		olume TSP Sampler Calibration Record
Location Calibrated by Date	: : :	AM1(ICC) K.T.Ho 05/03/2025
<u>Sampler</u> Model Serial Number	:	TE-5170 S/N 0767

Calibration Orifice and Standard	l Calibration	Relationship
Serial Number	:	2454
Next Calibration Date	:	02 December 2025
Slope (m)	:	2.08315
Intercept (b)	:	-0.04938
Correlation Coefficient(r)	:	0.99985
<u>Standard Condition</u> Pstd (hpa) Tstd (K)	:	1013 298.18
<u>Calibration Condition</u> Pa (hpa)	:	1013

Resi	istance Plate	dH [green liquid]	Z	X=Qstd	IC	Y
		(inch water)		(cubic meter/min)	(chart)	(corrected)
1	18 holes	11.2	3.364	1.639	58	58.30
2	13 holes	8.2	2.878	1.405	50	50.26
3	10 holes	6.2	2.503	1.225	42	42.22
4	7 holes	4.4	2.109	1.036	34	34.18
5	5 holes	2.6	1.621	0.802	22	22.11

295

:

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b, Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship

Ta(K)

Slope(m):<u>43.298</u> Intercept

Intercept(b):-11.470

Correlation Coefficient(r): 0.9972

Checked by: Magnum Fan

Date: 08/03/2025

		olume TSP Sampler Calibration Record
Location Calibrated by Date	: : :	AM1(ICC) K.T.Ho 04/05/2025
<u>Sampler</u> Model Serial Number	:	TE-5170 S/N 0767

Calibration Orifice and Standar	rd Calibration	n Relationship
Serial Number	:	2454
Next Calibration Date	:	02 December 2025
Slope (m)	:	2.08315
Intercept (b)	:	-0.04938
Correlation Coefficient(r)	:	0.99985
Standard Condition		
Pstd (hpa)	:	1013
Tstd (K)	:	298.18
Calibration Condition		
Pa (hpa)	:	1010
Ta(K)	:	301

Resi	stance Plate	dH [green liquid]	Ζ	X=Qstd	IC	Y
		(inch water)		(cubic meter/min)	(chart)	(corrected)
1	18 holes	10.2	3.173	1.547	58	57.63
2	13 holes	7.5	2.721	1.330	50	49.68
3	10 holes	5.6	2.351	1.152	42	41.73
4	7 holes	3.8	1.937	0.954	34	33.78
5	5 holes	2.6	1.602	0.793	24	23.85

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b, Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship

Slope(m):44.098

Intercept(b):-9.6053

Correlation Coefficient(r): 0.9959

6 Checked by: Magnum Fan

Date: 06/05/2025

		C e n t	al	7			DI	ALIBRATION JE DATE: nber 2, 2025
	Ce	rtifi	cate				ntion	
			Calibration	Certificatio	on Informat	ion		
Cal. Date:	December	2, 2024	Rootsi	meter S/N:	438320	Та:	293	°К
Operator:	Jim Tisch					Pa:	757.4	mm Hg
Calibration	Model #:	TE-5025A	Calib	orator S/N:	2454			
		Vol. Init	Vol. Final	ΔVol.	∆Time	ΔΡ	ΔН	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4200	3.2	2.00	
	2	3	4	1	1.0170	6.4	4.00	
	3	5	6	1	0.9090	7.9 8.8	5.00 5.50	
	4	7	8 10	1	0.8700	8.8	8.00	
		9	10		0.7140	12.0	0.00	
			E	Data Tabula	tion			
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax	•	Va	(x-axis)	(y-axis)	
	1.0093	0.7108	1.423		0.9958	0.7013	0.8796	
	1.0051	0.9883	2.013	36	0.9916	0.9750	1.2439	
	1.0031	1.1035	2.252		0.9896	1.0886	1.3907	
	1.0018	1.1515	2.363		0.9884	1.1361	1.4586	
	0.9965	1.3956	2.847		0.9831	1.3769	1.7592 1.30443	
	OCTO	m= b=	2.083		04		-0.03050	
	QSTD	r=	0.999		QA	r=	0.99985	
	II							,
		A)/-1//D- AD		Calculatio		ΔVol((Pa-Δ)/Pa)	
		Δνοι((Pa-ΔP Vstd/ΔTime)/Pstd)(Tstd/Ta	a)		Va/ATime	-)/Fd)	
	QStu-	VStu/Amme	For subsequ	ont flow ra	te calculation			
	Qstd=	1/m ((_\	L Dr. V Tetal	-)-b)		1/m((√ΔF	I(Ta/Pa))-b)	
	L	<u>\\ V</u>		///		\\'		
7-1-1		Conditions		0		DECA	LIBRATION]
Tstd: Pstd:		<u>°K</u> mm Hg				NECA	LIBRATION	
1 3.0.	tantan in	Key			Personal Contraction of the second se		nnual recalibratio	
	or manome	ter reading (201021 (NS223 (21 0)		Regulations Part !	Concerning and Concer
		eter reading					, Reference Meth	
		perature (°K)			THE CASE OF CONTRACT PRESS CONTRACT	2011 CARL CALLS - 104 CALLSON CALLS	ended Particulat	
b: intercept		ressure (mm	<u>пв)</u>		th	e Atmosphe	ere, 9.2.17, page	30
m: slope					L			

