

TSP HIGH VOLUME AIR SAMPLER CALIBRATION REPORT

Customer	Envir Service Co.,Ltd.			Date	January 22, 2026
Address	42 Raminthra 14 Yeak 9, Tha Raeng, Bangkok, Bangkok 10230			Start Time	1:30 PM
Sampler Number	TSP No.9	Transfer Standard Type	Orifice	Stop Time	1:55 PM
Motor Serial Number	TSP No.9	Calibrator Model	25A	Person	Mr.Pasagorn Samol
Recorder Serial Number	-	Calibrator Serial Number	307N		

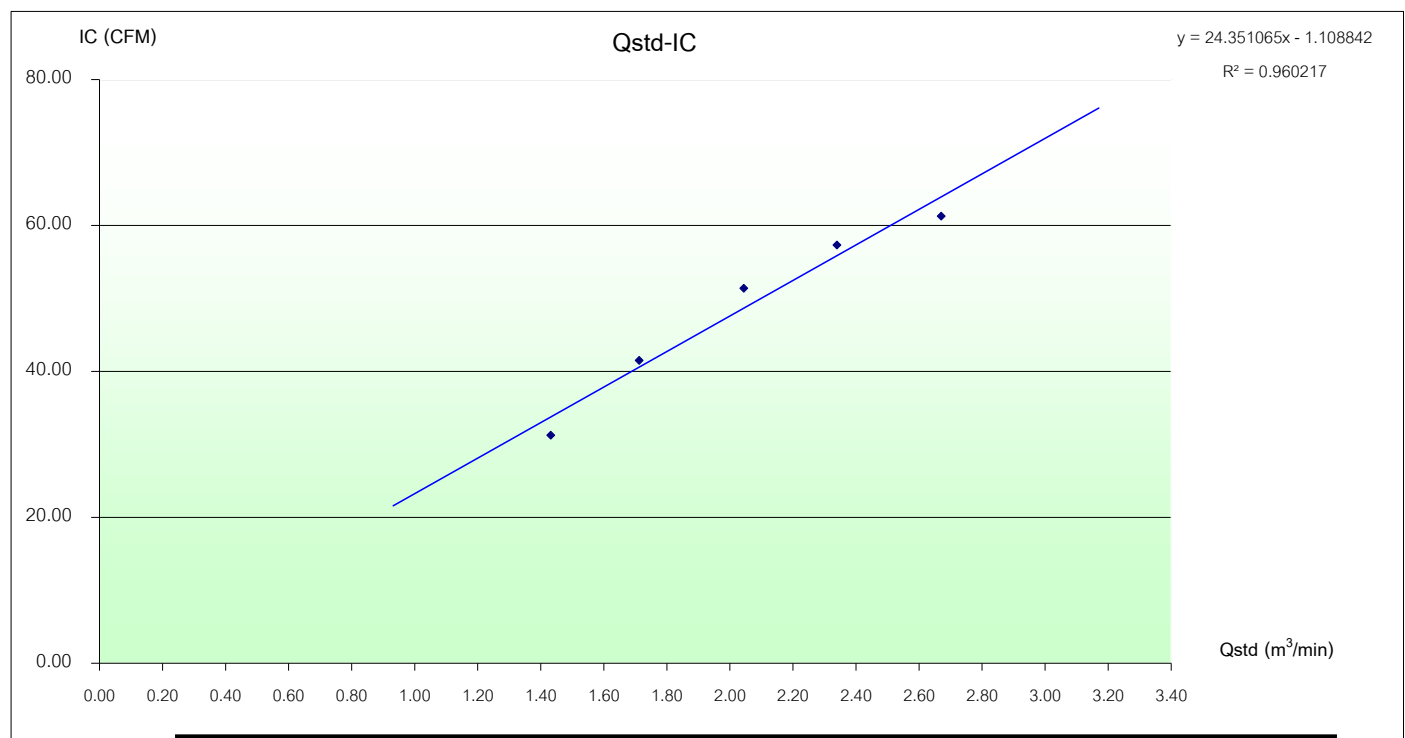
Calibration Orifice

Manufacture:	Graseby GMW	Qstd Slope:	1.29243
Model:	25A	Qstd Intercept:	-0.01962
Serial#:	307N	Calibration Date:	14-Dec-26

