

File No. MA16034/05/0042

Project No.	AM1 - Tin Hau	Temple					
Date:	12-Jun-23 Next Due Date: 13-Aug-23		Operator:	SK			
Equipment No.:	A-0	1-05	Model No.:	GS	\$2310	Serial No.	10599
			Ambient C	ondition			
Temperatur	re, Ta (K)	303.2	Pressure, Pa	(mmHg)		751.5	
•	· · · ·		•				
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	ation Date:	16-Jan-23	n	nc x Qstd + bo	$c = [\Delta H \times (Pa/760)]$	) x (298/Ta)] <sup>1/2</sup>	1
Next Calibra	ation Date:	16-Jan-24	(	$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/	<b>Γa)]<sup>1/2</sup> -bc} / m</b>	:
			Calibration of T	<b>FSP Sampler</b>			
Calibration		01	fice			HVS	
Point	$\Delta H$ (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/76 Y	0) x (298/Ta)] <sup>1/2</sup> •axis
1	13.0		3.55	60.55	9.6	3	3.05
2	10.1		3.13	53.44	7.1	2	2.63
3	7.4		2.68	45.83	5.1	2	2.23
4	5.5		2.31	39.59	3.2	1	.76
5	3.0		1.71	29.39	1.6	1	.25
By Linear Regr Slope , mw = Correlation of *If Correlation C	ession of Y on X 0.0586 coefficient* = Coefficient < 0.9	<b>X0</b> 90, check and rea	I .9986 calibrate.	intercept, bw	-0.498	3	
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration (	Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, tl	he "Y" value acc	ording to				
		mw x Q	$\Delta std + bw = [\Delta W x]$	(Pa/760) x (29	98/Ta)] <sup>1/2</sup>		
Therefore, Se	et Point; W = ( n	nw x Qstd + bw )	<sup>2</sup> x ( 760 / Pa ) x ( 7	Га / 298 ) =	4.21		
Remarks:							
Conducted by:	Wong Sh	ning Kwai	Signature:	K	火.	Date:	12-Jun-23
Checked by:	Henry	Leung	Signature:	-lem	1 drag	Date:	12-Jun-23



#### File No. MA16034/08/0042

Project No.	AM2 - Sai Tso	Wan Recreation	Ground				
Date:	12-Jun-23		Next Due Date: 13-A		Aug-23	Operator:	SK
Equipment No.:	A-0	1-08	Model No.:	GS	\$2310	Serial No.	1287
			Ambient (	Condition			
Temperatur	re, Ta (K)	303.2	Pressure, Pa	(mmHg)		751.5	
		0					
	No	<u>Or</u>	fice Transfer Sta	ndard Informa	Intercord	t ha	0.02401
Last Calibra	INU.	16 Jan 23	Slope, Ilic	$\frac{0.03928}{\text{mc x Ostd} + bc}$	$r = [AH \times (Pa/76)]$	$(298/T_{a})^{1/2}$	-0.03491
Next Calibra	ation Date:	16-Jan-24		$Ostd = \{ \Delta H x \}$	$(Pa/760) \ge (298/2)$	$[\Gamma_{a}]^{1/2} - bc \} / m$	с
Tion Cullon	ation Dute.			<u></u>	(		-
			Calibration of	TSP Sampler			
Calibration		01	fice			HVS	
Point	$\Delta H$ (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/76 Y	50) x (298/Ta)] <sup>1/2</sup> <b>-axis</b>
1	13.2		3.58	61.01	9.1		2.97
2	10.3		3.16	53.96	6.7		2.55
3	7.5		2.70	46.13	5.0		2.20
4	5.2		2.25	38.51	3.3		1.79
5	3.0		1.71	29.39	1.7		1.29
By Linear Regr Slope , mw = Correlation of	ession of Y on X 0.0526 coefficient* =	K 0	.9992	Intercept, bw =	-0.248	30	
*If Correlation C	Coefficient < 0.99	90, check and red	calibrate.	-			
			Set Point C	alculation			
From the TSP Fi	eld Calibration (	Curve, take Qstd	= 43 CFM				
From the Regress	sion Equation, th	ne "Y" value acco	ording to				
		mw x (	$\mathbf{O}$ std + bw = [ $\Delta \mathbf{W}$	x (Pa/760) x (29	$98/Ta)1^{1/2}$		
				(2, / 0 0) 12 (2)	() () ()		
Therefore, Se	et Point; W = ( m	w x Qstd + bw )	<sup>2</sup> x ( 760 / Pa ) x (	Ta / 298 ) =	4.17		
Remarks:							
				Ь			
Conducted by:	Wong Sł	ning Kwai	Signature	(	八-	Date:	12-Jun-23
					- 1		
Checked by:	Henry	Leung	Signature:	Hem	, any	Date:	12-Jun-23

