBRATOR
Manufacturer : RION
Model : NC-75
Serial No.: 34302326
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 02 APRIL 2025
Calibration Date : 30 APRIL 2025
Date of Issue : 02 MAY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

T. Petchur
(Thanakul Petchurai)

COPY

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

SITHIPORN
associates

SITHIPORN ASSOCIATES
CALIBRATION LABORATORY

Cert. No. : ACC25018

Job No. : VC68AC0077

Pages : 2 of 3

Calibration Procedure : CP-AC-03

Calibration Method :

This equipment was calibrated by follow on IEC-60942-2003 Standard.

The sound pressure level, frequency and total distortion of the sound calibrator was measured using the reference microphone.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33511B	MY52302742	EF-0012-25	11-FEB-26
Digital Multimeter	33461A	MY60024273	CA2025120EA	18-MAR-26
Programmable Attenuator	MAT-1070	62100114	EF-0006-25	11-FEB-26
Condenser Microphone	4180	2977900	AA-1002-25	19-FEB-26
Measuring Amplifier	NA-42KAI	34560495	AA-3002-25	19-FEB-26
Audio Analyzer	AVR-3360A	V744B6069	EF-0013-25	13-FEB-26

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Electrical And Electronics Institute (EEI).

COPY

T. Petchur

Cert. No. : ACC25018

Job No. : VC68AC0077

Pages : 3 of 3

Result of calibration :

1. Sound pressure level

Specified sound pressure level (dB)	Measured value (dB)	Deviated value (dB)	Uncertainty (dB)	Acceptance limit (dB)
94	94.03	0.03	0.15	0.40

2. Frequency

Specified Frequency (Hz)	Measured value (Hz)	Deviated value (%)	Uncertainty (%)	Acceptance limit (%)
1000	1000.0	0.0	0.1	1.0

3. Total distortion

Measured value (%)	Uncertainty (%)	Acceptance limit (%)
0.79	0.10	3.0

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY

T. Petch

SOUND LEVEL METER

MODEL : NL-52A

SERIAL No. : 00230988



Cert. No. : ACL25049
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-52A / Microphone UC-59 / Preamplifier NH-25
Serial No.: 00230988 / 22332 / 22424
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by : 
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Calibration Procedure : CP-AC-01

Cert. No. : ACL25049
Job No. : VC68AC0048
Pages : 2 of 8

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

<u>Instrument</u>	<u>Model</u>	<u>Serial No.</u>	<u>Cert. No.</u>	<u>Due Date</u>
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY


Cert. No. : ACL25049
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25049
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :**1. Absolute sensitivity**

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	94.0	0.0	±0.3

2. Self-generated noise**2.1 Normal test**

Measured Value (dB)
13.8

2.2 TT : microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	9.9
C - weight	14.8
Flat	20.4

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
25	0.4	0.4	0.4	± 1.0
100	0.2	0.2	0.2	± 0.7
1000	0.3	0.3	0.3	+ 1.5, - 2.5

COPY

T. Petcha-

COPY

T. Petcha-

Cert. No. : ACL25049
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	-0.1	-0.1	±1.0
125	-0.1	0.0	0.0	±1.0
250	0.0	0.0	-0.1	±1.0
500	0.0	0.0	-0.1	±1.0
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±1.0
4000	0.0	0.0	0.0	±1.0
8000	0.0	0.1	0.1	+ 1.5, - 2.5
16000	0.0	-1.2	-1.2	+ 2.5, -16.0

5. Frequency and time weightings at 1 kHz**5.1 Frequency weightings at 1 kHz**

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.1

COPY
T. Petch.

Cert. No. : ACL25049
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±0.8
136.0	136.0	0.0	±0.8
135.0	135.0	0.0	±0.8
134.0	134.0	0.0	±0.8
133.0	133.0	0.0	±0.8
132.0	131.9	-0.1	±0.8
131.0	130.9	-0.1	±0.8
129.0	129.0	0.0	±0.8
124.0	124.0	0.0	±0.8
119.0	119.0	0.0	±0.8
114.0	114.0	0.0	±0.8
109.0	109.0	0.0	±0.8
104.0	104.0	0.0	±0.8
99.0	99.0	0.0	±0.8
94.0	94.0	0.0	±0.8
89.0	89.0	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.0	±0.8
39.0	39.0	0.0	±0.8
34.0	34.0	0.0	±0.8
30.0	30.0	0.0	±0.8
29.0	29.0	0.0	±0.8
28.0	28.0	0.0	±0.8
27.0	27.0	0.0	±0.8
26.0	26.0	0.0	±0.8
25.0	25.0	0.0	±0.8

COPY
T. Petch.

Cert. No. : ACL25049
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±0.8

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±0.8

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.0 ; -3.0
	2	8	117.0	117.0	0.0	1.0 ; -1.5
	200	800	134.0	134.0	0.0	±0.5
Slow	2	8	108.0	108.0	0.0	1.0 ; -3.0
	200	800	127.6	127.6	0.0	±0.5
SEL	0.25	1	99.0	98.9	-0.1	1.0 ; -3.0
	2	8	108.0	108.0	0.0	1.0 ; -1.5
	200	800	128.0	128.0	0.0	±0.5

Cert. No. : ACL25049
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±2.0
On	133.4	133.4	0.0	±2.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±1.0
Positive half cycle	135.4	135.2	-0.2	±1.0
Negative half cycle	135.4	135.2	-0.2	±1.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle	Value (dB)	
89.5	89.5		
		0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.1

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$ or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY

T. Petch

COPY

T. Petch

SOUND LEVEL METER

MODEL : NL-52A

SERIAL No. : 00230989

Cert. No. : ACL25050
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-52A / Microphone UC-59 / Preamplifier NH-25
Serial No.: 00230989 / 22337 / 22425
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

T. Petch.
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference
Standard Instruments.

For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAI	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY
T. Petch.

Cert. No. : ACL25050
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

COPY

T. Petch

Cert. No. : ACL25050
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :**1. Absolute sensitivity**

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	94.0	0.0	±0.3

2. Self-generated noise**2.1 Nonnal test**

Measured Value (dB)
14.2

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	10.8
C - weight	15.4
Flat	20.7

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			Acceptance Limits
	Flat	C-weight	A-weight	
125	0.4	0.4	0.4	± 1.0
1000	0.3	0.3	0.3	± 0.7
8000	1.2	1.2	1.2	+ 1.5, - 2.5

COPY

T. Petch

Cert. No. : ACL25050
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	0.0	±1.0
125	0.0	0.0	0.0	±1.0
250	0.0	0.0	-0.1	±1.0
500	0.0	0.0	-0.1	±1.0
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±1.0
4000	0.0	0.0	0.0	±1.0
8000	0.0	0.0	0.0	+ 1.5, - 2.5
16000	0.0	-1.2	-1.2	+ 2.5, -16.0

5. Frequency and time weightings at 1 kHz**5.1 Frequency weightings at 1 kHz**

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.1	0.1	± 0.1

Cert. No. : ACL25050
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±0.8
136.0	136.1	0.1	±0.8
135.0	135.1	0.1	±0.8
134.0	134.1	0.1	±0.8
133.0	133.0	0.0	±0.8
132.0	132.0	0.0	±0.8
131.0	131.0	0.0	±0.8
129.0	129.1	0.1	±0.8
124.0	124.0	0.0	±0.8
119.0	119.1	0.1	±0.8
114.0	114.1	0.1	±0.8
109.0	109.1	0.1	±0.8
104.0	104.1	0.1	±0.8
99.0	99.1	0.1	±0.8
94.0	94.0	0.0	±0.8
89.0	89.0	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.0	±0.8
39.0	39.0	0.0	±0.8
34.0	34.0	0.0	±0.8
30.0	30.0	0.0	±0.8
29.0	29.0	0.0	±0.8
28.0	28.0	0.0	±0.8
27.0	27.1	0.1	±0.8
26.0	26.1	0.1	±0.8
25.0	25.0	0.0	±0.8

COPY
T. Retchu.

COPY
T. Retchu.

Cert. No. : ACL25050

Job No. : VC68AC0048

Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±0.8

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±0.8

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.0 ; -3.0
	2	8	117.0	116.9	-0.1	1.0 ; -1.5
	200	800	134.0	134.0	0.0	±0.5
Slow	2	8	108.0	108.0	0.0	1.0 ; -3.0
	200	800	127.6	127.6	0.0	±0.5
SEL	0.25	1	99.0	98.8	-0.2	1.0 ; -3.0
	2	8	108.0	107.9	-0.1	1.0 ; -1.5
	200	800	128.0	128.0	0.0	±0.5

Cert. No. : ACL25050

Job No. : VC68AC0048

Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±2.0
One	133.4	133.3	-0.1	±2.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±1.0
Positive half cycle	135.4	135.2	-0.2	±1.0
Negative half cycle	135.4	135.2	-0.2	±1.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.1

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY
RetchCOPY
Retch

SOUND LEVEL METER

MODEL : NL-52A

SERIAL No. : 01120946

Cert. No. : ACL25301

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-52A / Microphone UC-59 / Preamplifier NH-25
Serial No.: 01120946 / 21952 / 22335
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (50.0 ± 20) %

Received Date : 14 JULY 2025
Calibration Date : 04 AUGUST 2025
Date of Issue : 06 AUGUST 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by : *Wichok E.*
(Wichok Ekpongpradit)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25301

Job No. : VC68AC0154

Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0011-25	11-FEB-26
Waveform Generator	33511B	MY52302742	EF-0012-25	11-FEB-26
Digital Multimeter	33461A	MY53220104	EEL-BP 24/0268	22-APR-26
Digital Multimeter	33461A	MY53220076	EEL-BP 23/0268	22-APR-26
Digital Multimeter	34461A	MY60024273	CA2025120FA	18-MAR-26
Programmable Attenuator	MAT-1070	62100114	EF-0006-25	11-FEB-26
Condenser Microphone	4180	2977900	AA-1002-25	19-FEB-26
Measuring Amplifier	NA-42KAI	34560495	AA-3002-25	19-FEB-26

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).
- 3.3 Electrical And Electronics Institute (EEI).

COPY

Cert. No. : ACL25301
Job No. : VC68AC0154
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.1 (93.94)	94.0	0.9	±0.2

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
14.4

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A-weight	11.6
C-weight	16.1
Flat	21.3

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			Acceptance Limits
	Flat	C-weight	A-weight	
125	0.1	0.2	0.2	± 1.0
1000	0.1	0.1	0.1	± 0.7
8000	0.9	0.9	0.9	+ 1.5, - 2.5

COPY
Handwritten signature

richon 22

COPY
Handwritten signature

richon 22

Cert. No. : ACL25301
Job No. : VC68AC0154
Pages : 5 of 8

Cert. No. : ACL25301
Job No. : VC68AC0154
Pages : 6 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	-0.1	-0.1	±1.0
125	-0.1	0.0	0.0	±1.0
250	0.0	0.0	-0.1	±1.0
500	0.0	0.0	-0.1	±1.0
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±1.0
4000	0.0	0.0	0.0	±1.0
8000	0.0	0.0	0.0	+ 1.5, - 2.5
16000	0.0	-1.2	-1.2	+ 2.5, -16.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.1

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	±0.8
136.0	136.1	0.1	±0.8
135.0	135.1	0.1	±0.8
134.0	134.1	0.1	±0.8
133.0	133.0	0.0	±0.8
132.0	132.0	0.0	±0.8
131.0	131.0	0.0	±0.8
129.0	129.1	0.1	±0.8
124.0	124.0	0.0	±0.8
119.0	119.1	0.1	±0.8
114.0	114.1	0.1	±0.8
109.0	109.1	0.1	±0.8
104.0	104.1	0.1	±0.8
99.0	99.1	0.1	±0.8
94.0	94.0	0.0	±0.8
89.0	89.0	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.0	±0.8
39.0	39.0	0.0	±0.8
34.0	34.0	0.0	±0.8
30.0	30.0	0.0	±0.8
29.0	29.0	0.0	±0.8
28.0	28.0	0.0	±0.8
27.0	27.0	0.0	±0.8
26.0	26.1	0.1	±0.8
25.0	25.1	0.1	±0.8

Cert. No. : ACL25301
Job No. : VC68AC0154
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±0.8

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.1	0.1	±0.8

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.0 ; -3.0
	2	8	117.0	116.9	-0.1	1.0 ; -1.5
	200	800	134.0	134.0	0.0	±0.5
Slow	2	8	108.0	108.0	0.0	1.0 ; -3.0
	200	800	127.6	127.6	0.0	±0.5
SEL	0.25	1	99.0	98.9	-0.1	1.0 ; -3.0
	2	8	108.0	108.0	0.0	1.0 ; -1.5
	200	800	128.0	128.0	0.0	±0.5

Cert. No. : ACL25301
Job No. : VC68AC0154
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±2.0
One	133.4	133.4	0.0	±2.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±1.0
Positive half cycle	135.4	135.2	-0.2	±1.0
Negative half cycle	135.4	135.2	-0.2	±1.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle	-0.1	±1.5
89.6	89.5		

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.1

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

COPY

richard B.

End of Calibration Certificate

COPY

richard B.

SOUND LEVEL METER

MODEL : NL-52A

SERIAL No. : 00230993

Certificate of Calibration

Certificate No.: S2502-1005

Customer: EASTERN THAI CONSULTING 1992 CO.,LTD.
683 Moo 11, Sukhapibarn 8 Rd,
Nongkham, Sriracha, Chonburi 20230

Date of calibration: 2025-03-03
Date of issue: 2025-03-04
Instrument calibrated: Sound Level Meter
Manufacturer: Rion
Model: NL-52A (Meter), NH-25 (Preamplifier), UC-59 (Microphone)
Serial number: 00230993 (Meter), 22429 (Preamplifier), 22776 (Microphone)

Calibration and verification performed:

Acoustical levels are stated relative to 20 μ Pa. Other dB levels are relative values.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%.

The sound level meter instrument submitted for periodic testing following the periodic tests of IEC 61672-3 : 2013.

Preconditioning:

The equipment was preconditioned for more than 16 hours at the specified calibration temperature and humidity.

Instruments and Program:

A complete list of instruments, hardware, and software, that has been used for this calibration is separately available from the calibration laboratory.

Equipment standards used:

- Sound measuring equipment calibration unit 483B S/N31083
- Digital multimeter Keysight S/N 11P34401A
- Ultra-low distortion function generator Stanford SRS DS360 S/N123625
- Acoustic sound calibrator class 1 Nor1256 S/N125626542
- Combined Pressure, Humidity and Temperature Transmitter P1U300 S/NM2520568

Traceability

The measured values are traceable to following the ISO/IEC 17025 laboratories:

Sound Pressure Level: EEI, Thailand

Reference Pressure, Humidity and Temperature: TPA, Thailand

Voltage: TPA, Thailand

Frequency: TPA, Thailand

COPY

This certificate of calibration is issued by Acoustic Laboratory (Thailand) (ALT). It also states that the laboratory has a satisfactory quality assurance system and traceability to accredited or national calibration laboratories. This certificate may not be reproduced other than in full.

Certificate No.: S2502-1005

Environmental conditions: Pressure: Temperature: Relative humidity:
Reference conditions: 101.325 kPa 23.0 °C 50 %RH
Measurement conditions: 101.30 \pm 0.10 kPa 22.5 \pm 1.0 °C 52.7 \pm 2.0 %RH

1. Indication at the calibration check frequency

Reference Acoustic Signal (dB)	Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
	Before adjust	After adjust		
94.0	94.3	94.0	0.0	\pm 0.7

Note: Indication at the checked calibration frequency was adjusted to 94.0 dB by the sound calibrator

2. Self-generated noise

Frequency weightings	Measured value (dB)
A-Weighting	11.2
C-Weighting	15.3
Z-Weighting	20.7

3. Electrical signal test of frequency weighting at 93 dB

Nominal Frequency (Hz)	Deviation from various frequency weighting response curve			
	A-Weighting (dB)	C-Weighting (dB)	Z-Weighting (dB)	Acceptance limit (dB)
63	0.0	0.0	0.0	\pm 1.0
125	0.0	0.1	0.1	\pm 1.0
250	0.0	0.1	0.1	\pm 1.0
500	0.0	0.1	0.1	\pm 1.0
1000	0.0	0.0	0.0	\pm 0.7
2000	-0.1	-0.1	-0.1	\pm 1.0
4000	-0.2	-0.2	-0.3	\pm 1.0
8000	0.1	0.1	0.0	+1.5, -2.5
16000	-1.6	-1.6	-0.4	+2.5, -16.0

Date of calibration : 2025-03-03

Date of issue : 2025-03-04

COPY

4. Frequency and time weighting at 1 kHz

4.1 Frequency weighting at 1 kHz

Frequency weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
A	94.0	0.0	±0.2
C	94.0	0.0	±0.2
Z	94.0	0.0	±0.2

4.2 Time weighting at 1 kHz

Time weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	94.0	0.0	±0.1
Slow	94.0	0.0	±0.1
Leq	94.0	0.0	±0.1

5. Long term stability

Time interval (mm:ss)	Start level (dB)	Stop level (dB)	Deviated value (dB)	Acceptance limit (dB)
36:09	94.0	94.0	0.0	±0.1

Date of calibration : 2025-03-03
Date of issue : 2025-03-04

COPY

6. Level linearity on the reference level range

6.1 Measured at 31.5 Hz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
84.0	84.0	0.0	±0.8
89.0	89.0	0.0	±0.8
94.6	94.6	0.0	±0.8
95.6	95.6	0.0	±0.8
96.6	96.6	0.0	±0.8
97.6	97.6	0.0	±0.8
98.6	98.6	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.1	±0.8
42.0	42.0	0.0	±0.8
41.0	41.0	0.0	±0.8
40.0	39.9	-0.1	±0.8
39.0	38.9	-0.1	±0.8
38.0	37.9	-0.1	±0.8

Date of calibration : 2025-03-03
Date of issue : 2025-03-04

COPY

6.2 Measured at 1 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±0.8
99.0	99.0	0.0	±0.8
104.0	104.1	0.1	±0.8
109.0	109.0	0.0	±0.8
114.0	114.1	0.1	±0.8
119.0	119.1	0.1	±0.8
124.0	124.0	0.0	±0.8
129.0	129.1	0.1	±0.8
134.0	134.1	0.1	±0.8
135.0	135.0	0.0	±0.8
136.0	136.1	0.1	±0.8
137.0	137.0	0.0	±0.8
138.0	138.0	0.0	±0.8
94.0	94.0	0.0	±0.8
89.0	89.1	0.1	±0.8
84.0	84.1	0.1	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.0	±0.8
42.0	42.0	0.0	±0.8
41.0	41.0	0.0	±0.8
40.0	39.9	-0.1	±0.8
39.0	39.0	0.0	±0.8
38.0	38.0	0.0	±0.8

Date of calibration : 2025-03-03
Date of issue : 2025-03-04

COPY

6.3 Measured at 8 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±0.8
99.0	99.0	0.0	±0.8
104.0	104.0	0.0	±0.8
109.0	109.0	0.0	±0.8
114.0	114.0	0.0	±0.8
119.0	119.0	0.0	±0.8
124.0	124.0	0.0	±0.8
129.0	129.0	0.0	±0.8
132.9	132.9	0.0	±0.8
133.9	133.9	0.0	±0.8
134.9	134.9	0.0	±0.8
135.9	135.9	0.0	±0.8
136.9	136.9	0.0	±0.8
94.0	94.0	0.0	±0.8
89.0	89.0	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.0	±0.8
42.0	42.0	0.0	±0.8
41.0	41.0	0.0	±0.8
40.0	40.0	0.0	±0.8
39.0	39.0	0.0	±0.8
38.0	38.0	0.0	±0.8

Date of calibration : 2025-03-03
Date of issue : 2025-03-04

COPY

7. Tone burst response

Time weightings	Tone burst duration, Tb (ms)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	200	135.0	0.0	±0.5
	2	118.0	0.0	+1.0,-1.5
	0.25	109.0	0.0	+1.0,-3.0
Slow	200	128.6	0.0	±0.5
	2	109.0	0.0	+1.0,-3.0
	200	129.0	0.0	±0.5
SEL	2	109.1	0.1	+1.0,-1.5
	0.25	100.0	0.0	+1.0,-3.0

8. Peak C sound level

Number of cycles in test signal	Anticipated Value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Complete cycle	128.4	127.9	-0.5	±2.0
Positive half cycle	130.4	130.2	-0.2	±1.0
Negative half cycle	130.4	130.2	-0.2	±1.0

9. Overload indication

Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
Positive one half cycle	Negative one half cycle		
139.1	139.1	0.0	±1.5

10. High level stability

Initial level (dB)	Final level (dB)	Deviated value (dB)	Acceptance limit (dB)
137.0	137.0	0.0	±0.1

Date of calibration : 2025-03-03
Date of issue : 2025-03-04


COPY


Uncertainty of measurement

Parameters	Uncertainty
1. Indication at the calibration check frequency	0.12 dB
2. Self-generated noise	
- Frequency Weighting A	0.060 dB
- Frequency Weighting C	0.060 dB
- Frequency Weighting Z	0.060 dB
3. Electrical signal test of frequency weighting	0.13 dB
4. Frequency and time weightings at 1 kHz	0.13 dB
5. Long term stability test	0.10 dB
6. Level linearity on the reference level range	0.14 dB
7. Tone burst response	0.14 dB
8. Peak C sound level	0.13 dB
9. Overload indication	0.13 dB
10. High level stability test	0.10 dB

The reported expanded uncertainty is based upon a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%

Remark : The acoustical signal test of frequency weighting at 125Hz, 1kHz, and 8kHz is not included, along with correction values for environmental conditions in a free-field or diffuse field, and the effect of reflection and diffraction on the measurement microphone and the sound level meter.

Calibrated By: 
(Mr. Chaiporn Sompichai)

Approved By: 
(Mr. Pitupong Sarapho)

Date of calibration : 2025-03-03
Date of issue : 2025-03-04

----- End of Calibration Certificate -----

COPY

SOUND LEVEL METER

MODEL : NL-52A

SERIAL No. : 00230995

Certificate of Calibration

Certificate No.: S2502-1007

Customer: EASTERN THAI CONSULTING 1992 CO.,LTD.
683 Moo 11, Sukhapibarn 8 Rd,
Nongkham, Sriracha, Chonburi 20230

Date of calibration: 2025-02-27
Date of issue: 2025-02-28
Instrument calibrated: Sound Level Meter
Manufacturer: Rion
Model: NL-S2A (Meter), NI1-25 (Preamplifier), UC-59 (Microphone)
Serial number: 00230995 (Meter), 22332 (Preamplifier), 21947 (Microphone)

Calibration and verification performed:

Acoustical levels are stated relative to 20μPa. Other dB levels are relative values.
The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%.
The sound level meter instrument submitted for periodic testing following the periodic tests of IEC 61672-3 : 2013.

Preconditioning:

The equipment was preconditioned for more than 16 hours at the specified calibration temperature and humidity.

Instruments and Program:

A complete list of instruments, hardware, and software, that has been used for this calibration is separately available from the calibration laboratory.

Equipment standards used:

- Sound measuring equipment calibration unit 483B S/N31083
- Digital multimeter Keysight S/N HP34401A
- Ultra-low distortion function generator Stanford SRS DS360 S/N123625
- Acoustic sound calibrator class 1 Nor1256 S/N125626542
- Combined Pressure, Humidity and Temperature Transmitter PTU300 S/NM2520568

Traceability

The measured values are traceable to following the ISO/IEC 17025 laboratories:
Sound Pressure Level: EEI, Thailand
Reference Pressure, Humidity and Temperature: TPA, Thailand
Voltage: TPA, Thailand
Frequency: TPA, Thailand

COPY

This certificate of calibration is issued by Acoustic Laboratory Thailand (ALT). It also states that the laboratory has a satisfactory quality assurance system and traceability to accredited or national calibration laboratories. This certificate may not be reproduced other than in full.