Plate No.	(Delta H)			(A)	(X)	(I)	(Y)	Temperature	Barometric Pressure	Start Meter	Stop Meter
	Positive	Negative	ΔH_2O	$[\Delta H_2O(Pa/P_{std})(T_{std}/T_a)]^{1/2}$	Qstd = $(1/m)[(A-b)]$ (m ³ /min)	Sample Flow Rate Indication (ft ³ /min)	IC = $1/[(Pa/P_{std})(T_{std}/T_a)]^{1/2}$	(°K = °C+273)	(mmHg)		
5	1.9	1.8	8.7	2.92311	1.43183	32.0	31.26	305.0	760.0	10:40	-
7	2.8	2.7	12.5	3.50095	1.71185	42.0	41.51	305.1	760.0	-	-
10	4.0	3.9	17.9	4.18591	2.04379	52.0	51.39	305.0	760.0	-	-
13	5.3	5.2	23.5	4.79605	2.33946	58.0	57.32	305.1	760.0	-	-
18	6.4	6.3	30.7	5.47868	2.67027	62.0	61.28	305.1	760.0	-	10:35

Linear Regression Y ON X : Y= mX + b

1	Slope (m)	2.0635	Linear Equation		Average	305.1	760.0		
2	Intercept(b)	-0.03151	Set Point Flow Rate (X) (m ³ /min)		r ²	0.982631	0.982631	Pstd(mmHg)	760.0
3	Correlation Coefficient (r)	0.99993	Final Set Flow Rate = (I)		r	0.99127746	T _{NTP}		298.0
Result					0	(Pa/Pstd)*(Tstd/Ta)			0.976857012
						C=(Pa/Pstd)*(Tstd/Ta)^0.5			0.98836077



PM10 HIGH VOLUME AIR SAMPLER CALIBRATION REPORT

Customer	ENVIR SERVICE CO., LTD.			Date	January 21, 2026
Address	42 Ramintra 14 Yeak 9, Tha Raeng, Bang Khen, Bangkok 10230			Start Time	1:30 PM
Sampler Number	PM10 No.9	Transfer Standard Type	Orifice	Stop Time	1:55 PM
Motor Serial Number	PM10 No.9	Calibrator Model	25A	Person	Mr.Pasagorn Samol
Recorder Serial Number	-	Calibrator Serial Number	307N		