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ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



SUB-CONTRACTING REPORT

CONTACT	: MR MAGNUM FAN	WORK ORDER HK2502565
CLIENT	ENVIROTECH SERVICES CO.	
ADDRESS	: RM 712, 7/F, MY LOFT 9 HOI WING ROAD, TUEN MUN, N.T. HK	SUB-BATCH: 1DATE RECEIVED: 15-JAN-2025DATE OF ISSUE: 21-JAN-2025
PROJECT	:	NO. OF SAMPLES : 1 CLIENT ORDER :

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to Envirotech Services Company.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	Position
Kidard Jenny .	
Richard Fung	Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release. ALS Technichem (HK) Pty Ltd

ALS Technichem (HK) Pty Ltd Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com WORK ORDER : HK2502565 SUB-BATCH : 1 CLIENT : ENVIROTECH SERVICES CO. PROJECT : ----



ALS Lab	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2502565-001	Sibata LD-5R (831656)	Equipments	02-Jan-2025	S/N: 831656

----- END OF REPORT ------



Envirotech Services Co.

Rm. 712, 7/F My Loft, 9 Hoi Wing Road, Tuen Mun, H.K. Tel : 2560 8450 Fax : 2560 6553 E-mail: envirotech@netvigator.com

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust Monitor	
Manufacturer:	Sibata LD-5R	
Serial No.:	831656	
Equipment Ref.:	N/A	abuations.
ALS Job Order:	HK2500343	

Standard Equipment

Standard Equipment:	High Volume Sampler (TSP)
Location :	Envirotech Room (Calibration Room)
Equipment Ref.:	HVS 8162
Last Calibration Date:	1-Jan-2025

Equipment Verification Results:

Verification Date:

2-Jan-2025

		Mean	Mean	TSP Level in mg	Total Count
Hour	Time	Temp [°] C	Pressure (hpa)	(Standard Equipment) (Y-Axis)	(Calibrated Equipment) (X-Axis)
1hr 00mins	0900-1000	16.1	1023	0.096	62
2hr 00mins	1005-1205	20.5	1022	0.147	122
3hr 00mins	1330-1630	21.0	1022	0.268	220

Linear Regression of Y or X		0.300
Slope (K-factor):	0.0012(mg)/Count	0.250 - y = 0.0012x + 0.0079
Correlation Coefficient (R):	0.9959	$R^2 = 0.200$ $R^2 = 0.9918$
Date of Issue:	15-Jan-2025	
		0.150 -
		0.100 -
		0.050 -
Remarks:		0.000 0 50 100 150 200 250

1. Strong Correlation (>0.8)

2. Factor 0.0012(mg)/Count should be applied for TSP monitoring

*If R<0.5, repair or verification is required for the equipment

Operator:	P.F.Yeung	Signature	Fai	Date:	<u>15 Jan 2025</u>
QC Reviewer:	K.F.Ho	Signature	at	Date:	<u>15 Jan 2025</u>