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File No. MA16034/03/0042

Project No.	AM3 - Yau Lai	Estate, Bik Lai H	Iouse				
Date:	12-Jun-23 Next Due Date:		Next Due Date:	12-Aug-23		Operator:	SK
Equipment No.:	A-0	1-03	Model No.:	GS	\$2310	Serial No.	10379
			Ambient C	ondition			
Temperatur	re, Ta (K)	303.2	Pressure, Pa	(mmHg)		751.5	
•	· · · ·			( <u> </u>			
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	tion Date:	16-Jan-23	n	nc x Qstd + bc	$c = [\Delta H x (Pa/760)]$	) x $(298/Ta)$ ] <sup>1/2</sup>	
Next Calibra	ation Date:	16-Jan-24	(	$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/	Γa)] <sup>1/2</sup> -bc} / mo	:
			Calibration of T	<b>FSP Sampler</b>			
Calibration		Oı	fice			HVS	
Point	$\Delta H$ (orifice), in. of water	[ΔH x (Pa/76	60) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/76) Υ·	0) x (298/Ta)] <sup>1/2</sup> •axis
1	12.8		3.53	60.09	8.7	2	91
2	10.1		3.13	53.44	6.5	2	2.51
3	8.0		2.79	47.63	4.7	2	
4	5.0		2.20	37.77	3.0	1	.71
5	2.7		1.62	27.91	1.7	1	.29
By Linear Regr Slope , mw = Correlation ( *If Correlation C	ession of Y on 2 0.0501 coefficient* = Coefficient < 0.9	<b>X</b> 0 90, check and rec	1.9957 calibrate.	intercept, bw =	-0.161	7	
Enour the TSD E	ald Calibration (	Comune dallas Octal	Set Point Ca	alculation			
From the TSP Fi		Lurve, take Qstd	= 43 CFM				
From the Regres	sion Equation, t	ne "Y" value acc	braing to				
		mw x Q	$\mathbf{std} + \mathbf{bw} = [\Delta \mathbf{W} \mathbf{x}]$	(Pa/760) x (29	$98/Ta)]^{1/2}$		
Therefore, Se	et Point; W = ( n	nw x Qstd + bw )	<sup>2</sup> x ( 760 / Pa ) x ( 7	Γa / 298 ) =	4.08		
Remarks:							
Conducted by:	Wong Sh	ning Kwai	Signature:	K	火.	Date:	12-Jun-23
Checked by:	Henry	Leung	Signature:	-lem	1 dran	Date:	12-Jun-23