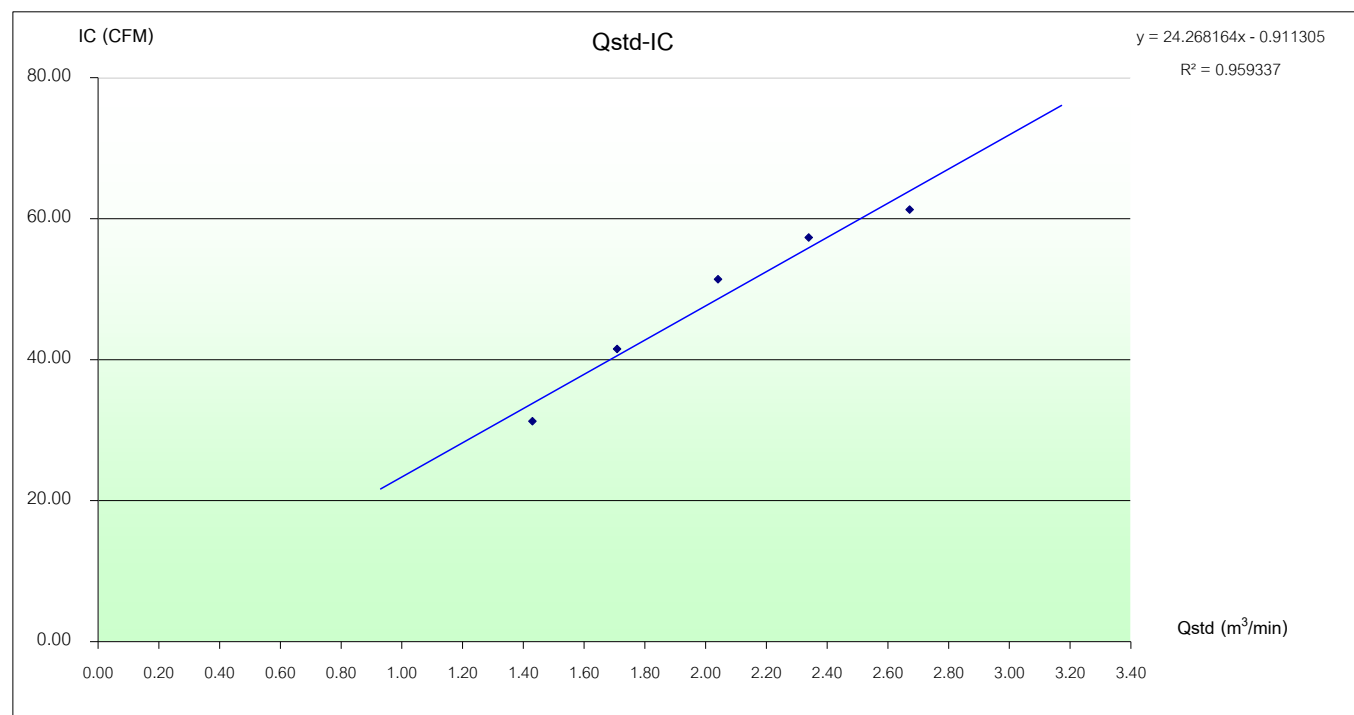
Calibration Orifice

Manufacture:	Graseby GMW	Qstd Slope:	1.29243
Model:	25A	Qstd Intercept:	-0.01962
Serial#:	307N	Calibration Date:	14-Dec-26

Plate No.	(Delta H)			(A)	(X)	(I)	(Y)	Temperature	Barometric Pressure	Start Meter	Stop Meter
	Positive	Negative	ΔH_2O	$[\Delta H_2O(Pa/P_{std})(T_{std}/Ta)]^{1/2}$	Qstd = (I/m)[(A-b)] (m ³ /min)	Sample Flow Rate Indication (ft ³ /min)	IC = I[[P _g /P _{std}](T _{std} /Ta)] ^{1/2}	(°K = °C+273)	(mmHg)		
5	1.9	1.8	8.7	2.91967	1.43016	32.0	31.26	305.0	760.0	9:30	-
7	2.8	2.7	12.5	3.49483	1.70889	42.0	41.51	305.1	760.0	-	-
10	4.0	3.8	17.9	4.17994	2.04090	52.0	51.39	305.0	760.0	-	-
13	5.3	5.2	23.5	4.79568	2.33929	58.0	57.32	305.1	760.0	-	-
18	6.4	6.3	30.8	5.48170	2.67174	62.0	61.28	305.2	760.0	-	9:55

Linear Regression Y ON X : Y= mX + b

1	Slope (m)	2.0635	Linear Equation		r^2	0.982631	Pstd(mmHg)	760.0
2	Intercept(b)	-0.03151	Set Point Flow Rate (X) (m ³ /min)	1.133	r	0.99127746	T _{NTP}	298.0
3	Correlation Coefficient (r)	0.99993	Final Set Flow Rate = (I)	0	(Pa/Pstd)*(Tstd/Ta)		0.976792972	
Result					C=(Pa/Pstd)*(Tstd/Ta)^0.5		0.988328373	



CALIBRATION TEST REPORT FOR Partisol Air Sampler

Calibrated Date: 19 January 2026

Report No: PM-202601008

Calibrated Due on: 18 January 2027

Instruments Information

Description : PM2.5/PM10 FRM Air

Sampler

Control Model : CCZ-30

Sample flow control and reporting : 3 - 30 L/min

Serial No. : 2024EN0242009

Instrument used for calibration [STD]

