

File No. MA16034/05/0036

Project No.	AM1 - Tin Hau	Temple					
Date:	9-Jun-22		Next Due Date:	9- <i>A</i>	9-Aug-22		SK
Equipment No.:	A-0	1-05	Model No.:	GS	S2310	Serial No.	10599
			Ambient C	ondition			
Temperatur	re, Ta (K)	299.3	Pressure, Pa			754	
*	, , ,		,	<i>\</i>			
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05922	Intercept		-0.02420
Last Calibra	ation Date:	31-Jan-22			$c = [\Delta H \times (Pa/760]]$		
Next Calibra	ation Date:	31-Jan-23		$Qstd = \{ [\Delta H \ x] $	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} / mo	c
			Calibration of '	ΓSP Sampler			
Calibration		Oı	fice			HVS	1/2
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		50) x (298/Ta)] ^{1/2} -axis
1	13.4		3.64	61.84	9.8	3	3.11
2	10.3		3.19	54.27	7.4	2	2.70
3	7.9		2.79	47.58	5.6	2	2.35
4	5.5		2.33	39.77	3.5	1.86	
5	3.2		1.78	30.43	2.1	1	1.44
	0.0540 coefficient* =	_	.9988	Intercept, bw =	-0.234	17	
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration (Curve, take Qstd		acuiativii			
		ne "Y" value acco					
		mw x ($\mathbf{Qstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (m	nw x Qstd + bw)	² x (760 / Pa) x (7	Γa / 298) =	4.42		
Remarks:							
Conducted by:	Wong Sh	ning Kwai	Signature:	K	火-	Date:	9-Jun-22
Checked by:	Henry	Leung	Signature:	-lem	y C	Date:	9-Jun-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA16034/05/0037

Project No.	AM1 - Tin Hau	Temple					
Date:	9-A	ug-22	Next Due Date:	9-0	Oct-22	Operator:	SK
Equipment No.:	A-0	01-05	Model No.:	GS	S2310	Serial No.	10599
			Ambient C	ondition			
Temperatur	re Ta(K)	299.7	Pressure, Pa			752.8	
Temperatur	ic, iu (ii)	277.1	Tressure, ru	(IIIIII Ig)		732.0	
		Or	ifice Transfer Sta	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05922	Intercept	, bc	-0.02420
Last Calibra	ntion Date:	31-Jan-22			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	31-Jan-23		$\mathbf{Qstd} = \{ [\Delta \mathbf{H} \ \mathbf{x}] \}$	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} / m	c
			Calibration of	TSP Sampler	T		
Calibration		Oı	fice	I		HVS	1/2
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	(50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		50) x (298/Ta)] ^{1/2} -axis
1	13.2		3.61	61.29	9.7		3.09
2	10.1		3.15	53.67	7.2		2.66
3	7.7		2.75	46.91	5.4		2.31
4	5.3		2.28	38.99	3.3	1.80	
5	3.1		1.75	29.91	2.0	1.40	
By Linear Regr Slope, mw = Correlation o	0.0546 coefficient* =	0	.9986	Intercept, bw :	-0.266	5	
			Set Point C	alculation			
From the TSP Fi	eld Calibration (Curve take Ostd		aicuiation			
From the Regres		_					
	,		-				
		mw x Q	$\mathbf{pstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (n	nw x Qstd + bw)	² x (760 / Pa) x (′	Γa / 298) =	4.40		
Remarks:							
Conducted by:	Wong Sl	ning Kwai	Signature:	K	<u></u>	Date:	9-Aug-22
Checked by:	Henry	Leung	Signature:	\-lem	y Xoy	Date:	9-Aug-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA16034/08/0036