Environmental conditions: Pressure: Temperature: Relative humidity:
Reference conditions: 101.325 kPa 23.0 °C 50 %RH
Measurement conditions: 101.31 ± 0.10 kPa 22.4 ± 1.0 °C 52.6 ± 2.0 %RH

1. Indication at the calibration check frequency

Reference Acoustic Signal (dB)	Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
	Before adjust	After adjust		
94.0	94.4	94.0	0.0	±0.7

Note: Indication at the checked calibration frequency was adjusted to 94.0 dB by the sound calibrator

2. Self-generated noise

Frequency weightings	Measured value (dB)
A-Weighting	11.8
C-Weighting	15.9
Z-Weighting	21.2

3. Electrical signal test of frequency weighting at 93 dB

Nominal Frequency (Hz)	Deviation from various frequency weighting response curve			
	A-Weighting (dB)	C-Weighting (dB)	Z-Weighting (dB)	Acceptance limit (dB)
63	0.0	0.0	-0.1	±1.0
125	0.0	0.0	0.0	±1.0
250	-0.1	0.0	0.0	±1.0
500	0.0	0.0	0.0	±1.0
1000	0.0	0.0	0.0	±0.7
2000	-0.2	-0.2	-0.2	±1.0
4000	-0.3	-0.3	-0.3	±1.0
8000	0.0	0.0	0.0	+1.5, -2.5
16000	-1.7	-1.7	-0.5	+2.5, -16.0

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

4. Frequency and time weighting at 1 kHz

4.1 Frequency weighting at 1 kHz

Frequency weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
A	94.0	0.0	±0.2
C	94.0	0.0	±0.2
Z	94.0	0.0	±0.2

4.2 Time weighting at 1 kHz

Time weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	94.0	0.0	±0.1
Slow	94.0	0.0	±0.1
Leq	94.0	0.0	±0.1

5. Long term stability

Time interval (mm:ss)	Start level (dB)	Stop level (dB)	Deviated value (dB)	Acceptance limit (dB)
34:54	94.0	94.0	0.0	±0.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6. Level linearity on the reference level range

6.1 Measured at 31.5 Hz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
84.0	84.0	0.0	±0.8
89.0	89.0	0.0	±0.8
94.6	94.6	0.0	±0.8
95.6	95.6	0.0	±0.8
96.6	96.6	0.0	±0.8
97.6	97.6	0.0	±0.8
98.6	98.6	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	64.0	0.0	±0.8
59.0	59.0	0.0	±0.8
54.0	54.0	0.0	±0.8
49.0	49.0	0.1	±0.8
44.0	44.2	0.2	±0.8
42.0	42.0	0.0	±0.8
41.0	41.0	0.0	±0.8
40.0	40.0	0.0	±0.8
39.0	39.0	0.0	±0.8
38.0	38.0	0.0	±0.8

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6.2 Measured at 1 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±0.8
99.0	99.0	0.0	±0.8
104.0	104.0	0.0	±0.8
109.0	109.0	0.0	±0.8
114.0	114.0	0.0	±0.8
119.0	119.0	0.0	±0.8
124.0	124.0	0.0	±0.8
129.0	129.0	0.0	±0.8
134.0	134.0	0.0	±0.8
135.0	135.0	0.0	±0.8
136.0	135.9	-0.1	±0.8
137.0	137.0	0.0	±0.8
138.0	137.9	-0.1	±0.8
94.0	94.0	0.0	±0.8
89.0	89.0	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	79.0	0.0	±0.8
74.0	74.0	0.0	±0.8
69.0	69.0	0.0	±0.8
64.0	63.9	-0.1	±0.8
59.0	59.0	0.0	±0.8
54.0	53.9	-0.1	±0.8
49.0	49.0	0.0	±0.8
44.0	44.0	0.0	±0.8
42.0	42.0	0.0	±0.8
41.0	41.0	0.0	±0.8
40.0	40.0	0.0	±0.8
39.0	39.0	0.0	±0.8
38.0	38.0	0.0	±0.8

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6.3 Measured at 8 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±0.8
99.0	99.0	0.0	±0.8
104.0	104.0	0.0	±0.8
109.0	109.0	0.0	±0.8
114.0	114.0	0.0	±0.8
119.0	119.0	0.0	±0.8
124.0	124.0	0.0	±0.8
129.0	129.0	0.0	±0.8
132.9	132.8	-0.1	±0.8
133.9	133.8	-0.1	±0.8
134.9	134.8	-0.1	±0.8
135.9	135.9	0.0	±0.8
136.9	136.8	-0.1	±0.8
94.0	94.0	0.0	±0.8
89.0	89.0	0.0	±0.8
84.0	84.0	0.0	±0.8
79.0	78.9	-0.1	±0.8
74.0	73.9	-0.1	±0.8
69.0	68.9	-0.1	±0.8
64.0	63.9	-0.1	±0.8
59.0	58.9	-0.1	±0.8
54.0	53.9	-0.1	±0.8
49.0	48.9	-0.1	±0.8
44.0	43.9	-0.1	±0.8
42.0	41.9	-0.1	±0.8
41.0	41.0	0.0	±0.8
40.0	39.9	-0.1	±0.8
39.0	38.9	-0.1	±0.8
38.0	37.9	-0.1	±0.8

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

7. Tone burst response

Time weightings	Tone burst duration, Tb (ms)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	200	135.0	0.0	±0.5
	2	118.0	0.0	+1.0,-1.5
	0.25	108.9	-0.1	+1.0,-3.0
Slow	200	128.6	0.0	±0.5
	2	109.0	0.0	+1.0,-3.0
	200	129.0	0.0	±0.5
SEL	2	109.0	0.0	+1.0,-1.5
	0.25	99.9	-0.1	+1.0,-3.0

8. Peak C sound level

Number of cycles in test signal	Anticipated Value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Complete cycle	128.4	128.3	-0.1	±2.0
Positive half cycle	130.4	130.2	-0.2	±1.0
Negative half cycle	130.4	130.2	-0.2	±1.0

9. Overload indication

Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
Positive one half cycle	Negative one half cycle		
139.1	139.1	0.0	±1.5

10. High level stability

Initial level (dB)	Final level (dB)	Deviated value (dB)	Acceptance limit (dB)
137.0	137.0	0.0	±0.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY


Uncertainty of measurement

Parameters	Uncertainty
1. Indication at the calibration check frequency	0.12 dB
2. Self-generated noise	
- Frequency Weighting A	0.060 dB
- Frequency Weighting C	0.060 dB
- Frequency Weighting Z	0.060 dB
3. Electrical signal test of frequency weighting	0.13 dB
4. Frequency and time weightings at 1 kHz	0.13 dB
5. Long term stability test	0.10 dB
6. Level linearity on the reference level range	0.14 dB
7. Tone burst response	0.14 dB
8. Peak C sound level	0.13 dB
9. Overload indication	0.13 dB
10. High level stability test	0.10 dB

The reported expanded uncertainty is based upon a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%

Remark : The acoustical signal test of frequency weighting at 125Hz, 1kHz, and 8kHz is not included, along with correction values for environmental conditions in a free-field or diffuse field, and the effect of reflection and diffraction on the measurement microphone and the sound level meter.

Calibrated By: 
(Mr. Anusorn Whangphuklang)

Approved By: 
(Mr. Pitupong Sarapho)

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

----- End of Calibration Certificate -----

COPY

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322747

Cert. No. : ACL25044
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322747 / 196470 / 15479
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 ± 3) °C
Pressure : (101.3 ± 3) kPa
Relative Humidity : (50.0 ± 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by : 
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25044
Job No. : VC68AC0048
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference
Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL-BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL-BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL-BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAJ	34560495	AA-3001-24	05-FEB-25

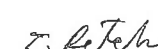
2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).





Cert. No. : ACL25044
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25044
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 No mal test

Measured Value (dB)
14.8

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	11.6
C - weight	17.8
Flat	23.3

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.4	0.4	0.4	± 1.5
1 00	0.1	0.1	0.1	± 1.0
8 00	1.0	1.0	1.0	±5.0

COPY

T. Petch

COPY

T. Petch

Cert. No. : ACL25044
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	-0.1	0.0	±2.0
125	0.0	0.0	-0.1	±1.5
250	0.0	0.0	-0.1	±1.5
500	0.0	0.0	-0.1	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

Cert. No. : ACL25044
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	132.9	-0.1	± 1.1
132.0	131.9	-0.1	± 1.1
131.0	130.9	-0.1	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	30.0	0.0	± 1.1
29.0	29.1	0.1	± 1.1
28.0	28.0	0.0	± 1.1
27.0	27.1	0.1	± 1.1
26.0	26.1	0.1	± 1.1
25.0	25.1	0.1	± 1.1

COPY
T. Petch.

COPY
T. Petch.

Cert. No. : ACL25044
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	107.9	-0.1	1.0 ; -2.5
	200	800	128.0	128.0	0.0	±1.0

Cert. No. : ACL25044
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.6	89.6	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY

T. Petch

COPY

T. Petch

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322744



Acoustic Laboratory (Thailand) Co., Ltd.
6/57 Soi Phoem Sin 42, Sai Mai, Sai Mai, Bangkok 10220
Tel: (+66) 02-1296780 Email: info@altbkk.com



Certificate of Calibration

Certificate No.: S2502-0998

Customer: EASTERN THAI CONSULTING 1992 CO.,LTD.
683 Moo 11, Sukhapibarn 8 Rd,
Nongkham, Sriracha, Chonburi 20230

Date of calibration: 2025-02-27
Date of issue: 2025-02-28
Instrument calibrated: Sound Level Meter
Manufacturer: Rion
Model: NL-42A (Meter), N11-24 (Preamplifier), UC-52 (Microphone)
Serial number: 00322744 (Meter), 15476 (Preamplifier), 196467 (Microphone)

Calibration and verification performed:

Acoustical levels are stated relative to 20 μ Pa. Other dB levels are relative values.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%.

The sound level meter instrument submitted for periodic testing following the periodic tests of IEC 61672-3 : 2013.

Preconditioning:

The equipment was preconditioned for more than 16 hours at the specified calibration temperature and humidity.

Instruments and Program:

A complete list of instruments, hardware, and software, that has been used for this calibration is separately available from the calibration laboratory.

Equipment standards used:

- Sound measuring equipment calibration unit 483B S/N31083
- Digital multimeter Keysight S/N HP34401A
- Ultra-low distortion function generator Stanford SRS DS360 S/N123625
- Acoustic sound calibrator class 1 Nor1256 S/N125626542
- Combined Pressure, Humidity and Temperature Transmitter PTU300 S/NM2520568

Traceability

The measured values are traceable to following the ISO/IEC 17025 laboratories:

Sound Pressure Level: EEL, Thailand

Reference Pressure, Humidity and Temperature: TPA, Thailand

Voltage: TPA, Thailand

Frequency: TPA, Thailand

COPY

This certificate of calibration is issued by Acoustic Laboratory Thailand (ALT). It also states that the laboratory has a satisfactory quality assurance system and traceability to accredited or national calibration laboratories. This certificate may not be reproduced other than in full.



Certificate No.: S2502-0998

Environmental conditions: Pressure: Temperature: Relative humidity:
Reference conditions: 101.325 kPa 23.0 °C 50 %RH
Measurement conditions: 101.28 \pm 0.10 kPa 22.6 \pm 1.0 °C 51.3 \pm 2.0 %RH

1. Indication at the calibration check frequency

Reference Acoustic Signal (dB)	Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
	Before adjust	After adjust		
94.0	94.3	94.0	0.0	\pm 1.0

Note: Indication at the checked calibration frequency was adjusted to 94.0 dB by the sound calibrator

2. Self-generated noise

Frequency weightings	Measured value (dB)
A-Weighting	12.1
C-Weighting	18.3
Z-Weighting	24.0

3. Electrical signal test of frequency weighting at 91 dB

Nominal Frequency (Hz)	Deviation from various frequency weighting response curve			
	A-Weighting (dB)	C-Weighting (dB)	Z-Weighting (dB)	Acceptance limit (dB)
63	0.0	-0.1	0.0	\pm 2.0
125	0.0	0.0	0.0	\pm 1.5
250	0.0	0.0	0.0	\pm 1.5
500	0.0	0.0	0.0	\pm 1.5
1000	0.0	0.0	0.0	\pm 1.0
2000	-0.1	-0.2	-0.2	\pm 2.0
4000	-0.3	-0.4	-0.4	\pm 3.0
8000	0.1	0.0	-0.1	\pm 5.0

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

4. Frequency and time weighting at 1 kHz

4.1 Frequency weighting at 1 kHz

Frequency weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
A	94.0	0.0	±0.3
C	94.0	0.0	±0.3
Z	94.0	0.0	±0.3

4.2 Time weighting at 1 kHz

Time weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	94.0	0.0	±0.3
Slow	94.0	0.0	±0.3
Leq	94.0	0.0	±0.3

5. Long term stability

Time interval (mm:ss)	Start level (dB)	Stop level (dB)	Deviated value (dB)	Acceptance limit (dB)
28:13	94.0	94.0	0.0	±0.3

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6. Level linearity on the reference level range

6.1 Measured at 31.5 Hz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
84.0	84.0	0.0	±1.1
89.0	89.0	0.0	±1.1
92.6	92.5	-0.1	±1.1
93.6	93.6	0.0	±1.1
94.6	94.5	-0.1	±1.1
95.6	95.6	0.0	±1.1
96.6	96.6	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.1	0.1	±1.1
44.0	43.9	-0.1	±1.1
40.0	39.9	-0.1	±1.1
39.0	38.9	-0.1	±1.1
38.0	37.9	-0.1	±1.1
37.0	36.9	-0.1	±1.1
36.0	35.9	-0.1	±1.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6.2 Measured at 1 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
132.0	132.0	0.0	±1.1
133.0	133.0	0.0	±1.1
134.0	134.0	0.0	±1.1
135.0	135.0	0.0	±1.1
136.0	136.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	40.0	0.0	±1.1
39.0	39.0	0.0	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	36.1	0.1	±1.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6.3 Measured at 8 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
130.9	130.9	0.0	±1.1
131.9	131.9	0.0	±1.1
132.9	132.9	0.0	±1.1
133.9	133.9	0.0	±1.1
134.9	134.9	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	78.9	-0.1	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	40.0	0.0	±1.1
39.0	39.0	0.0	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	36.0	0.0	±1.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

7. Tone burst response

Time weightings	Tone burst duration, Tb (ms)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	200	132.9	-0.1	±1.0
	2	115.9	-0.1	+1.0,-2.5
	0.25	106.9	-0.1	+1.5,-5.0
Slow	200	126.5	-0.1	±1.0
	2	106.9	-0.1	+1.0,-5.0
SEL	200	126.9	-0.1	±1.0
	2	106.9	-0.1	+1.0,-2.5
	0.25	97.9	-0.1	+1.5,-5.0

8. Peak C sound level

Number of cycles in test signal	Anticipated Value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Complete cycle	128.4	127.4	-1.0	±3.0
Positive half cycle	130.4	130.2	-0.2	±2.0
Negative half cycle	130.4	130.2	-0.2	±2.0

9. Overload indication

Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
Positive one half cycle	Negative one half cycle		
139.1	139.1	0.0	±1.5

10. High level stability

Initial level (dB)	Final level (dB)	Deviated value (dB)	Acceptance limit (dB)
135.0	135.0	0.0	±0.3

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY


Uncertainty of measurement

Parameters	Uncertainty
1. Indication at the calibration check frequency	0.12 dB
2. Self-generated noise	
- Frequency Weighting A	0.060 dB
- Frequency Weighting C	0.060 dB
- Frequency Weighting Z	0.060 dB
3. Electrical signal test of frequency weighting	0.13 dB
4. Frequency and time weightings at 1 kHz	0.13 dB
5. Long term stability test	0.10 dB
6. Level linearity on the reference level range	0.14 dB
7. Tone burst response	0.14 dB
8. Peak C sound level	0.13 dB
9. Overload indication	0.13 dB
10. High level stability test	0.10 dB

The reported expanded uncertainty is based upon a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%

Remark : The acoustical signal test of frequency weighting at 125Hz, 1kHz, and 8kHz is not included, along with correction values for environmental conditions in a free-field or diffuse field, and the effect of reflection and diffraction on the measurement microphone and the sound level meter.

Calibrated By: 
(Mr. Anusorn Whangphuklang)

Approved By: 
(Mr. Pitupong Sarapho)

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

----- End of Calibration Certificate -----

COPY

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00222593

Cert. No. : ACL25042
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RJON
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00222593 / 195906 / 15426
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

T. Petchurai
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Cert. No. : ACL25042
Job No. : VC68AC0048
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference
Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAJ	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY
T. Petchurai

Cert. No. : ACL25042
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25042
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
13.8

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	9.9
C - weight	16.8
Flat	22.5

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.6	0.6	0.6	± 1.5
1000	0.1	0.1	0.1	± 1.0
8000	0.8	0.8	0.8	±5.0

COPY

T. Petch.

COPY

T. Petch.

Cert. No. : ACL25042
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.1	0.0	0.0	±2.0
125	0.1	0.1	0.0	±1.5
250	0.1	0.0	0.0	±1.5
500	0.1	0.1	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.0	±2.0
4000	0.0	0.1	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.1	0.1	± 0.3

Cert. No. : ACL25042
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	30.0	0.0	± 1.1
29.0	29.0	0.0	± 1.1
28.0	28.0	0.0	± 1.1
27.0	27.1	0.1	± 1.1
26.0	26.0	0.0	± 1.1
25.0	25.0	0.0	± 1.1

COPY

P. Petch.

COPY

P. Petch.

Cert. No. : ACL25042
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

Cert. No. : ACL25042
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.1	-0.3	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.6	0.1	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY

T. Retch-

COPY

T. Retch-

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322745

Cert. No. : ACL25043

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322745 / 196468 / 15477
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

T. Petchur
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

<u>Instrument</u>	<u>Model</u>	<u>Serial No.</u>	<u>Cert. No.</u>	<u>Due Date</u>
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KA1	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY

T. Petchur

Cert. No. : ACL25043
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

COPY

T. Retch.

Cert. No. : ACL25043
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :**1. Absolute sensitivity**

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise**2.1 Normal test**

Measured Value (dB)
14.4

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	12.6
C - weight	19.2
Flat	24.7

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.3	0.3	0.3	± 1.5
1000	0.1	0.1	0.1	± 1.0
8000	0.9	0.9	0.9	±5.0

COPY

T. Retch.

Cert. No. : ACL25043
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	0.0	0.0	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.0	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz**5.1 Frequency weightings at 1 kHz**

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

Cert. No. : ACL25043
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	78.9	-0.1	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	53.9	-0.1	± 1.1
49.0	48.9	-0.1	± 1.1
44.0	43.9	-0.1	± 1.1
39.0	38.9	-0.1	± 1.1
34.0	33.9	-0.1	± 1.1
30.0	29.9	-0.1	± 1.1
29.0	28.9	-0.1	± 1.1
28.0	27.9	-0.1	± 1.1
27.0	26.9	-0.1	± 1.1
26.0	25.9	-0.1	± 1.1
25.0	24.9	-0.1	± 1.1

COPY

T. Petch

COPY

T. Petch

Cert. No. : ACL25043
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	28.9	-0.1	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

Cert. No. : ACL25043
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle	0.0	±1.5
89.5	89.5		

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00222592

Cert. No. : ACL25041

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00222592 / 195904 / 15424
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

T. Petchurai
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Cert. No. : ACL25041

Job No. : VC68AC0048

Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference
Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAI	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY

T. Petchurai

Cert. No. : ACL25041
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25041
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
14.2

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	10.8
C - weight	17.0
Flat	22.9

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.4	0.4	0.4	± 1.5
1000	0.1	0.1	0.1	± 1.0
8000	1.5	1.5	1.5	±5.0

COPY

T. Petch

COPY

T. Petch

Cert. No. : ACL25041
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	0.0	0.0	±2.0
125	0.0	0.1	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.1	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.0	±2.0
4000	0.0	0.1	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.1	0.1	± 0.3

COPY
T. Refh

Cert. No. : ACL25041
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.1	0.1	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	30.0	0.0	± 1.1
29.0	28.9	-0.1	± 1.1
28.0	28.0	0.0	± 1.1
27.0	27.0	0.0	± 1.1
26.0	25.9	-0.1	± 1.1
25.0	24.9	-0.1	± 1.1

COPY
T. Refh

Cert. No. : ACL25041
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	108.0	0.0	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

Cert. No. : ACL25041
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	132.9	-0.1	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.1	-0.3	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY

T. Petch

COPY

T. Petch

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322749

Certificate of Calibration

Certificate No.: S2502-1000

Customer: EASTERN THAI CONSULTING 1992 CO.,LTD.
683 Moo 11, Sukhapibarn 8 Rd,
Nongkham, Sriracha, Chonburi 20230

Date of calibration: 2025-02-26
Date of issue: 2025-02-27
Instrument calibrated: Sound Level Meter
Manufacturer: Rion
Model: NL-42A (Meter), N11-24 (Preamplifier), UC-52 (Microphone)
Serial number: 00322749 (Meter), 15481 (Preamplifier), 196472 (Microphone)

Calibration and verification performed:

Acoustical levels are stated relative to 20 μ Pa. Other dB levels are relative values.
The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%.
The sound level meter instrument submitted for periodic testing following the periodic tests of IEC 61672-3 : 2013.

Preconditioning:

The equipment was preconditioned for more than 16 hours at the specified calibration temperature and humidity.

Instruments and Program:

A complete list of instruments, hardware, and software, that has been used for this calibration is separately available from the calibration laboratory.

Equipment standards used:

- Sound measuring equipment calibration unit 483B S/N31083
- Digital multimeter Keysight S/N HP34401A
- Ultra-low distortion function generator Stanford SRS DS360 S/N123625
- Acoustic sound calibrator class 1 Nor1256 S/N125626542
- Combined Pressure, Humidity and Temperature Transmitter PTU300 S/NM2520568

Traceability

The measured values are traceable to following the ISO/IEC 17025 laboratories:
Sound Pressure Level: EEI, Thailand
Reference Pressure, Humidity and Temperature: TPA, Thailand
Voltage: TPA, Thailand
Frequency: TPA, Thailand

COPY

Environmental conditions: Pressure: Temperature: Relative humidity:
Reference conditions: 101.325 kPa 23.0 °C 50 %RH
Measurement conditions: 101.36 \pm 0.10 kPa 22.4 \pm 1.0 °C 56.3 \pm 2.0 %RH

1. Indication at the calibration check frequency

Reference Acoustic Signal (dB)	Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
	Before adjust	After adjust		
94.0	94.4	94.0	0.0	\pm 1.0

Note: Indication at the checked calibration frequency was adjusted to 94.0 dB by the sound calibrator

2. Self-generated noise

Frequency weightings	Measured value (dB)
A-Weighting	11.8
C-Weighting	17.8
Z-Weighting	23.1

3. Electrical signal test of frequency weighting at 91 dB

Nominal Frequency (Hz)	Deviation from various frequency weighting response curve			
	A-Weighting (dB)	C-Weighting (dB)	Z-Weighting (dB)	Acceptance limit (dB)
63	-0.1	-0.1	0.0	\pm 2.0
125	0.0	0.0	0.0	\pm 1.5
250	0.0	0.0	0.0	\pm 1.5
500	0.0	0.0	0.0	\pm 1.5
1000	0.0	0.0	0.0	\pm 1.0
2000	-0.2	-0.2	-0.2	\pm 2.0
4000	-0.3	-0.3	-0.3	\pm 3.0
8000	0.0	0.0	0.0	\pm 5.0

Date of calibration : 2025-02-26
Date of issue : 2025-02-27

COPY

Certificate No.: S2502-1000

4. Frequency and time weighting at 1 kHz

4.1 Frequency weighting at 1 kHz

Frequency weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
A	94.0	0.0	±0.3
C	94.0	0.0	±0.3
Z	94.0	0.0	±0.3

4.2 Time weighting at 1 kHz

Time weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	94.0	0.0	±0.3
Slow	94.1	0.1	±0.3
Leq	94.0	0.0	±0.3

5. Long term stability

Time interval (mm:ss)	Start level (dB)	Stop level (dB)	Deviated value (dB)	Acceptance limit (dB)
33:38	94.0	94.0	0.0	±0.3

Date of calibration : 2025-02-26
Date of issue : 2025-02-27

COPY

Certificate No.: S2502-1000

6. Level linearity on the reference level range

6.1 Measured at 31.5 Hz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
84.0	84.0	0.0	±1.1
89.0	89.1	0.1	±1.1
92.6	92.7	0.1	±1.1
93.6	93.7	0.1	±1.1
94.6	94.6	0.0	±1.1
95.6	95.7	0.1	±1.1
96.6	96.7	0.1	±1.1
84.0	84.0	0.0	±1.1
79.0	79.1	0.1	±1.1
74.0	74.1	0.1	±1.1
69.0	69.1	0.1	±1.1
64.0	64.1	0.1	±1.1
59.0	59.1	0.1	±1.1
54.0	54.1	0.1	±1.1
49.0	49.1	0.1	±1.1
44.0	44.1	0.1	±1.1
40.0	40.1	0.1	±1.1
39.0	39.0	0.0	±1.1
38.0	38.1	0.1	±1.1
37.0	37.0	0.0	±1.1
36.0	36.1	0.1	±1.1

Date of calibration : 2025-02-26
Date of issue : 2025-02-27

COPY

6.2 Measured at 1 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
132.0	132.0	0.0	±1.1
133.0	133.0	0.0	±1.1
134.0	134.0	0.0	±1.1
135.0	135.0	0.0	±1.1
136.0	136.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	83.9	-0.1	±1.1
79.0	78.9	-0.1	±1.1
74.0	74.0	0.0	±1.1
69.0	68.9	-0.1	±1.1
64.0	63.9	-0.1	±1.1
59.0	59.0	0.0	±1.1
54.0	53.9	-0.1	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	40.0	0.0	±1.1
39.0	38.9	-0.1	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	36.0	0.0	±1.1

Date of calibration : 2025-02-26
Date of issue : 2025-02-27

COPY

6.3 Measured at 8 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.1	0.1	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.1	0.1	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
130.9	130.9	0.0	±1.1
131.9	131.9	0.0	±1.1
132.9	132.9	0.0	±1.1
133.9	133.9	0.0	±1.1
134.9	134.9	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	40.0	0.0	±1.1
39.0	39.0	0.0	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	36.0	0.0	±1.1

Date of calibration : 2025-02-26
Date of issue : 2025-02-27

COPY

7. Tone burst response

Time weightings	Tone burst duration, Tb (ms)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	200	133.0	0.0	±1.0
	2	115.9	-0.1	+1.0,-2.5
	0.25	106.9	-0.1	+1.5,-5.0
Slow	200	126.6	0.0	±1.0
	2	107.0	0.0	+1.0,-5.0
SEL	200	127.0	0.0	±1.0
	2	107.0	0.0	+1.0,-2.5
	0.25	97.9	-0.1	+1.5,-5.0

8. Peak C sound level

Number of cycles in test signal	Anticipated Value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Complete cycle	128.4	128.4	0.0	±3.0
Positive half cycle	130.4	130.3	-0.1	±2.0
Negative half cycle	130.4	130.3	-0.1	±2.0

9. Overload indication

Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
Positive one half cycle	Negative one half cycle		
139.2	139.1	0.1	±1.5

10. High level stability

Initial level (dB)	Final level (dB)	Deviated value (dB)	Acceptance limit (dB)
135.0	135.0	0.0	±0.3

Date of calibration : 2025-02-26
Date of issue : 2025-02-27


COPY


Uncertainty of measurement

Parameters	Uncertainty
1. Indication at the calibration check frequency	0.12 dB
2. Self-generated noise	
- Frequency Weighting A	0.060 dB
- Frequency Weighting C	0.060 dB
- Frequency Weighting Z	0.060 dB
3. Electrical signal test of frequency weighting	0.13 dB
4. Frequency and time weightings at 1 kHz	0.13 dB
5. Long term stability test	0.10 dB
6. Level linearity on the reference level range	0.14 dB
7. Tone burst response	0.14 dB
8. Peak C sound level	0.13 dB
9. Overload indication	0.13 dB
10. High level stability test	0.10 dB

The reported expanded uncertainty is based upon a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%

Remark : The acoustical signal test of frequency weighting at 125Hz, 1kHz, and 8kHz is not included, along with correction values for environmental conditions in a free-field or diffuse field, and the effect of reflection and diffraction on the measurement microphone and the sound level meter.