Description : Flow Meter

BIOS DryCal DC-Lite

Model : DCL-M REV. 1.08

Range : 200 ml/min - 20 L/min

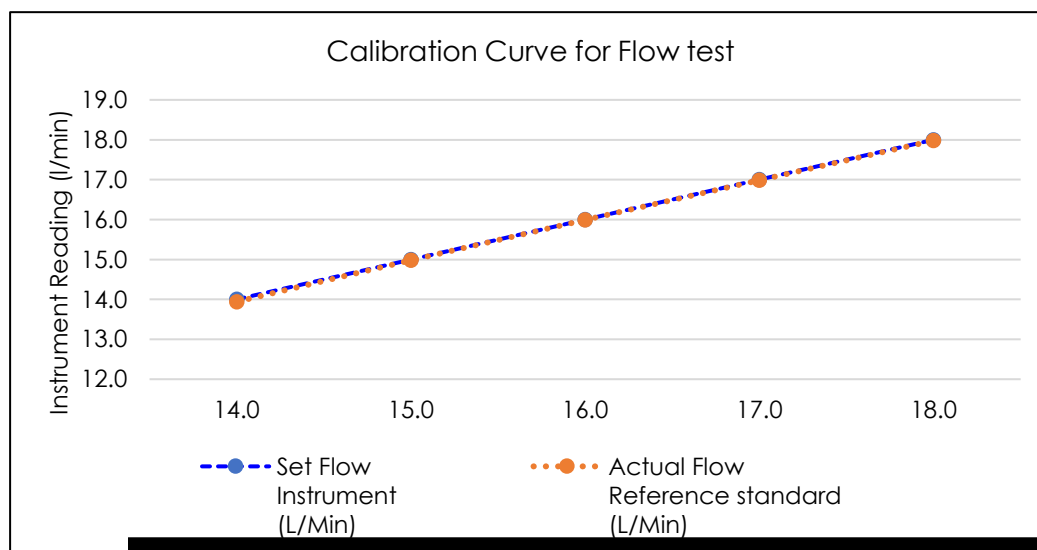
Serial No. : 5016

Environment : Temperature 25.5 °C

Humidity: 51 %RH

Calibration Report

Filter	Set Flow Instrument (L/Min)	Current Flow Instrument reading (L/Min)	Actual Flow Reference standard (L/Min)	Error	Drift%
47 mm.	14.0	14.0	13.94	0.06	0.43
	15.0	15.0	14.98	-0.02	0.13
	16.0	16.0	15.99	-0.01	0.06
	17.0	17.0	16.99	-0.01	0.06
	18.0	18.0	17.98	-0.02	0.11



Calibrate By

Analyzer Performance Test

Calibrated Date: 2026-Jan-15

Instruments Information

Analyzer Type : Total Hydrocarbon Analyzer Manufacturer : Thermo Environmental
Model : 51C Serial Number : 51CHT-77685-387

Calibrator Unit

Dilutor Model : Dasibi Model 5008

Serial Number : 705

ZERO AIR Generator : API MODEL 701

Serial Number : 1924

Standard Gas Concentration

Methane (CH₄) 181.0 PPM

Propane 180.7 PPM

Cylinder number EB0123130

Expire Date: 3 Oct. 2027

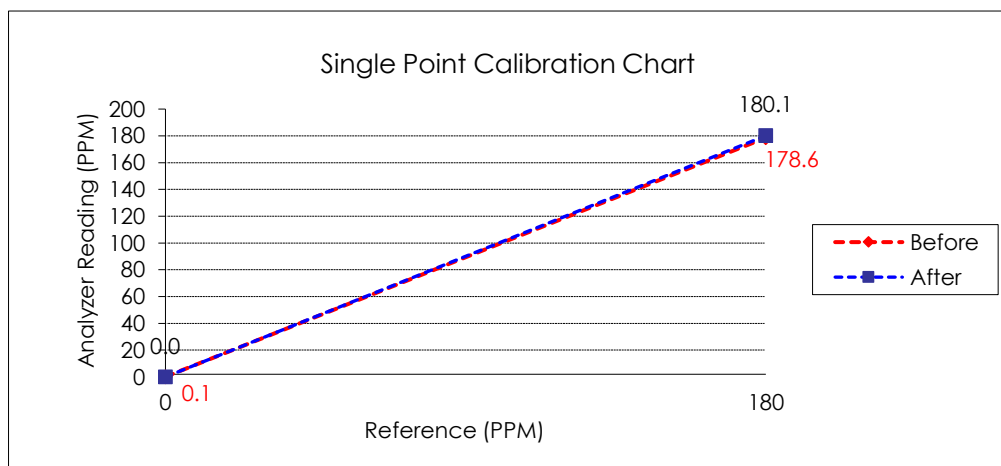
Environment : Temperature 25.5 °C Humidity: 51 %RH

Calibration Report (Before adjust)

Status	Zero			Span		
	Reference (PPM)	Reading (PPM)	Drift (PPM)	Reference (PPM)	Reading (PPM)	Drift%
Methane	0.0	0.1	0.1	180.0	178.6	-0.8
NMHC	0.0	0.1	0.1	180.0	178.7	-0.7

Calibration Report (After adjust)

Status	Zero			Span		
	Reference (PPM)	Reading (PPM)	Drift (PPM)	Reference (PPM)	Reading (PPM)	Drift%
Methane	0.0	0.0	0.0	180.0	180.1	0.1
NMHC	0.0	0.0	0.0	180.0	179.9	0.0



Calibrate By



บริษัท เอ็นไวร์ เซอร์วิส จำกัด
ENVIR SERVICE CO., LTD.