Project No.	AM2 - Sai Tso	Wan Recreation	Ground				
Date:	9-Jun-22		2 Next Due Date:		9-Aug-22		SK
Equipment No.:	A-0	01-08	Model No.:	GS	S2310	Serial No.	1287
			Ambient C	ondition			
Temperatur	re, Ta (K)	299.3	Pressure, Pa			754	
			=				
Comin 1	No		ifice Transfer Star			t ho	0.02420
Serial Last Calibra		3864	Slope, mc	0.05922	Intercept $c = [\Delta H \times (Pa/760)]$		-0.02420
Next Calibra		31-Jan-22 31-Jan-23			$(Pa/760) \times (298/7)$		
Next Canora	ation Date.	31-Jan-23	1		(1 a/ 100) X (270/ 1	1a) -bc// inc	
		•	Calibration of T	ΓSP Sampler			
Colibration		Oı	rfice			HVS	
Calibration Point	ΔH (orifice),	[AH v (Do/74	50) x (298/Ta)] ^{1/2}	Qstd (CFM)	ΔW (HVS), in.		0) x (298/Ta)] ^{1/2}
	in. of water	[Δ11 X (1 a/ / t	00) X (296/14)]	X - axis	of water	Y-	axis
1	13.4		3.64	61.84	9.7	3	3.10
2	10.6		3.24	55.05	7.0		2.63
3	8.0		2.81	47.88	5.4	2	2.31
4	5.5		2.33		3.7	1	.91
5	3.2		1.78	30.43	2.2	1	.47
By Linear Regr		X	•	Intonoont how	0.000	12	
Slope, mw =	coefficient* =	_	.9972	intercept, bw =	-0.090	13	
*If Correlation C							
'II Correlation C	0.9)	90, Check and led	Cambrate.				
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration (Curve, take Qstd	= 43 CFM				
From the Regress	sion Equation, th	ne "Y" value acc	ording to				
		,		(D. (E(0)) (A(20/m >1/2		
		mw x ($\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa//60) x (29	98/Ta)] *		
Therefore, Se	et Point; W = (m	nw x Qstd + bw)	² x (760 / Pa) x (7	Γa / 298) =	4.39		
Remarks:							
remarks.							
•							
a	,		~.	X	λ	-	0.4
Conducted by:	Wong Sh	ning Kwai	Signature:	/\		Date:	9-Jun-22
C1 4		•	~.	\ 0	y (Xoy	_	0.4.
Checked by:	Henry	Leung	Signature:	tem	7 m	Date:	9-Jun-22



File No. MA16034/08/0037

Project No.	AM2 - Sai Tso	Wan Recreation	Ground				
Date:	9-Aug-22		Next Due Date: 9-Oc		Oct-22	Operator:	SK
Equipment No.:	A-(01-08	Model No.:	GS	S2310	Serial No.	1287
			Ambient C	ondition			
Temperatur	e, Ta (K)	299.7	Pressure, Pa			752.8	
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05922	Intercept		-0.02420
Last Calibra	tion Date:	31-Jan-22			$c = [\Delta H \times (Pa/760]]$		
Next Calibra	ntion Date:	31-Jan-23		$\mathbf{Qstd} = \{ [\Delta \mathbf{H} \ \mathbf{x}] \}$	(Pa/760) x (298/7	[a)] ^{1/2} -bc} / mo	;
			Calibration of T	ΓSP Sampler	T		
Calibration		Oı	rfice	T		HVS	1/2
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		0) x (298/Ta)] ^{1/2} -axis
1	13.2		3.61	61.29	9.5	3	3.06
2	10.4		3.20	54.45	6.8	2	2.59
3	7.8		2.77	47.21	5.2	2	2.26
4	5.4		2.31	39.35	3.6	1	.88
5	3.1		1.75	29.91	2.1	1	.44
By Linear Regressions Slope, mw =	0.0505	_		Intercept, bw :	-0.099	8	
	coefficient* =		.9971	ī			
*If Correlation C	oefficient < 0.9	90, check and re	calibrate.				
			Set Point Ca	lculation			
From the TSP Fig	eld Calibration	Curve_take Ostd		irculation			
From the Regress							
Trom the Regress	sion Equation, t	ne i varae ace	ording to				
		mw x ($\mathbf{Qstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
	.		2 (50)				
Therefore, Se	et Point; W = (r	nw x Qstd + bw)	$x^2 \times (760 / Pa) \times (78)$	Ta / 298) =	4.36		
Remarks:							
•							
•							
Conduct 11	33 7 O	him a Vanci	G :	X	λ	Deter	0. 4 22
Conducted by:	wong S	hing Kwai	Signature:			Date:	9-Aug-22
Checked by:	Henry	/ Leung	Signature:	\-lem	~ X27	Date:	9-Aug-22