Calibrated By: 
(Mr. Anusorn Whangphuklang)

Approved By: 
(Mr. Pitupong Sarapho)

Date of calibration : 2025-02-26
Date of issue : 2025-02-27

----- End of Calibration Certificate -----

COPY

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00222594

Certificate of Calibration

Certificate No.: S2502-0999

Customer: EASTERN THAI CONSULTING 1992 CO.,LTD.
683 Moo 11, Sukhapibarn 8 Rd,
Nongkham, Sriracha, Chonburi 20230

Date of calibration: 2025-02-27
Date of issue: 2025-02-28
Instrument calibrated: Sound Level Meter
Manufacturer: Rion
Model: NL-42A (Meter), NH-24 (Preamplifier), UC-52 (Microphone)
Serial number: 00222594 (Meter), 15425 (Preamplifier), 195905 (Microphone)

Calibration and verification performed:

Acoustical levels are stated relative to 20 μ Pa. Other dB levels are relative values.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%.

The sound level meter instrument submitted for periodic testing following the periodic tests of IEC 61672-3 : 2013.

Preconditioning:

The equipment was preconditioned for more than 16 hours at the specified calibration temperature and humidity.

Instruments and Program:

A complete list of instruments, hardware, and software, that has been used for this calibration is separately available from the calibration laboratory.

Equipment standards used:

- Sound measuring equipment calibration unit 483B S/N31083
- Digital multimeter Keysight S/N HP34401A
- Ultra-low distortion function generator Stanford SRS DS360 S/N123625
- Acoustic sound calibrator class 1 Nor1256 S/N125626542
- Combined Pressure, Humidity and Temperature Transmitter PTU300 S/NM2520568

Traceability

The measured values are traceable to following the ISO/IEC 17025 laboratories:

Sound Pressure Level: EEI, Thailand

Reference Pressure, Humidity and Temperature: TPA, Thailand

Voltage: TPA, Thailand

Frequency: TPA, Thailand

COPY

Certificate No.: S2502-0999

Environmental conditions:	Pressure:	Temperature:	Relative humidity:
Reference conditions:	101.325 kPa	23.0 °C	50 %RH
Measurement conditions:	101.31 \pm 0.10 kPa	22.6 \pm 1.0 °C	53.8 \pm 2.0 %RH

1. Indication at the calibration check frequency

Reference Acoustic Signal (dB)	Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
	Before adjust	After adjust		
94.0	94.3	94.0	0.0	\pm 1.0

Note: Indication at the checked calibration frequency was adjusted to 94.0 dB by the sound calibrator

2. Self-generated noise

Frequency weightings	Measured value (dB)
A-Weighting	11.5
C-Weighting	17.5
Z-Weighting	23.1

3. Electrical signal test of frequency weighting at 91 dB

Nominal Frequency (Hz)	Deviation from various frequency weighting response curve			
	A-Weighting (dB)	C-Weighting (dB)	Z-Weighting (dB)	Acceptance limit (dB)
63	0.0	0.0	0.0	\pm 2.0
125	0.0	0.1	0.0	\pm 1.5
250	0.0	0.0	0.0	\pm 1.5
500	0.0	0.1	0.0	\pm 1.5
1000	0.0	0.0	0.0	\pm 1.0
2000	-0.2	-0.1	-0.2	\pm 2.0
4000	-0.3	-0.3	-0.3	\pm 3.0
8000	0.1	0.1	0.0	\pm 5.0

Date of calibration : 2025-02-27

Date of issue : 2025-02-28

COPY

4. Frequency and time weighting at 1 kHz

4.1 Frequency weighting at 1 kHz

Frequency weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
A	94.0	0.0	±0.3
C	94.0	0.0	±0.3
Z	94.0	0.0	±0.3

4.2 Time weighting at 1 kHz

Time weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	94.0	0.0	±0.3
Slow	94.0	0.0	±0.3
Leq	94.0	0.0	±0.3

5. Long term stability

Time interval (mm:ss)	Start level (dB)	Stop level (dB)	Deviated value (dB)	Acceptance limit (dB)
25:59	94.0	94.0	0.0	±0.3

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6. Level linearity on the reference level range

6.1 Measured at 31.5 Hz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
84.0	84.0	0.0	±1.1
89.0	89.0	0.0	±1.1
92.6	92.6	0.0	±1.1
93.6	93.6	0.0	±1.1
94.6	94.6	0.0	±1.1
95.6	95.7	0.1	±1.1
96.6	96.6	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.1	0.1	±1.1
44.0	44.0	0.0	±1.1
40.0	40.0	0.0	±1.1
39.0	38.9	-0.1	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	36.0	0.0	±1.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6.2 Measured at 1 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
132.0	132.0	0.0	±1.1
133.0	133.0	0.0	±1.1
134.0	134.0	0.0	±1.1
135.0	135.0	0.0	±1.1
136.0	136.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	39.9	-0.1	±1.1
39.0	38.9	-0.1	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	35.9	-0.1	±1.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

6.3 Measured at 8 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	123.9	-0.1	±1.1
129.0	129.0	0.0	±1.1
130.9	130.8	-0.1	±1.1
131.9	131.8	-0.1	±1.1
132.9	132.8	-0.1	±1.1
133.9	133.8	-0.1	±1.1
134.9	134.8	-0.1	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	73.9	-0.1	±1.1
69.0	68.9	-0.1	±1.1
64.0	63.9	-0.1	±1.1
59.0	58.9	-0.1	±1.1
54.0	53.9	-0.1	±1.1
49.0	48.9	-0.1	±1.1
44.0	43.9	-0.1	±1.1
40.0	39.9	-0.1	±1.1
39.0	38.9	-0.1	±1.1
38.0	37.9	-0.1	±1.1
37.0	36.9	-0.1	±1.1
36.0	35.9	-0.1	±1.1

Date of calibration : 2025-02-27
Date of issue : 2025-02-28

COPY

7. Tone burst response

Time weightings	Tone burst duration, Tb (ms)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	200	133.0	0.0	±1.0
	2	115.9	-0.1	+1.0,-2.5
	0.25	106.9	-0.1	+1.5,-5.0
Slow	200	126.6	0.0	±1.0
	2	107.0	0.0	+1.0,-5.0
	200	127.0	0.0	±1.0
SEL	2	107.0	0.0	+1.0,-2.5
	0.25	97.9	-0.1	+1.5,-5.0

8. Peak C sound level

Number of cycles in test signal	Anticipated Value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Complete cycle	128.4	127.3	-1.1	±3.0
Positive half cycle	130.4	130.2	-0.2	±2.0
Negative half cycle	130.4	130.2	-0.2	±2.0

9. Overload indication

Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
Positive one half cycle	Negative one half cycle		
139.1	139.1	0.0	±1.5

10. High level stability

Initial level (dB)	Final level (dB)	Deviated value (dB)	Acceptance limit (dB)
135.0	135.0	0.0	±0.3

Date of calibration : 2025-02-27

Date of issue : 2025-02-28


COPY


Uncertainty of measurement

Parameters	Uncertainty
1. Indication at the calibration check frequency	0.12 dB
2. Self-generated noise	
- Frequency Weighting A	0.060 dB
- Frequency Weighting C	0.060 dB
- Frequency Weighting Z	0.060 dB
3. Electrical signal test of frequency weighting	0.13 dB
4. Frequency and time weightings at 1 kHz	0.13 dB
5. Long term stability test	0.10 dB
6. Level linearity on the reference level range	0.14 dB
7. Tone burst response	0.14 dB
8. Peak C sound level	0.13 dB
9. Overload indication	0.13 dB
10. High level stability test	0.10 dB

The reported expanded uncertainty is based upon a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%

Remark : The acoustical signal test of frequency weighting at 125 Hz, 1 kHz, and 8 kHz is not included, along with correction values for environmental conditions in a free-field or diffuse field, and the effect of reflection and diffraction on the measurement microphone and the sound level meter.

Calibrated By: 
(Mr. Anusorn Whangphuklang)

Approved By: 
(Mr. Pitupong Sarapho)

Date of calibration : 2025-02-27

Date of issue : 2025-02-28

----- End of Calibration Certificate -----

COPY

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322751



Cert. No. : ACL25047
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322751 / 196474 / 15483
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :


(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Cert. No. : ACL25047
Job No. : VC68AC0048
Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

<u>Instrument</u>	<u>Model</u>	<u>Serial No.</u>	<u>Cert. No.</u>	<u>Due Date</u>
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAJ	34560495	AA-3001-24	05-FEB-25

- This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.
- This certificate is traceable to the international system of unit maintained at :
 - 3.1 National Institute of Metrology (Thailand).
 - 3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY



Cert. No. : ACL25047
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25047
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :**1. Absolute sensitivity**

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise**2.1 Normal test**

Measured Value (dB)
14.2

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	10.8
C - weight	16.7
Flat	22.5

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.3	0.3	0.3	± 1.5
1000	0.1	0.1	0.1	± 1.0
8000	0.5	0.5	0.5	± 5.0

COPY

S. Retch.

COPY

S. Retch.

Cert. No. : ACL25047
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	0.0	0.0	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.0	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

Cert. No. : ACL25047
Job No. : VC68AC0048
Pages : 6 of 8

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.1	0.1	± 1.1
84.0	84.1	0.1	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.1	0.1	± 1.1
69.0	69.1	0.1	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.1	0.1	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.1	0.1	± 1.1
30.0	30.1	0.1	± 1.1
29.0	29.1	0.1	± 1.1
28.0	28.1	0.1	± 1.1
27.0	27.1	0.1	± 1.1
26.0	26.1	0.1	± 1.1
25.0	25.2	0.2	± 1.1

COPY

T. Petch

COPY

T. Petch

Cert. No. : ACL25047
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.0	0.0	±1.0

Cert. No. : ACL25047
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.6	0.1	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322754



Cert. No. : ACL25267

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322754 / 196477 / 15486
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 26 JUNE 2025
Calibration Date : 08 JULY 2025
Date of Issue : 09 JULY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

Wichok B.
(Wichok Ekpongpradit)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25267

Job No. : VC68AC0096

Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).

The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.

For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0011-25	11-FEB-26
Waveform Generator	33511B	MY52302742	EF-0012-25	11-FEB-26
Digital Multimeter	33461A	MY53220104	EEL.BP 24/0268	22-APR-26
Digital Multimeter	33461A	MY53220076	EEL.BP 23/0268	22-APR-26
Digital Multimeter	34461A	MY60024273	CA2025120EA	18-MAR-26
Programmable Attenuator	MAT-1070	62100114	EF-0006-25	11-FEB-26
Condenser Microphone	4180	2977900	AA-1002-25	19-FEB-26
Measuring Amplifier	NA-42KAI	34560495	AA-3002-25	19-FEB-26

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).
- 3.3 Electrical And Electronics Institute (EEI).

COPY

Cert. No. : ACL25267
Job No. : VC68AC0096
Pages : 3 of 8

Cert. No. : ACL25267
Job No. : VC68AC0096
Page : 4 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
17.50000003

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	12.7
C - weight	19.6
Flat	25.4

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.0	0.1	0.1	± 1.5
1000	0.0	0.0	0.0	± 1.0
8000	0.6	0.6	0.6	±5.0

COPY

COPY

Cert. No. : ACL25267
Job No. : VC68AC0096
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	-0.1	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.1	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Lcq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	30.1	0.1	± 1.1
29.0	29.1	0.1	± 1.1
28.0	28.1	0.1	± 1.1
27.0	27.2	0.2	± 1.1
26.0	26.2	0.2	± 1.1
25.0	25.3	0.3	± 1.1

Cert. No. : ACL25267
Job No. : VC68AC0096
Pages : 6 of 8

Cert. No. : ACL25267
Job No. : VC68AC009
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	28.9	-0.1	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.0 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.6	89.6	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$ or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY
Shaw

COPY
Shaw

Michael

Michael

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322746

Cert. No. : ACL25248

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322746 / 196469 / 15478
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JUNE 2025
Calibration Date : 18 JUNE 2025
Date of Issue : 20 JUNE 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by : *Wichon E.*
(Wichok Ekpongpradit)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25248

Job No. : VC68AC0117

Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).

The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.

For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0011-25	11-FEB-26
Waveform Generator	33511B	MY52302742	EF-0012-25	11-FEB-26
Digital Multimeter	33461A	MY53220104	EEL.BP 24/0268	22-APR-26
Digital Multimeter	33461A	MY53220076	EEL.BP 23/0268	22-APR-26
Digital Multimeter	34461A	MY60024273	CA2025120EA	18-MAR-26
Programmable Attenuator	MAT-1070	62100114	EF-0006-25	11-FEB-26
Condenser Microphone	4180	2977900	AA-1002-25	19-FEB-26
Measuring Amplifier	NA-42KAI	34560495	AA-3002-25	19-FEB-26

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

- 3.1 National Institute of Metrology (Thailand).
- 3.2 Thailand Institute of Scientific and Technological Research (TISTR).
- 3.3 Electrical And Electronics Institute (EEI).

COPY

COPY

Cert. No. : ACL25248
Job No. : VC68AC011
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

COPY

Richard B.

Cert. No. : ACL25248
Job No. : VC68AC0117
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
15.1

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	10.8
C - weight	17.1
Flat	22.6

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.4	0.4	0.4	± 1.5
1000	0.1	0.1	0.1	± 1.0
8000	0.8	0.9	0.9	±5.0

COPY

Richard B.

Cert. No. : ACL25248
Job No. : VC68AC0117
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	0.0	-0.1	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.0	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	53.9	-0.1	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	29.9	-0.1	± 1.1
29.0	28.9	-0.1	± 1.1
28.0	27.9	-0.1	± 1.1
27.0	26.9	-0.1	± 1.1
26.0	25.9	-0.1	± 1.1
25.0	24.9	-0.1	± 1.1

Cert. No. : ACL25248
Job No. : VC68AC0117
Pages : 6 of 8

Cert. No. : ACL25248
Job No. : VC68AC011
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	28.9	-0.1	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.0 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

Cert. No. : ACL25248
Job No. : VC68AC011
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.3	-0.1	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	135.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.6	89.5	-0.1	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

SOUND LEVEL METER

MODEL : NL-42

SERIAL No. : 01147300

Cert. No. : ACL25040
Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42 / Microphone UC-52 / Preamplifier NH-24
Serial No.: 01147300 / 191027 / 47529
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 06 JANUARY 2025
Calibration Date : 15 - 16 JANUARY 2025
Date of Issue : 17 JANUARY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by : 
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced
other than in full, except with the prior written approval of the head of Calibration Laboratory.

COPY

Calibration Procedure : CP-AC-01

Cert. No. : ACL25040
Job No. : VC68AC0048
Pages : 2 of 8

Calibration Method :

This equipment was calibrated by follow 611 IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference
Standard Instruments.
For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

<u>Instrument</u>	<u>Model</u>	<u>Serial No.</u>	<u>Cert. No.</u>	<u>Due Date</u>
Waveform Generator	33210A	MY48017076	EF-0009-24	05-FEB-25
Waveform Generator	33511B	MY52302742	EF-0007-24	05-FEB-25
Digital Multimeter	33461A	MY53220104	EEL.BP 21/0267	13-FEB-25
Digital Multimeter	33461A	MY53220076	EEL.BP 20/0267	15-FEB-25
Digital Multimeter	34461A	MY60024273	EEL.BP 22/0267	15-FEB-25
Programmable Attenuator	MAT-1070	62100114	EF-0008-24	05-FEB-25
Condenser Microphone	4180	2977900	AA-1001-24	12-FEB-25
Measuring Amplifier	NA-42KAI	34560495	AA-3001-24	05-FEB-25

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

COPY


Cert. No. : ACL25040
Job No. : VC68AC0048
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25040
Job No. : VC68AC0048
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
13.4

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	10.8
C - weight	17.4
Flat	22.9

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.5	0.5	0.5	± 1.5
1000	0.1	0.1	0.1	± 1.0
8000	-0.7	-0.7	-0.7	± 5.0

COPY

T. Ketch

COPY

T. Ketch

Cert. No. : ACL25040
Job No. : VC68AC0048
Pages : 5 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	0.0	±2.0
125	0.0	0.1	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.1	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.1	±2.0
4000	0.0	0.1	0.1	±3.0
8000	0.1	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz**5.1 Frequency weightings at 1 kHz**

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.1	0.1	± 0.3

7. Level linearity on the reference level range

Cert. No. : ACL25040
Job No. : VC68AC0048
Pages : 6 of 8

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.1	0.1	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.1	0.1	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	30.0	0.0	± 1.1
29.0	28.9	-0.1	± 1.1
28.0	28.0	0.0	± 1.1
27.0	26.9	-0.1	± 1.1
26.0	26.0	0.0	± 1.1
25.0	24.9	-0.1	± 1.1

COPY

T. Petch

COPY

T. Petch

Cert. No. : ACL25040
Job No. : VC68AC0048
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	108.0	0.0	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.5 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.1	0.1	±1.0

Cert. No. : ACL25040
Job No. : VC68AC0048
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, Lcpeak (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.2	-0.2	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	132.9	-0.1	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.1	-0.3	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

COPY

T. Petch

COPY

T. Petch

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322752

Cert. No. : ACL25266

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322752 / 196475 / 15484
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 26 JUNE 2025
Calibration Date : 08 JULY 2025
Date of Issue : 09 JULY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

Wichon E.
(Wichok Ekpongpradit)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25266

Job No. : VC68AC0096

Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).

The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anchoic chamber and Reference Standard Instruments.

For tests results of each items were made by observation of each Instruments display and also with SLM's display.

Condition of this result of calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0011-25	11-FEB-26
Waveform Generator	33511B	MY52302742	EF-0012-25	11-FEB-26
Digital Multimeter	33461A	MY53220104	EEL.BP 24/0268	22-APR-26
Digital Multimeter	33461A	MY53220076	EEL.BP 23/0268	22-APR-26
Digital Multimeter	34461A	MY60024273	CA2025120EA	18-MAR-26
Programmable Attenuator	MAT-1070	62100114	EF-0006-25	11-FEB-26
Condenser Microphone	4180	2977900	AA-1002-25	19-FEB-26
Measuring Amplifier	NA-42KAI	34560495	AA-3002-25	19-FEB-26

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Thailand Institute of Scientific and Technological Research (TISTR).

3.3 Electrical And Electronics Institute (EEI).

COPY

Cert. No. : ACL25266
Job No. : VC68AC009
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Cert. No. : ACL25266
Job No. : VC68AC0096
Page : 4 of 8

Result of calibration :

1. Absolute sensitivity

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	±0.3

2. Self-generated noise

2.1 Normal test

Measured Value (dB)
17.50000003

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	13.6
C - weight	20.1
Flat	25.8

3. Acoustical signal tests of frequency weightings

Meter free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	-0.3	-0.3	-0.3	± 1.5
1000	-0.3	-0.3	-0.3	± 1.0
8000	0.8	0.9	0.9	±5.0

COPY

COPY

Cert. No. : ACL25266
Job No. : VC68AC009
Pages : 5 of 8

Cert. No. : ACL25266
Job No. : VC68AC009
Pages : 6 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	-0.1	-0.1	-0.1	±2.0
125	0.0	0.0	-0.1	±1.5
250	0.0	0.0	-0.1	±1.5
500	0.0	0.0	-0.1	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.0	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	132.9	-0.1	± 1.1
132.0	131.9	-0.1	± 1.1
131.0	130.9	-0.1	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.1	0.1	± 1.1
30.0	30.1	0.1	± 1.1
29.0	29.2	0.2	± 1.1
28.0	28.2	0.2	± 1.1
27.0	27.3	0.3	± 1.1
26.0	26.3	0.3	± 1.1
25.0	25.4	0.4	± 1.1

Cert. No. : ACL25266
Job No. : VC68AC009
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.1	0.1	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.0	0.0	±1.0
Slow	2	8	108.0	108.0	0.0	1.0 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.0	0.0	±1.0

Cert. No. : ACL25266
Job No. : VC68AC009
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
One	133.4	133.4	0.0	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.1	-0.3	±2.0
Negative half cycle	135.4	135.1	-0.3	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.5	89.5	0.0	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

COPY

m2/rel B

End of Calibration Certificate

COPY

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322757

Certificate of Calibration

Certificate No.: S2503-1027

Customer: EASTERN THAI CONSULTING 1992 CO.,LTD.
683 Moo 11, Sukhapibarn 8 Rd,
Nongkham, Sriracha, Chonburi 20230

Date of calibration: 2025-03-11
Date of issue: 2025-03-12
Instrument calibrated: Sound Level Meter
Manufacturer: Rion
Model: NL-42A (Meter), NH-24 (Preamplifier), UC-52 (Microphone)
Serial number: 00322757 (Meter), 15489 (Preamplifier), 209264 (Microphone)

Calibration and verification performed:

Acoustical levels are stated relative to 20 μ Pa. Other dB levels are relative values.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%.

The sound level meter instrument submitted for periodic testing following the periodic tests of IEC 61672-3 : 2013.

Preconditioning:

The equipment was preconditioned for more than 16 hours at the specified calibration temperature and humidity.

Instruments and Program:

A complete list of instruments, hardware, and software, that has been used for this calibration is separately available from the calibration laboratory.

Equipment standards used:

- Sound measuring equipment calibration unit 483B S/N31083
- Digital multimeter Keysight S/N HP34401A
- Ultra-low distortion function generator Stanford SRS DS360 S/N123625
- Acoustic sound calibrator class 1 Nor1256 S/N125626542
- Combined Pressure, Humidity and Temperature Transmitter PTU300 S/NM2520568

Traceability

The measured values are traceable to following the ISO/IEC 17025 laboratories:

Sound Pressure Level: EEI, Thailand

Reference Pressure, Humidity and Temperature: TPA, Thailand

Voltage: TPA, Thailand

Frequency: TPA, Thailand

COPY

This certificate of calibration is issued by Acoustic Laboratory Thailand (ALT). It also states that the laboratory has a satisfactory quality assurance system and traceability to accredited or national calibration laboratories. This certificate may not be reproduced other than in full.

Certificate No.: S2503-1027

Environmental conditions: Pressure: Temperature: Relative humidity:
Reference conditions: 101.325 kPa 23.0 °C 50 %RH
Measurement conditions: 101.12 \pm 0.10 kPa 22.4 \pm 1.0 °C 51.5 \pm 2.0 %RH

1. Indication at the calibration check frequency

Reference Acoustic Signal (dB)	Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
	Before adjust	After adjust		
94.0	93.9	94.0	0.0	\pm 1.0

Note: Indication at the checked calibration frequency was adjusted to 94.0 dB by the sound calibrator.

2. Self-generated noise

Frequency weightings	Measured value (dB)
A-Weighting	11.4
C-Weighting	17.6
Z-Weighting	23.4

3. Electrical signal test of frequency weighting at 91 dB

Nominal Frequency (Hz)	Deviation from various frequency weighting response curve			
	A-Weighting (dB)	C-Weighting (dB)	Z-Weighting (dB)	Acceptance limit (dB)
63	0.0	0.0	0.0	\pm 2.0
125	0.0	0.1	0.0	\pm 1.5
250	0.0	0.1	0.0	\pm 1.5
500	0.0	0.1	0.0	\pm 1.5
1000	0.0	0.0	0.0	\pm 1.0
2000	-0.1	-0.1	-0.2	\pm 2.0
4000	-0.3	-0.3	-0.3	\pm 3.0
8000	0.1	0.1	0.0	\pm 5.0

Date of calibration : 2025-03-11

Date of issue : 2025-03-12

COPY

4. Frequency and time weighting at 1 kHz

4.1 Frequency weighting at 1 kHz

Frequency weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
A	94.0	0.0	± 0.3
C	94.0	0.0	± 0.3
Z	94.0	0.0	± 0.3

4.2 Time weighting at 1 kHz

Time weightings	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	94.0	0.0	± 0.3
Slow	94.0	0.0	± 0.3
Leq	94.0	0.0	± 0.3

5. Long term stability

Time interval (mm:ss)	Start level (dB)	Stop level (dB)	Deviated value (dB)	Acceptance limit (dB)
30:23	94.0	94.0	0.0	± 0.3

Date of calibration : 2025-03-11
Date of issue : 2025-03-12

COPY

6. Level linearity on the reference level range

6.1 Measured at 34.5 Hz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
84.0	84.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
92.6	92.6	0.0	± 1.1
93.6	93.6	0.0	± 1.1
94.6	94.6	0.0	± 1.1
95.6	95.6	0.0	± 1.1
96.6	96.6	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	43.9	-0.1	± 1.1
40.0	39.9	-0.1	± 1.1
39.0	38.9	-0.1	± 1.1
38.0	37.9	-0.1	± 1.1
37.0	36.9	-0.1	± 1.1
36.0	35.9	-0.1	± 1.1

Date of calibration : 2025-03-11
Date of issue : 2025-03-12

COPY

6.2 Measured at 1 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
132.0	132.0	0.0	±1.1
133.0	133.0	0.0	±1.1
134.0	134.0	0.0	±1.1
135.0	135.0	0.0	±1.1
136.0	136.0	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	40.0	0.0	±1.1
39.0	39.0	0.0	±1.1
38.0	38.0	0.0	±1.1
37.0	37.0	0.0	±1.1
36.0	36.0	0.0	±1.1

Date of calibration : 2025-03-11

Date of issue : 2025-03-12

COPY

6.3 Measured at 8 kHz

Anticipated value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
94.0	94.0	0.0	±1.1
99.0	99.0	0.0	±1.1
104.0	104.0	0.0	±1.1
109.0	109.0	0.0	±1.1
114.0	114.0	0.0	±1.1
119.0	119.0	0.0	±1.1
124.0	124.0	0.0	±1.1
129.0	129.0	0.0	±1.1
130.9	130.9	0.0	±1.1
131.9	131.9	0.0	±1.1
132.9	132.8	-0.1	±1.1
133.9	133.9	0.0	±1.1
134.9	134.9	0.0	±1.1
94.0	94.0	0.0	±1.1
89.0	89.0	0.0	±1.1
84.0	84.0	0.0	±1.1
79.0	79.0	0.0	±1.1
74.0	74.0	0.0	±1.1
69.0	69.0	0.0	±1.1
64.0	64.0	0.0	±1.1
59.0	59.0	0.0	±1.1
54.0	54.0	0.0	±1.1
49.0	49.0	0.0	±1.1
44.0	44.0	0.0	±1.1
40.0	39.9	-0.1	±1.1
39.0	39.0	0.0	±1.1
38.0	37.9	-0.1	±1.1
37.0	37.0	0.0	±1.1
36.0	36.0	0.0	±1.1

Date of calibration : 2025-03-11

Date of issue : 2025-03-12

COPY

7. Tone burst response

Time weightings	Tone burst duration, Tb (ms)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Fast	200	133.0	0.0	±1.0
	2	116.0	0.0	+1.0,-2.5
	0.25	107.0	0.0	+1.5,-5.0
Slow	200	126.6	0.0	±1.0
	2	107.0	0.0	+1.0,-5.0
SEL	200	127.1	0.1	±1.0
	2	107.0	0.0	+1.0,-2.5
	0.25	98.0	0.0	+1.5,-5.0

8. Peak C sound level

Number of cycles in test signal	Anticipated Value (dB)	Measured value (dB)	Deviated value (dB)	Acceptance limit (dB)
Complete cycle	128.4	128.3	-0.1	±3.0
Positive half cycle	130.4	130.2	-0.2	±2.0
Negative half cycle	130.4	130.2	-0.2	±2.0

9. Overload indication

Measured value (dB)		Deviated value (dB)	Acceptance limit (dB)
Positive one half cycle	Negative one half cycle		
139.1	139.1	0.0	±1.5

10. High level stability

Initial level (dB)	Final level (dB)	Deviated value (dB)	Acceptance limit (dB)
135.0	135.0	0.0	±0.3

Date of calibration : 2025-03-11

Date of issue : 2025-03-12

COPY

Uncertainty of measurement

Parameters	Uncertainty
1. Indication at the calibration check frequency	0.12 dB
2. Self-generated noise	
- Frequency Weighting A	0.060 dB
- Frequency Weighting C	0.060 dB
- Frequency Weighting Z	0.060 dB
3. Electrical signal test of frequency weighting	0.13 dB
4. Frequency and time weightings at 1 kHz	0.13 dB
5. Long term stability test	0.10 dB
6. Level linearity on the reference level range	0.14 dB
7. Tone burst response	0.14 dB
8. Peak C sound level	0.13 dB
9. Overload indication	0.13 dB
10. High level stability test	0.10 dB

The reported expanded uncertainty is based upon a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%.

