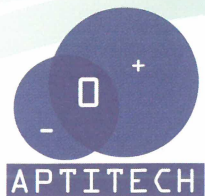
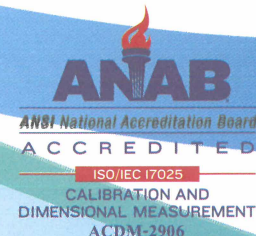


ภาคผนวกที่ 6-4
เอกสารสอบเทียบระดับความดังเสียง
(Sound Level Meter)



APTITECH CALIBRATION CO., LTD.

50/40 Moo 5 T. Lat Sawai, A. Lamlukka, Pathumthani 12150
Tel. +66 2103-6290 Fax. +66 2103-6291
Email. sales@aptitech-cal.com



CERTIFICATE OF CALIBRATION

Certificate Number : SC220494

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong, Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC220494
Manufacturer	: Pulsar Instrument Plc	Calibration Location	: Laboratory
Model	: 44	Ambient Temperature	: 22 ± 2 °C
Serial Number	: PN2202	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 19-Dec-2022

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	EEL	13-May-24



Authority of Calibration

Approved Signatory

- ☒ Mr. Anuwat Simsiriwat [Laboratory Manager]
☐ Mr. Aumnart Uppanan [Quality Manager]

Calibration Date : 20-Dec-2022

Issued Date : 23-Dec-2022

Calibrated By : Mr.Suchou Lardsa-ard

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.

CALIBRATION REPORT

Certificate Number : SC220494

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
 Results of Calibration : Without any adjustment

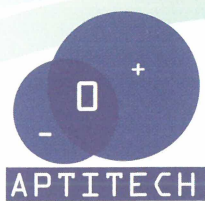
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
A	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB
C	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.2 dB	0.33 dB	0.60 dB

Sound Level Measurement (Fast Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
A	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB
C	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB

--- End of Certificate ---

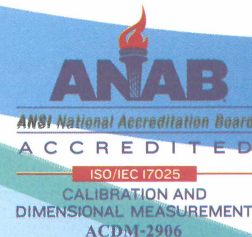


APTITECH CALIBRATION CO., LTD.

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CERTIFICATE OF CALIBRATION

Certificate Number : SC220493

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong, Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC220493
Manufacturer	: Pulsar Instrument Plc	Calibration Location	: Laboratory
Model	: 44	Ambient Temperature	: 22 ± 2 °C
Serial Number	: PN2200	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 19-Dec-2022

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	EEL	13-May-24



Authority of Calibration

Approved Signatory

- ☒ Mr. Anuwat Simsiriwat [Laboratory Manager]
☐ Mr. Aumnart Uppanan [Quality Manager]

Calibration Date : 20-Dec-2022

Issued Date : 23-Dec-2022

Calibrated By : Mr.Suchou Lardsa-ard

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.

CALIBRATION REPORT

Certificate Number : SC220493

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

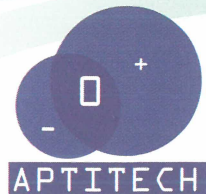
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
A	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB
C	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB

Sound Level Measurement (Fast Mode)

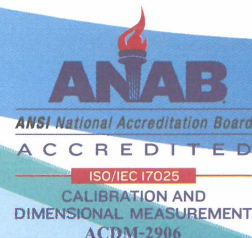
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
A	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB
C	20-140 dB	93.86 dB	94.0 dB	0.14 dB	0.60 dB
		113.87 dB	114.1 dB	0.23 dB	0.60 dB

--- End of Certificate ---



APTITECH CALIBRATION CO., LTD.

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CERTIFICATE OF CALIBRATION

Certificate Number : SC230021

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230021
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222020	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 04-Jan-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24

APTITECH

Authority of Calibration

Approved Signatory

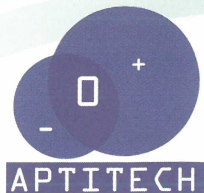
Calibration Date : 05-Jan-2023

Issued Date : 10-Jan-2023

Calibrated By : Mr. Rattapong Janpanya

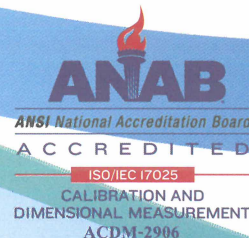
- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.