บริษัท เอ็นไวร์ เซอร์วิส จำกัด

42 รามอินทรา 14 แยก 9 แขวงท่าแร้ง เขตบางเขน กรุงเทพฯ 10230 โทรศัพท์ 02-9435814-5 โทรสาร 02-9438201

42 Raminthra 14 yeak 9, Tha Rang, Bangkhen, Bangkok 10230 Tel : 02-9435814-5 Fax : 02-9438201

Analyzer Performance Test

Calibrated Date: 22 April 2022

Instruments Information

Analyzer Type: CO Analyzer Model: 48C	Manufacturer Thermo Environmental S/N: 0604815182
--	--

Calibration System

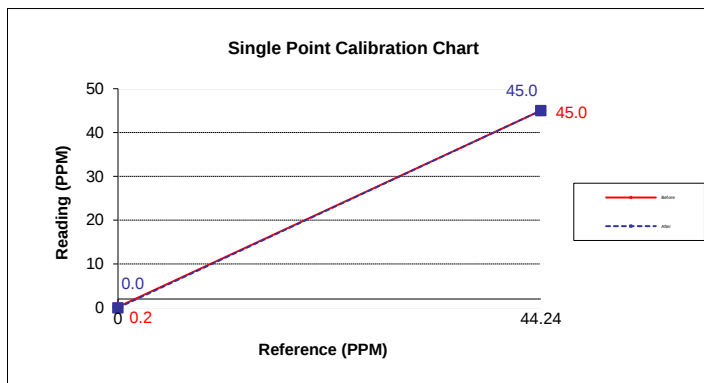
Calibrator Unit	Standard Gas
Dilutor Model Dasibi Model 5008 S/N: 705 ZERO AIR Generator API MODEL 701 S/N: 1924	NO Conc 55.47 PPM SO2 Conc 55.11 PPM CO Conc 4,535 PPM Cylinder number EB0129027 Expire Date: 29 Oct. 2027

Environment: Temperature 25.5 °C

Humidity: 51 %RH

Calibration Report

Status	Zero			Span		
	Reference (PPM)	Reading (PPM)	Drift (PPM)	Reference (PPM)	Reading (PPM)	Drift%
Before	0.0	0.2	0.2	44.2	45.0	1.7
After	0.0	0.0	0.0	45.0	45.0	0.0



Calibrat



บริษัท เอ็นไวร์ เซอร์วิส จำกัด

42 รามอินทรา 14 แยก 9 แขวงท่าแร้ง เขตบางเขน กรุงเทพฯ 10230 โทรศัพท์ 02-9435814-5 โทรสาร 02-9438201
บริษัท เอ็นไวร์ เซอร์วิส จำกัด 42 Raminthra 14 yeak 9, Tha Rang, Bangkhen, Bangkok 10230 Tel : 02-9435814-5 Fax : 02-9438201
ENVIR SERVICE CO., LTD.

Analyzer Performance Test

Calibrated Date: 21 April 2022

Instruments Information

Analyzer Type: SO2 Analyzer Model: 43C	Manufacturer Thermo Environmental S/N: 43C-56775-310
---	---