Remark : The acoustical signal test of frequency weighting at 125Hz, 1kHz, and 8kHz is not included, along with correction values for environmental conditions in a free-field or diffuse field, and the effect of reflection and diffraction on the measurement microphone and the sound level meter.

Calibrated By

(Mr. Anusorn Whangphuking)

Approved By

(Mr. Pitupong Saraphoj)

Date of calibration : 2025-03-11

Date of issue : 2025-03-12

----- End of Calibration Certificate -----

COPY

SOUND LEVEL METER

MODEL : NL-42A

SERIAL No. : 00322753



Cert. No. : ACL25180

Pages : 1 of 8

Calibration Certificate

Equipment : SOUND LEVEL METER
Manufacturer : RION
Model : NL-42A / Microphone UC-52 / Preamplifier NH-24
Serial No.: 00322753 / 196476 / 15485
ID No.: -

Condition As Found : GOOD

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
SAHA GROUP INDUSTRIAL PARK, 683 MOO 11,
NONGKHAM, SIRACHA, CHONBURI 20230 THAILAND.

Location : -
Ambient Temperature : (23.0 \pm 3) °C
Pressure : (101.3 \pm 3) kPa
Relative Humidity : (50.0 \pm 20) %

Received Date : 02 APRIL 2025
Calibration Date : 28 APRIL 2025
Date of Issue : 02 MAY 2025

Calibrated by : Nathakorn Pisutpaisan

Approved by :

T. Petchur
(Thanakul Petchurai)

This certificate is issued in accordance with the requirements of ISO/IEC 17025 standard, may not be reproduced other than in full, except with the prior written approval of the head of Calibration Laboratory.

Cert. No. : ACL25180

Job No. : VC68AC0077

Pages : 2 of 8

Calibration Procedure : CP-AC-01

Calibration Method :

This equipment was calibrated by follow on IEC-61672-3 (2013) Standard for sound level meter (SLM).
The SLM had tests to Acoustical and Electrical signal tests of frequency weighting with Anechoic chamber and Reference Standard Instruments.
For tests results of each items were made by observation of each instruments display and also with SLM's display.

Condition of the result of Calibration :

1. Reference Standard Instruments :

Instrument	Model	Serial No.	Cert. No.	Due Date
Waveform Generator	33210A	MY48017076	EF-0011-25	11-FEB-26
Waveform Generator	33511B	MY52302742	EF-0012-25	11-FEB-26
Digital Multimeter	34461A	MY60024273	CA2025120EA	18-MAR-26
Programmable Attenuator	MAT-1070	62100114	EF-0006-25	11-FEB-26
Condenser Microphone	4180	2977900	AA-1002-25	19-FEB-26
Measuring Amplifier	NA-42KAI	34560495	AA-3002-25	19-FEB-26

2. This result of calibration was found accurate as shown on date and place of calibration for this calibrated item only.

3. This certificate is traceable to the international system of unit maintained at :

3.1 National Institute of Metrology (Thailand).

3.2 Electrical And Electronics Institute (EEI).

COPY

COPY

T. Petchur

Cert. No. : ACL25180
Job No. : VC68AC0077
Pages : 3 of 8

Summary of Measurement Result :

Parameter	Uncertainty (dB)	Maximum-permitted uncertainty of measurement (dB)
1. Absolute sensitivity	0.2	N/A
2. Self-generated noise	0.2	N/A
3. Acoustical signal tests of frequency weightings		
125 Hz	0.3	0.6
1000 Hz	0.3	0.6
8000 Hz	0.3	0.7
4. Electrical signal tests of frequency weightings		
For 10 Hz to 4 kHz	0.3	0.6
For > 4 kHz to 10 kHz	0.3	0.7
For > 10 kHz to 20 kHz	0.3	1.0
5. Frequency and time weightings at 1 kHz	0.2	0.2
6. Long - term stability	0.1	0.1
7. Level linearity on the reference level range	0.2	0.3
8. Level linearity including the level range control	0.2	0.3
9. Tone burst response	0.2	0.3
10. Peak C sound level	0.2	0.35
11. Overload indication	0.2	0.25
12. High level stability	0.1	0.1

Result of calibration :**1. Absolute sensitivity**

Reference Acoustic Signal (dB)	Measured Value (dB)	Deviation (dB)	Acceptance Limit (dB)
93.9 (93.94)	93.9	0.0	10.3

2. Self-generated noise**2.1 Formal test**

Measured Value (dB)
14.8

2.2 The microphone of the sound level meter was replaced by electrical signal input device.

Frequency Weighting	Weighting (dB)
A - weight	11.6
C - weight	17.5
Flat	23.2

3. Acoustical signal tests of frequency weightings

Meas. free-field acoustic response at a level of 84 dB

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
125	0.3	0.4	0.4	± 1.5
1000	0.2	0.2	0.2	± 1.0
8000	1.0	1.1	1.1	± 5.0

COPY

Z. Petcha.

COPY

Z. Petcha.

Cert. No. : ACL25180
Job No. : VC68AC0077
Pages : 5 of 8

Cert. No. : ACL25180
Job No. : VC68AC0077
Pages : 6 of 8

4. Electrical signal tests of frequency weightings

Weighting network response with relative to 1 kHz.

Frequency (Hz)	Deviation from various frequency weighting response curve (dB)			
	Flat	C-weight	A-weight	Acceptance Limits
63	0.0	-0.1	0.0	±2.0
125	0.0	0.0	0.0	±1.5
250	0.0	0.0	0.0	±1.5
500	0.0	0.1	0.0	±1.5
1000	0.0	0.0	0.0	±1.0
2000	0.0	0.1	0.0	±2.0
4000	0.0	0.0	0.0	±3.0
8000	0.0	0.1	0.1	±5.0

5. Frequency and time weightings at 1 kHz

5.1 Frequency weightings at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.2
C - weight	94.0	94.0	0.0	± 0.2
Flat	94.0	94.0	0.0	± 0.2

5.2 Time weighting at 1 kHz

Frequency Weighting	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	94.0	94.0	0.0	± 0.1
Slow	94.0	94.0	0.0	± 0.1
Leq	94.0	94.0	0.0	± 0.1

6. Long - term stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A - weight	94.0	94.0	0.0	± 0.3

7. Level linearity on the reference level range

Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
137.0	137.0	0.0	± 1.1
136.0	136.0	0.0	± 1.1
135.0	135.0	0.0	± 1.1
134.0	134.0	0.0	± 1.1
133.0	133.0	0.0	± 1.1
132.0	132.0	0.0	± 1.1
131.0	131.0	0.0	± 1.1
129.0	129.0	0.0	± 1.1
124.0	124.0	0.0	± 1.1
119.0	119.0	0.0	± 1.1
114.0	114.0	0.0	± 1.1
109.0	109.0	0.0	± 1.1
104.0	104.0	0.0	± 1.1
99.0	99.0	0.0	± 1.1
94.0	94.0	0.0	± 1.1
89.0	89.0	0.0	± 1.1
84.0	84.0	0.0	± 1.1
79.0	79.0	0.0	± 1.1
74.0	74.0	0.0	± 1.1
69.0	69.0	0.0	± 1.1
64.0	64.0	0.0	± 1.1
59.0	59.0	0.0	± 1.1
54.0	54.0	0.0	± 1.1
49.0	49.0	0.0	± 1.1
44.0	44.0	0.0	± 1.1
39.0	39.0	0.0	± 1.1
34.0	34.0	0.0	± 1.1
30.0	29.9	-0.1	± 1.1
29.0	29.0	0.0	± 1.1
28.0	28.0	0.0	± 1.1
27.0	26.9	-0.1	± 1.1
26.0	25.9	-0.1	± 1.1
25.0	24.9	-0.1	± 1.1

COPY

T. Petch

Cert. No. : ACL25180
Job No. : VC68AC0077
Pages : 7 of 8

8. Level linearity including the level range control

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	94.0	94.0	0.0	±1.1

Range	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
130	29.0	29.0	0.0	±1.1

9. Tone burst response

Time Weighting	Tone burst duration, Tb (ms)	Cycle	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Fast	0.25	1	108.0	107.9	-0.1	1.5 ; -5.0
	2	8	117.0	117.0	0.0	1.0 ; -2.5
	200	800	134.0	134.1	0.1	±1.0
Slow	2	8	108.0	108.0	0.0	1.0 ; -5.0
	200	800	127.6	127.6	0.0	±1.0
SEL	0.25	1	99.0	98.9	-0.1	1.5 ; -5.0
	2	8	108.0	108.0	0.0	1.0 ; -2.5
	200	800	128.0	128.0	0.0	±1.0

Cert. No. : ACL25180
Job No. : VC68AC0077
Pages : 8 of 8

10. Peak C sound level

Number of cycle in test signal	Anticipated Value (dB)	Measured Value, L _{peak} (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	130.0	130.0	0.0	±3.0
Once	133.4	133.2	-0.2	±3.0

Number of cycle in test signal	Anticipated Value (dB)	Measured Value (dB)	Deviated Value (dB)	Acceptance Limits (dB)
Continuous	133.0	133.0	0.0	±2.0
Positive half cycle	135.4	135.2	-0.2	±2.0
Negative half cycle	135.4	135.2	-0.2	±2.0

11. Overload indication

Measured value (dB)		Deviated Value (dB)	Acceptance Limits (dB)
Positive one-half cycle	Negative one-half cycle		
89.6	89.5	-0.1	±1.5

12. High level stability

Frequency Weighting	SLM Display at initial (dB)	SLM Display at final (dB)	Deviated Value (dB)	Acceptance Limits (dB)
A-weight	137.0	137.0	0.0	±0.3

The reported uncertainty is based on a standard uncertainty multiplied by coverage factor $k = 2$
or any value following calculation, providing a level of confidence of approximately 95 %

End of Calibration Certificate

NOISE DOSI METER

MODEL : CR:110A

SERIAL No. : CB0956

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231840



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory

N.Smith

Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc

Model: CR:110A

Serial number: CB0956

Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

Notes

COPY

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:

231840

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.30 kPa Temperature: 21.9 °C Humidity: 38.5 %
After Pressure: 99.32 kPa Temperature: 22.0 °C Humidity: 38.7 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

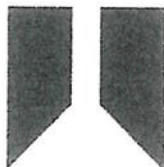
MODEL : CR:110A

SERIAL No. : CA8879

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231822



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CA8879
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 30 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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%.

COPY

CERTIFICATE OF CALIBRATION

Certificate Number:
231822

Page 2 of 2

Environmental conditions

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

Before Pressure: 101.00 kPa Temperature: 21.2 °C Humidity: 35.1 %
After Pressure: 101.04 kPa Temperature: 21.5 °C Humidity: 35.7 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

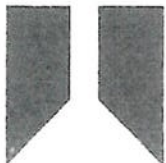
MODEL : CR:110A

SERIAL No. : CB0955

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231830



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory

N.Smith

Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB0955
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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%.

COPY

CERTIFICATE OF CALIBRATION

Certificate Number:

231830

Page 2 of 2

Environmental conditions

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

Before	Pressure: 99.58 kPa	Temperature: 22.3 °C	Humidity: 40.4 %
After	Pressure: 99.62 kPa	Temperature: 22.3 °C	Humidity: 40.9 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

MODEL : CR:110A

SERIAL No. : CB0958

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231829



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB0958
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 30 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.
The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:
231829

Page 2 of 2

Environmental conditions

The following conditions were recorded at the time of the test

Before Pressure: 101,16 kPa Temperature: 22,2 °C Humidity: 36,6 %
After Pressure: 101,17 kPa Temperature: 22,3 °C Humidity: 36,7 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

MODEL : CR:110A

SERIAL No. : CB0954

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231831

Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory

N.Smith

Electronically signed:



Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB0954
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
883 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:

231831

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.46 kPa Temperature: 22.3 °C Humidity: 39.6 %
After Pressure: 99.51 kPa Temperature: 22.4 °C Humidity: 40.2 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

NOISE DOSI METER

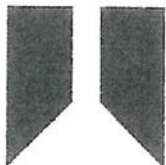
MODEL : CR:110A

SERIAL No. : CB0957

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231839



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB0957
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 30 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.
The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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%.

COPY

CERTIFICATE OF CALIBRATION

Certificate Number:
231839

Page 2 of 2

Environmental conditions

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

Before Pressure: 101.13 kPa Temperature: 22.0 °C Humidity: 36.7 %
After Pressure: 101.16 kPa Temperature: 22.2 °C Humidity: 36.6 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

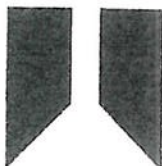
MODEL : CR:110A

SERIAL No. : CA8887

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231823



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CA8887
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:

231823

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.41 kPa Temperature: 22.0 °C Humidity: 38.6 %
After Pressure: 99.41 kPa Temperature: 22.3 °C Humidity: 38.8 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

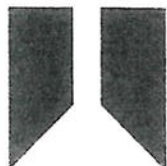
MODEL : CR:110A

SERIAL No. : CA8889

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231820



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CA8889
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:

231820

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.52 kPa Temperature: 22.4 °C Humidity: 40.5 %
After Pressure: 99.55 kPa Temperature: 22.3 °C Humidity: 40.4 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

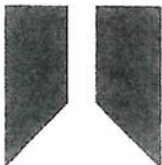
MODEL : CR:110A

SERIAL No. : CB1498

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231833



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory

N.Smith

Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB1498
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 30 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:

231833

Page 2 of 2

Environmental conditions

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

Before Pressure: 101.04 kPa Temperature: 21.6 °C Humidity: 35.6 %
After Pressure: 101.06 kPa Temperature: 21.7 °C Humidity: 36.4 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

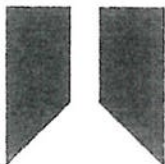
MODEL : CR:110A

SERIAL No. : CB1500

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231835



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB1500
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

Notes

COPY

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:

231835

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.64 kPa Temperature: 22.2 °C Humidity: 41.1 %
After Pressure: 99.68 kPa Temperature: 22.4 °C Humidity: 42.4 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

MODEL : CR:110A

SERIAL No. : CB0640

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231837



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory

N.Smith

Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc

Model: CR:110A

Serial number: CB0640

Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 30 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:

231837

Page 2 of 2

Environmental conditions

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

Before Pressure: 101.17 kPa Temperature: 22.5 °C Humidity: 36.3 %

After Pressure: 101.18 kPa Temperature: 22.5 °C Humidity: 36.6 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

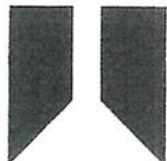
MODEL : CR:110A

SERIAL No. : CA8886

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231821



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc Notes: Eastern Thai Consulting 1992 Co., Ltd
Model: CR:110A 683 Moo 11,
Serial number: CA8886 Sukaphibai 8 Rd.,
Firmware version: 5.4 Nongkham,
Sriracha,

Test summary

Date of calibration: 30 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	KEYSIGHT	33511B	MY58001613
Attenuator	Cirrus Research	ZE:952	64370
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	100498

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:

231821

Page 2 of 2

Environmental conditions

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

Before Pressure: 100.92 kPa Temperature: 20.8 °C Humidity: 34.1 %

After Pressure: 100.96 kPa Temperature: 20.9 °C Humidity: 34.3 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

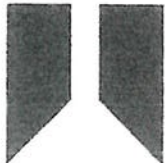
MODEL : CR:110A

SERIAL No. : CB1499

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231834



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N. Smith
Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB1499
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:
231834

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.19 kPa Temperature: 21.9 °C Humidity: 38.3 %
After Pressure: 99.22 kPa Temperature: 21.9 °C Humidity: 38.4 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

NOISE DOSI METER

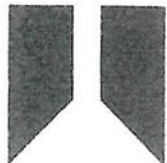
MODEL : CR:110A

SERIAL No. : CB1365

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231836



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer:	Cirrus Research plc	Notes:	Eastern Thai Consulting 1992 Co., Ltd
Model:	CR:110A		683 Moo 11,
Serial number:	CB1365		Sukaphibai 8 Rd.,
Firmware version:	5.4		Nongkham,
			Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	KEYSIGHT	33511B	MY58001613
Attenuator	Cirrus Research	ZE:952	64370
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	100498

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%.

COPY

CERTIFICATE OF CALIBRATION

Certificate Number:

231836

Page 2 of 2

Environmental conditions

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

Before	Pressure: 99.57 kPa	Temperature: 22.4 °C	Humidity: 40.6 %
After	Pressure: 99.63 kPa	Temperature: 22.3 °C	Humidity: 41.0 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

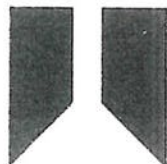
MODEL : CR:110A

SERIAL No. : CB1497

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231832



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosemeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CB1497
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

Notes

COPY

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:

231832

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.33 kPa Temperature: 22.0 °C Humidity: 39.0 %
After Pressure: 99.38 kPa Temperature: 22.0 °C Humidity: 39.0 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

NOISE DOSI METER

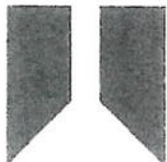
MODEL : CR:110A

SERIAL No. : CA8888

CERTIFICATE OF CALIBRATION

ISSUED BY Cirrus Research plc

DATE OF ISSUE 31 January 2025 CERTIFICATE NUMBER 231838



Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:

Dosimeter : IEC 61252-1993+A1:2000

Instrument information

Manufacturer: Cirrus Research plc
Model: CR:110A
Serial number: CA8888
Firmware version: 5.4

Notes: Eastern Thai Consulting 1992 Co., Ltd
683 Moo 11,
Sukaphibai 8 Rd.,
Nongkham,
Sriiracha,

Test summary

Date of calibration: 29 January 2025

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.

The dosimeter submitted for testing successfully completed the periodic tests of IEC 61252-1993+A1:2000.

The dosimeter submitted for testing conforms to the specifications in IEC 61252-1993+A1:2000.

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	SIGLENT	SDG1032X	SDG1XDDC7R0237
Attenuator	Cirrus Research	ZE:952	78713
Environmental Monitor	Comet	T7510	16966334
doseBadge Reader	Cirrus Research plc	RC:110A	79620

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:

231838

Page 2 of 2

Environmental conditions

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

Before Pressure: 99.43 kPa Temperature: 22.3 °C Humidity: 39.0 %
After Pressure: 99.45 kPa Temperature: 22.3 °C Humidity: 39.5 %

Test results summary

Test	Result
Absolute Acoustic Sensitivity	Complies
Linearity	Complies
Short Duration	Complies
Overload Latching	Complies
Frequency weighting	Complies

COPY

COPY

ANALYTICAL BALANCE (DU)

Model : XS205DU


Serial No. : 1126323724

Mettler-Toledo (Thailand) Ltd.
846/4 - 846/5/846/4 - 846/5 Lasalle Rd., Bangna Tai
Bangna District, Bangkok 10260
+66 2723 0382
MT-TH.ServiceSupport@mt.com



Accuracy Calibration Certificate

Customer

Company: EASTERN THAI CONSULTING 1992 CO., LTD.
Address: 683 Moo 11, Sukhaphiban 8 Rd., Nong Kham
City: Sriracha Contact: Sasiporn Nakin
Zip / Postal: 20230
State / Province: Chonburi
Order Number: 
0 3 3 3 1 9 6 1 9

Weighing Device

Manufacturer: Mettler Toledo Instrument Type: Weighing Instrument
Model: XS205DU Asset Number: LABE 05/1
Serial No.: 1126323724 Terminal Model: SAT
Building: Laboratory Terminal Serial No.: 1126323724
Floor: 1 Terminal Asset No.: N/A
Room: Analytical Balance

Range	Max. Capacity	Readability (d)
1	81 g	0.0001 g
2	220 g	0.0001 g

Procedure

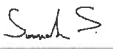

Calibration Guideline: EURAMET cg-18 v. 4.0 (11/2015)
METTLER TOLEDO Work Instruction: CP/W002/20

This calibration certificate contains measurements for As Found calibration. No As Left calibration was performed because the device was not modified after As Found calibration. Therefore, results for As Left correspond to As Found.

The sensitivity/span of the weighing instrument was adjusted before calibration with a built-in weight.

In accordance with EURAMET cg-18 (11/2015), the test loads were selected to reflect the specific use of the weighing device or to accommodate specific calibration conditions.

	Temperature		Humidity	
As Found	Start: 25.7 °C	End: 25.8 °C	Start: 50.9 %	End: 50.6 %

As Found Calibration Date: 09-Dec-2024 Calibrator: 
As Left Calibration Date: N/A
Issue Date: 11-Dec-2024
Approved Signatory: 
Technical Manager / Head of Calibration Center

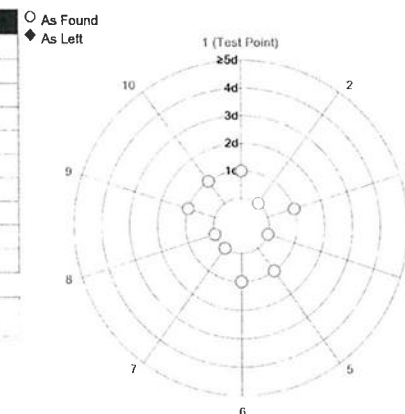
Measurement Results

Repeatability

Test Load: 70 g

	As Found	As Left
1	70.00004 g	N/A
2	70.00005 g	N/A
3	70.00004 g	N/A
4	70.00005 g	N/A
5	70.00006 g	N/A
6	70.00004 g	N/A
7	70.00005 g	N/A
8	70.00005 g	N/A
9	70.00006 g	N/A
10	70.00006 g	N/A

Standard Deviation	0.000008 g	N/A
--------------------	------------	-----



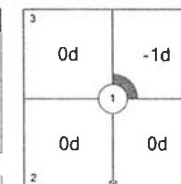
The "d" in the graph represents the readability of the range/interval in which the test was performed.
The results of this graph are based upon the absolute values of the differences from the mean value.

Eccentricity

Test Load: 100 g

Position	As Found	As Left
1	100.0000 g	N/A
2	100.0000 g	N/A
3	100.0000 g	N/A
4	99.9999 g	N/A
5	100.0000 g	N/A

Maximum Deviation	0.0001 g	N/A
-------------------	----------	-----



As Found

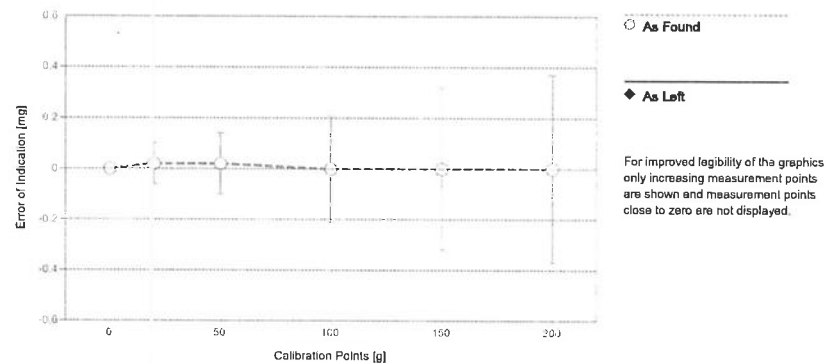
The "d" in the graph represents the readability of the range/interval in which the test was performed.