TSP SAMPLER CALIBRATION CACULATION SPREADSHEET

Location :		2, My Loi	ft, Tuen M	un	Date of Calibration: 1-Jan-			
HVS ID:		Date		1000 5155				
Name and	Model :	TISCH	HVS Mode	on a second s	which want to get a feature and the second	Operator:		K.F.Ho
				CONDI	10102	1/01/0 		
		el Pressu ature (°C)		102		Corrected Pre Temperature	ssure (mm Hg)	767.3 288.8
	Tempera	aure (°C)			.0	Tomporature	(11)	200.0
		an de calamétrica (Longo de Calamétrica de Calamétrica (Longo de Calamétrica de Calamétrica de Calamétrica de C		CALIBR	ATION C	ORIFICE	an and delivery of	Provide gualities of the con-
			Make:	TISC	н	Qstd Slope		2.08315
			Model: Serial#:	TE-5025 245	-	Qstd Intercep	t (0.5 maans) and mo'n parach is	-0.04938
Soon A			in nobale	CALIBR	ATION) Ann annan	. fr: Noise (Confid	nainaina Maailase B
Plate	H2O(L)	H20(R)	H2O	Qstd	I	IC	nethorn and ta gran	LINEAR
No.	(in)	(in)	(in)	(m3/mir) (chart)	(corrected)	9, 1, 1998, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	REGRESSION
18	6.4	6.4	12.8	1.777	62	63.30	Slope=	35.208
13	5.3	5.3	10.6	1.619	56	57.17	Intercept=	
10	4.2	4.2	8.4	1.444	48	49.00	Corr. Coeff.=	0.9959
7	2.7	2.7	5.4	1.163	41	41.86		
5	1.7	1.7	3.4	0.927	32	32.67		
Calulations					IC	on none send of 5-remarks noi	Flow Rate	<u>nia georiana di 198</u> niani asiar tanpao
		(Pa/Pstd)([std/Ta))-b]		70	1993 Boot o Store 1 De Pacific anto	2278021186681900 113788122686838200	eve to breeden ever Netvers of a reader
	(Pa/Pstd)(T				65	enting points for	ame idantified m.e.	(2300 - 0760) at the s
					E			step a vector of all
Qstd = stan	dard flow r	ate			60		<u>jeuč</u> n	meast No. Sering 1
C = correction	ted chart re	esponse			55			
[= actual c	hart respon	se			50			
	ator Qstd sl				45	i Igoations and na statico por	belong to	Set up monitoring sta and unt at least throu
	tor Qstd in				E ea			aach 8-day folling per
	T .		calibration		40	/	And a state of the second s	soricalistsion of the f PSP included to a
Pa = actual	pressure d	uring calib	oration (mn	n Hg)	35		e-day rolling peno	uses fuuns aneurou
For enhear	uent calcul	ation of a	ampler floy	<i>v</i> .	30	•		During 1908 - 2000
	t(298/Tav)		-	· .	25		•	
I III (II/[J]I	ιταγ) ¹ αγ)	(1 411100)	J-D)	873 J 1 88	Ę			Bat up monitoren pa 192 antakat onen par 192
m = samp	ler slope				20	o nobsilatéo.roo	et monitoring of the	ub tasg mi dhi y bohad
					15	a (doa oon ⁶ va antara	<u>i arakanmaG haipna</u> 32 503 1947 faassa	ited these Total Susp environtion activities
b = sampl	L.				10 È	L	e tab ê laneyla e	tala iboi ol o ichi oid
b = sampl I = chart i	response							
I = chart r	response 1 average te	emperature	e				1 1.2 1.3 1.4 1 Qstd(m3/min)	1.5 1.6 1.7 1.8 1.