File No. MA16034/03/0036

Project No.	AM3 - Yau Lai	Estate, Bik Lai I	House				
Date:	9-Jun-22		Next Due Date: 9-Aug-22		Aug-22	Operator:	SK
Equipment No.:	A-0	01-03	Model No.:	G:	S2310	Serial No.	10379
			Ambient C	ondition			
Temperatur	re, Ta (K)	299.3	Pressure, Pa			754	
	, ()			(8)			
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05922	Intercept	t, bc	-0.02420
Last Calibra	ation Date:	31-Jan-22			$c = [\Delta H \times (Pa/760]]$		
Next Calibra	ation Date:	31-Jan-23		$Qstd = \{ [\Delta H \ x] \}$	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} / mo	c
			Calibration of	TSP Sampler	T		
Calibration		Oı	fice	Γ		HVS	1/2
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		50) x (298/Ta)] ^{1/2} -axis
1	12.9		3.57	60.69	9.1	3	3.00
2	10.1		3.16	53.75	6.8	2	2.59
3	8.1		2.83	48.17	5.3	2	2.29
4	5.0		2.22	37.94	3.2	1.78	
5	2.8		1.66	28.49	1.8	1.33	
	0.0514 coefficient* =	_	.9990	Intercept, bw :	-0.158	80	
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration (Curve, take Qstd		inculation			
		ne "Y" value acco					
1108100							
		mw x ($\mathbf{Qstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (m	nw x Qstd + bw)	² x (760 / Pa) x (7	Γa / 298) =	4.27		
Remarks:							
Conducted by:	Wong Sh	ning Kwai	Signature:	K	<u></u>	Date:	9-Jun-22
Checked by:	Henry	Leung	Signature:	-lem	y C	Date:	9-Jun-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA16034/03/0037

Project No.	AM3 - Yau Lai	Estate, Bik Lai I	House				
Date:	9-Aug-22		Next Due Date:	9-0	Oct-22	Operator:	SK
Equipment No.:	A-()1-03	Model No.:	GS	S2310	Serial No.	10379
			Ambient C	ondition			
Temperatur	re Ta (K)	299.7	Pressure, Pa			752.8	
Temperatur	ic, 14 (11)	200.1	r ressure, r u	(minig)		732.0	
		Or	ifice Transfer Sta	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05922	Intercept	, bc	-0.02420
Last Calibra	tion Date:	31-Jan-22			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	31-Jan-23	($Qstd = \{ [\Delta H \ x] \}$	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} / m	c
			Calibration of	TSP Sampler			
Calibration		Oı	fice	T		HVS	1/0
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		50) x (298/Ta)] ^{1/2} -axis
1	12.7		3.54	60.13	8.8		2.94
2	10.0		3.14	53.40	6.7		2.57
3	7.9		2.79	47.51	5.1		2.24
4	4.8		2.17	37.12	3.0		1.72
5	2.6		1.60	27.43	1.7		1.29
By Linear Regr Slope, mw = Correlation C	0.0505 coefficient* =	0	.9988	Intercept, bw : -	-0.127	3	
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration	Curve, take Ostd					
From the Regress		_					
C			-		1/0		
		mw x Q	$\mathbf{pstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (n	nw x Qstd + bw)	² x (760 / Pa) x (′	Γa / 298) =	4.25		
Remarks:							
Conducted by:	Wong Sl	hing Kwai	Signature:	K	X-	Date:	9-Aug-22
Checked by:	Henry	/ Leung	Signature:	\-lem	y Xoy	Date:	9-Aug-22