Error of Indication

As Found

	Reference Value	Indication	Error of Indication	Expanded Uncertainty	k
1	0.00000 g	0.00000 g	0.00000 g	0.017 mg	2
2	0.01000 g	0.01000 g	0.00000 g	0.020 mg	2
3	0.10000 g	0.10000 g	0.00000 g	0.023 mg	2
4	1.00000 g	1.00000 g	0.00000 g	0.032 mg	2
5	4.99998 g	5.00000 g	0.00002 g	0.048 mg	2
6	10.00001 g	10.00001 g	0.00000 g	0.061 mg	2
7	19.99998 g	20.00001 g	0.00002 g	0.082 mg	2
8	50.00003 g	50.00005 g	0.00002 g	0.12 mg	2
9	100.0000 g	100.0000 g	0.0000 g	0.21 mg	2
10	150.0000 g	150.0000 g	0.0000 g	0.32 mg	2
11	200.0000 g	200.0000 g	0.0000 g	0.37 mg	2

*The calculated uncertainty was replaced by the CMC (Calibration and Measurement Capabilities) value because the calculated uncertainty was smaller than the CMC value.



The expanded measurement uncertainty is reported as the standard measurement uncertainty multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95 %.

The user is responsible for maintaining environmental conditions and the settings of the weighing instrument when it was calibrated. The results of this calibration certificate relate only to the calibrated item.

COPY

Test Equipment

All weights used for metrological testing are traceable to national or international standards. The weights were calibrated and certified by an accredited calibration laboratory.

Weight Set 1: OIML :2

Weight Set No.: WS37 Date of Issue: 17-Jun-2024
Certificate Number: 186753-1 Calibration Due Date: 20-Jan-2025

Weight Set 2: OIML :2

Weight Set No.: WS87 Date of Issue: 04-Jul-2023
Certificate Number: 186520 Calibration Due Date: 02-Jan-2025

Thermo Hygrometer

Equipment No.: IN279 Date of Issue: 19-Jun-2024
Certificate Number: SG-H-00577/67 Calibration Due Date: 17-Jun-2025

Remarks

FACT adjustment functionality activated

Equipment condition: Good

Next calibration according to customer's procedure

Calibration data not decided by calibration laboratory

End of Accredited Section

The information below and any attachments to this calibration certificate are not part of the accredited calibration.

COPY

Measurement Uncertainty of the Weighing Instrument in Use

Stated is the expanded uncertainty with $k=2$ in use. The formula shall be used for the estimation of the uncertainty under consideration of the errors of indication. The value R represents the net load indication in the unit of measure of the device.

Temperature coefficient for the evaluation of the measurement uncertainty in use: $1.5 \cdot 10^{-6} / K$

Temperature range on site for the evaluation of the measurement uncertainty in use: 3 K

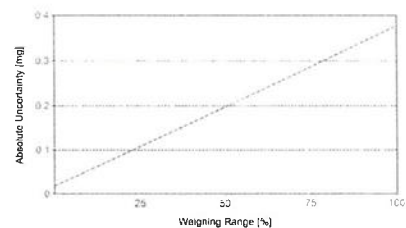
Linearization of Uncertainty Equation

	Range		As Found	As Left
	d	Max		
1	0.00001 g	81 g	$U_1 = 0.018 \text{ mg} + 0.00444 \text{ mg/g} \cdot R$	N/A
2	0.0001 g	220 g	$U_2 = 0.06 \text{ mg} + 0.00439 \text{ mg/g} \cdot R$	N/A

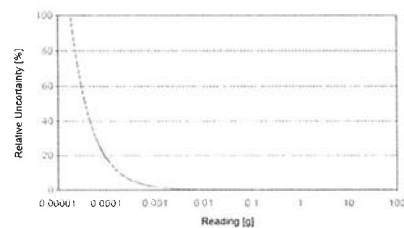
To optimize the stability of the linearization, besides of the zero load only increasing measurement points with a test load of 5% of the measurement range or larger are taken for the calculation of the linear equation.

Absolute and Relative Measurement Uncertainty in Use for Various Net Indications (Examples)

Net Indication	As Found		As Left	
0.00220 g	0.018 mg	0.82%	N/A	N/A
0.02200 g	0.018 mg	0.082%	N/A	N/A
0.22000 g	0.019 mg	0.0086%	N/A	N/A
2.20000 g	0.028 mg	0.0013%	N/A	N/A
220.0000 g	1.0 mg	0.00047%	N/A	N/A



As Found



As Left

The weighing range shown in the absolute uncertainty graph refers to the first interval/range of the device.

COPY

GWP® Certificate



As
Found



As
Left



The weighing device meets the given process requirements.

The weighing device meets the given process requirements.

Tests Performed: ☒ As Found ☐ As Left ☒ No adjustments/modifications made. As Left results correspond to As Found.

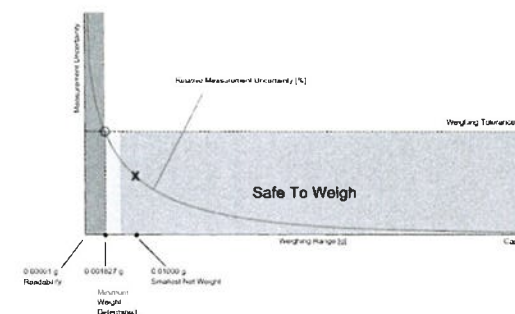
Process Requirements

Weighing Tolerance: 1%

Smallest Net Weight: 0.01000 g

Safety Factor: 2

Safe Weighing Range



While the values in this graph reflect the actual calibration results, the measurement uncertainty curves are simply a visual representation. This graph reflects As Left testing, unless only As Found was performed.

COPY

Minimum Weight

As Found Minimum Weight Table

Range 1

Tolerance	Minimum weights for different weighing tolerances and safety factors				
	Safety Factor				
	1	2	3	5	10
0.1%	0.016339 g	0.036842 g	0.055511 g	0.093358 g	0.191052 g
0.2%	0.006149 g	0.018339 g	0.027570 g	0.046156 g	0.093358 g
0.5%	0.002655 g	0.007316 g	0.010984 g	0.018339 g	0.036842 g
1%	0.001827 g	0.003655 g	0.005485 g	0.009149 g	0.018339 g
2%	0.000913 g	0.001827 g	0.002740 g	0.004569 g	0.009149 g
5%	0.000365 g	0.000730 g	0.001096 g	0.001827 g	0.003655 g

The minimum weight table applies to the fine range of the weighing device.

✓ Pass: The determined minimum weight meets the requirement for the smallest net weight.

As Left Minimum Weight Table

Range 1

Tolerance	Minimum weights for different weighing tolerances and safety factors				
	Safety Factor				
	1	2	3	5	10
0.1%	0.016339 g	0.036842 g	0.055511 g	0.093358 g	0.191052 g
0.2%	0.006149 g	0.018339 g	0.027570 g	0.046156 g	0.093358 g
0.5%	0.002655 g	0.007316 g	0.010984 g	0.018339 g	0.036842 g
1%	0.001827 g	0.003655 g	0.005485 g	0.009149 g	0.018339 g
2%	0.000913 g	0.001827 g	0.002740 g	0.004569 g	0.009149 g
5%	0.000365 g	0.000730 g	0.001096 g	0.001827 g	0.003655 g

The minimum weight table applies to the fine range of the weighing device.

✓ Pass: The determined minimum weight meets the requirement for the smallest net weight.

At these net minimum weight values, the measurement uncertainty of the weighing device is equal to or less than 1/1 (no safety factor), 1/2, 1/3, 1/5, or 1/10 of the required tolerance. The values are calculated with $k = 2$ and based on the linear formula of the measurement uncertainty of the weighing device in use.

The safety factor for As Found is always 1. This implies no safety factor. As Found testing looks at the behavior of the instrument from the past until test occurred. For the present, it is necessary to know that the tolerance was met, but not the safety factor. The safety factor is a proactive measure to apply for future measurements.

Notes on minimum weight values in above table:

- If "N/A" is shown above, no appropriate value could be calculated.
- METTLER TOLEDO is not responsible for the definition of the process requirements.

Measurement Results

Results Summary

	Repeatability	Eccentricity	Error of Indication
As Found	✓	✓	✓
As Left	✓	✓	✓

✓ = Passed

✗ = Failed

N/A = Safety Factor not met

Repeatability

Test Load: 70 g

Tolerance	Control Limit	As Found		As Left	
		Std. Deviation	Result	Std. Deviation	Result
0.1%	0.000005 g	0.000008 g	✗	0.000008 g	✗
0.2%	0.000010 g		✓		✓
0.5%	0.000025 g		✓		✓
1%	0.000050 g		✓		✓
2%	0.000100 g		✓		✓
5%	0.000250 g		✓		✓

The weighing tolerance is met if the standard deviation is less than or equal to the corresponding control limit.

Eccentricity

Test Load: 100 g

Tolerance	Control Limit	As Found		As Left	
		Deviation	Result	Deviation	Result
0.1%	0.0500 g	0.0001 g	✓	0.0001 g	✓
0.2%	0.1000 g		✓		✓
0.5%	0.2500 g		✓		✓
1%	0.5000 g		✓		✓
2%	1.0000 g		✓		✓
5%	2.5000 g		✓		✓

The weighing tolerance is met if the deviation is less than or equal to the corresponding control limit.

Attachment to Calibration Certificate:

TH2008-028-120924-ACC-TH

GWP® Certificate

METTLER TOLEDO Service

Error of Indication

As Found

Reference Value	Error	Control limits for various weighing tolerances					
		0.1%	0.2%	0.5%	1%	2%	5%
0.00000 g	0.00000 g	N/A	N/A	N/A	N/A	N/A	N/A
19.99999 g	0.00002 g	0.01000 g	0.02000 g	0.05000 g	0.10000 g	0.20000 g	0.50000 g
50.00003 g	0.00002 g	0.02500 g	0.05000 g	0.12500 g	0.25000 g	0.50000 g	1.25000 g
100.00000 g	0.00000 g	0.05000 g	0.10000 g	0.25000 g	0.50000 g	1.00000 g	2.50000 g
150.00000 g	0.00000 g	0.07500 g	0.15000 g	0.37500 g	0.75000 g	1.50000 g	3.75000 g
200.00000 g	0.00000 g	0.10000 g	0.20000 g	0.50000 g	1.00000 g	2.00000 g	5.00000 g
Result		✓	✓	✓	✓	✓	✓

As Left

Reference Value	Error	Control limits for various weighing tolerances					
		0.1%	0.2%	0.5%	1%	2%	5%
0.00000 g	0.00000 g	N/A	N/A	N/A	N/A	N/A	N/A
19.99999 g	0.00002 g	0.01000 g	0.02000 g	0.05000 g	0.10000 g	0.20000 g	0.50000 g
50.00003 g	0.00002 g	0.02500 g	0.05000 g	0.12500 g	0.25000 g	0.50000 g	1.25000 g
100.00000 g	0.00000 g	0.05000 g	0.10000 g	0.25000 g	0.50000 g	1.00000 g	2.50000 g
150.00000 g	0.00000 g	0.07500 g	0.15000 g	0.37500 g	0.75000 g	1.50000 g	3.75000 g
200.00000 g	0.00000 g	0.10000 g	0.20000 g	0.50000 g	1.00000 g	2.00000 g	5.00000 g
Result		✓	✓	✓	✓	✓	✓

The weighing tolerance is met if the error (of indication) for each test point is less than or equal to the corresponding control limit for that particular weighing tolerance. Results at or close to the zero point cannot be assessed.

COPY

ANALYTICAL BALANCE (DU)

Model : XS205DU

Serial No. : B344940005

Certificate No. : 25-205716
Sample Code : 25-90375-006

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Analytical Balance Room)

Equipment : ELECTRONIC BALANCE

Manufacturer : METTLER TOLEDO

Model : XS205DU

Serial No. : B344940005

ID No. : LABE 05/3

Date of Receipt : 26 November 2025

Date of Calibration : 26 November 2025

Calibrated by Mr. Thanadol Pholthep
Scientist

Approved by (Mr. Somchai Neampunt)
Signed for Director

Issue date 28 November 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 25-205716
Sample Code : 25-90375-006

REPORT OF CALIBRATION

Equipment : ELECTRONIC BALANCE
Manufacturer : METTLER TOLEDO
Model : XS205DU
Capacity : Max 81 g / 200 g
Resolution : 0.00001 g / 0.0001 g
Serial No. : B344940005
ID No. : LABE 05/3

Result of Calibration

1. Test weight and repeatability of reading

Repeatability is a measure of the ability of a balance to supply the same result in repetitive weighings with one and the same load under the same measurement condition. The measurement of the repeatability must include both the balance specifications and the ambient (vibration, fluctuating air current/temperature/humidity, etc.) Operator handling of the balance is also included in the standard deviation.

Unit : g	Range : 81	<input type="checkbox"/> Before adjustment	<input type="checkbox"/> After adjustment
	Nominal value	40	80
<input checked="" type="checkbox"/> No adjustment	Standard weight	40.000087	80.000088
<input type="checkbox"/> Adjustment	Average reading of indicator	40.00004	80.00004
	Standard deviation	0.000007	0.000007

Unit : g	Range : 200	<input type="checkbox"/> Before adjustment	<input type="checkbox"/> After adjustment
	Nominal value	100	200
<input checked="" type="checkbox"/> No adjustment	Standard weight	99.999988	200.000015
<input type="checkbox"/> Adjustment	Average reading of indicator	99.9999	199.9997
	Standard deviation	0.000005	0.000005

Certificate No. : 25-205716
Sample Code : 25-90375-006

Page 3 of 4

REPORT OF CALIBRATION

Result of Calibration

2. Sensitivity or value of a scale division

Change in the output variable of a measuring instrument divided by the associated change in the input variable.

Unit : g

Range : 81

Range : 200

Test Point	Sensitivity, S	Test Point	Sensitivity, S
0	1.00000	0	1.0000
40	1.00000	100	1.0000
80	1.00000	200	1.0000

3. Departure of indication from nominal value, Linearity

Unit : g

Nominal Value	Standard Value	Average Reading of Indicator	Correction Value	Expanded Uncertainty	Coverage Factor (k)
Unload	0.0000000	0.00000	0.00000	0.000011	2.04
0.01	0.0100016	0.01000	0.00000	0.000011	2.04
0.1	0.1000056	0.10000	0.00001	0.000012	2.02
1	1.0000110	1.00000	0.00001	0.000015	2.01
5	4.9999996	4.99998	0.00002	0.000020	2.00
10	9.9999994	9.99999	0.00000	0.000026	2.00
20	20.0000042	20.00000	0.00004	0.000037	2.00
50	50.0000052	50.00003	0.00002	0.000067	2.00
100	99.9999988	100.00000	0.00000	0.000016	2.00
150	150.0000040	150.00001	-0.00001	0.000022	2.00
200	200.0000015	200.00001	-0.00001	0.000027	2.00

COPY

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

Certificate No. : 25-205716
Sample Code : 25-90375-006

Page 4 of 4

REPORT OF CALIBRATION

Result of Calibration :

4. Eccentric or off-centre loading

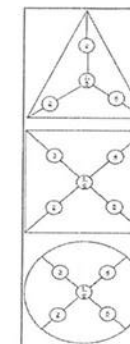
Deviation of the measurement value through off-center (eccentric) loading. The corner load increases with the weight of the load and its removal from the center of the pan support.

☐ Triangular☒ Rectangular☐ Circle

Test weight : 50 and 100

Unit : g

Range	81	200
Position	Reading of indicator	Reading of indicator
1	50.00000	100.0000
2	49.99997	100.0000
3	49.99993	99.9999
4	49.99999	100.0000
5	50.00003	99.9999
6	50.00000	100.0000
Maximum difference	0.00007	0.0001



Condition of Calibration

1. Calibration Method : WI-CL-004 base on UKAS LAB 14: 2019

2. This result of calibration was found accurate as shown on date and place of calibration only.

3. Condition of Calibration item: Normal

4. This certification is traceable to the International System of Unit maintained at : .

- Through the reference standard laboratory of Asia Medical and Agricultural Laboratory and Research Center Public

Company Limited (Instrument number 1).

5. Reference standard instrument :

Instrument	Class	ID No.	Certificate No.	Due Date
1) STANDARD WEIGHT 1 mg to 1 kg	E2	LB-WE-78	25-134074	18 July 2026

- End of Report -

COPY

ANALYTICAL BALANCE

Model : SECURA224-1S

Serial No. : 0036707137

NSC-TISI-TIS17025
CALIBRATION 0152

Page 1 of 4

Certificate No. : 24-164695
Sample Code : 24-67405-005

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Analytical Balance Room)

Equipment : ELECTRONIC BALANCE

Manufacturer : SARTORIUS

Model : SECURA224-1S

Serial No. : 0036707137

ID No. : LABE 05/2

Date of Receipt : 19 December 2024

Date of Calibration : 19 December 2024

Calibrated by Mr. Thanadol Pholthep
Scientist

Approved by (Mr. Nuttaput Timula)
Signed for Director

Issue date 20 December 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

NSC-TISI-TIS17025
CALIBRATION 0152

Page 2 of 4

Certificate No. : 24-164695
Sample Code : 24-67405-005

REPORT OF CALIBRATION

Equipment : ELECTRONIC BALANCE
Manufacturer : SARTORIUS
Model : SECURA224-1S
Capacity : Max 220 g
Resolution : 0.0001 g
Serial No. : 0036707137
ID No. : LABE 05/2

Result of Calibration

1. Test weight and repeatability of reading

Repeatability is a measure of the ability of a balance to supply the same result in repetitive weighings with one and the same load under the same measurement condition. The measurement of the repeatability must include both the balance specifications and the ambient (vibration, fluctuating air current/temperature/humidity, etc.) Operator handling of the balance is also included in the standard deviation.

Unit : g	Range : 220	<input type="checkbox"/> Before adjustment	<input type="checkbox"/> After adjustment
<input checked="" type="checkbox"/> No adjustment	Nominal value	100	200
<input type="checkbox"/> Adjustment	Standard weight	100.000016	200.000028
	Average reading of indicator	100.0000	200.0000
	Standard deviation	0.00005	0.00005

Unit : -	Range : -	<input type="checkbox"/> Before adjustment	<input type="checkbox"/> After adjustment
<input type="checkbox"/> No adjustment	Nominal value	-	-
<input type="checkbox"/> Adjustment	Standard weight	-	-
	Average reading of indicator	-	-
	Standard deviation	-	-

Certificate No. : 24-164695
Sample Code : 24-67405-005

Page 3 of 4

REPORT OF CALIBRATION

Result of Calibration

2. Sensitivity or value of a scale division

Change in the output variable of a measuring instrument divided by the associated change in the input variable.

Unit : g

Range : 220

Range :

Test Point	Sensitivity, S	Test Point	Sensitivity, S
0	0.9998		
100	0.9998		
200	0.8998		

3. Departure of indication from nominal value, Linearity

Unit : g

Nominal Value	Standard Value	Average Reading of Indicator	Correction Value	Expanded Uncertainty	Coverage Factor (k)
Unload	0.0000000	0.0000	0.0000	0.000094	2.01
0.01	0.0100015	0.0100	0.0000	0.000094	2.01
0.1	0.1000064	0.1000	0.0000	0.000094	2.01
1	1.0000017	1.0000	0.0000	0.000095	2.01
2	2.0000049	2.0000	0.0000	0.000095	2.01
5	5.0000012	5.0000	0.0000	0.000096	2.01
10	9.999992	10.0000	0.0000	0.000097	2.01
20	20.000042	20.0000	0.0000	0.00010	2.01
50	50.000046	50.0000	0.0000	0.00012	2.01
100	100.000016	100.0000	0.0000	0.00016	2.00
200	200.000028	200.0000	0.0000	0.00028	2.00

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003.

Certificate No. : 24-164695
Sample Code : 24-67405-005

Page 4 of 4

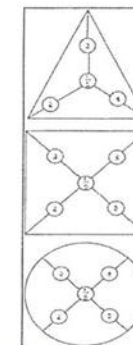
REPORT OF CALIBRATION

Result of Calibration :

4. Eccentric or off-center loading

Deviation of the measurement value through off-center (eccentric) loading. The corner load increases with the weight of the load and its removal from the center of the pan support.

Weighing pan	<input checked="" type="radio"/> Circle <input type="radio"/> Triangular <input type="radio"/> Rectangular	Test weight : 100 Unit : g
Range	220	
Position	Reading of indicator	Reading of indicator
1	99.9999	-
2	100.0001	-
3	99.9999	-
4	99.9998	-
5	99.9999	-
6	99.9999	-
Maximum difference	0.0002	-



Condition of Calibration

1. Calibration Method : WI-CL-004 base on UKAS LAB 14: 2019
2. This result of calibration was found accurate as shown on date and place of calibration only.
3. Condition of Calibration item: Normal

4. This certification is traceable to the International System of Unit maintained at :

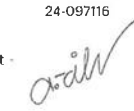
- Through the reference standard laboratory of Asia Medical and Agricultural Laboratory and Research Center Public

Company Limited (Instrument number 1).

5. Reference standard instrument :

Instrument	Class	ID No.	Certificate No.	Due Date
1) STANDARD WEIGHT 1 mg to 1 kg	E2	LB-WF-78	24-097116	02 August 2025

- End of Report -



6. Ambient conditions	Min	Max
Temperature (°C)	25.0	25.4
Relative Humidity (%Rh)	39.8	41.0
Air pressure (hPa)	1011.0	1012.1

BOD INCUBATOR

Model : LABE 19/3

CERTIFICATE OF CALIBRATION

Page 1 of 3

Certificate No. : 25-118065

Sample Code : 25-51697-001

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Laboratory)

Equipment : Temperature controlled enclosures (Incubator)

Manufacturer : พิกัด เครื่องเย็น Model : N/A

Serial No. : S43020027 ID No. : LABE 19/3

Date of Receipt : 25 June 2025 Date of Calibration : 25 June 2025

Condition of Calibration

1. Environment
- | | | | | | | |
|---------------------------|---|---------|-----------|---|---------|-----------|
| 1.1 Ambient temperature | : | Maximum | 34.6 °C | : | Minimum | 32.2 °C |
| 1.2 Relative humidity | : | Maximum | 64.0 % | : | Minimum | 58.7 % |
| 1.3 Line voltage supplied | : | Maximum | 224.5 VAC | : | Minimum | 223.8 VAC |

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-P1100)	LB-DA-08 (RTD-411 to RTD-419)	25-082913	18 May 2026

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by

Mr. Pattanapong Pulngern
Scientist

Approved by

(Mr. Somchai Neampunt)
Signed for Director

Issue date

26 June 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

REPORT OF CALIBRATION

Page 2 of 3

Certificate No. : 25-118065

Sample Code : 25-51697-001

Results of Calibration

Resolution : 0.1 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)									Uncertainty ± (°C)	Coverage factor k
			# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9 ^{ref}		
20	20.0	20.0	20.61	20.42	19.97	19.90	20.29	20.47	20.25	19.96	20.18	0.24	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
20	0.09	0.46	0.89

Notes

- UUC* = Unit Under Calibration



NSC-TISI-TIS17025
CALIBRATION 0152

Page 3 of 3

REPORT OF CALIBRATION

Certificate No. : 25-118065

Sample Code : 25-51697-001

Results of Calibration

Notes

1. Sensor installation locations

1.1 All sensors at any corners or walls should be positioned
5 cm (a x b x c) from the wall.

1.2 The reference sensor is preferably located of the geometric center
of the chamber.

2. Interior dimensions approx of chamber :

W = 70 cm ; D = 55 cm ; H = 140 cm

3. Air valve or fresh air level : Off

4. Fan level : Open

5. The quoted uncertainty includes "Stability of chamber and loading effect
in chamber at 20% of uniformity".6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference
location which are observed at the same time.

7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.

8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.

9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.

10. Calibration results without adjustment.

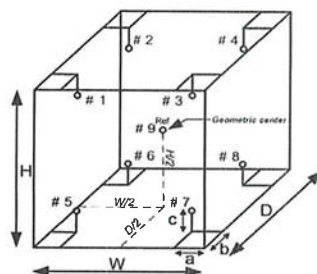


Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003.

- End of Report -

COPY

BOD INCUBATOR

Model : LABE 19/5

CERTIFICATE OF CALIBRATION

Page 1 of 3

Certificate No. : 25-042561

Sample Code : 25-18090-002

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Laboratory)

Equipment : Temperature controlled enclosures (Incubator)

Manufacturer : Lovibond Model : TC 445 S

Serial No. : 0520/005227 ID No. : LABE 19/5

Date of Receipt : 20 March 2025 Date of Calibration : 20 March 2025

Condition of Calibration

1. Environment
- 1.1 Ambient temperature : Maximum 29.9 °C ; Minimum 27.5 °C
- 1.2 Relative humidity : Maximum 51.9 % ; Minimum 43.4 %
- 1.3 Line voltage supplied : Maximum 239.4 VAC ; Minimum 232.8 VAC

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-P1100)	LB-DA-11 (RTD-148 to RTD-155, RTD-227)	24-040190	03 April 2025

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by Mr. Pattanapong Pulngern
Scientist

Approved by

(Mr. Somchai Neampunt)

Signed for Director

Issue date 24 March 2025

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

REPORT OF CALIBRATION

Page 2 of 3

Certificate No. : 25-042561

Sample Code : 25-18090-002

Results of Calibration

Resolution : 0.1 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)										Uncertainty ± (°C)	Coverage factor k
			#1	#2	#3	#4	#5	#6	#7	#8	#9 ^{ref}			
20	20.5	20.5	19.91	19.78	19.82	19.86	19.78	19.85	19.93	19.63	19.79		0.38	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
20	0.28	0.25	0.83

Notes

- UUC* = Unit Under Calibration



NSC-TISI-TISI17025
CALIBRATION 0152

Page 3 of 3

REPORT OF CALIBRATION

Certificate No. : 25-042561

Sample Code : 25-18090-002

Results of Calibration

Notes

1. Sensor installation locations
 - 1.1 All sensors at any corners or walls should be positioned 5 cm (a x b x c) from the wall.
 - 1.2 The reference sensor is preferably located of the geometric center of the chamber.
2. Interior dimensions approx of chamber :
W = 60 cm ; D = 56 cm ; H = 146 cm
3. Air valve or fresh air level : Off
4. Fan level : Open
5. The quoted uncertainty includes* Stability of chamber and loading effect in chamber at 20% of uniformity*.
6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.
8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.
9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.
10. Calibration results without adjustment.