File No. MA20003/55/019

Project No.	CKL 2 - Flat 103	3 Cha Kwo Ling	Village			. –	
Date:	04-M	ay-23	Next Due Date:		Jul-23	Operator:	SK
Equipment No.:	Equipment No.: A-01-55		Model No.:	TE	2 5170	Serial No.	1956
			Ambient (	Condition			
Temperatu	ire, Ta (K)	290.4	Pressure, Pa	ı (mmHg)		767.6	
		Ori	fice Transfer Sta	ndard Informa	ation		
Seria	1 No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	ation Date:	16-Jan-23	]	mc x Qstd + bo	$c = [\Delta H \times (Pa/760)]$	) x (298/Ta)] <sup>1/</sup>	'2
Next Calibr	ration Date:	16-Jan-24		$\mathbf{Qstd} = \{ [\Delta \mathbf{H} \mathbf{x} ] \}$	(Pa/760) x (298/2	$[\Gamma a)]^{1/2} - bc\} / m$	iC
		Or	Calibration of	TSP Sampler		HVS	
Calibration Point	$\Delta H$ (orifice), in. of water	[ΔH x (Pa/76	$(10) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/76	50) x (298/Ta)] <sup>1/2</sup> Z- <b>axis</b>
1	13.0		3.67	62.51	10.2		3.25
2	10.8		3.35	57.03	8.2		2.92
3	8.7		3.00	51.24	6.3	2.56	
4	5.3		2.34	40.13	3.1		1.79
5	2.9		1.73	29.83	1.8		1.37
By Linear Reg Slope , mw =	ression of Y on X 0.0592	<u>-</u>		Intercept, bw =	-0.473	34	
Correlation *If Correlation (	<b>coefficient* =</b> Coefficient < 0.99	0, check and rec	calibrate.	_			
			Set Point C	alculation			
From the TSP F From the Regres	ield Calibration C ssion Equation, th	Curve, take Qstd e "Y" value acco <b>mw x Q</b>	= 43 CFM ording to $p_{std} + bw = [\Delta W > 2]$	x (Pa/760) x (29	98/Ta)] <sup>1/2</sup>		
Therefore, S	et Point; W = ( m	w x Qstd + bw )	<sup>2</sup> x ( 760 / Pa ) x (	Ta / 298 ) =	4.14		
Remarks:							
Conducted by:	Wong Sh	ing Kwai	Signature:	k	<u>у</u> .	Date:	04-May-23
Checked by:	Henry	Leung	Signature:	1_0	Non of	Date:	04-May-23



File No. MA20003/55/020

Project No.	CKL 2 - Flat 10	3 Cha Kwo Ling	Village			-	
Date:	4-Ju	1-23	Next Due Date:	4-Sep-23		Operator:	SK
Equipment No.:	A-0	1-55	Model No.:	TE	E 5170	Serial No.	1956
			Ambient C	ondition			
Temperatur	re, Ta (K)	302.3	Pressure, Pa	(mmHg)		756.6	
		Ori	fice Transfer Sta	ndard Inform	ation		
Serial	No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	tion Date:	16-Jan-23	1	nc x Qstd + bo	$c = [\Delta H \times (Pa/760)]$	) x (298/Ta)]	1/2
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/2	Га)] <sup>1/2</sup> -bc} / 1	nc
			Calibration of				
		Or	Calibration of	ISP Sampler		HVS	
Calibration Point	$\Delta H$ (orifice), in. of water	[ΔH x (Pa/76	0) x $(298/Ta)$ ] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/7	760) x (298/Ta)] <sup>1/2</sup> <b>Y-axis</b>
1	12.9		3.56		9.8		3.10
2	10.9		3.27		7.8		2.77
3	8.8	,	2.94		6.0		2.43
4	5.0	,	2.22	37.96	2.8	1.66	
5	3.0		1.72	29.53	1.7		1.29
By Linear Regr Slope , mw = Correlation ( *If Correlation C	ession of Y on X 0.0589 coefficient* = Coefficient < 0.99	0, check and rec	9977 alibrate.	Intercept, bw = -	-0.505	59	
From the TSP Fi From the Regres	eld Calibration C sion Equation, th	Curve, take Qstd e "Y" value acco <b>mw x Q</b> w x Ostd + bw 2	Set Foint C: = 43 CFM ording to $abc = [\Delta W x]$	arculation (Pa/760) x (29	98/Ta)] <sup>1/2</sup>		
Remarks:	a i omi, w – ( m	w x Qsiu + 0w )	x (700/1a)x (	14 / 290 ) -			
Conducted by:	Wong Sh Henry	ing Kwai Leung	Signature:		X.	Date:	4-Jul-23