15								ALIBRATION UE DATE:
)		Decer	nber 2, 202
<u>ivir</u> (2	a i cate e	of	Cal	ibra	ntion	
[Calibration	Certificatio	on Informat	ion		
Cal. Date:	December 2	2, 2024	Rootsi	meter S/N:	438320	Ta:	293	°K
	Jim Tisch	_,				Pa:	757.4	mm Hg
Calibration I		TE-5025A	Calik	prator S/N:	2454			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4200	3.2	2.00	-
	2	3	4	1	1.0170	6.4	4.00	-
	. 3	5	6	1	0.9090	7.9	5.00	-
	4	7	8	1	0.8700	8.8 12.8	5.50 8.00	-
	5	9	10	1	0.7140	12.8	8.00	1
			1	Data Tabula	tion			-
	Vstd	Qstd	√∆H(Pa)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	1.0093	0.7108	1.42		0.9958	0.7013	0.8796	-
	1.0051	0.9883	2.01		0.9916	0.9750	1.2433	-
	1.0031 1.0018	1.1035 1.1515	2.25		0.9884	1.1361	1.4586	-1
	0.9965	1.3956	2.30		0.9831	1.3769	1.7592	
	0.5505	m=	2.083			m=	1.30443	
	QSTD	b=	-0,04		QA	b=		
		r=	0.999	985		r=	0.99985	<u>'</u>
		-		Calculatio				
)/Pstd)(Tstd/T	a)		∆Vol((Pa-∆	P)/Pa)	4
	Qstd=	Vstd/∆Time				Va/ATime		4
			For subsequ	uent flow ra	te calculatio	ns:		-
	Qstd=	1/m((√∆H	(<u>Pa</u>)(<u>Tstd</u> Pstd)(Ta	-))-b)	Qa=	1/m((√∆	H(Ta/Pa))-b)	
[Standard	Conditions]				
Tstd:	298.15	°К				RECA	LIBRATION	
Pstd:		mm Hg Key			US EPA rec	ommends a	nnual recalibrati	ion per 1998
ΔH: calibrat		ter reading (in H2O)		40 Code	of Federal	Regulations Part	50 to 51,
ΔP: rootsme	eter manom	neter reading	(mm Hg)	1), Reference Met	
Ta: actual a	bsolute tem	perature (°K)				pended Particula	
Pa: actual b		oressure (mm	Hg)		th th	ne Atmosph	ere, 9.2.17, page	30
b: intercept								

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ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



DATE OF ISSUE : 8-JAN-2025

NO. OF SAMPLES : 1

CLIENT ORDER

SUB-CONTRACTING REPORT						
CONTACT	: MR MAGNUM FAN	WORK ORDER	HK2500019			
CLIENT	ENVIROTECH SERVICES CO.					
ADDRESS	RM 712, 7/F, MY LOFT 9 HOI WING ROAD,	SUB-BATCH	: 1			
		DATE RECEIVED	: 16-DEC-2024			

TUEN MUN, N.T. HK

PROJECT : -----

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client. •
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the • item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. •
- Calibration was subcontracted to Envirotech Services Company. •

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	Position		
Richard Juny .			
Richard Fung	Managing Director	à	*

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER

: HK2500019

: 1 : ENVIROTECH SERVICES CO. SUB-BATCH



CLIENT PROJECT

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.	
HK2500019-001	Sibata LD-3B (235780)	Equipments	07-Dec-2024	S/N: 235780	

- END OF REPORT --



Envirotech Services Co.

Rm. 712, 7/F My Lott, 9 Hoi Wing Roed, Tuen Mun, H.K. Tel: 2560 6553 F-mail: envirotech@netvigstor.com

Equipment Verification Report (TSP)

Equipment Calibrated:

Laser Dust Monitor	
Sibata LD-3B	
235780	
N/A	
HK2451037	
	Sibata LD-3B 235780 N/A

Standard Equipment

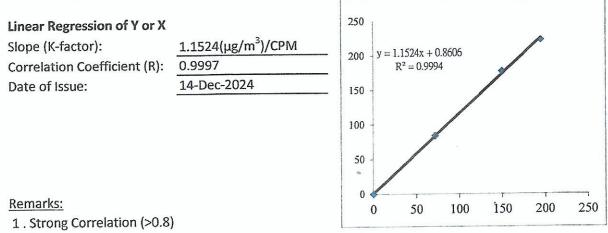
Standard Equipment:	High Volume Sampler (TSP)				
Location :	Envirotech Room (Calibration Room)				
Equipment Ref.:	HVS 8162				
Last Calibration Date:	19-Oct-2024				

Equipment Verification Results:

Verification Date:

7-Dec-2024

Hour	Time	Mean Temp ^o C	Mean Pressure (hpa)	Concentration in µg/m ³ (Standard Equipment) (Y-Axis)	Concentration in µg/m ³ (Calibrated Equipment) (X-Axis)
1hr 00mins	0910-1010	19.5	1022	84	72
2hr 00mins	1300-1500	21.2	1019	177	150
3hr 00mins	1505-1805	21.5	1018	223	195



2. Factor $1.1524(\mu g/m^3)/CPM$ should be applied for TSP monitoring

1

*If R<0.5, repair or verification is required for the equipment

Operator:	P.F.Yeung	Signature	Far	Date:	14 Dec 2024
QC Reviewer:	K.F.Ho	Signature	at	Date:	14 Dec 2024

Date of Calibration: 19-Oct-24 Location: Rm. 712, My Loft, Tuen Mun 19-Dec-24 Next Calibration Date: HVS ID: 8162 K.F.Ho Operator: Name and Model: TISCH HVS Model TE-5170 CONDITIONS 761.3 1015 Corrected Pressure (mm Hg) Sea Level Pressure (hpa) 299 Temperature (K) 26.0 Temperature (°C) CALIBRATION ORIFICE 2.07544 TISCH Qstd Slope Make: -0.03205 Ostd Intercept Model: TE-5025A 2454 Serial#: CALIBRATION LINEAR IC H2O Ostd Ι H2O(L) H20(R) Plate REGRESSION (corrected) (m3/min) (chart) No. (in) (in) (in) Slope= 45.67 61.97 1.718 62 18 6.1 6.4 12.5 Intercept=-15.10355.97 1.546 56 4.9 5.2 10.1 13 Corr. Coeff.= 0.9947 48 47.97 1.325 7.4 10 3.6 3.8 34 33.98 5.1 1.103 7 2.4 2.7 23.99 3.1 0.863 24 5 1.4 1.7 Flow Rate Calulations: IC Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]70 IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]65 60 Ostd = standard flow rate IC = corrected chart response55 I = actual chart response50 m = calibrator Qstd slope 45 b = calibrator Qstd intercept Ta = actual temperature during calibration (deg K) 40 Pa = actual pressure during calibration (mm Hg) 35 30 For subsequent calculation of sampler flow: 1/m((I)[Sqrt(298/Tav)(Pav/760)]-b) 25 20 m = sampler slope15 b = sampler intercept I = chart response10 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 Tay = daily average temperature Pav = daily average pressure Qstd(m3/min)

TSP SAMPLER CALIBRATION CACULATION SPREADSHEET

19	RF						DI	LIBRATION JE DATE:
							Decem	ber 15, 2024
n viro		2	cate e	/			ntion	
			Calibration	Certificatio	on Informat	ion		
Cal. Date: D	December	15, 2023	Roots	meter S/N:	438320	Ta:	295	°K
Operator: J	im Tisch					Pa:	748.5	mm Hg
Calibration M	lodel #:	TE-5025A	Calik	orator S/N:	2454			
Г		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
F	1	1	2	1	1.4250	3.2	2.00	
F	2	3	4	1	1.0090	6.4	4.00	
F	3	5	6	1	0.9040	7.9	5.00	
	4	7	8	1	0.8610	8.8	5.50	
	5	9	10	1	0.7110	12.8	8.00	
Γ	*·· XV		E	Data Tabula	tion			
Γ	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$)(<u>Tstd</u>)		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-axi		Va	(x-axis)	(y-axis)	
F	0.9907	0.6952	1.410		0.9957	0.6988	0.8878	
-	0.9864	0.9776	1.994		0.9914	0.9826	1.2556	
F	0.9844	1.0890	2.230)4	0.9894	1.0945	1.4037	
	0.9832	1.1420	2.339	93	0.9882	1.1478	1.4723	
Γ	0.9779	1.3754	2.821		0.9829	1.3824	1.7756	
		m=	2.075				1.29961	3
10	QSTD	b=	-0.032		QA	b=	-0.02017 0.99999	
Ļ		r=	0.999			r=	0.33333	
Ļ			1	Calculation	and a second sec	AV/ 1//D- AI		
		the second second second second)/Pstd)(Tstd/Ta	a)		ΔVol((Pa-Δl Va/ΔTime	-)/Pa)	
F	Qstd= Vstd/ΔTime For subsequent flow rate calculations:							
F	Qstd=	1/m ((Pa Tstd) -b)		1/m ((√∆F	I(Ta/Pa))-b)	
<u>L</u>	Standard	Conditions						
Tstd:	298.15			· · · · ·		RECA	LIBRATION	-
Pstd:	760	mm Hg						n nor 1000
		(ey	1100)				nnual recalibratio	10.554
ΔH : calibrator							Regulations Part 5 , Reference Meth	11 mar 11 mar 11
ΔP: rootsmete Ta: actual abs							ended Particulate	
Pa: actual bar						Contraste de Contrastentes	erice Particulate ere, 9.2.17, page 3	
b: intercept	1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 -							