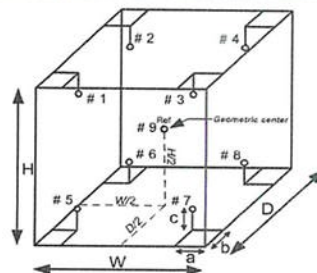


Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

- End of Report -

COPY

Hot Air Oven

Model : UM 400

Serial No. : 900982

CERTIFICATE OF CALIBRATION

Certificate No. : 24-164692

Sample Code : 24-67405-002

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarni 8 Rd, Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : EASTERN THAI CONSULTING 1992 CO., LTD.
(Hot Lab)

Equipment : Temperature controlled enclosures (Hot air oven)

Manufacturer : Memmert Model : UM 400

Serial No. : 900982 ID No. : LABE 17/1

Date of Receipt : 19 December 2024 Date of Calibration : 19 December 2024

Condition of Calibration

1. Environment
- | | | | | |
|---------------------------|-----------|-----------|-----------|-----------|
| 1.1 Ambient temperature | : Maximum | 32.1 °C | : Minimum | 30.4 °C |
| 1.2 Relative humidity | : Maximum | 48.9 % | : Minimum | 42.4 % |
| 1.3 Line voltage supplied | : Maximum | 226.3 VAC | : Minimum | 221.0 VAC |

2. Calibration method

TLAS-G-20: Guidelines for calibration and checks of temperature controlled enclosures.

3. Reference standard instrument

Instrument	ID No.	Certificate No.	Due Date
Data Acquisition With Sensor (RTD-Pt100)	LB-DA-11 (RTD-148 to RTD-155, RTD-227)	24-040190	03 April 2025

4. This certificate is traceable to the international system of unit (SI Unit).

The measurement is traceable to Asia Medical and Agricultural Laboratory and Research Center Public Company Limited.

5. This result of calibration was found accurate as shown on date and place of calibration only.

6. Condition of calibration item : Normal

Calibrated by Mr. Nophanon Anusak
Scientist

Approved by

(Mr. Somchai Neampunt)
Signed for Director

Issue date 20 December 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

REPORT OF CALIBRATION

Certificate No. : 24-164692

Sample Code : 24-67405-002

Results of Calibration

Resolution : 0.1 °C

1. Reporting of Temperature

Calibration point (°C)	UUC* setting (°C)	UUC* reading (°C)	Measured temperature at each positions (°C)									Uncertainty ± (°C)	Coverage factor <i>k</i>
			# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9 ^{ref}		
85	85.0	85.0	85.33	85.28	84.83	85.01	85.15	85.18	85.32	85.12	85.23	0.25	2.00

2. Characterization results

Calibration point (°C)	Stability ± (°C)	Uniformity (°C)	Overall variation (°C)
85	0.10	0.43	0.69

Notes

- UUC* = Unit Under Calibration

COPY

REPORT OF CALIBRATION

Page 3 of 3

Certificate No. : 24-164692

Sample Code : 24-67405-002

Results of Calibration

Notes

1. Sensor installation locations
 - 1.1 All sensors at any corners or walls should be positioned 5 cm (a x b x c) from the wall.
 - 1.2 The reference sensor is preferably located of the geometric center of the chamber.
2. Interior dimensions approx of chamber :
W = 40 cm ; D = 28 cm ; H = 39 cm
3. Air valve or fresh air level : Off
4. Fan level : Open
5. The quoted uncertainty includes "Stability of chamber and loading effect in chamber at 20% of uniformity".
6. Uniformity - the maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
7. Stability - one-half of the greatest maximum difference of measured temperatures at any one sensor.
8. Overall variation - the difference of the maximum and the minimum measured temperatures throughout observation time.
9. UUC* reading - the average reading of indicating device that forms the integral part of the enclosure.
10. Calibration results without adjustment.

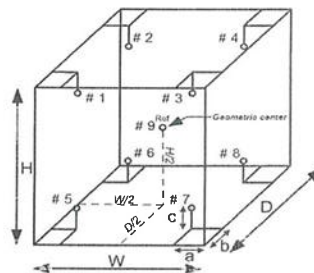


Figure: Example of sensor
installation Positions

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

- End of Report -

COPY

LIQUID IN GLASS THERMOMETER

Model / Type : 0-100 °C

Serial No. : 43560



CALIBRATION LABORATORY Co.,LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



CERTIFICATE OF CALIBRATION

FOR

NOMENCLATURE : LIQUID IN GLASS THERMOMETER
MANUFACTURER : AA PRECISION
MODEL / TYPE : 0-100 °C
SERIAL NO. : 43560[LABE 16/1]
CLID. NO. : 232403905
JOB CONTROL NO. : 241031116258
CALIBRATION SERVICE : ☒ IN-LABORATORY ☐ ON-SITE

CUSTOMER : EASTERN THAI CONSULTING 1992 CO., LTD.
683 MOO 11, SUKHAPIBARN 8 RD,
NONGKHAM, SRIRACHA, CHONBURI 20230

DATE OF RECEIVED : 31 October 2024

DATE OF ISSUED : 05 November 2024

The report of calibration shall not be reproduced except in full without approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Pimsiri Hemtanon
Calibration Engineer

Approved By : Mongkol Yotsoontorn
Authorized Signatory
05 November 2024



This Calibration Certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI)

Certificate No. Q24116258

F3-011-05/12-23

COPY

page 1 of 3



etccalibration



CALIBRATION LABORATORY Co.,LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail: sale@cal-laboratory.com



REPORT OF CALIBRATION

FOR

NOMENCLATURE : LIQUID IN GLASS THERMOMETER
MANUFACTURER : AA PRECISION
MODEL / TYPE : 0-100 °C
SERIAL NO. : 43560[LABE 16/1]
DATE OF CALIBRATION : 04 November 2024

ENVIRONMENT CONDITIONS :

Temperature : $(23 \pm 2) ^\circ\text{C}$

Relative Humidity : $(55 \pm 10) \% \text{ RH}$

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPH-02 based on ASTM E 77-07 as calibration guidelines.
The calibration was performed by comparison with Calibration Bath, Precision Thermometer and IPRT which maintained by the Calibration Laboratory Co., Ltd.

REFERENCE STANDARD USED :

1. Calibration Bath, Kambic Model OB-22/2 ULT, OB-22/2 S/N, 17115653, 17115654.
2. Precision Thermometer, ASL Model F200-A-8 S/N, 014433/03 with IPRT S/N, L0193A-1-1, PO106346-1-18.

TRACEABILITY :

1. The measurements are traceable to International System of Units (SI), through Calibration Laboratory Co., Ltd. Certificate No. Q23136342, Q23126517. Due Date 20 December 2024, 20 November 2024.
2. The measurements are traceable to International System of Units (SI), through Thailand Institute of Scientific and Technological Research (TISTR) and National Institute of Metrology (Thailand). Certificate No. PSL-T 0203/67, TT-0136-23, TT-0110-24. Due Date 07 December 2024, 12 December 2024, 06 August 2025.

UNCERTAINTY :

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.00$ which for a normal distribution corresponds to a coverage probability of approximately 95 %.
It has been evaluated according to the "Evaluation of the Uncertainty of Measurement in Calibration (ISA-402 M-2023)".

Certificate No. Q24116258

F3-011-05/12-23

COPY

page 2 of 3



etccalibration



CLC
Accredited
ISO/IEC 17025

CALIBRATION LABORATORY CO., LTD.

2/10 11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : RECEIVED IN GOOD OPERATIONAL CONDITION

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The DUC Reading were recorded and the means value were reported of four times measurement in the table below.

CALIBRATION DATA

CORRECTION OF TEMPERATURE

STD Reading (°C)	DUC Reading (°C)	Correction (°C)	Uncertainty \pm (°C)
0.039	0.00	+0.039	0.065
25.003	25.00	+0.003	
50.008	50.00	+0.008	
100.013	100.00	+0.013	

Range : 0 °C to 100 °C

Graduation : 0.1 °C

Immersion Type : Total Immersion

Correction of Reference Temperature (0 °C) = 0.039 °C

Note: The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 012 Page 56 of 67

This report is valid for the above stated instrument/s only.

End of Certificate

Certificate No. Q24116258

F3-011-05/12-23

COPY
page 3 of 3



@dcalibration

LIQUID IN GLASS THERMOMETER

Model / Type : 0-100 °C

Serial No. : 43560



CALIBRATION LABORATORY CO., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yeek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



CERTIFICATE OF CALIBRATION

FOR

NOMENCLATURE : LIQUID IN GLASS THERMOMETER
MANUFACTURER : AA PRECISION
MODEL / TYPE : 0-100 °C
SERIAL NO. : 43560[LABE 16/1]
CLID. NO. : 232403905
JOB CONTROL NO. : 251115135334
CALIBRATION SERVICE : ☒ IN-LABORATORY ☐ ON-SITE

CUSTOMER : EASTERN THAI CONSULTING 1992 CO., LTD.
683 MOO 11, SUKHAPIBARN 8 RD,
NONGKHAM, SRIRACHA, CHONBURI 20230

DATE OF RECEIVED : 15 November 2025 DATE OF ISSUED : 18 November 2025

The report of calibration shall not be reproduced except in full without approval of the Calibration Laboratory Co., Ltd.

Calibrated By : Pimsiri Hemtanon
Calibration Engineer

Approved By : Mongkol Yotsoontorn
Authorized Signatory
18 November 2025



This Calibration Certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI)

Certificate No. Q25135334

F3-011-05/12-23

COPY



@clccalibration



CALIBRATION LABORATORY CO., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yeek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



REPORT OF CALIBRATION

FOR

NOMENCLATURE : LIQUID IN GLASS THERMOMETER
MANUFACTURER : AA PRECISION
MODEL / TYPE : 0-100 °C
SERIAL NO. : 43560[LABE 16/1]
DATE OF CALIBRATION : 17 November 2025

ENVIRONMENT CONDITIONS :

Temperature : $(23 \pm 2) ^\circ\text{C}$ Relative Humidity : $(55 \pm 10) \%$

PROCEDURE USED :

This instrument was calibrated under procedure No. CLC-CPTH-02 based on ASTM E 77-07 as calibration guidelines.
The calibration was performed by comparison with Calibration Bath, Precision Thermometer and IPRT which maintained by the Calibration Laboratory Co., Ltd.

REFERENCE STANDARD USED :

1. Calibration Bath, Kambic Model OB-22/2 ULT,OB-22/2 S/N. 17115653,17115654.
2. Precision Thermometer, ASL Model F200-A-8 S/N. 014433/03 with IPRT S/N. L0193A-1-1,PO106346-1-13.

TRACEABILITY :

1. The measurements are traceable to International System of Units (SI), through Calibration Laboratory Co., Ltd. Certificate No. Q24120999,Q25124610. Due Date 26 November 2025,07 November 2026.
2. The measurements are traceable to International System of Units (SI), through Thailand Institute of Scientific and Technological Research (TISTR) and National Institute of Metrology (Thailand). Certificate No. PSL-T 0177/68,TT-0169-24,TT-1008-25. Due Date 10 February 2026,11 December 2025,04 March 2026.

UNCERTAINTY :

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$ which for a normal distribution corresponds to a coverage probability of approximately 95 %.
It has been evaluated according to the "Evaluation of the Uncertainty of Measurement in Calibration (EA-4/02 M:2022)"

Certificate No. Q25135334

F3-011-05/12-23

COPY



@clccalibration



CALIBRATION LABORATORY Co., LTD.

2/10-11,14,55 Soi Prasert Manukit 29 Yaek 4, Prasert Manukit Rd., Ladphrao, Bangkok 10230
Tel. 02-578-0353-4 Fax: 02-578-2672 www.cal-laboratory.com E-mail:sale@cal-laboratory.com



CONDITION OF CALIBRATION ITEM : RECEIVED IN GOOD OPERATIONAL CONDITION

MEASUREMENT RESULTS : (X) without adjustment () adjustment

The DUC Reading were recorded and the means value were reported of four times measurement in the table below.

CALIBRATION DATA

CORRECTION OF TEMPERATURE

STD Reading (°C)	DUC Reading (°C)	Correction (°C)	Uncertainty \pm (°C)
0.01	0.00	+0.01	0.06
25.02	25.00	+0.02	
50.03	50.00	+0.03	
100.01	100.00	+0.01	

Range : 0 °C to 100 °C

Graduation : 0.1 °C

Immersion Type : Total Immersion.

Correction of Reference Temperature (0 °C) = 0.00 °C

Note. The Scope of Accredited ANAB Certificate No. ACDM-2814 Version 016 Page 60 of 73

This report is valid for the above stated instrument/s only.

End of Certificate

Certificate No. Q25135334

F3-011-05/12-23

COPY



@clccalibration

pH Meter

Model : SevenCompact S220

Serial No. : B835349235

Certificate Number CCP-0403-25**Calibration Certificate**
SevenCompact™ pH/Ion Meter S220**Customer**Company EASTERN THAI CONSULTING 1992 CO., LTD.Address 683 Moo 11, Sukhaphiban 8 Rd., Nong KhamSrirachaCHONBURI 20230Customer ID number 301608441Customer representative คุณ ศิริกรณ นาคฉัตรกุล**Instrument**

Type	<u>SevenCompact™ S220</u>	Instrument Serial Number	<u>B835349235</u>
Internal Identification	<u>LASE 11/6</u>	Firmware version	<u>1.20.06</u>

Technical specifications

Measuring Range	<u>-1999.9 ... 1999.9 mV</u>	<u>-2.000 ... 20.000 pH</u>
Resolution	<u>0.1 mV</u>	<u>0.001 pH</u>
Limit of Error	<u>± 0.2 mV</u>	<u>± 0.002 pH</u>

Temperature range MTC -30.0 ... 130.0 °CTemperature range ATC -5.0 ... 130.0 °CResolution 0.1 °CLimit of Error ± 0.1 °C**Procedure Statement**

METTLER TOLEDO Certification SOP (Doc. No. ME-30027577B) will be used as referring documentation to adjust and certify the instrument indicated in the "Type" and "Serial number" section. The measurement results of this certification were obtained at ambient conditions.

COPYCertificate Number CCP-0403-25**Certification Tools**

Certified digital voltmeter	Manufacturer	<u>KEYSIGHT TECHNOLOGIES</u>
	Type	<u>34461A</u>
	Control No.	<u>ANA143</u>

Serial number	<u>MY60036967</u>
Certificate number	<u>E1U2401054</u>
Due date	<u>March 10, 2025</u>

Certified Temperature Resistors	Manufacturer	<u>METTLER-TOLEDO</u>
	Type	<u>51302410</u>
	Control No.	<u>ANA114</u>

Serial number	<u>A275</u>
Certificate number	<u>73757</u>
Due date	<u>February 12, 2026</u>

Designation	Nominal value	Certified value
NTC 30 kΩ, 0 °C	94.980 kΩ	94.9730 kΩ
NTC 30 kΩ, 25 °C	30.000 kΩ	29.9950 kΩ
NTC 30 kΩ, 50 °C	10.969 kΩ	10.9704 kΩ
NTC 30 kΩ, 75 °C	4.528 kΩ	4.5275 kΩ
NTC 30 kΩ, 100 °C	2.070 kΩ	2.0714 kΩ
PT1000, 0 °C	1.000 kΩ	1.0001 kΩ
PT1000, 25 °C	1.0974 kΩ	1.0975 kΩ
PT1000, 50 °C	1.1940 kΩ	1.1942 kΩ
PT1000, 75 °C	1.2899 kΩ	1.2900 kΩ
PT1000, 100 °C	1.3851 kΩ	1.3851 kΩ

COPY

METTLER TOLEDO

Certificate Number **CCP-0403-25**

Certification Measurements

pH/mV Sensor Input	Designation	Certified value	Measured value	Max. Tolerance	Passed / Failed
	-1900 mV	-1900.0 mV	-1899.98 mV	0.2 mV	Passed
	-1000 mV	-1000.0 mV	-1000.00 mV	0.2 mV	Passed
	-500 mV	-500.0 mV	-499.98 mV	0.2 mV	Passed
	-180 mV	-180.0 mV	-180.00 mV	0.2 mV	Passed
	0 mV	0.0 mV	0.01 mV	0.2 mV	Passed
	180 mV	180.0 mV	179.98 mV	0.2 mV	Passed
	500 mV	500.0 mV	499.90 mV	0.2 mV	Passed
	1000 mV	1000.0 mV	1000.00 mV	0.2 mV	Passed
	1900 mV	1900.0 mV	1899.99 mV	0.2 mV	Passed

pH/mV Sensor Input at high Impedance	Designation	Measured low imp.	Measured high imp.	Max. Tolerance	Passed / Failed
	1900 mV	1900.0 mV	1899.8 mV	0.6 mV	Passed

Temperature Sensor Input	Designation	Nominal value	Measured value	Max. Tolerance	Passed / Failed
	NTC 30 kΩ, 0 °C	0.0 °C	0.0 °C	0.1 °C	Passed
	NTC 30 kΩ, 25 °C	25.0 °C	25.0 °C	0.1 °C	Passed
	NTC 30 kΩ, 50 °C	50.0 °C	50.0 °C	0.1 °C	Passed
	NTC 30 kΩ, 75 °C	75.0 °C	74.9 °C	0.1 °C	Passed
	NTC 30 kΩ, 100 °C	100.0 °C	100.0 °C	0.1 °C	Passed
	Pt1000, 0 °C	0.0 °C	0.1 °C	0.1 °C	Passed
	Pt1000, 25 °C	25.0 °C	25.0 °C	0.1 °C	Passed
	Pt1000, 50 °C	50.0 °C	50.0 °C	0.1 °C	Passed
	Pt1000, 75 °C	75.0 °C	74.9 °C	0.1 °C	Passed
	Pt1000, 100 °C	100.0 °C	99.9 °C	0.1 °C	Passed

Summary of Certification

Certification of instrument

Passed

The instrument referred to in this certificate has fulfilled the criteria of the certification. This is indicated by the notation Passed in the column above.

Remarks - Test high Impedance at 1900.0 mV, Results : 1899.8 mV

Difference = 0.005% Within MPE (0.033%)

Certification of the Instrument was performed by

Name Khomsan Pralaung Function Service

Place Mettler-Toledo (Thailand) Ltd.

Calibration Date: 29-Jan-2025

Signature

COPY

Mettler-Toledo (Thailand) Limited

METTLER TOLEDO

Performance Test

Attachment to Certificate No. CCP-0403-25

pH Electrode

Type: InLab Expert Pro-ISM S/N: 2463982

Certified standards used

Standard 1:	Type: pH Buffer	Manufacturer: METTLER TOLEDO	Exp. date: 3-Dec-2026
	Nominal value: pH (25.00 °C):	4.01	Lot No.: 1J338E
Standard 2:	Type: pH Buffer	Manufacturer: METTLER TOLEDO	Exp. date: 27-Nov-2026
	Nominal value: pH (25.00 °C):	7.00	Lot No.: 1J331B
Standard 3:	Type: pH Buffer	Manufacturer: METTLER TOLEDO	Exp. date: 11-Jan-2026
	Nominal value: pH (25.00 °C):	10.00	Lot No.: 1K011B
Standard 4:	Type: Redox Solution	Manufacturer: METTLER TOLEDO	Exp. date: -
	Nominal value: pH (25.00 °C):	-	Lot No.: -

Adjustment

Set Calibration Buffer	B1 (25 °C) 1.68, 4.01, 7.00, 10.01					
Select Calibration Mode	3-Point calibration		2-Point calibration		2-Point calibration	
Segment	°C	pH	°C	pH	°C	pH
3-Point Calibration						
Cal 1	ATC	25.5	7.00	ATC		
Cal 2	ATC	25.5	4.00	ATC		
Offset (mV)	-27.2					
Slope % (or mV/pH)	95.9					
Cal 3	ATC	25.5	10.01			
Offset (mV)	-27.2					
Slope % (or mV/pH)	97.4					

Measurements

Resolution: 2 Decimal places

As Found				As Left			
Buffer Values	Measured	Difference	Buffer Values	Measured	Difference	Buffer Values	Measured
pH	°C	pH	pH	°C	pH	pH	°C
4.01	25.3	ATC	4.02	0.01	4.01	25.3	ATC
7.00	25.2	ATC	6.98	-0.02	7.00	25.2	ATC
9.99	25.3	ATC	10.11	0.12	9.99	25.2	ATC

Redox Measurement Result = - mV

Note: The difference result of calibrated electrode should be within +/- 0.05 pH

Remarks: N/A

Place: Laboratory Calibration Date: 29-Jan-2025

Service Specialist: Khomsan Pralaung

Signature: Khomsan

STANDARD WEIGHT 50 g

Certificate No. : 24-062445
Sample Code : 24-25551-001

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., Nongkham,
Sriracha, Chonburi 20230

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited
(Calibration Laboratory)

Equipment : Standard Weight 50 g

Manufacturer : METTLER TOLEDO

Class : F1

Serial No. : N/A

ID No. : LABE 10/1

Date of Receipt : 23 May 2024

Date of Calibration : 03 June 2024

Calibrated by Mr. Somwang Sangdee
Scientist

Approved by (Mr. Somchai Neampunt)
Signed for Director

Issue date 04 June 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 24-062445
Sample Code : 24-25551-001

REPORT OF CALIBRATION

Equipment : Standard Weight 50 g

Manufacturer : METTLER TOLEDO

Class : F1

Serial No. : N/A

ID No. : LABE 10/1

Result of Calibration :

☒ Without adjustment☐ Adjustment

Conventional value of the result of weighing in air. For a weight taken at a reference temperature (t_{ref}) of 20°C, the conventional mass is the mass of a reference weight of a density (ρ_{ref}) of 8000 kg.m⁻³ which it balances in air of a reference density (ρ_0) of 1.2 kg.m⁻³

Description	Deviation	Conventional	Expanded	Maximum	ID No.
	(mg)	Mass	Uncertainty	Permissible Error	
			(mg)	± (mg)	
50 g	-0.343	49.999657 g	0.10	0.30	LABE 10/1

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.0$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

Certificate No. : 24-062445
Sample Code : 24-25551-001

Page 3 of 3

REPORT OF CALIBRATION

Condition of Calibration

1. Ambient Conditions : Temperature $20^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$, Relative humidity $50\% \pm 10\%$ and air density 1.19 kg/m^3
2. Calibration Method : Direct comparison weighing according to OIML R111-1 : 2004(E)
3. Reference standard instrument

Instrument	Class	ID No.	Certificate No.	Due Date
1) Standard Weight 1 mg to 1 kg	E2	LB-WE-83	24-001894	11 January 2025

4. This certification is traceable to the International System of Unit maintained at : -

Asia Medical and Agricultural Laboratory and Research Center Public Company Limited

(Instrument number 1).

5. Condition of Calibration item: Normal

6. Description of Calibrated Item :

Type and Nominal Value :	Standard Weight 50 g
Shape :	Cylindrical weight with knob
Material :	Stainless steel
Case :	Wooden Box
Comments :	Recalibration

- End of Report -



STANDARD WEIGHT 100 g

Certificate No. : 24-079772
Sample Code : 24-31841-002

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., NongKham,
Sriracha, Chonburi 20230

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited
(Calibration Laboratory)

Equipment : Standard Weight 100 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/2

Date of Receipt : 25 June 2024

Date of Calibration : 30 June 2024

Calibrated by Mr. Nawa Sisuwan Approved by (Mr. Somchai Neampunt)
Scientist Signed for Director

Issue date 03 July 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 24-079772
Sample Code : 24-31841-002

REPORT OF CALIBRATION

Equipment : Standard Weight 100 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/2

Result of Calibration : ☒ Without adjustment ☐ Adjustment

Conventional value of the result of weighing in air. For a weight taken at a reference temperature (t_{ref}) of 20°C, the conventional mass is the mass of a reference weight of a density (ρ_{ref}) of 8000 kg.m⁻³ which it balances in air of a reference density (ρ_0) of 1.2 kg.m⁻³

Description	Deviation	Conventional Mass	Expanded Uncertainty	Maximum Permissible Error	ID No.
	(mg)		(mg)	± (mg)	
100 g	-0.173	99.999827 g	0.16	0.50	LABE 10/2

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.0$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003

Certificate No. : 24-079772

Sample Code : 24-31841-002

REPORT OF CALIBRATION

Condition of Calibration

1. Ambient Conditions : Temperature $20^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$, Relative humidity $50\% \pm 10\%$ and air density 1.19 kg/m^3

2. Calibration Method : WI-CL-007 base on OIML R 111-1 : 2004(E)

3. Reference standard instrument

Instrument	Class	ID No.	Certificate No.	Due Date
1) Standard Weight 1 mg to 1 kg	E2	LB-WE-83	24-001894	11 January 2025

4. This certification is traceable to the International System of Unit maintained at : -

Asia Medical and Agricultural Laboratory and Research Center Public Company Limited

(Instrument number 1).

5. Condition of Calibration item: Normal

6. Description of Calibrated Item :

Type and Nominal Value :	Standard Weight 100 g
Shape :	Cylindrical weight with knob
Material :	Stainless steel
Case :	Wooden Box
Comments :	Recalibration

- End of Report -



COPY

STANDARD WEIGHT 50 g

Certificate No. : 24-079773
Sample Code : 24-31841-003

CERTIFICATE OF CALIBRATION

Customer : EASTERN THAI CONSULTING 1992 CO., LTD.
683 Moo 11, Sukhapibarn 8 Rd., NongKham,
Sriracha, Chonburi 20230

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited
(Calibration Laboratory)

Equipment : Standard Weight 50 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/4

Date of Receipt : 25 June 2024

Date of Calibration : 30 June 2024

Calibrated by Mr. Nawa Sisuwan Approved by (Mr. Somchai Neampunt)
Scientist Signed for Director

Issue date 03 July 2024

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the unit of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (AMARC).