#### **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Laser Dust Mc	onitor		Date of Calibration 31-May-23			
Manufacturer:	Sibata Scientif	ic Technology LTD.		Validity of Calibra	tion Record	31-Jul-23	
Model No.:	LD-3B	<u>.</u>					
Serial No.:	2Y6194	<u>-</u>					
Equipment No.:	SA-01-02	<u>-</u>	Sensitivity	0.001 mg/m3			
High Volume Sa	ampler No.:	A-01-03	Before Sensi	tivity Adjustment	578		
Tisch Calibration	n Orifice No.:	3864	After Sensitiv	vity Adjustment	578		
		Calibra	tion of 1 hr T	SP			
Calibration		Laser Dust Monitor			HVS		
Point	Total Count	Count / Minute X-axis		Mass	concentration ( Y-axis	μg/m <sup>3</sup> )	
1	4080	71.0			136.0		
2	3600	62.0			118.0		
3	2880	51.0			97.0		
Aver	rage	61.3			117.0		
By Linear Regr Slope , mw =	ession of Y on 1.94	X 185	Inter	rcept, bw =	-2.5083	3	
Correls	ation coefficien	.t* =0.999	99				
Set Correlation I SCF = [ K=Hig]	Factor , SCF h Volume Sam	pler / Dust Meter, ( µ g/m3) ]		1.9			

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Limited)

Calibrated by:

Approved by: ~ an Project Manager (Henry Leung)



#### **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator	Date	of Calibration	31-May-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibr	ration Record	31-Jul-23
Model No.:	LD-5R			
Serial No.:	8Y2374			
Equipment No.:	SA-01-04	Sensitivity 0.001 mg/m3	-	
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensitivity Adjustment	652	
Tisch Calibration	orifice No.: 3864	After Sensitivity Adjustment	652	

	Calibration	n of 1 hr TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ( $\mu g/m^3$ )
X-axis		Y-axis
1	72.0	133.0
2	65.0	120.0
3	52.0	98.0
Average	63.0	117.0
Correlation co	efficient* = 0.9997	
	Set Correl	ation Factor
Particaulate Cond	centration by High Volume Sampler $(\mu g/m^3)$	
Particaulate Con	centration by Dust Meter $(\mu g/m^3)$	63.0
Managemain a time		60.0
Measureing ume.	, (min)	00.0
Set Correlation F	actor, SCF	
SCF = [ K=High	Volume Sampler / Dust Meter, (µg/m3) ]	1.9

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Technical Officer (Wong Shing Kwai)

Calibrated by:



#### **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date	of Calibration	31-May-23
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calib	ration Record	31-Jul-23
Model No.:	LD-5R				
Serial No.:	8Y2373				
Equipment No.:	SA-01-05	Sensitivity	0.001 mg/m3	_	
High Volume Sa	mpler No.: A-01-03	Before Sensiti	vity Adjustment	657	
Tisch Calibration	n Orifice No.: 3864	After Sensitiv	ity Adjustment	657	
Calibration of 1 br TSP					

	Calibration	of 1 hr 1SP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ( $\mu g/m^3$ )
Tollit	X-axis	Y-axis
1	73.0	134.0
2	64.0	115.0
3	53.0	97.0
Average	63.3	115.3
Correlation co		
	Set Correla	ition Factor
Particaulate Con-	centration by High Volume Sampler ( $\mu g/m^3$ )	115.3
Particaulate Con-	centration by Dust Meter ( $\mu g/m^3$ )	63.3
Measureing time	e, (min)	60.0
Set Correlation F	Factor, SCF	
SCF = [ K=Higl	h Volume Sampler / Dust Meter, (µg/m3) ]	1.8

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Technical Officer (Wong Shing Kwai)