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ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



SUB-CONTRACTING REPORT

CONTACT	: MR MAGNUM FAN	WORK ORDER HK2448121
CLIENT	ENVIROTECH SERVICES CO.	
ADDRESS	: RM 712, 7/F, MY LOFT 9 HOI WING ROAD, TUEN MUN, N.T. HK	SUB-BATCH:1DATE RECEIVED:13-NOV-2024DATE OF ISSUE:20-NOV-2024
PROJECT	:	NO. OF SAMPLES : 1 CLIENT ORDER :

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to Envirotech Services Company.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	Position
Kidard Jenny .	
Richard Fung	Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release. ALS Technichem (HK) Pty Ltd

ALS Technichem (HK) Pty Ltd Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

: HK2448121 WORK ORDER SUB-BATCH [:] 1 : ENVIROTECH SERVICES CO. CLIENT

PROJECT

:



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2448121-001	Sibata LD-3B (245834)	Equipments	09-Nov-2024	S/N: 245834

----- END OF REPORT ------



Envirotech Services Co.

Rm. 712, 7/F My Loft, 9 Hoi Wing Road, Tuen Mun, H.K. Tel : 2560 8450 Fax : 2560 8553 E-mail: envirotech@netvigator.com

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust Monitor
Manufacturer:	Sibata LD-3B
Serial No.:	245834
Equipment Ref.:	N/A
ALS Job Order:	HK2446853

Standard Equipment

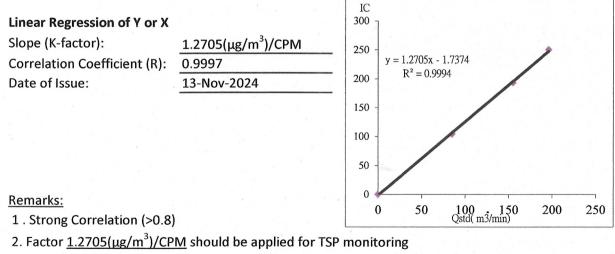
Standard Equipment:	High Volume Sampler (TSP)
Location :	Envirotech Room (Calibration Room)
Equipment Ref.:	HVS 8162
Last Calibration Date:	19-Oct-2024

Equipment Verification Results:

Verification Date:

9-Nov-2024

Hour	Time	Mean Temp [°] C	Mean Pressure (hpa)	Concentration in μg/m ³ (Standard Equipment) (Y-Axis)	Concentration in µg/m ³ (Calibrated Equipment) (X-Axis)
1hr 00mins	0905-1005	24.9	1013	85	104
2hr 00mins	1015-1215	25.2	1014	155	193
3hr 00mins	1430-1730	25.6	1014	196	250