File No. MA20003/55/0015

Project No.	CKL 2 - Flat 103	Cha Kwo Ling	Village				
Date:	5-Jul-22		Next Due Date:	4-Sep-22		Operator:	SK
Equipment No.:	A-01	-55			E 5170		1956
			Ambient C	Condition			
Temperatur	re, Ta (K)	302	Pressure, Pa			753.2	
	T	Ori	fice Transfer Sta	ndard Informa	tion		
Serial	No.	3864	Slope, mc	0.05922	Intercept		-0.02420
Last Calibra		31-Jan-22			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	31-Jan-23		$\mathbf{Qstd} = \{ [\Delta \mathbf{H} \ \mathbf{x}] \}$	(Pa/760) x (298/7	[a)] ^{1/2} -bc} / mc	
	Ι		Calibration of	TSP Sampler		******	
Calibration	ΔH (orifice),		fice	Octd (CEM)	AW (IIVE) :-	HVS	0) x (298/Ta)] ^{1/2}
Point	in. of water	[ΔH x (Pa/76	(0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	Δ W (HVS), in. of water		axis
1	12.8		3.54	60.15	9.8		.10
2	10.8		3.25	55.29	7.6		.73
3	8.6	,	2.90	49.38	5.9	2	.40
4	5.3	2.28		38.85	3.2	1	.77
5	2.9		1.68	28.85	1.8	1	.33
Ry Linear Regr	ression of Y on X						
Slope, mw =				Intercept, bw =	-0.354	1	
Correlation coefficient* = 0.9968							
*If Correlation C	Coefficient < 0.99	0, check and rec	alibrate.	_			
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration C	urve, take Qstd	= 43 CFM				
From the Regres	sion Equation, the	e "Y" value acco	ording to				
		mw v C	$\mathbf{pstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Po/760) v (20	08/Ta)] ^{1/2}		
		mw x Q		(1 a/ 700) X (2)	76/ 1 a)]		
Therefore, Se	et Point; W = (my	$w \times Qstd + bw$	2 x (760 / Pa) x ($^{\prime}$	Ta / 298) =	4.37		
Remarks:							
Conducted by	Wara Chi	a V	C: atrana	X)	Ͻ ∤ _	Dotor	5-Jul-22
Conducted by:	Wong Shi	ing K wai	Signature:			Date:	J-Jul-22
Charles d k	II	Launa	C:	\ 0	V	Data	5 Jul 22
спескей бу:	Henry	Leung	Signature:	ten	1 mont	Date:	5-Jul-22

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00160 Issue Date : 10 Jan 2022

Application No. : HP00040

Certificate of Calibration

Applicant : Cinotech Consultants Limited

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-08-07

Manufacturer: : SVANTEK

Other information : | Model No.

Model No.	SVAN 957
Serial No.	21455
Microphone No.	22391

Date Received : 03 Jan 2022

Test Period : 10 Jan 2022 to 10 Jan 2022

Test Requested : Performance checking for Sound Level Meter

Test Method : The Sound Level Calibrator has been calibrated in accordance with the

documented procedures and using standard and instrument which are

recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius

Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark: 1. Information of the sample description provided by the Applicant.

2. The result(s) relate only to the items tested or calibrated.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Lee Wai Kit Laboratory Manager

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00160 | Issue Date : 10 Jan 2022

Application No. : HP00040

Certificate of Calibration

Measuring equipment

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	93.9	-0.1	± 1.5
114.0	113.8	-0.2	± 1.5

Note

- : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
 - 2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00168 Issue Date : 25 Jan 2022

Application No. : HP00044

Certificate of Calibration

Applicant : Cinotech Consultants Limited

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-08-11

Manufacturer: : SVANTEK

Other information :

Model No.	SVAN 957
Serial No.	23852
Microphone No.	22454

Date Received : 20 Jan 2022

Test Period : 21 Jan 2022 to 21 Jan 2022

Test Requested : Performance checking for Sound Level Meter

Test Method : The Sound Level Calibrator has been calibrated in accordance with the

documented procedures and using standard and instrument which are

recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius

Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark: 1. Information of the sample description provided by the Applicant.

2. The result(s) relate only to the items tested or calibrated.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Lee Wai Kit Laboratory Manager

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00168 | Issue Date : 25 Jan 2022

Application No. : HP00044

Certificate of Calibration

Measuring equipment

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+0.1	± 1.5
114.0	114.2	+0.2	± 1.5

Note

- : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
 - 2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00150 Issue Date : 16 Nov 2021

Application No. : HP00032

Certificate of Calibration

Applicant : Cinotech Consultants Limited

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Sound Level Calibrator.