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CALIBRATION REPORT

Certificate Number : SC230021

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

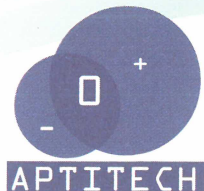
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.6 dB	-0.27 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.6 dB	-0.26 dB	0.60 dB
		113.87 dB	113.6 dB	-0.27 dB	0.60 dB

Sound Level Measurement (Fast Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.6 dB	-0.26 dB	0.60 dB
		113.87 dB	113.6 dB	-0.27 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.6 dB	-0.26 dB	0.60 dB
		113.87 dB	113.5 dB	-0.37 dB	0.60 dB

--- End of Certificate ---

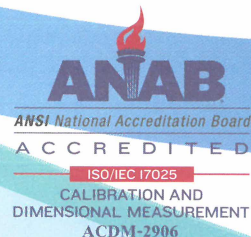


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CERTIFICATE OF CALIBRATION

Certificate Number : SC230104

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230104
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222167	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24



Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.

CALIBRATION REPORT

Certificate Number : SC230104

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

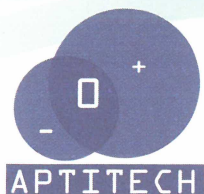
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.9 dB	0.04 dB	0.60 dB
		113.87 dB	113.9 dB	0.03 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

Sound Level Measurement (Fast Mode)

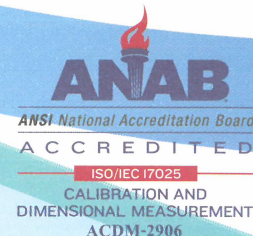
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

--- End of Certificate ---



APTITECH CALIBRATION CO., LTD.

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CERTIFICATE OF CALIBRATION

Certificate Number : SC230097

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230097
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222133	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24

APTITECH

Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

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CALIBRATION REPORT

Certificate Number : SC230097

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

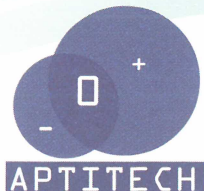
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

Sound Level Measurement (Fast Mode)

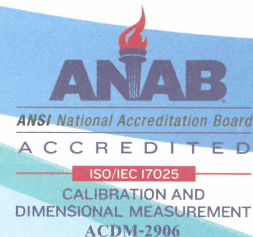
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB

--- End of Certificate ---



APTITECH CALIBRATION CO., LTD.

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CERTIFICATE OF CALIBRATION

Certificate Number : SC230099

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230099
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222135	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24



Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.

CALIBRATION REPORT

Certificate Number : SC230099

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

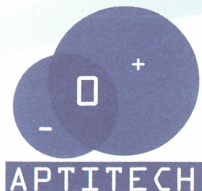
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

Sound Level Measurement (Fast Mode)

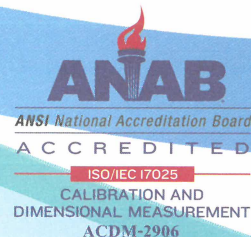
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB

--- End of Certificate ---



APTITECH CALIBRATION CO., LTD.

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CERTIFICATE OF CALIBRATION

Certificate Number : SC230101

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230101
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222137	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24

APTITECH

Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.

CALIBRATION REPORT

Certificate Number : SC230101

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

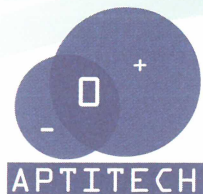
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB

Sound Level Measurement (Fast Mode)

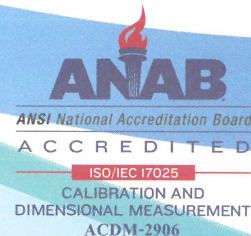
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB

--- End of Certificate ---



APTITECH CALIBRATION CO., LTD.

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CERTIFICATE OF CALIBRATION

Certificate Number : SC230105

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230105
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222168	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24

APTITECH

Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

☐ Mr. Anuwat Simsiriwat [Laboratory Manager]

☒ Mr. Sompoch Srisunart [Technical Manager]

Calibration certificates without signatures are not valid. This certificate applied to only the item identified and shall not be reproduced other than in full, without the specific written approval by APTITECH CALIBRATION CO., LTD.

CALIBRATION REPORT

Certificate Number : SC230105

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

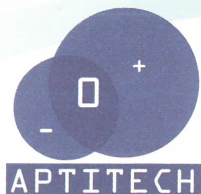
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB

Sound Level Measurement (Fast Mode)

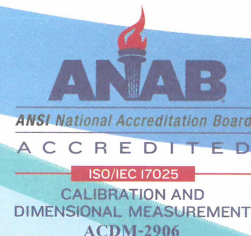
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.7 dB	-0.16 dB	0.60 dB
		113.87 dB	113.7 dB	-0.17 dB	0.60 dB

--- End of Certificate ---



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CERTIFICATE OF CALIBRATION

Certificate Number : SC230110

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230110
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222174	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24