Certificate No. : 24-079773
Sample Code : 24-31841-003

REPORT OF CALIBRATION

Equipment : Standard Weight 50 g

Manufacturer : N/A

Class : N/A

Serial No. : N/A

ID No. : LABE 10/4

Result of Calibration : ☒ Without adjustment ☐ Adjustment

Conventional value of the result of weighing in air. For a weight taken at a reference temperature (t_{ref}) of 20°C, the conventional mass is the mass of a reference weight of a density (ρ_{ref}) of 8000 kg.m⁻³ which it balances in air of a reference density (ρ_0) of 1.2 kg.m⁻³

Description	Deviation	Conventional	Expanded	Maximum	ID No.
	(mg)	Mass	Uncertainty	Permissible Error	
			(mg)	± (mg)	
50 g	-0.176	49.999824 g	0.10	0.30	LABE 10/4

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2.0$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003



Certificate No. : 24-079773

Sample Code : 24-31841-003

REPORT OF CALIBRATION

Condition of Calibration

1. Ambient Conditions : Temperature $20^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$, Relative humidity $50\% \pm 10\%$ and air density 1.19 kg/m^3
2. Calibration Method : WI-CL-007 base on OIML R 111-1 : 2004(E)
3. Reference standard instrument

Instrument	Class	ID No.	Certificate No.	Due Date
1) Standard Weight 1 mg to 1 kg	E2	LB-WE-83	24-001894	11 January 2025

4. This certification is traceable to the International System of Unit maintained at : -

Asia Medical and Agricultural Laboratory and Research Center Public Company Limited

(Instrument number 1).

5. Condition of Calibration item: Normal

6. Description of Calibrated Item :

Type and Nominal Value :	Standard Weight 50 g
Shape :	Cylindrical weight with knob
Material :	Stainless steel
Case :	Wooden Box
Comments :	Recalibration

- End of Report -

COPY

SPECTROPHOTOMETER

Model : PROVE 100

Serial No. : 1613110857



CERTIFICATE OF CALIBRATION

Instrument : SPECTROPHOTOMETER
Model : PROVE 100
Date of Calibration : February 07, 2025
Customer Name : Eastern Thai Consulting 1992 Co., Ltd.

Procedure used.

The wavelength accuracy and the linearity of the absorbance measurement of photometers are checked using Check solutions according to Merck calibration laboratory work instruction.

Measurements results

Function : **Photometric Accuracy** Absorbance measurement.
All data shown below as received values of blank solution before adjustment.

Check Solution (Abs.)	Wavelength (nm)	Desired Absorbance (Abs.)	Measured Absorbance (Abs.)	Error (Abs)
0.000	445	0.000 ± 0.005	0.000	0.000
0.000	525	0.000 ± 0.005	0.000	0.000
0.000	690	0.000 ± 0.005	0.000	0.000

CERTIFICATE No. **WO-02931344**



Merck Ltd. Thailand
19th Floor, Emporium Tower, 622 Sukhumvit Road
Klongton, Klongtoey, Bangkok 10110
Tel. : +66 (0) 2667 8000
Fax : +66 (0) 2667 8399
Customer Care Center : +66 (0) 2667 8333

www.merck.co.th

1 of 4

COPY



CERTIFICATE OF CALIBRATION

Function : **Photometric Accuracy** Absorbance measurement.
All data shown below were final value of standard solution after adjustment.

Check Solution (Abs.)	Desired Absorbance (Abs.)	Allowed tolerance. (Abs.)	Actual Absorbance (Abs.)	Assessment Yes/No
445-1	0.197	± 0.020	0.193	Yes
445-2	0.497	± 0.030	0.491	Yes
445-3	0.990	± 0.040	0.979	Yes
445-4	1.494	± 0.050	1.479	Yes
525-1	0.198	± 0.020	0.198	Yes
525-2	0.493	± 0.030	0.491	Yes
525-3	0.988	± 0.040	0.975	Yes
525-4	1.485	± 0.050	1.468	Yes
690-1	0.204	± 0.020	0.202	Yes
690-2	0.504	± 0.030	0.495	Yes
690-3	0.987	± 0.040	0.995	Yes
690-4	1.498	± 0.050	1.496	Yes

* Spectroquant Photo check (Check Solution) **Lot: HC299606**

- Check solution for this certification is traceable to: Reference Photometer Agilent Cary 4000 checked and calibrated using NIST-grey glass filter SRM 1930 and Holmium oxide Solution NIST SRM 2034
- Desired absorbance round cell has been calculated from the absorbance of the 1 cm cell using the path length of the round cell and is entered as the desired



Merck Ltd. Thailand
19th Floor, Emporium Tower, 622 Sukhumvit Road
Klongton, Klongtoey, Bangkok 10110
Tel. : +66 (0) 2667 8000
Fax : +66 (0) 2667 8399
Customer Care Center : +66 (0) 2667 8333

www.merck.co.th

2 of 4

COPY

CERTIFICATE OF CALIBRATION

Software version: 2.0.1

Wavelength Accuracy				
Equipment	Nominal value	Tolerance limit	Actual value	Result
Holmium Oxide Liquid Filter Hellma 667-UV5	361.25 nm	360.05 - 362.45 nm	361.0 nm	P
	451.35 nm	450.15 - 452.55 nm	451.3 nm	P
	485.25 nm	484.05 - 486.45 nm	485.0 nm	P
	536.60 nm	535.40 - 537.80 nm	537.6 nm	P
	640.50 nm	639.30 - 641.70 nm	641.2 nm	P
Stray Light				
Equipment	Wavelength	Nominal value	Actual value	Result
Sodium Nitrite Hellma 667-UV11	340 nm	≤0.10 %T	0.05 %T	P
Self-test Hardware				P
No visual flaws, no burrs, no loose parts, and fastenings				

3 of 4



Merck Ltd. Thailand
19th Floor, Emporium Tower, 622 Sukhumvit Road
Klongton, Klongtoey, Bangkok 10110
Tel : +66 (0) 2667 8000
Fax : +66 (0) 2667 8399
Customer Care Center : +66 (0) 2667 8333

www.merck.co.th

COPY

CERTIFICATE OF CALIBRATION

INSTRUMENT : SPECTROPHOTOMETER

MANUFACTURER : Merck KGaA, Darmstadt, Germany

MODEL : PROVE 100

SERIAL No. : 1613110857

CLIENT : Eastern Thai Consulting 1992 Co., Ltd.

DATE OF ISSUE : February 07, 2025

APPROVED SIGNATORY

NAME : Mr. Supachai Konthong
(INSTRUMENTAL SERVICE ENGINEER)



SIGNATURE : _____

This certificate may not be reproduced except in full unless permission for the reproduction has been obtained in writing from the laboratory.

CERTIFICATE No. **WO-02931344**



Merck Ltd. Thailand
19th Floor, Emporium Tower, 622 Sukhumvit Road
Klongton, Klongtoey, Bangkok 10110
Tel : +66 (0) 2667 8000
Fax : +66 (0) 2667 8399
Customer Care Center : +66 (0) 2667 8333

www.merck.co.th

4 of 4

COPY

ภาคผนวก จ.

สำเนาหนังสืออนุญาตขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
จากกรมโรงงานอุตสาหกรรม และกรมสวัสดิการและคุ้มครองแรงงาน

ที่ อก ๐๓๒๐/๑๑๓๔๒



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๗ กรกฎาคม ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

อ้างถึง คำขอต่ออายุของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๗ มิถุนายน ๒๕๖๖

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย
๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย
๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๙๒ รายการ
จำนวน ๑๙ แผ่น

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๐๐๓ สถานที่ตั้งเลขที่ ๖๘๓ หมู่ที่ ๑๑ ถนนสุขุมวิท ๘ ตำบลหนองขาม อำเภอสรีราชา จังหวัดชลบุรี ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

- ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย ตามสิ่งที่ส่งมาด้วย ๑
- ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย ตามสิ่งที่ส่งมาด้วย ๒
- ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๗ รายการ
อากาศเสีย (ปล่องระบาย) จำนวน ๒๑ รายการ น้ำใต้ดิน จำนวน ๑๑๑ รายการ สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว
จำนวน ๑๘ รายการ และดิน จำนวน ๙๕ รายการ รวมทั้งสิ้นจำนวน ๒๙๒ รายการ ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๕ กรกฎาคม ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรม ภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

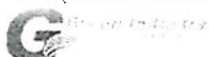
(นายทวี อำพาพันธ์)

ผู้อำนวยการศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๕ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eirw@diw.mail.go.th



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”

COPY



เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท อีสเทิร์น ไทย คอนซัลตติ้ง ๑๙๙๒ จำกัด เลขทะเบียน ว-๐๐๓

ที่ อก ๐๓๒๐/๑๑๓๔๒

ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย

๑) นางสาวมาลีเกษ เลขะวัจกุล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๑
๒) นายวัฒนา โคตรหล้า	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๒
๓) นางวรรณเพ็ญ เหลาจินดาวัฒน์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๓
๔) นายกะวีร์ สุธาทรัพย์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๔
๕) นางสาวนันท์ณภัส แปะขุนทด	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๕
๖) นางสาวพรนภา หลงคำหงษ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๖
๗) นางสาวอภิรดี ชื่นอารมย์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๗
๘) นางสาวอัจฉรี จิตตะยโสธร	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๘
๙) นางสาวจิรพร ปานคง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๙
๑๐) นายสุทธา สองธนี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๐
๑๑) นางสาวนันประภา อุยสูงเนิน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๑
๑๒) นายธงไชย บุญศักดิ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๒
๑๓) นางสาวธนาพร กลิ่นโสภณ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๓
๑๔) นายธีระพงษ์ นวลอินทร์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๔
๑๕) นางสาวแพรว พลแสน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๕
๑๖) นายทรงพล ผิวอ้วน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๖
๑๗) นายภาคภูมิ บัวสวัสดิ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๗
๑๘) นางสาวจันทน์ สายพันธ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๘
๑๙) นายภาณุพงศ์ บำรุงรส	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๙
๒๐) นางสาวปภาณิน จันตะสอน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๐
๒๑) นายวรากร ไวยะเสวี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๑
๒๒) นางสาววรรณภา ไชยศิริ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๒
๒๓) นางสาวพรพิมล ภูมิคอนสาร	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๓
๒๔) นางสาวธมลวรรณ ผลอ้อ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๔
๒๕) นางสาวบุญเรือง บุญถม	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๕
๒๖) นางสาวภัสรินทร์ ป้อมน้อย	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๖
๒๗) นายชานูวัฒน์ โชติวงค์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๗
๒๘) นางสาวพจณี งามวิสัย	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๘
๒๙) นายวิญญ์วัล สิงห์โต	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๙
๓๐) นางสาวนุกูล อารศรี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๐
๓๑) นายศุภฤกษ์ พาดกลาง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๑
๓๒) นายณิชาพล ทองหล่อ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๒
๓๓) นายธรรมรัตน์ โพธิ์ตันคำ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๓
๓๔) นายโอชา ขวัญศิริมงคล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๔
๓๕) นายเมธี สุขประเสริฐ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๕

COPY

๓๖) นางสาวพรพินันท์...

๓๖) นางสาวพรพินันท์ วิริยกุลกุล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๖
๓๗) นางสาวอาภาภรณ์ เสริมสนธิ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๗
๓๘) นางสาวนภัทร์ธมมภ์ ประดิษฐ์นุช	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๘
๓๙) นางสาวสุนิษา เอ็งเส้ง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๙
๔๐) นางสาวระพิน อ้นขัน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๔๐

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย

๑) นางสาวดวงกมล เนื้อทอง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๑
๒) นางสาววัชรภรณ์ อินทสุข	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๒
๓) นางสาวกัญจน์ถวิกา จันทร์ชอดแก้ว	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๓
๔) นางสาวฉัตรสุดา มงคลโกชนัน	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๔
๕) นางสาวณัฐวดี อำนวยทัศน	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๕
๖) นางสาวนิอรอุมา ปาระ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๖
๗) นางสาวธัญลักษณ์ ชันโต	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๗
๘) นางสาวสุทธิดา สร้างแก้ว	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๘
๙) นายอุดมทรัพย์ เจนจบจริง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๙
๑๐) นายนราธิป สงวนศิลป์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๐
๑๑) นายวีระชัย พอใจ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๑
๑๒) นายอัญชลี ทะพงษ์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๒
๑๓) นางสาวสุมลิตรา มีแก่น	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๓
๑๔) นางสาวสวรรยา เพชรประไพ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๔
๑๕) นางสาวจุฑามาศ เจริญพรหม	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๕
๑๖) นางสาวนิภาพร คำขมภู	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๖
๑๗) นางสาวอรชา พันธุ์เมือง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๗
๑๘) นายกิตติ ไพโรจน์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๘
๑๙) นายชาญณรงค์ ตั้งธรรมรักษ์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๙
๒๐) นางสาวปวีรศา เอสันเทียะ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๐
๒๑) นางสาวจุฑาทิพย์ กิจดี	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๑
๒๒) นางสาวสุภาวดี ศรีละออง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๒
๒๓) นางสาวณัฐชยา บรรพบุตร	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๓
๒๔) นางสาวณัฐนิช นนตานอก	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๔
๒๕) นางสาวดวงสุดา แสนวันดี	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๕

COPY

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด เลขทะเบียน ว-๐๐๓

ที่ อก ๐๓๒๐/๑๑๓๔๒

ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๙๒ รายการ

น้ำเสีย จำนวน 47 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) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
3	Barium	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	δ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
7	γ -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, Membrane Electrode Method ^[4] 2) 5-Day BOD Test, Azide Modification Method ^[4]
9	Cadmium	Digestion, Inductively Coupled Plasma Method ^[4]
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ^[4]
11	cis-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
12	trans-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
13	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]

COPY

14 Color...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
14	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[4]
15	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
16	Cyanide	Distillation, Colorimetric Method ^[4]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
19	DDT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
23	Endosulfan sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
24	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
25	Endrin aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
26	Endrin ketone	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
27	Formaldehyde	Distillation, Colorimetric Method ^[3]
28	Free Chlorine	1) Iodometric Method ^[4] 2) Colorimetric Method ^[4]

COPY

29 Heptachlor...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
29	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
30	Heptachlor Epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
31	Hexavalent Chromium	Filtration, Colorimetric Method ^[4]
32	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
33	Manganese	Digestion, Inductively Coupled Plasma Method ^[4]
34	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
35	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
36	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
37	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[4]
38	pH	Electrometric Method ^[4]
39	Phenols	Distillation, Direct Photometric Method ^[4]
40	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
41	Sulfide	ZnS Precipitation, Iodometric Method ^[4]
42	Temperature	Field Method ^[4]
43	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[4]
44	Total Dissolved Solids	Dried at 180 °C ^[4]
45	Total Kjeldahl Nitrogen	Macro Kjeldahl Method ^[4]
46	Total Suspended Solids	Dried at 103-105 °C ^[4]
47	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

COPY

อากาศเสีย...

อากาศเสีย (ปล่องระบาย) จำนวน 21 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
2	Arsenic	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
3	Cadmium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
4	Carbon Monoxide	1) Bag, Non-Dispersive Infrared Method ^[5] 2) Instrumental Analyzer Method ^[5]
5	Chromium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
6	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
7	Copper	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
8	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]
9	Lead	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
10	Manganese	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
11	Mercury	Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[5]
12	Nickel	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
13	Opacity	Ringelmann's Method ^[1,5]
14	Oxides of Nitrogen	1) Absorption Sampling, Phenoldisulfonic Acid Method ^[8] 2) Instrumental Analyzer Method ^[7]
15	Selenium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
16	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Method ^[5] 2) Instrumental Analyzer Method ^[5]
17	Sulfuric Acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[6]
18	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]

COPY

19 Total Suspended Particulate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Total Suspended Particulate	Isokinetic Sampling, Gravimetric Method ^[6]
20	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
21	Xylene	Adsorption Sampling, Gas Chromatographic Method ^[6]

น้ำใต้ดิน จำนวน 111 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
5	Antimony	Digestion, Inductively Coupled Plasma Method ^[4]
6	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
7	Barium	Digestion, Inductively Coupled Plasma Method ^[4]
8	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
9	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
10	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
11	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
12	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
13	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
14	Beryllium	Digestion, Inductively Coupled Plasma Method ^[4]

COPY

15 Bis(2-chloroethyl)ether...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
16	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
17	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
18	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
19	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
20	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
21	Cadmium	Digestion, Inductively Coupled Plasma Method ^[4]
22	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
23	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
24	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
25	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
26	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
27	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
28	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
29	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
30	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
31	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
32	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[4]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
33	Chromium (VI)	Filtration, Colorimetric Method ^[4]
34	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
35	Cyanide	Distillation, Colorimetric Method ^[4]
36	DDD	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
37	DDE	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
38	DDT	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
39	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
40	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
41	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
42	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
43	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
44	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
45	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
46	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
47	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
48	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
49	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
50	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
51	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

52 Dieldrin...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
52	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
53	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
54	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
55	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
56	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
57	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
58	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
59	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
60	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
61	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
62	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
63	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
64	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
65	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
66	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
67	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
68	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
69	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

70 γ -HCH...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
70	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
71	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
72	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
73	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
74	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
75	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
76	Manganese	Digestion, Inductively Coupled Plasma Method ^[4]
77	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
78	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
79	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
80	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
81	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
82	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
83	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
84	Nickel	Digestion, Inductively Coupled Plasma Method ^[4]
85	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
86	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
87	pH	Electrometric Method ^[4]
88	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

89 Phenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
89	Phenol	1) Distillation, Direct Photometric Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
91	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
92	Silver	Digestion, Inductively Coupled Plasma Method ^[4]
93	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
94	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
95	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
97	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
101	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
102	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
103	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Vanadium	Digestion, Inductively Coupled Plasma Method ^[4]
105	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
106	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

107 m-Xylene...

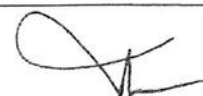
ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
107	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
108	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
109	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 18 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Digestion, Inductively Coupled Plasma Method ^[9,10]
2	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
3	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
4	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
5	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
6	Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
7	Chromium (VI)	1) Waste Extraction, Digestion, Colorimetric Method ^[2,13] 2) Alkaline Digestion, Colorimetric Method ^[9,13]
8	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
9	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
11	Mercury	1) Waste Extraction, Digestion, Cold Vapor Atomic Absorption Spectrometric Method ^[2,11] 2) Digestion, Cold vapor Atomic Absorption Spectrometric Method ^[9,11]
12	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
13	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
14	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
15	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
16	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
17	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
18	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]



COPY

ดิน...

ดิน จำนวน 95 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
3	Anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
4	Antimony	Digestion, Inductively Coupled Plasma Method ^[9,10]
5	Arsenic	Digestion, Inductively Coupled Plasma Method ^[9,10]
6	Barium	Digestion, Inductively Coupled Plasma Method ^[9,10]
7	Benz(a)anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
8	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
9	Benzo(b)fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
10	Benzo(k)fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
11	Benzo(a)pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
12	Benzo[g,h,i]perylene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
13	Beryllium	Digestion, Inductively Coupled Plasma Method ^[9,10]
14	Bis(2-chloroethyl)ether	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
15	Bis(2-ethylhexyl)phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
16	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
17	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
18	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

19 Butyl benzyl phthalate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Butyl benzyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
20	Cadmium	Digestion, Inductively Coupled Plasma Method ^[9,10]
21	Carbazole	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
22	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
23	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
24	p-Chloroaniline	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
25	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
26	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
27	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
28	2-Chlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
29	Chromium	Digestion, Inductively Coupled Plasma Method ^[9,10]
30	Chromium (III)	Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[9,10]
31	Chromium (VI)	Alkaline Digestion, Colorimetric Method ^[12,13]
32	Chrysene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
33	Dibenz(a,h)anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
34	Di-n-butyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
35	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
36	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
37	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

38 1,1-Dichloroethane...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
38	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
39	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
40	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
41	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
42	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
43	2,4-Dichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
44	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
45	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
46	Diethyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
47	2,4-Dimethylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
48	2,4-Dinitrotoluene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
49	2,6-Dinitrotoluene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
50	Di-n-octyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
51	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
52	Fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
53	Fluorene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
54	Hexachlorobenzene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
55	Hexachloro-1,3-butadiene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
56	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
57	Hexachlorocyclopentadiene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
58	Hexachloroethane	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
59	Indeno(1,2,3-cd)pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
60	Isophorone	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
61	Lead	Digestion, Inductively Coupled Plasma Method ^[9,10]
62	Manganese	Digestion, Inductively Coupled Plasma Method ^[9,10]
63	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[9,11]
64	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
65	2-Methylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
66	2-Methylnaphthalene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
67	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
68	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
69	Nickel	Digestion, Inductively Coupled Plasma Method ^[9,10]
70	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
71	N-Nitrosodi-n-propylamine	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
72	Phenanthrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
73	Phenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
74	Pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
75	Selenium	Digestion, Inductively Coupled Plasma Method ^[9,10]
76	Silver	Digestion, Inductively Coupled Plasma Method ^[9,10]
77	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
78	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
79	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
80	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
81	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
82	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
83	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
84	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
85	2,4,5-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
86	2,4,6-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
87	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
88	Vanadium	Digestion, Inductively Coupled Plasma Method ^[9,10]
89	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
90	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
91	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
92	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
93	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
94	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
95	Zinc	Digestion, Inductively Coupled Plasma Method ^[9,10]

เอกสารอ้างอิง

1. กระทรวงอุตสาหกรรม. **ประกาศกระทรวงอุตสาหกรรม พ.ศ.2549** เรื่องกำหนดค่าปริมาณเขม่าควันที่เจือปนในอากาศที่ระบายออกจากปล่องของหม้อน้ำโรงสีข้าวที่ใช้แก๊สเป็นเชื้อเพลิง. ราชกิจจานุเบกษา. 4 ธันวาคม 2549. เล่มที่ 123 ตอนพิเศษ 125 ง.
2. กระทรวงอุตสาหกรรม. **ประกาศกระทรวงอุตสาหกรรม พ.ศ.2548** เรื่อง การกำจัดสิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว. ราชกิจจานุเบกษา. 25 มกราคม 2549. เล่มที่ 123 ตอนพิเศษ 11ง.
3. สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย. คู่มือวิเคราะห์น้ำเสีย. พิมพ์ครั้งที่ 4. กรุงเทพฯ: เรือนแก้วการพิมพ์, 2547.
4. APHA, AWWA, WEF. **Standard Methods for the Examination of Water and Wastewater**. 23rd ed. Washington, DC : APHA, 2017
5. United States Environmental Protection Agency. **Standard of Performance for New Stationary Sources**. 40 CFR Part 60. Appendix A, 2017.
6. United States Environmental Protection Agency. **Standard of Performance for New Stationary Sources**. 40 CFR Part 60. Appendix A, 2019.
7. United States Environmental Protection Agency. **Standard of Performance for New Stationary Sources**. 40 CFR Part 60. Appendix A, 2020.
8. United States Environmental Protection Agency. **Standard of Performance for New Stationary Sources**. 40 CFR Part 60. Appendix A, 2023.
9. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Acid Digestion of Sediments Sludge and Soils. SW-846 Method 3050B**, 1996.
10. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Inductively Coupled Plasma-Atomic Emission spectrometry. SW-846 Method 6010C**, 2007.
11. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique). SW-846 Method 7471B**, 2007.
12. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Alkaline digestion for Hexavalent Chromium. SW-846 Method 3060A**, 1996.