Equipment No.: : N-13-01

Manufacturer: : SOUNDTEK

Other information : Model No. ST-120

Serial No. 181001608

Date Received : 05 Nov 2021

Test Period : 08 Nov 2021 to 12 Nov 2021

Test Requested : Performance checking for Sound Level Calibrator

Test Method : The Sound Level Meter and Calibrator has been calibrated in accordance with

the documented procedures and using standard and instrument which are

recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius

Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : 1. Information of the sample description provided by the Applicant.

2. The result(s) relate only to the items tested or calibrated.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Lee Wai Kit Laboratory Manager

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00150 | Issue Date : 16 Nov 2021

Application No. : HP00032

Certificate of Calibration

Measuring equipment

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Description	Sound Meter
Manufacturer	BSWA Technology
Model No.	BSWA 308
Serial No.	570188
Microphone No.	570608
Equipment No.	N-12-03

Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+0.1	± 0.3
114.0	114.0	0.0	± 0.5

Note

- : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
 - 2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

Digital Dust Indicator



Date of Calibration 29-Jul-22

Certificate of Calibration

Description:

Manufacturer:	Sibata Scient	ific Technology LTD.	_	Validity of Caliba	ration Record	28-Sep-22
Model No.:	LD-5R					
Serial No.:	972778					
Equipment No.:	SA-01-07		Sensitivity	0.001 mg/m3	_	
High Volume Sa	mpler No.:	A-01-03	Before Sensitiv	vity Adjustment	735 CPM	
Tisch Calibration	n Orifice No.:	3864	After Sensitivi	ty Adjustment	735 CPM	
		Cal	libration of 1 h	r TSP		
Calibration		Laser Dust Monitor			HVS	
Point	M	Iass Concentration (μg/	m3)	Mas	ss concentration (µ	g/m^3)
		X-axis			Y-axis	
2		73.0 64.0			155.0 133.0	
3		51.0			109.0	
Average		62.7		132.3		
Slope , mw = Correlation co	2.07 pefficient* =	0.9968	Interd	ept, bw =	2.3896	
		Se	t Correlation F	actor		
	-	High Volume Sampler (μg/m ³)	132.3		
	-	Oust Meter (μg/m ³)		62.7		
Measureing time					60.0	
Set Correlation F SCF = [K=Higl		npler / Dust Meter, (μ	g/m3)]	2.1		
The Dust Monitor Factor (CF) betw	or was compare veen the Dust I	to the instruction manual of the instruction manual of with a calibrated High Monitor and High Volumeted by HOKLAS laborated	gh Volume Samp me Sampler.		was used to gener	ate the Correlation
Calibrated by:	,	ng Shing Kwai)	_	Approved by:	Ct Manager (Henry	Leung)

Digital Dust Indicator



Date of Calibration 29-Jul-22

Certificate of Calibration

Description:

Manufacturer:	Sibata Scienti	ific Technology LTD.	_	Validity of Calibr	ration Record	28-Sep-22
Model No.:	LD-5R					
Serial No.:	972779					
Equipment No.:	SA-01-08		Sensitivity	0.001 mg/m3	_	
High Volume Sa	mpler No.:	A-01-03	Before Sensiti	vity Adjustment	744 CPM	
Tisch Calibration	n Orifice No.:	3864	After Sensitivi	ty Adjustment	744 CPM	
		Cal	libration of 1 h	r TSP		
Calibration		Laser Dust Monitor	•		HVS	
Point	Mass Concentration (μg/m3)		m3)	Mas	ss concentration ($\mu g/m^3$)
1		X-axis			Y-axis	
1 2	74.0			157.0 135.0		
3		63.0 51.0			110.0	
Average	62.7		134.0			
Slope , mw = Correlation co	2.04 pefficient* =	0.9999		cept, bw =	5.9043	_
Darticaulate Con	contration by I	High Volume Sampler (t Correlation F	actor	124.0	
		Oust Meter ($\mu g/m^3$)	μg/III)	134.0 62.7		
Measureing time		(1-8)		60.0		
Set Correlation F SCF = [K=High		npler / Dust Meter, (μş	g/m3)]	2.1		
The Dust Monitor Factor (CF) betw	or was compare ween the Dust M	to the instruction manual of the instruction manual of with a calibrated High Monitor and High Volumeted by HOKLAS laborated	gh Volume Sam me Sampler.		was used to gene	rate the Correlation
Calibrated by:	-	ng Shing Kwai)	_	Approved by:	t Manager (Henr	y Leung)