APTITECH

Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

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CALIBRATION REPORT

Certificate Number : SC230110

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

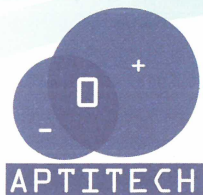
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.9 dB	0.04 dB	0.60 dB
		113.87 dB	113.9 dB	0.03 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.9 dB	0.04 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

Sound Level Measurement (Fast Mode)

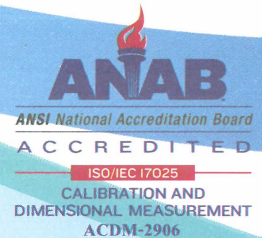
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

--- End of Certificate ---



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CERTIFICATE OF CALIBRATION

Certificate Number : SC230040

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230040
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222049	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 13-Jan-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24



Authority of Calibration

Approved Signatory

Calibration Date : 15-Jan-2023

Issued Date : 20-Jan-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

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CALIBRATION REPORT

Certificate Number : SC230040

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

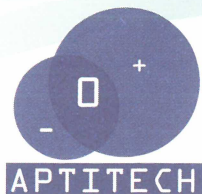
Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	94.00 dB	93.8 dB	-0.20 dB	0.60 dB
		114.00 dB	113.8 dB	-0.20 dB	0.60 dB
LC	40-130 dB	94.00 dB	93.8 dB	-0.20 dB	0.60 dB
		114.00 dB	113.8 dB	-0.20 dB	0.60 dB

Sound Level Measurement (Fast Mode)

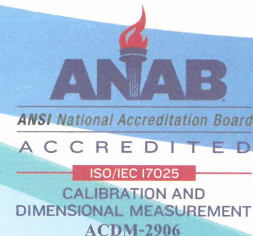
Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	94.00 dB	93.7 dB	-0.30 dB	0.60 dB
		114.00 dB	113.7 dB	-0.30 dB	0.60 dB
LC	40-130 dB	94.00 dB	93.8 dB	-0.20 dB	0.60 dB
		114.00 dB	113.7 dB	-0.30 dB	0.60 dB

--- End of Certificate ---



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CERTIFICATE OF CALIBRATION

Certificate Number : SC230102

Customer : Pacific Laboratory Co.,Ltd.
Address : 14/5358 Moo 14 Tambol Bang Bua Thong, Amphoe Bang Thong,
Nonthaburi 11110

Description	: Sound Level Meter	W/O Number	: SC230102
Manufacturer	: ACO	Calibration Location	: Laboratory
Model	: 6236	Ambient Temperature	: 22 ± 2 °C
Serial Number	: 222138	Ambient Humidity	: 55 ± 15 %RH
ID. Number	: N/A	Received Date	: 24-Feb-23

This certifies that the above instrument was calibrated in compliance with the Calibration Systems Requirement of ISO/IEC 17025:2017 in accordance with referenced procedures. Standards used to perform this calibration are certified by or traceable to National Institute of Metrology (Thailand) and/or other recognized national measurement institutes which realizes the units of measurement according to the International System of Units (SI Unit).

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in The Expression of Uncertainty and Confidence in Measurement (M3003).

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor $k=2$ such that the coverage probability corresponds to approximately 95%. This result of calibration was found accurate as shown on date and place of calibration only.

Standard Equipments

Description	Serial No.	Certificate No.	Traceability	Due Date
Sound Level Calibrator	141011576	CP20220161EA	TISI: 22-LB0125	13-May-24

APTITECH

Authority of Calibration

Approved Signatory

Calibration Date : 27-Feb-2023

Issued Date : 2-Mar-2023

Calibrated By : Mr. Sataporn Petnoi

- ☐ Mr. Anuwat Simsiriwat [Laboratory Manager]
☒ Mr. Sompoch Srisunart [Technical Manager]

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CALIBRATION REPORT

Certificate Number : SC230102

Calibration Method

The Unit Under Calibration (UUC) was calibrated by comparison measurement with sound level calibrator. The calibration has been accomplished in an ambient environment controlled, base on the in-house calibration procedure. The identification of the laboratory's calibration procedure employed are CP-7.2-01-107

Calibration Results

Appearance and function of use : Good
Results of Calibration : Without any adjustment

Sound Level Measurement (Slow Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.9 dB	0.04 dB	0.60 dB
		113.87 dB	113.9 dB	0.03 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.9 dB	0.04 dB	0.60 dB
		113.87 dB	113.9 dB	0.03 dB	0.60 dB

Sound Level Measurement (Fast Mode)

Function	UUC Range	Standard Value	UUC Reading	UUC Error	(±) Uncertainty
LA	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB
LC	40-130 dB	93.86 dB	93.8 dB	-0.06 dB	0.60 dB
		113.87 dB	113.8 dB	-0.07 dB	0.60 dB

--- End of Certificate ---