Calibrated by:



#### **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date	31-May-23	
Manufacturer:	nufacturer: Sibata Scientific Technology LTD.		Validity of Calibration Record		31-Jul-23
Model No.:	LD-5R				
Serial No.:	972777				
Equipment No.:	SA-01-06	Sensitivity	0.001 mg/m3	-	
High Volume Sa	ampler No.: A-01-03	Before Sensiti	vity Adjustment	645	
Tisch Calibration Orifice No.: 3864		After Sensitivi	ty Adjustment	645	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor			HVS	
Point	Mass Concentration (µg/	′m3)	Mass concentration ( $\mu g/m^3$ )		
1 Onite	X-axis			Y-axis	
1	72.0			138.0	
2	64.0			119.0	
3	52.0			100.0	
Average	62.7			119.0	

By Linear Regre	ession of Y on X			
Slope , mw =	1.8750		Intercept, bw =	1.5000
Correlation co	efficient* =	0.9934		

Set Correlation F	Set Correlation Factor						
Particaulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )	119.0						
Particaulate Concentration by Dust Meter (µg/m <sup>3</sup> )	62.7						
Measureing time, (min)	60.0						
Set Correlation Factor , SCF							
SCF = [ K=High Volume Sampler / Dust Meter, (µg/m3) ]	1.9						

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Calibrated by:

Approved by: Project Manager (Henry Leung)



#### **Certificate of Calibration**

1

2

3

Average

By Linear Regression of Y on X Slope , mw = 2.0440

Correlation coefficient\* =

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date	of Calibration	31-May-23		
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibr	ration Record	31-Jul-23		
Model No.:	LD-5R						
Serial No.:	972778						
Equipment No.:	SA-01-07	Sensitivity	0.001 mg/m3	-			
High Volume Sa	impler No.: A-01-03	Before Sensiti	vity Adjustment	735 CPM			
Tisch Calibration	n Orifice No.: <u>3864</u>	After Sensitivi	ity Adjustment	735 CPM			
	Calibration of 1 hr TSP						
Calibration	Laser Dust Monitor	r		HVS			
Point	Mass Concentration (µg/	m3)	Mas	ss concentration (µ	ıg/m <sup>3</sup> )		
	X-axis			Y-axis			

	-
Set Correlation F	Factor
Particaulate Concentration by High Volume Sampler ( $\mu g/m^3$ )	117.0
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )	59.0
Measureing time, (min)	60.0
Set Correlation Factor , SCF	
SCF = [ K=High Volume Sampler / Dust Meter, (µg/m3) ]	2.0

Intercept, bw =

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

68.0

60.0

49.0

59.0

0 9989

Calibrated by:

Approved by: \_\_\_\_\_\_\_ Project Manager (Henry Leung)

136.0

118.0

97.0

117.0

-3.5934



#### **<u>Certificate of Calibration</u>**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date of Calibration		31-May-23
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibration Record		31-Jul-23
Model No.:	LD-5R				
Serial No.:	972779				
Equipment No.:	SA-01-08	Sensitivity	0.001 mg/m3	_	
High Volume Sa	impler No.: A-01-03	Before Sensit	ivity Adjustment	744 CPM	
Tisch Calibration	n Orifice No.: <u>3864</u>	After Sensitiv	vity Adjustment	744 CPM	
Calibration of 1 br TSP					

Calibration	Laser Dust Monitor	HVS					
Point	Mass Concentration (µg/	$Mass concentration (\mu g/m^3)$					
	X-axis	Y-axis					
1	70.0	137.0					
2	59.0	118.0					
3	50.0	97.0					
Average	59.7	117.3					
By Linear Regr Slope , mw = Correlation co	ession of Y on X 	Intercept, bw = -1.4053					
	Se	t Correlation Factor					
Particaulate Con	centration by High Volume Sampler	(μg/m <sup>3</sup> ) 117.3					
Particaulate Con	centration by Dust Meter ( $\mu g/m^3$ )	59.7					
Measureing time	, (min)	60.0					
Set Correlation Factor, SCF							
SCF = [ K=High	n Volume Sampler / Dust Meter, (μ	g/m3)] <u>2.0</u>					