Digital Dust Indicator



Date of Calibration 29-Jul-22

Certificate of Calibration

Description:

Manufacturer:	Sibata Scient	ific Technology LTD.	<u>-</u>	Validity of Calib	ration Record	28-Sep-22
Model No.:	LD-5R					
Serial No.:	972780					
Equipment No.:	SA-01-09		Sensitivity	0.001 mg/m3	_	
High Volume Sa	mpler No.:	A-01-03	Before Sensiti	ivity Adjustment	739 CPM	
Tisch Calibration	n Orifice No.:	3864	After Sensitiv	ity Adjustment	739 CPM	
		Cal	libration of 1 h	nr TSP		
Calibration		Laser Dust Monitor	•		HVS	
Point	Mass Concentration (μg/m3) X-axis		m3)	Mas	ss concentration (µ	ıg/m³)
1					Y-axis	
2		72.0 64.0			161.0 145.0	
3		51.0			115.0	
Average		62.3			140.3	
Slope , mw = Correlation co	2.20 pefficient* =	0.9993		cept, bw =	3.0890	_
Particaulate Con	centration by I	Sei High Volume Sampler (t Correlation I	actor	140.3	
	-	Oust Meter ($\mu g/m^3$)	μg/111)	62.3		
Measureing time	-	(1.5)			60.0	
Set Correlation I	Factor , SCF			•		
SCF = [K=High	h Volume San	npler / Dust Meter, (με	g/m3)]	2.3		
The Dust Monitor Factor (CF) betw	or was compare veen the Dust I	to the instruction manual and with a calibrated High Monitor and High Volumeted by HOKLAS laborated	gh Volume Sam me Sampler.	-	was used to gener	rate the Correlation
Calibrated by:		ng Shing Kwai)	_	Approved by:	Lemot Manager (Henry	Leung)

Digital Dust Indicator



Date of Calibration 29-Jul-22

Certificate of Calibration

Description:

Manufacturer:	Sibata Scientific Technology LTD.	<u>-</u>	Validity of Calibr	ation Record	28-Sep-22
Model No.:	LD-5R				
Serial No.:	972781				
Equipment No.:	SA-01-10	Sensitivity	0.001 mg/m3		
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensitiv	vity Adjustment	734 CPM	
Tisch Calibration	Orifice No.: 3864	After Sensitivi	ty Adjustment	734 CPM	
	Cal	ibration of 1 h	r TSP		
Calibration	Laser Dust Monitor			HVS	
Point	Mass Concentration (μg/r X-axis	m3)	Mas	s concentration (μ Y-axis	g/m ³)
1	76.0			157.0	
2	64.0			134.0	
3	51.0 108.0				
Average	63.7		133.0		
Slope , mw = Correlation co	ession of Y on X 	Interc	ept, bw =	8.1780	
	Set	Correlation F	actor		
Particaulate Con	centration by High Volume Sampler (ug/m ³)		133.0	
Particaulate Con-	centration by Dust Meter (μg/m³)		63.7		
Measureing time				60.0	
Set Correlation F SCF = [K=High	actor , SCF n Volume Sampler / Dust Meter, (µg	/m3)]	2.1		
The Dust Monitor Factor (CF) betw	in according to the instruction manual or was compared with a calibrated Hig reen the Dust Monitor and High Volumers are weighted by HOKLAS labor	h Volume Samp ne Sampler.		was used to genera	ate the Correlation
Calibrated by:	al Officer (Wong Shing Kwai)		Approved by:	t Manager (Henry	Leung)