Calibration System

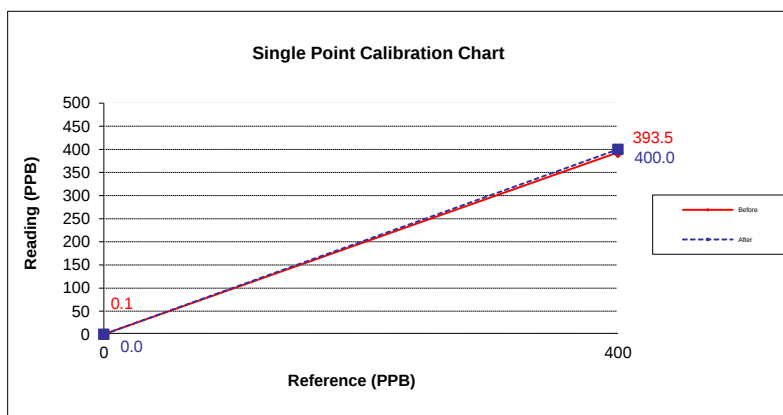
Calibrator Unit	Standard Gas
Dilutor Model Dasibi Model 5008 S/N: 705 ZERO AIR Generator API MODEL 701 S/N: 1924	NO Conc 55.47 PPM SO2 Conc 55.11 PPM CO Conc 4,535 PPM Cylinder number EB0129027 Expire Date: 29 Oct. 2027

Environment: Temperature 25.5 °C

Humidity: 51 %RH

Calibration Report

Status	Zero			Span		
	Reference (PPB)	Reading (PPB)	Drift (PPB)	Reference (PPB)	Reading (PPB)	Drift%
Before	0.0	0.1	0.1	400.0	393.5	-1.6
After	0.0	0.0	0.0	400.0	400.0	0.0



Calibrate By :



บริษัท เอ็นไวร์ เซอร์วิส จำกัด
ENVIR SERVICE CO., LTD.

บริษัท เอ็นไวร์ เซอร์วิส จำกัด

42 รามอินทรา 14 แยก 9 แขวงท่าแร้ง เขตบางเขน กรุงเทพฯ 10230 โทรศัพท์ 02-9435814-5 โทรสาร 02-9438201

42 Raminthra 14 yeak 9, Tha Rang, Bangkhen, Bankok 10230 Tel : 02-9435814-5 Fax : 02-9438201

Analyzer Performance Test

Calibrated Date: 21 April 2022

Instruments Information

Analyzer Type: NO/NO2/NOx Analyzer Model: 42C	Manufacturer Thermo Environmental S/N: 42C-66152-351
--	---

Calibration System

Calibrator Unit	Standard Gas
Dilutor Model Dasibi Model 5008 S/N: 705 ZERO AIR Generator API Model 701 S/N: 1924	NO Conc 55.47 PPM SO2 Conc 55.11 PPM CO Conc 4,535 PPM Cylinder number EB0129027 Expire Date: 29 Oct. 2027

Environment: Temperature 25.5 °C

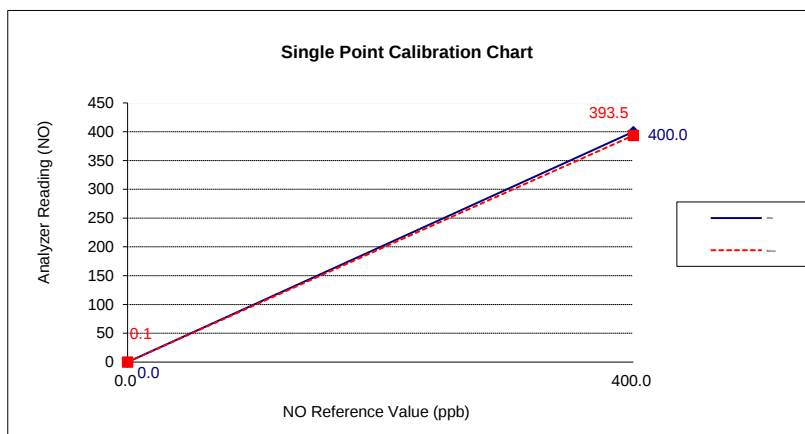
Humidity: 51 %RH

Calibration Check (Before adjust)

GAS	Zero			Span		
	Reading Value (ppb)	Expected Value (ppb)	Drift (ppb)	Reading Value (ppb)	Expected Value (ppb)	Drift%
NO	0.1	0.0	0.1	393.5	400.0	-1.6
NOx	0.1	0.0	0.1	396.2	400.0	-1.0

Calibration Check (After adjust)

GAS	Zero			Span		
	Reading Value (ppb)	Expected Value (ppb)	Drift (ppb)	Reading Value (ppb)	Expected Value (ppb)	Drift%
NO	0.0	0.0	0.0	400.0	400.0	0.0
NOx	0.0	0.0	0.0	400.0	400.0	0.0