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Calibrated by:



#### **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator	Date of Calibration		31-May-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibration Record		31-Jul-23
Model No.:	LD-5R			
Serial No.:	972780			
Equipment No.:	SA-01-09	Sensitivity 0.001 mg/m3	-	
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensitivity Adjustment	739 CPM	
Tisch Calibration	n Orifice No.: 3864	After Sensitivity Adjustment	739 CPM	

	Calibration	n of 1 hr TSP			
Calibration	Laser Dust Monitor		HVS		
Point	Mass Concentration (µg/m3)	Ma	ass concentration ( $\mu g/m^3$ )		
Tom	X-axis		Y-axis		
1	72.0		139.0		
2	62.0		119.0		
3	51.0		98.0		
Average	61.7		118.7		
Slope , mw = Correlation coeff		Intercept, bw =	-1.0858		
	Set Correl	ation Factor			
Particaulate Concer	tration by High Volume Sampler ( $\mu$ g/m <sup>3</sup> )		118.7		
Particaulate Concern	tration by Dust Meter ( $\mu g/m^3$ )		61.7		
Measureing time, (r	nin)		60.0		
Set Correlation Fact	tor, SCF				
SCF = [ K=High V	olume Sampler / Dust Meter, (μg/m3) ]	1.9	1		

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Calibrated by:



#### **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust I	ndicator		Date	of Calibration	31-May-23
Manufacturer:	Sibata Scientific Technology LTD.		Validity of Calibration Record		31-Jul-23	
Model No.:	LD-5R					
Serial No.:	972781					
Equipment No.:	SA-01-10		Sensitivity	0.001 mg/m3	-	
High Volume Sa	mpler No.:	A-01-03	Before Sensiti	vity Adjustment	734 CPM	
Tisch Calibration	n Orifice No.:	3864	After Sensitivity Adjustment		734 CPM	

Calibration of 1 hr TSP					
Calibration	Laser Dust Monitor	HVS			
Point	Mass Concentration (µg/m3)	Mass concentration ( $\mu g/m^3$ )			
	X-axis	Y-axis			
1	79.0	131.0			
2	69.0	113.0			
3	58.0	96.0			
Average	68.7	113.3			
Correlation co	efficient* = 0.9990				
	Set Correla	tion Factor			
Particaulate Con-	centration by High Volume Sampler (µg/m <sup>3</sup> )	113.3			
Particaulate Con-	centration by Dust Meter ( $\mu g/m^3$ )	68.7			
Measureing time	, (min)	60.0			
Set Correlation F	Factor, SCF				
SCF = [ K=Higl	h Volume Sampler / Dust Meter, (µg/m3) ]	1.7			

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Technical Officer (Wong Shing Kwai)

Calibrated by:



RECALIBRATION

**DUE DATE:** 

January 16, 2024

Certificate of Calibration

			Calibration	Certificati	on Informat	ion		
Cal. Date:	January 16	, 2023	Roots	meter S/N:	438320	Ta:	293	°К
Operator:	Jim Tisch					Pa:	749.0	mm Hg
Calibration	Model #:	el #: TE-5025A Calibrator S/N: 3864						
					47	4.0	AU	1
		Vol. Init	Vol. Final		ΔTime			
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)		-
	1	1	2	1	1.4440	5.2	2.00	{
	2	5	4	1	0.0100	8.0	5.00	1
	3		0	1	0.9100	8.8	5.50	1
	5	9	10	1	0.7210	12.8	8.00	1
				Data Tabula	tion		man a start	i
								1
	Vstd	Qstd	√∆H( <u>Pa</u>	_) <u>(_Tstd</u> ) ∟)(_Ta)		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax	(is)	Va	(x-axis)	(y-axis)	
	0.9981	0.6912	1.41	59	0.9957	0.6896	0.8845	]
	0.9938	0.9724	2.00	24	0.9915	0.9701	1.2509	
	0.9917	1.0898	2.23	88	0.9893	1.0872	1.3985	
	0.9906	1.1373	2.34	80	0.9883	1.1346	1.4668	
	0.9853	1.3665	2.83	18	0.9829	1.3633	1.7690	
		m=	2.094	152		m=	1.31155	
	QSTD	b=	-0.034	-0.03493		b=	-0.02182	
		r=	0.999	995		r=	0.99995	
				Calculatio	ns			
	Vstd=	ΔVol((Pa-ΔP	)/Pstd)(Tstd/T	a)	Va= ΔVol((Pa-ΔP)/Pa)			
	Qstd=	Vstd/∆Time			Qa=	Va/ <b>Δ</b> Time		
			For subsequ	ient flow ra	te calculatio	ns:		
	Qstd=	1/m((√∆H(	( <u>Pa</u> )( <u>Tstd</u> Pstd (Ta	-))-ь)	Qa=	1/m ((√∆H	H(Та/Ра))-b)	
	Standard	Conditions						
Tstd	298.15	°К				RECA	LIBRATION	
Pstd	760	mm Hg				ammondea	nnual recalibratio	on ner 100
	or manama	tor roading /			AD Code	of Federal		50 to 51
AP: rootem	or manome	eter reading (I	(mm Hg)		Appondia	B to Dart FO	Poforonco Math	ad for the
Ta: actual a	bsolute tem	perature (°K)	(1111118)		Appendix B to Part 50, Reference Method for the			o Matter !-
Pa: actual b	arometric p	ressure (mm	Hg)		Determina	a Atmosphere	ended Particulat	e watter if
: intercept					tn th	e Atmosphe	ere, 9.2.17, page	50
m' slone								

# CINGTECH

### **Certificate of Calibration - Wind Monitoring Station**

Description:	Yau Lai Estate, Bik Lai House
Manufacturer:	Davis Instruments
Model No.:	<u>Davis7440</u>
Serial No.:	MC01010A44
Equipment No.:	<u>SA-03-04</u>
Date of Calibration	<u>18-Feb-2023</u>
Next Due Date	<u>18-Aug-2023</u>

#### 1. Performance check of Wind Speed

Wind Sp	beed, m/s	Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V2)	D = V1 - V2
0.0	0.0	0.0
1.2	1.3	-0.1
2.5	2.5	0.0
3.8	3.9	-0.1

#### 2. Performance check of Wind Direction

Wind Di	rection (°)	Difference D (°)
Wind Direction Reading (W1)	Marine Compass Value (W2)	$\mathbf{D} = \mathbf{W1} - \mathbf{W2}$
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: \_\_\_\_\_\_\_ Henry/Leung

Rm 1904, Technology Park 18 On Lai Street, Shatin NT, Hong Kong Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Issue Date : 06 Jan 2023

Report No.:00319Application No.:HP00222

# **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.	SVAN 957
		Serial No.	21455
		Microphone No.	17204

Date Received	:	06 Jan 2023
Test Period	:	06 Jan 2023 to 06 Jan 2023
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.

Lee Wai Kit Laboratory Manager

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Issue Date : 06 Jan 2023

Report No.:00319Application No.:HP00222

# **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	95.0	± 1.0	± 1.5
114.0	114.4	+ 0.4	± 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.

Report No.

Rm 1904, Technology Park 18 On Lai Street, Shatin NT, Hong Kong Tel: +852 3841 4388 Website: https://www.hpct.com.hk

: 00333



Issue Date : 20 Jan 2023

 

 Application No.
 :
 HP00212

 **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-12-02

 Manufacturer:
 :
 BSWA Technology

Other information	:	Model No.	BSWA 308
		Serial No.	570187
		Microphone No.	590079

Date Received	:	18 Jan 2023
Test Period	:	20 Jan 2023 to 20 Jan 2023
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.