COPY

13. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Chromium. Hexavalent (Colorimetric). SW-846 Method 7196A**, 1992

14. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples. SW-846 Method 5035A**, 2002

15. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Ultrasonic Extraction. SW-846 Method 3550C**, 2007

16. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS). SW-846 Method 8260D**, 2018

17. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry. SW-846 Method 8270E**, 2018



COPY

ที่ อก ๐๓๒๐/ ๕๖๐๕ 1



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๕๐๐

๑๕ พฤษภาคม ๒๕๖๗

เรื่อง เปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร
ของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๕ มีนาคม ๒๕๖๗

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ และเปลี่ยนแปลง
สารมลพิษบริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด จำนวน ๑๒ แผ่น

ตามคำขอฯ ที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ห้องปฏิบัติการวิเคราะห์
เอกชน เลขทะเบียน ว-๐๐๓ สถานที่ตั้งเลขที่ ๖๘๓ หมู่ที่ ๑๑ ถนนสุขาภิบาล ๘ ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี แจ้งขอเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษในน้ำเสีย น้ำใต้ดิน
เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว มีความเห็นดังนี้

๑. ให้ยกเลิกผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ ราย

นายวัฒนา โคตรหล้า ทะเบียนเลขที่ ว-๐๐๓-ค-๐๐๐๒

๒. ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓ ราย

๑) นางสาวอัญชลี ทะพงษ์ ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๑๒

๒) นางสาวจุฑามาศ เจริญพรหม ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๑๕

๓) นางสาวณัฐนิช นนตานอก ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๒๔

๓. ให้ยกเลิกขอบข่ายรายการสารมลพิษในน้ำเสีย และน้ำใต้ดินตามรายการเอกสารแนบท้าย
หนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชนที่ อก ๐๓๒๐/๑๑๓๔๒ ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

๔. ให้วิเคราะห์สารมลพิษตามขอบข่ายที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๗ รายการ
และน้ำใต้ดิน จำนวน ๑๑๑ รายการ รวมทั้งสิ้นจำนวน ๑๕๘ รายการ ตามเอกสารแนบท้ายหนังสือเปลี่ยนแปลง
เอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร ดังสิ่งที่ส่งมาด้วย

๕. ให้วิเคราะห์สารมลพิษตามขอบข่ายที่ได้รับขึ้นทะเบียนให้วิเคราะห์เพิ่มเติมในดิน จำนวน
๑๒ รายการ ตามเอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษเปลี่ยนแปลงสารมลพิษ
ในดิน และเปลี่ยนแปลงบุคลากร ดังสิ่งที่ส่งมาด้วย

อนึ่ง หนังสือ

COPY



อนึ่ง หนังสือฉบับนี้จะหมดอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์
เอกชนในวันที่ ๕ กรกฎาคม ๒๕๖๙

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ



(นายพรศ กลั่นกรอง)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๙ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eirw@diw.mail.go.th

COPY



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”



เอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

เลขทะเบียน ว-๐๐๓

ที่ ออก ๐๓๒๐/

ลงวันที่

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๑๗๐ รายการ

น้ำเสีย จำนวน 47 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
2	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
3	Barium	Digestion, Inductively Coupled Plasma Method ^[1]
4	α -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
5	β -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
6	δ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
7	γ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Membrane Electrode Method ^[1] 2) 5-Day BOD Test, Azide Modification Method ^[1]
9	Cadmium	Digestion, Inductively Coupled Plasma Method ^[1]
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ^[1]
11	cis-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]

COPY

12 trans-Chlordane ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
12	trans-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
13	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
14	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[1]
15	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
16	Cyanide	Distillation, Colorimetric Method ^[1]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
19	DDT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
23	Endosulfan sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
24	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]

COPY

25 Endrin aldehyde ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
25	Endrin aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
26	Endrin ketone	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
27	Formaldehyde	Distillation, Colorimetric Method ^[4]
28	Free Chlorine	1) Iodometric Method ^[1] 2) Colorimetric Method ^[1]
29	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
30	Heptachlor Epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
31	Hexavalent Chromium	Filtration, Colorimetric Method ^[1]
32	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
33	Manganese	Digestion, Inductively Coupled Plasma Method ^[1]
34	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1]
35	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
36	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
37	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[1]
38	pH	Electrometric Method ^[1]
39	Phenols	Distillation, Direct Photometric Method ^[1]
40	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[1]

COPY

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
41	Sulfide	ZnS Precipitation, Iodometric Method ^[1]
42	Temperature	Field Method ^[1]
43	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[1] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[1]
44	Total Dissolved Solids	Dried at 180 °C ^[1]
45	Total Kjeldahl Nitrogen	Macro Kjeldahl Method ^[1]
46	Total Suspended Solids	Dried at 103-105 °C ^[1]
47	Zinc	Digestion, Inductively Coupled Plasma Method ^[1]

น้ำใต้ดิน จำนวน 111 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
5	Antimony	Digestion, Inductively Coupled Plasma Method ^[1]
6	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
7	Barium	Digestion, Inductively Coupled Plasma Method ^[1]
8	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
9	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
10	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
11	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
12	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
13	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
14	Beryllium	Digestion, Inductively Coupled Plasma Method ^[1]
15	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
16	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
17	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
18	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
19	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
20	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
21	Cadmium	Digestion, Inductively Coupled Plasma Method ^[1]
22	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
23	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
24	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

25 Chlordane ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
25	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
26	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
27	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
28	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
29	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
30	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
31	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
32	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[1] 2) Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[1]
33	Chromium (VI)	Filtration, Colorimetric Method ^[1]
34	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
35	Cyanide	Distillation, Colorimetric Method ^[1]
36	DDD	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
37	DDE	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
38	DDT	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
39	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

40 Di-n-butyl phthalate ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
40	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
41	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
42	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
43	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
44	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
45	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
46	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
47	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
48	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
49	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
50	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
51	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
52	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
53	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
54	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

55 2,4-Dinitrotoluene ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
55	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
56	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
57	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
58	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
59	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
60	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
61	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
62	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
63	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
64	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
65	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
66	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
67	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
68	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
69	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
70	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
71	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
72	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
73	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
74	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
75	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
76	Manganese	Digestion, Inductively Coupled Plasma Method ^[1]
77	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1]
78	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
79	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
80	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
81	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
82	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
83	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
84	Nickel	Digestion, Inductively Coupled Plasma Method ^[1]
85	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
86	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
87	pH	Electrometric Method ^[4]
88	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
89	Phenol	1) Distillation, Direct Photometric Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
91	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
92	Silver	Digestion, Inductively Coupled Plasma Method ^[4]
93	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
94	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
95	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
97	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
101	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
102	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
103	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Vanadium	Digestion, Inductively Coupled Plasma Method ^[4]
105	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
106	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
107	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
108	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
109	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

ดิน จำนวน 12 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	α -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
2	β -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
3	γ -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
4	Heptachlor	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]

COPY

5 Aldrin ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
5	Aldrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
6	Heptachlor epoxide	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
7	Chlordane	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
8	Dieldrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
9	Endrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
10	DDD	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
11	DDT	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
12	Methoxychlor	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]

เอกสารอ้างอิง

1. APHA, AWWA, WEF. **Standard Methods for the Examination of Water and Wastewater**. 24th ed. Washington, DC: APHA, 2023.
2. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Ultrasonic Extraction. SW-846 Method 3550C**, 2007
3. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry. SW-846 Method 8270E**, 2018
4. สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย. คู่มือวิเคราะห์น้ำเสีย. พิมพ์ครั้งที่ 4. กรุงเทพฯ: เรือนแก้วการพิมพ์, 2547.

COPY



แบบ ภ.บญ
นิติบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน

ใบอนุญาต

เป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน

ใบอนุญาตเลขที่ ๐๔๐๑-๐๓-๒๕๖๔-๐๐๐๙

อนุญาตให้.....บริษัท อีสเทิร์น ไทย คอนซัลติง 1992 จำกัด.....

เลขทะเบียนนิติบุคคล ๐๒๐๕๕๓๕๐๐๔๕๗๘.....

ตั้งอยู่ เลขที่ ๙๙๙ หมู่ที่ ๑๑ ตำบลหนองขาม อำเภอสรีราชา จังหวัดชลบุรี.....

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง
กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อม
ในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ในการตรวจวัดและวิเคราะห์
สภาวะการทำงานเกี่ยวกับระดับความร้อน ประกอบกับกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการ
เพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติ
ความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๓ ราย

ทั้งนี้ ตั้งแต่วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔

(นายสมพนธ์ กวางแก้ว)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

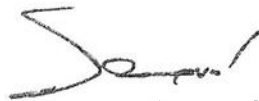
สมพนธ์ กวางแก้ว

รายชื่อบุคลากรแนบท้ายใบอนุญาต
เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๑-๐๓-๒๕๖๔-๐๐๐๙

๑. นางวรรณเพ็ญ	เหล่าจินดาวัฒน์
๒. นางสาวธนัชพร	กลั่นโสภณ
๓. นายวัฒนา	โคตรหล้า

ทั้งนี้ ตั้งแต่วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๕

ให้ไว้ ณ วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔



(นายสมพนธ์ กวางแก้ว)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพนธ์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สถานะการทำงานเกี่ยวกับระดับความร้อน
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๑-๐๓-๒๕๖๔-๐๐๐๘

๑. นางสาวปนัดดา	ร่มรุกษ์
๒. นางสาวอภิรดี	ชื่นอารมย์
๓. นางสาวจุฑามาศ	เจริญพรหม
๔. นางสาววินิดา	จำปาดัน
๕. นางสาวธัญลักษณ์	ขันโต
๖. นางสาวจุฑารัตน์	สุขชาเกต
๗. นางสาวศविตา	กิตติเนาวรัตน์
๘. นางสาวพรนภา	พงษ์เพชร

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพจน์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๑-๐๓-๒๕๖๔-๐๐๐๘

- | | |
|--------------------|---------------|
| ๑. นางสาวอรอนงค์ | ลี้วงศ์ศักดิ์ |
| ๒. นางสาวไพบราภรณ์ | สังข์ทอง |
| ๓. นางสาวยลดา | พาลี |

ทั้งนี้ ตั้งแต่วันที่ ๑๘ กันยายน พ.ศ. ๒๕๖๖ ถึงวันที่ ๒๘ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๘ กันยายน พ.ศ. ๒๕๖๖



(นายสมพงษ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

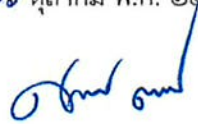


รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน
ของบริษัท อีสเทิร์น ไทย คอนซัลต์ติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๑-๐๓-๒๕๖๔-๐๐๐๙

๑. นายสุภชัย ภารการ

ทั้งนี้ ตั้งแต่วันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗



(นายศักดิ์ศิลป์ ตุลารุ)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

๒๕๖๗ ๖๖๖๖



แบบ ภ.บ.ญ
ฉบับบุคคล

กรมสวัสดิการและคุ้มครองแรงงาน

ใบอนุญาต

เป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง

ใบอนุญาตเลขที่ ๐๔๐๒-๐๓-๒๕๖๔-๐๐๐๙

อนุญาตให้ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

เลขทะเบียนนิติบุคคล ๐๒๐๕๕๓๕๐๐๔๕๗๘

ตั้งอยู่ เลขที่ ๙๙๙ หมู่ที่ ๑๑ ตำบลหนองขาม อำเภอศรีราชา จังหวัดชลบุรี

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ในการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง ประกอบกับกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการ เพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติ ความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๓ ราย

ทั้งนี้ ตั้งแต่วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔

(นายสมพงษ์ กวางแก้ว)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพงษ์ กวางแก้ว

รายชื่อบุคลากรแนบท้ายใบอนุญาต
เป็นนิติบุคคลผู้ให้บริการการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง
ของบริษัท ฮีลเทิร์น ไทย คอนซัลต์ติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๒-๐๓-๒๕๖๔-๐๐๐๙ .

- | | |
|----------------|----------------|
| ๑. นางวรรณเพ็ญ | เหลาจินดาวัดน์ |
| ๒. นางสาวณัชพร | กลั่นโสภณ |
| ๓. นายวัฒนา | โคตรหล้า |

ทั้งนี้ ตั้งแต่วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๕

ให้ไว้ ณ วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔



(นายสมพนธ์ กวางแก้ว)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY



รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๒-๐๓-๒๕๖๔-๐๐๐๙

๑. นางสาวปนัดดา	ร่มรุข
๒. นางสาวอภิรดี	ชินอารมย์
๓. นางสาวจุฑามาศ	เจริญพรหม
๔. นางสาววินิดา	จำปาดัน
๕. นางสาวธัญลักษณ์	ขันโต
๖. นางสาวจุฑารัตน์	สุขษาเกต
๗. นางสาวศविตา	กิตติเนาวรัตน์
๘. นางสาวพรนภา	พงษ์เพชร

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพนธ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY
สมพนธ์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๒-๐๓-๒๕๖๔-๐๐๐๙

- | | |
|--------------------|------------|
| ๑. นางสาวอรอนงค์ | ลิ่งศักดิ์ |
| ๒. นางสาวไพรยาภรณ์ | สังข์ทอง |
| ๓. นางสาวยลดา | พาลี |

ทั้งนี้ ตั้งแต่วันที่ ๑๘ กันยายน พ.ศ. ๒๕๖๖ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๘ กันยายน พ.ศ. ๒๕๖๖



(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

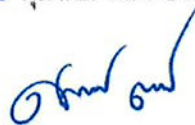
สมพจน์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๒-๐๓-๒๕๖๔-๐๐๐๙

๑. นายศุภชัย ภารการ

ทั้งนี้ ตั้งแต่วันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗



(นายศักดิ์ศิลป์ ตูลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

Assm. buri.



แบบ ก.ภ.บญ

ฉบับกลาง

กรมสวัสดิการและคุ้มครองแรงงาน

ใบอนุญาต

เป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง

ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๔-๐๐๐๙

อนุญาตให้.....บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด.....

เลขทะเบียนนิติบุคคล ๐๒๐๕๕๓๕๐๐๔๕๗๘

ตั้งอยู่ เลขที่ ๙๙๙ หมู่ที่ ๑๑ ตำบลหนองขาม อำเภอศรีราชา จังหวัดชลบุรี

เป็นนิติบุคคลผู้ให้บริการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน ตามกฎกระทรวง กำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ในการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง ประกอบกับกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการ เพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ แห่งพระราชบัญญัติความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๕๔ โดยมีบุคลากร จำนวน ๓ ราย

ทั้งนี้ ตั้งแต่วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔

(นายสมพจน์ กวางแก้ว)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพจน์ กวางแก้ว

รายชื่อบุคลากรแนบท้ายใบอนุญาต
เป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๔-๐๐๐๙

- | | |
|----------------|----------------|
| ๑. นางวรรณเพ็ญ | เหลาจินดาวัฒน์ |
| ๒. นางสาวธัญพร | กลิ่นโสภณ |
| ๓. นายวัฒนา | โคตรหล้า |

ทั้งนี้ ตั้งแต่วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔



(นายสมพนธ์ กวางแก้ว)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพนธ์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)
แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สถานะการทำงานเกี่ยวกับระดับเสียง
ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๔-๐๐๐๙

๑. นางสาวปนัดดา	ร่มรุกข์
๒. นางสาวอภิรดี	ชื่นอารมย์
๓. นางสาวจุฬามาศ	เจริญพรหม
๔. นางสาววินิดา	จำปาดัน
๕. นางสาวธัญลักษณ์	ขันโต
๖. นางสาวจุฬารัตน์	สุขขาเกต
๗. นางสาวศविตา	กิตติเนาวรัตน์
๘. นางสาวพรนภา	พงษ์เพชร

ทั้งนี้ ตั้งแต่วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๗ มิถุนายน พ.ศ. ๒๕๖๕



(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพจน์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)

แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง

ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๔-๐๐๐๙

- | | |
|------------------|-------------|
| ๑. นางสาวอรอนงค์ | สิงค์ศักดิ์ |
| ๒. นางสาวไพบรรณ | สังข์ทอง |
| ๓. นางสาวยลดา | พาลี |

ทั้งนี้ ตั้งแต่วันที่ ๑๗ กันยายน พ.ศ. ๒๕๖๖ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๗ กันยายน พ.ศ. ๒๕๖๖



(นายสมพงษ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

สมพงษ์ กวางแก้ว

รายชื่อบุคลากร (เพิ่มเติม)

แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง

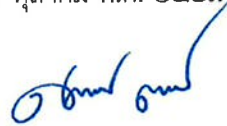
ของบริษัท อีสเทิร์น ไทย คอนซัลติง 1992 จำกัด

ใบอนุญาตเลขที่ ๐๔๐๓-๐๓-๒๕๖๔-๐๐๐๙

๑. นายศุภชัย ภารการ

ทั้งนี้ ตั้งแต่วันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗ ถึงวันที่ ๒๙ ธันวาคม พ.ศ. ๒๕๖๗

ให้ไว้ ณ วันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗



(นายศักดิ์ศิลป์ ตุลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY



ที่ รง ๐๕๐๔/๔๒๗๔



กรมสวัสดิการและคุ้มครองแรงงาน
ถนนมิตรไมตรี ดินแดง กรุงเทพฯ ๑๐๔๐๐

๓๗ มิถุนายน ๒๕๖๕

เรื่อง การอนุมัติเพิ่มเติมบุคลากรและเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง

เรียน กรรมการผู้จัดการบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

อ้างถึง หนังสือบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ที่ อทค.ตว. ๑๖๕/๒๕๖๕ และ อทค.ตว. ๑๖๖/๒๕๖๕ ลงวันที่ ๒๕ กุมภาพันธ์ ๒๕๖๕

สิ่งที่ส่งมาด้วย ๑. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง จำนวน ๓ ฉบับ
๒. รายการเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง (เพิ่มเติม) จำนวน ๑ ฉบับ

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ได้ขออนุมัติเพิ่มเติมบุคลากรผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง จำนวน ๘ ราย พร้อมเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง จำนวน ๑๘ เครื่อง สำหรับการเป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง ตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ ความละเอียดแจ้งแล้ว นั้น

กรมสวัสดิการและคุ้มครองแรงงาน ได้พิจารณาแล้วเห็นว่าบุคลากรและเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อนและเสียง ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ที่ขออนุมัติเพิ่มเติม มีคุณสมบัติตามกฎหมายกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ประกอบประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง หลักเกณฑ์ วิธีการตรวจวัด และการวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ ลงวันที่ ๘ กุมภาพันธ์ พ.ศ. ๒๕๖๑ จึงอนุมัติให้ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด เพิ่มเติมบุคลากรและเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียงดังกล่าว รายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย ทั้งนี้ ขอให้บริษัทฯ ปฏิบัติตามกฎหมายกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัยฯ อย่างเคร่งครัด

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

กองความปลอดภัยแรงงาน

โทรศัพท์ ๐ ๒๔๔๘ ๙๑๒๘ - ๓๙ ต่อ ๗๐๒

โทรสาร ๐ ๒๔๔๘ ๙๑๔๓

ที่ รง ๐๕๐๔/๓๗๕



กรมสวัสดิการและคุ้มครองแรงงาน
ถนนมิตรไมตรี ดินแดง กรุงเทพฯ ๑๐๔๐๐

๑๗ มกราคม ๒๕๖๖

เรื่อง การอนุมัติเพิ่มเติมเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน และเสียง
เรียน กรรมการผู้จัดการบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

อ้างถึง หนังสือบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ที่ อทค.ตว. 872/2565 ลงวันที่ ๕ สิงหาคม ๒๕๖๕
สิ่งที่ส่งมาด้วย รายการเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน และเสียง (เพิ่มเติม)
จำนวน ๒ ฉบับ

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ได้ขออนุมัติเพิ่มเติม
เครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน และเสียง จำนวน ๒๘ เครื่อง สำหรับ
การเป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง
ตามกฎหมายกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย
และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ ความละเอียดแจ้งแล้ว นั้น

กรมสวัสดิการและคุ้มครองแรงงาน ได้พิจารณาแล้วเห็นว่าเครื่องมือตรวจวัดและวิเคราะห์
สภาวะการทำงานเกี่ยวกับระดับความร้อน และเสียง ของบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
ที่ขออนุมัติเพิ่มเติม มีคุณสมบัติตามกฎหมายกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการ
ด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๔
ประกอบกับประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง หลักเกณฑ์ วิธีการตรวจวัด และการวิเคราะห์สภาวะ
การทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ
ลงวันที่ ๘ กุมภาพันธ์ พ.ศ. ๒๕๖๑ และที่แก้ไขเพิ่มเติม จึงอนุมัติให้ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
เพิ่มเติมเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน และเสียง ดังกล่าว รายละเอียด
ปรากฏตามสิ่งที่ส่งมาด้วย ทั้งนี้ ขอให้บริษัทฯ ปฏิบัติตามกฎหมายกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการ
เพื่อส่งเสริมความปลอดภัยฯ อย่างเคร่งครัด

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายสมพงษ์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

กองความปลอดภัยแรงงาน

โทรศัพท์ ๐ ๒๔๔๘ ๙๑๒๘ - ๓๙ ต่อ ๗๐๘

โทรสาร ๐ ๒๔๔๘ ๙๑๔๓

ที่ รง ๐๕๐๔/๓๖๓๗



กรมสวัสดิการและคุ้มครองแรงงาน
ถนนมิตรไมตรี ดินแดง กรุงเทพฯ ๑๐๔๐๐

๓๗ กันยายน ๒๕๖๖

เรื่อง การอนุมัติเพิ่มเติมบุคลากรและเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง

เรียน กรรมการผู้จัดการบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

อ้างถึง หนังสือบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ที่ อทค.ตว. ๑๑๐๖/๒๕๖๖ ลงวันที่ ๑๗ สิงหาคม ๒๕๖๖

สิ่งที่ส่งมาด้วย ๑. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน ลงวันที่ ๑๗ กันยายน พ.ศ. ๒๕๖๖ จำนวน ๑ ฉบับ
๒. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง ลงวันที่ ๑๗ กันยายน พ.ศ. ๒๕๖๖ จำนวน ๑ ฉบับ
๓. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง ลงวันที่ ๑๗ กันยายน พ.ศ. ๒๕๖๖ จำนวน ๑ ฉบับ
๔. รายการเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง (เพิ่มเติม) ลงวันที่ ๑๗ กันยายน พ.ศ. ๒๕๖๖ จำนวน ๑ ฉบับ

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ได้ขออนุมัติเพิ่มเติมบุคลากรผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง จำนวน ๓ ราย และเครื่องมือตรวจวัด รวมจำนวน ๒ เครื่อง สำหรับการเป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง ตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ เพื่อให้กรมสวัสดิการและคุ้มครองแรงงานพิจารณา ความละเอียดแจ้งแล้ว นั้น

กรมสวัสดิการและคุ้มครองแรงงาน ได้พิจารณาแล้วเห็นว่าบุคลากรและเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง ที่ขออนุมัติเพิ่มเติม มีคุณสมบัติตามกฎหมายกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ประกอบกับประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง หลักเกณฑ์ วิธีการตรวจวัด และการวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ ลงวันที่ ๘ กุมภาพันธ์ พ.ศ. ๒๕๖๑ และที่แก้ไขเพิ่มเติม จึงอนุมัติให้ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด เพิ่มเติมบุคลากรและเครื่องมือตรวจวัดดังกล่าว รายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย ทั้งนี้ ขอให้ปฏิบัติตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัยฯ อย่างเคร่งครัด

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

กองความปลอดภัยแรงงาน

โทรศัพท์ ๐ ๒๔๔๘ ๙๑๒๘ - ๓๙ ต่อ ๗๐๒

โทรสาร ๐ ๒๔๔๘ ๙๑๔๓

ที่ รง ๐๕๐๔/๑๖๒๐



กรมสวัสดิการและคุ้มครองแรงงาน
ถนนมิตรไมตรี ดินแดง กรุงเทพฯ ๑๐๔๐๐

๑๕ พฤศจิกายน ๒๕๖๖

เรื่อง การอนุมัติเพิ่มเติมเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง

เรียน กรรมการผู้จัดการบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

อ้างถึง หนังสือบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ที่ อทค.ตว. ๑๔๘๐/๒๕๖๖ ลงวันที่ ๑๖ ตุลาคม ๒๕๖๖

สิ่งที่ส่งมาด้วย รายการเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง (เพิ่มเติม) ลงวันที่

๑๕ พฤศจิกายน พ.ศ. ๒๕๖๖ จำนวน ๑ ฉบับ

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ได้ขออนุมัติเพิ่มเติมเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง รวมจำนวน ๒ เครื่อง สำหรับการเป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง ตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ เพื่อให้กรมสวัสดิการและคุ้มครองแรงงานพิจารณา ความละเอียดแจ้งแล้ว นั้น

กรมสวัสดิการและคุ้มครองแรงงาน ได้พิจารณาแล้วเห็นว่าเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง ที่ขออนุมัติเพิ่มเติม มีคุณสมบัติตามกฎกระทรวงกำหนดมาตรฐานในการบริหารจัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ประกอบกับประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง หลักเกณฑ์ วิธีการตรวจวัดและการวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ ลงวันที่ ๘ กุมภาพันธ์ พ.ศ. ๒๕๖๑ และที่แก้ไขเพิ่มเติม จึงอนุมัติให้ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด เพิ่มเติมเครื่องมือตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่างดังกล่าว รายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย ทั้งนี้ ขอให้ปฏิบัติตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัยฯ อย่างเคร่งครัด

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายสมพจน์ กวางแก้ว)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

กองความปลอดภัยแรงงาน

โทรศัพท์ ๐ ๒๔๔๘ ๙๑๒๘ - ๓๙ ต่อ ๗๐๒

โทรสาร ๐ ๒๔๔๘ ๙๑๔๓

ที่ รง ๐๕๐๔/ดว๒๖



กรมสวัสดิการและคุ้มครองแรงงาน
ถนนมิตรไมตรี ดินแดง กรุงเทพฯ ๑๐๔๐๐

๖ ตุลาคม ๒๕๖๗

เรื่อง การอนุมัติเพิ่มเติมบุคลากรผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง

เรียน กรรมการผู้จัดการบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

อ้างถึง หนังสือบริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ที่ อทค.ตว. ๑๒๒๔/๒๕๖๗ ลงวันที่ ๔ กันยายน ๒๕๖๗

สิ่งที่ส่งมาด้วย ๑. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน ลงวันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗ จำนวน ๑ ฉบับ
๒. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับแสงสว่าง ลงวันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗ จำนวน ๑ ฉบับ
๓. รายชื่อบุคลากร (เพิ่มเติม) แนบท้ายใบอนุญาตเป็นนิติบุคคลผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับเสียง ลงวันที่ ๑๖ ตุลาคม พ.ศ. ๒๕๖๗ จำนวน ๑ ฉบับ

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด ได้ขออนุมัติเพิ่มเติมบุคลากรผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง จำนวน ๑ ราย สำหรับการเป็นผู้ให้บริการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง ตามกฎกระทรวงการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงาน พ.ศ. ๒๕๖๔ เพื่อให้กรมสวัสดิการและคุ้มครองแรงงานพิจารณา ความละเอียดแจ้งแล้ว นั้น

กรมสวัสดิการและคุ้มครองแรงงาน ได้พิจารณาแล้วเห็นว่าบุคลากรผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียง ที่ขออนุมัติเพิ่มเติม มีคุณสมบัติตามกฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ ประกอบกับประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง หลักเกณฑ์ วิธีการตรวจวัด และการวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ ลงวันที่ ๘ กุมภาพันธ์ พ.ศ. ๒๕๖๑ และที่แก้ไขเพิ่มเติม จึงอนุมัติให้บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด เพิ่มเติมบุคลากรผู้ดำเนินการตรวจวัดและวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง และเสียงดังกล่าว รายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย ทั้งนี้ ขอให้บริษัทฯ ปฏิบัติตามกฎหมายการขึ้นทะเบียนและการอนุญาตให้บริการเพื่อส่งเสริมความปลอดภัย อย่างเคร่งครัด

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายศักดิ์ศิลป์ ตุลาธร)

ผู้ตรวจราชการกรม ปฏิบัติราชการแทน
อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

COPY

Dr. Somchai

กองความปลอดภัยแรงงาน

โทรศัพท์ ๐ ๒๔๔๘ ๙๑๒๘ - ๓๙ ต่อ ๗๐๒

โทรสาร ๐ ๒๔๔๘ ๙๑๔๓



บริษัท อีสเทิร์น ไทย คอนซัลต์ติง 1992 จำกัด
สวนอุตสาหกรรมศรีนครินทร์ (ศรีราชา) 683 หมู่ 11 ถนนสุขุมวิท 8
ตำบลหนองขาม อำเภอศรีราชา จังหวัดชลบุรี 20230