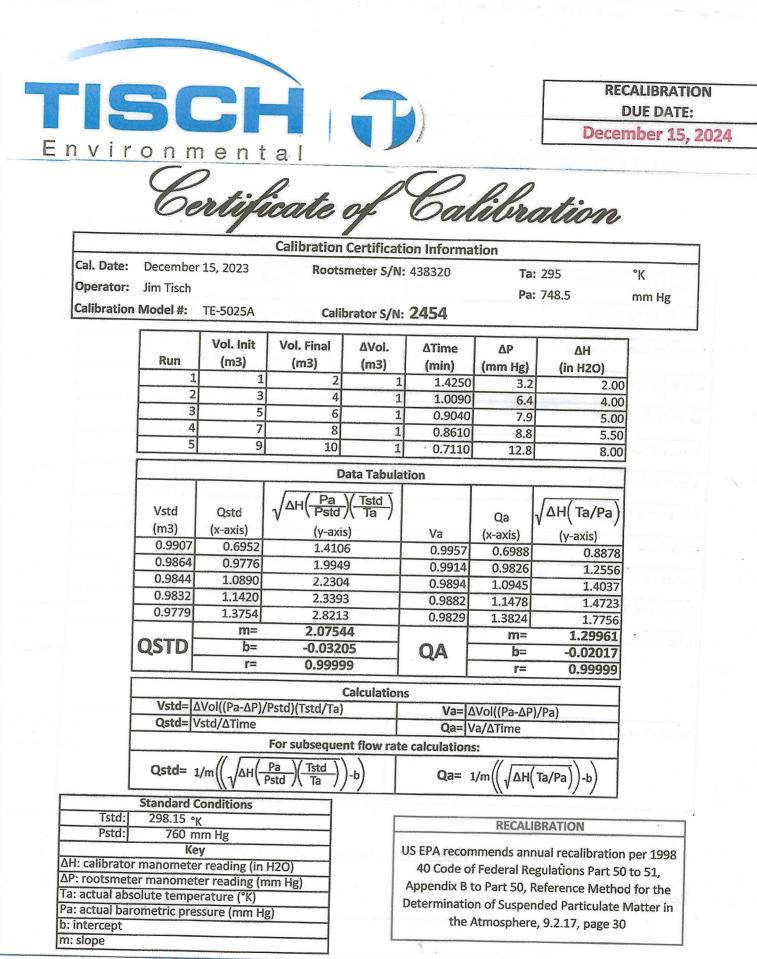
*If R<0.5, repair or verification is required for the equipment

Operator:	P.F.Yeung	Signature	Fai	Date:	11 Nov 2024
QC Reviewer:	K.F.Ho	Signature	at	Date:	<u>11 Nov 2024</u>

Location: Rm. 712, My Loft, Tuen Mun Date of Calibration: 19-Oct-24 HVS ID: 8162 Next Calibration Date: 19-Dec-24 Name and Model: TISCH HVS Model TE-5170 Operator: K.F.Ho CONDITIONS Sea Level Pressure (hpa) 1015 Corrected Pressure (mm Hg) 761.3 Temperature (°C) 26.0 Temperature (K) 299 CALIBRATION ORIFICE Make: TISCH Ostd Slope 2.07544 Model: TE-5025A **Qstd** Intercept -0.03205 Serial#: 2454 CALIBRATION H2O(L) H20(R) Plate H₂O Qstd Ι IC LINEAR No. (in) (in) (in) (m3/min) (chart) (corrected) REGRESSION 18 6.1 6.4 12.5 1.718 62 61.97 Slope= 45.67 13 4.9 5.2 10.1 1.546 56 55.97 Intercept= -15.103 10 3.6 3.8 7.4 1.325 48 47.97 Corr. Coeff.= 0.9947 7 2.4 2.7 5.1 1.103 34 33.98 5 1.4 1.7 3.1 0.863 24 23.99 Calulations: Flow Rate IC Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b] 70 IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]65 Qstd = standard flow rate 60 IC = corrected chart response55 I = actual chart response50 m = calibrator Ostd slopeb = calibrator Qstd intercept 45 Ta = actual temperature during calibration (deg K)40 Pa = actual pressure during calibration (mm Hg) 35 For subsequent calculation of sampler flow: 30 1/m((I)[Sqrt(298/Tav)(Pav/760)]-b) 25 20 m = sampler slopeb = sampler intercept 15 I = chart response10 Tav = daily average temperature 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 Pav = daily average pressure Qstd(m3/min)

TSP SAMPLER CALIBRATION CACULATION SPREADSHEET

Including workers of the Subcontractor and its all lower tions at



sch Environmental, Inc.