Calibrate By : M

Certificate No. EN-260120-04

Calibration & Test Certificate

FOR

Equipment Name : Sound Level Meter
Manufacturer : ACO
Model : 6236
Serial Number : 75929
Location of Calibration : In Lab
Received Date : Jan 12, 2026
Calibration Date : Jan 20, 2026
Recommended Due Date : N/A
Customer Name : GREEN ENVI ENGINEERING CO., LTD.
153/393 Moo 1, Wat Pho-Bang Yai Road, Makham Tia,
Mueang Surat Thani, Surat Thani 84000

CONDITION AS RECIVED : Normal

Environmental Conditions

Ambient Temperature : $(25 \pm 2) ^\circ\text{C}$ Relative Humidity : $(50 \pm 15) \% \text{RH}$
Result : No Adjustment (See data attached in page 2 to the end of certificate)

1. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $K = 2$ providing a level of confidence of approximately 95%
2. The Unit Under Calibration (UUC) has been calibrated by using the working standard which is traceable to SI-Unit. The calibration procedure documented is intended to implement the requirements of ISO/IEC 17025 : 2005 (TAF)
3. The working standard is indicated in page 2 of this certificate.
4. The report applies to the item and shall not be reproduced except in full, without written approval by Calibration Laboratory, Envir Service Co., Ltd.

Date of
Valid for
Calibration

Kittisak Jansangwattana
(Technician)

Pasagorn Samol
(Technician Manager)

Certificate No. EN-260120-04

We hereby certify that the instrument under mentioned has been certainly calibrated according to our calibration standard and the testing result in the calibration procedure has been good enough within the tolerance regulated in our specification.

Reference Standard

Equipment Name	Model	Serial Number	Due Date
Standard SOUND LEVEL METER	B&K 2239	2449143	OCT/22/2026

The Standard generators used for calibration procedure are proofed once a year and cab be traceable to the standard authorized by public organization.

Result of Calibration

Calibration Range : 94 dB, 114 dB

Function : @ 1KHz

Select A Fast response

STD Setting	UUC Reading (dB)	Correction (dB)	Uncertainty (±)
94.01	93.9	0.11	0.88
114.04	113.8	0.24	0.88

Select A Slow response

STD Setting	UUC Reading (dB)	Correction (dB)	Uncertainty (±)
94.01	93.9	0.11	0.88
114.04	113.8	0.24	0.88

Select C Fast response

STD Setting	UUC Reading (dB)	Correction (dB)	Uncertainty (±)
94.01	94.0	0.01	0.88
114.04	113.8	0.24	0.88

Select C Slow response

STD Setting	UUC Reading (dB)	Correction (dB)	Uncertainty (±)
94.01	94.0	0.01	0.88
114.04	113.8	0.24	0.88

STD = Standard

UUC = Unit Under Calibration

Calibration Certificate

Part Number: 721A2601

Description: Micromate with DIN Geophone

Serial Number: UM16052

Calibration Date: NOV 30 2021

Calibration Reference Equipment: SRV-AFR 714J7401

Instantel certifies that the above product was calibrated in accordance with the applicable Instantel procedures. These procedures are part of a quality system that is designed to assure that the product listed above meets or exceeds Instantel specifications.

Instantel further certifies that the measurement instruments used during the calibration of this product are traceable to the National Institute of Standards and Technology; or National Research Council of Canada. Evidence of traceability is on file at Instantel and is available upon request.

The environment in which this product was calibrated is maintained within the operating specifications of the instrument.