Lee Wai Kit Laboratory Manager

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Issue Date : 20 Jan 2023

Report No.:00333Application No.:HP00212

# **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	94.0	± 0.0	± 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.

Report No.

Rm 1904, Technology Park 18 On Lai Street, Shatin NT, Hong Kong Tel: +852 3841 4388 Website: https://www.hpct.com.hk

: 00361



Issue Date : 30 Mar 2023

: HP00236 Application No. **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-12-04 Manufacturer: : BSWA Technology Other information : Model No. **BSWA 308** Serial No. 580238 Microphone No. 570605 Data Bacaivad 77 Mar 2022

Date Received	•	27 Mar 2023
Test Period	:	28 Mar 2023 to 28 Mar 2023
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.

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

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

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

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Issue Date : 30 Mar 2023

Report No.:00361Application No.:HP00236

# **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	94.2	+ 0.2	± 1.5
114.0	114.3	+ 0.3	± 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.

Report No.

Rm 1904, Technology Park 18 On Lai Street, Shatin NT, Hong Kong Tel: +852 3841 4388 Website: https://www.hpct.com.hk

: 00364



Issue Date : 03 Apr 2023

: HP00240 Application No. **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-12-05 Manufacturer: : BSWA Technology Other information : Model No. **BSWA 308** Serial No. 580287 Microphone No. 570610 ~~~~

Date Received	:	03 Apr 2023
Test Period	:	03 Apr 2023 to 03 Apr 2023
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.

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

Lee Wai Kit Laboratory Manager

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Issue Date : 03 Apr 2023

Report No.:00364Application No.:HP00240

# **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	94.2	+ 0.2	± 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.

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Issue Date : 02 May 2023

Report No.:00370Application No.:HP00242

# **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.: : SN-01-01

Manufacturer: : SVANTEK

Other information	:	Model No.	SVAN 979
		Serial No.	27189
		Microphone No.	25202

Date Received	:	02 May 2023
Test Period	:	02 May 2023 to 02 May 2023
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.

Lee Wai Kit Laboratory Manager

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Issue Date : 02 May 2023

Report No.:00370Application No.:HP00242

# **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	114.0	± 0.0	± 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.

Report No.

Rm 1904, Technology Park 18 On Lai Street, Shatin NT, Hong Kong Tel: +852 3841 4388 Website: https://www.hpct.com.hk

: 00288



Issue Date : 10 Nov 2022

Application No. : HP00176 **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-13-03 Manufacturer: : SOUNDTEK Other information : Model No. ST-120 Serial No. 181001637 : 10 Nov 2022 Date Received Test Period : 10 Nov 2022 to 10 Nov 2022 : Performance checking for Sound Level Calibrator **Test Requested** 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.

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

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Issue Date : 10 Nov 2022

Report No.:00288Application No.:HP00176

# **<u>Certificate of Calibration</u>**

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.	570183	
Microphone No.	570605	
Equipment No.	N-12-01	

#### Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+ 0.1	± 0.3
114.0	114.2	+ 0.2	± 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.

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: 00389 Issue Date : 20 Jul 2023 Report No. Application No. : HP00262 **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-16-01 Manufacturer: : Hangzhou Aihua Instruments Co., Ltd. Other information : Model No. AWA6021A Serial No. 1023253 : 18 Jul 2023 Date Received Test Period : 19 Jul 2023 to 19 Jul 2023 : Performance checking for Sound Level Calibrator **Test Requested** 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.

Lee Wai Kit Laboratory Manager



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Issue Date : 20 Jul 2023

Report No.:00389Application No.:HP00262

# **<u>Certificate of Calibration</u>**

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.	570183	
Microphone No.	570605	
Equipment No.	N-12-01	

#### Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.2	+ 0.2	± 0.3
114.0	114.2	+ 0.2	± 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.