15 South Miami Avenue

llage of Cleves, OH 45002

<u>www.tisch-env.com</u> TOLL FREE: (877)263-7610 FAX: (513)467-9009

Certificate of Calibration

for

Description:	Sound Level Calibrator
Manufacturer:	Larson Davis
Type No.:	CAL200
Serial No.:	16172

Submitted by:

Customer:	Envirotech Services Co.
Address:	Rm.712, 7/F., My Loft, 9 Hoi Wing Road,
	Tuen Mun, Hong Kong

Upon receipt for calibration, the instrument was found to be:

\checkmark	Within
	Outside

the allowable tolerance.

The test equipments used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 6 February 2025

Date of calibration: 7 February 2025

Date of NEXT calibration: 6 February 2026

Calibrated by: Calibration Technician

Date of issue: 7 February 2025

Certified by:

Mr. Ng Yan Wa Laboratory Manager

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Certificate No.: APJ24-143-CC002

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com F-mail : inquiry@aa-lab.com

1. Calibration Precautions:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Specifications:

Calibration check

3. Calibration Conditions:

Air Temperature:	<u> </u>	
Air Pressure:		
Relative Humidity:	59.2 %	

4. Calibration Equipment:

Test Equipment	Туре	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

5. Calibration Results

5.1 Sound Pressure Level

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	93.7
114.0	113.6	114.4	113.7

6. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

Note:

The values given in this certification only related to the values measured at the time of the calibration.



Certificate No.: APJ24-143-CC002

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	RION
Type No.:	NL-52 (Serial No.: 00643040)
Microphone:	PCB 377B02 (Serial No.: 172764)
Preamplifier:	NH-25 (Serial No.:21757)

Submitted by:

Customer: Envirotech Services Co. Address: Rm.712, 7/F., My Loft, 9 Hoi Wing Road, Tuen Mun, Hong Kong

Upon receipt for calibration, the instrument was found to be:

✓ Within (31.5Hz – 8kHz)□ Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 25 September 2024

Date of calibration: 27 September 2024

Date of NEXT calibration: 26 September 2025

Calibrated by: Calibration Technician

Date of issue: 27 September 2024

Certified by:

Mr. Ng Yan Wa Laboratory Manager



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Certificate No.: APJ24-072-CC001

1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

24.9°C
1006 hPa
54.5 %

3. Calibration Equipment:

	Туре	Serial No.	Calibration Report Number	Traceable to	
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS	

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)		Applied value		UUT Reading,	IEC 61672 Class 1		
Range, dB	Freq. We	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.0	Ref
30-130	dBA	SPL	Fast	104	1000	104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. We	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
00.100	10.4	GDI	Fast	04	1000	94.0	Ref
30-130 dBA	dBA	BA SPL	Slow	94	1000	94.0	±0.3

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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Appl	Applied value		IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	93.8	±2.0
					63	93.9	±1.5
			125	93.9	±1.5		
			Fast		250	93.9	±1.4
30-130	dB	SPL		94	500	93.9	±1.4
					1000	94.0	Ref
	신간 오늘만 집에 가지 않는				2000	94.0	±1.6
				4000	94.5	±1.6	
				L	8000	91.8	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq.	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	54.4	-39.4 ±2.0
					63	67.8	-26.2±1.5
21				125	77.8	-16.1±1.5	
				250	85.3	-8.6±1.4	
30-130	dBA	SPL	Fast	94	500	90.7	-3.2 ± 1.4
					1000	94.0	Ref
					2000	95.2	+1.2±1.6
			4000	95.5	`+1.0±1.6		
				8000	90.8	-1.1+2.1; -3.1	

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	90.8	-3.0 ±2.0
					63	93.1	-0.8±1.5
				125	93.7	-0.2±1.5	
			Fast				250
30-130	dBC	SPL		94	500	93.9	-0.0 ± 1.4
					1000	94.0	Ref
					2000	93.8	-0.2±1.6
		1	4000	93.7	-0.8±1.6		
					8000	89.0	-3.0 +2.1: -3.1



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5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

94 dB	31.5 Hz	± 0.15
	63 Hz	± 0.10
	125 Hz	± 0.10
	250 Hz	± 0.05
	500 Hz	± 0.10
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

Uncertainties of Applied Value:

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



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