RECALIBRATION DUE DATE:

January 31, 2023

Certificate of Calibration

Calibration Certification Information

Cal. Date: January 31, 2022

Rootsmeter S/N: 438320

Ta: 294 °K

Pa: 752.6

Operator: Jim Tisch

mm Hg

Calibration Model #:

TE-5025A

Calibrator S/N: 3864

	Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔН
Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)
1	1	2	1	1.4490	3.2	2.00
2	3	4	1	1.0320	6.4	4.00
3	5	6	1	0.9160	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7230	12.7	8.00

	Data Tabulation					
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	√∆H(Ta/Pa)	
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)	
0.9995	0.6898	1.4169	0.9957	0.6872	0.8839	
0.9952	0.9643	2.0037	0.9915	0.9608	1.2500	
0.9932	1.0843	2.2402	0.9895	1.0802	1.3976	
0.9920	1.1363	2.3496	0.9883	1.1321	1.4658	
0.9868	1.3649	2.8337	0.9831	1.3598	1.7678	
	m=	2.09281		m=	1.31048	
QSTD	b=	-0.02426	QA [b=	-0.01514	
	r=	0.99993	,	r=	0.99993	

	Calculatio	ns	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/∆Time	Qa=	Va/ΔTime
	For subsequent flow ra	te calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$

	Standard Conditions
Tstd:	298.15 °K
Pstd:	760 mm Hg
	Key
ΔH: calibrate	or manometer reading (in H2O)
ΔP: rootsme	ter manometer reading (mm Hg)
Ta: actual ab	solute temperature (°K)
Pa: actual ba	rometric pressure (mm Hg)
b: intercept	
m: slope	

RECALIBRATION

US EPA recommends annual recalibration per 1998
40 Code of Federal Regulations Part 50 to 51,
Appendix B to Part 50, Reference Method for the
Determination of Suspended Particulate Matter in
the Atmosphere, 9.2.17, page 30



Certificate of Calibration - Wind Monitoring Station

Description: Yau Lai Estate, Bik Lai House

Manufacturer: <u>Davis Instruments</u>

Model No.: <u>Davis7440</u>

Serial No.: <u>MC01010A44</u>

Equipment No.: <u>SA-03-04</u>

Date of Calibration 19-Feb-2022

Next Due Date 19-Aug-2022

1. Performance check of Wind Speed

Wind Speed, m/s		Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V2)	D = V1 - V2
0.0	0.0	0.0
1.5	1.5	0.0
2.5	2.5	0.0
4.2	4.3	-0.1

2. Performance check of Wind Direction

Wind Direction (°)		Difference D (°)
Wind Direction Reading (W1)	Marine Compass Value (W2)	D = W1 - W2
0	0	0.0
90	90	0.0
180	180	0.0
270	270	0.0

Test Specification:

- 1. Performance Wind Speed Test The wind meter was on-site calibrated against the anemometer
- 2. Performance Wind Direction Test The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by: Approved by: Approved by: Henry Leung



Certificate of Calibration - Wind Monitoring Station

Description: Yau Lai Estate, Bik Lai House

Manufacturer: <u>Davis Instruments</u>

Model No.: <u>Davis7440</u>

Serial No.: MC01010A44

Equipment No.: <u>SA-03-04</u>

Date of Calibration 19-Aug-2022

Next Due Date 19-Feb-2023

1. Performance check of Wind Speed

Wind Speed, m/s		Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V2)	D = V1 - V2
0.0	0.0	0.0
1.5	1.5	0.0
2.5	2.6	-0.1
4.0	4.0	0.0

2. Performance check of Wind Direction

Wind Direction (°)		Difference D (°)
Wind Direction Reading (W1)	Marine Compass Value (W2)	D = W1 - W2
0	0	0.0
90	90	0.0
180	180	0.0
270	270	0.0

Test Specification:

- 1. Performance Wind Speed Test The wind meter was on-site calibrated against the anemometer
- 2. Performance Wind Direction Test The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by:

Wong Shing Kwai

Approved by:

Henry/Leung