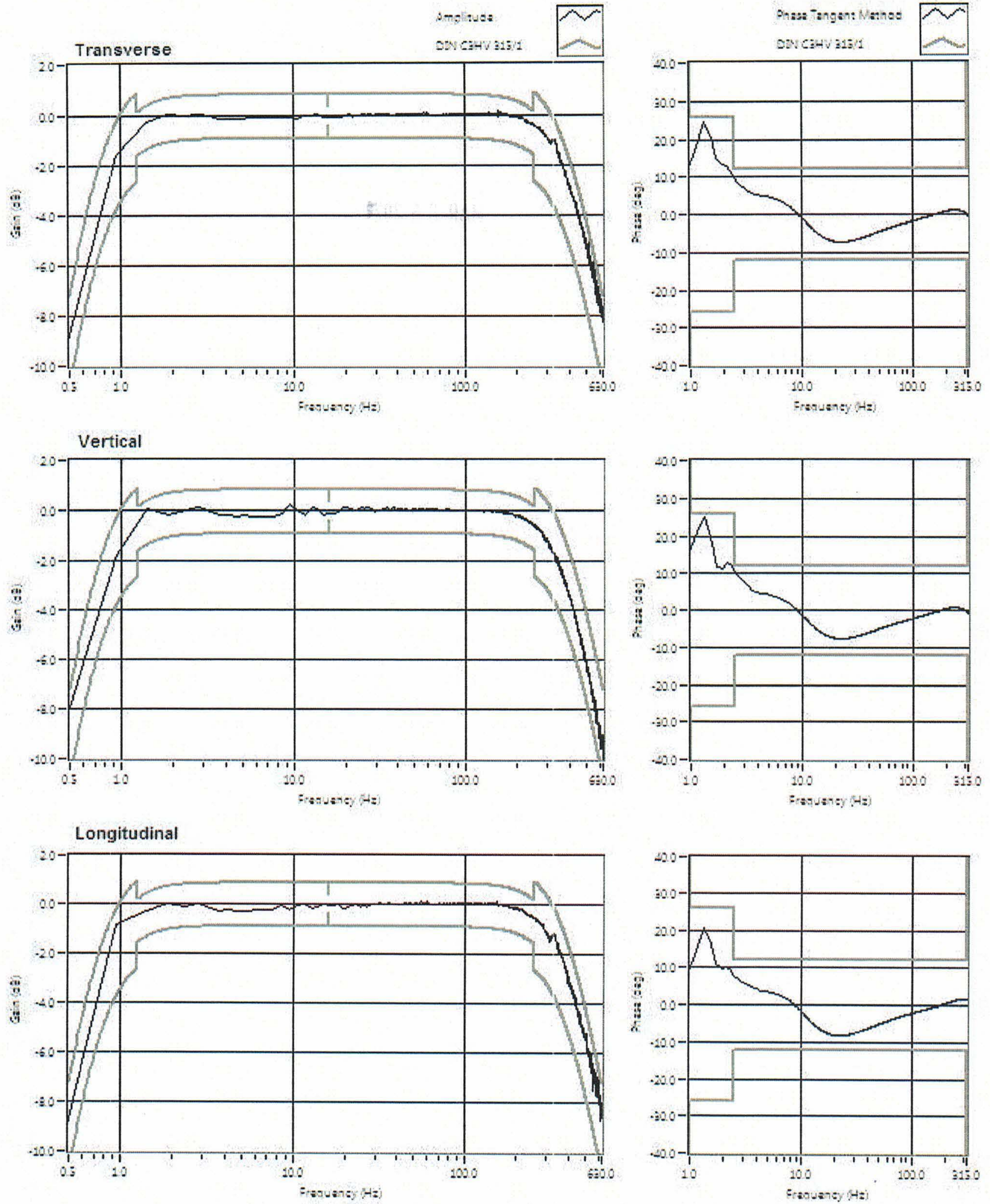
Please note that the sensor check function is intended to check that the sensors are connected to the unit, installed in the proper orientation and sufficiently level to operate properly. This function should not be confused with a formal calibration, which requires the sensors be checked against a reference that is traceable to a known standard. Instantel recommends that products be returned to Instantel or an authorized service and calibration facility for annual calibration.

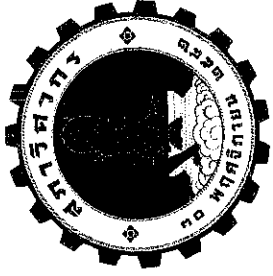
Calibrated By: _____



309 Legget Drive, Ottawa, Ontario, K2K 3A3, (613) 592-4642

Frequency Response of UM16052





สภาวิศวกร

ตามพระราชบัญญัติวิศวกร พ.ศ. ๒๕๕๒
ออกโดยอนุบัญญัติไว้เพื่อแสดงว่า

บริษัท กรีน เอ็นไว เอนจิเนียริง จำกัด

ได้รับอนุญาตประกอบวิชาชีพวิศวกรรมควบคุม

เลขทะเบียน ๑๕๖๕/๖๒

ตั้งแต่วันที่ ๑๖ สิงหาคม ๒๕๖๗ ถึงวันที่ ๑๕ สิงหาคม ๒๕๗๐