## **High-Volume TSP Sampler**

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/08/0045

Project No.	AM2 - Sai Tso V	Wan Recreation	Ground				
Date:	12-De	ec-23	Next Due Date:	12-	Feb-24	Operator:	SK
Equipment No.:	A-0	1-08	Model No.:	GS	S2310	Serial No.	1287
			Ambient C	Condition			
Temperatur	re, Ta (K)	297.7	Pressure, Pa			762.2	
		0	·e·	1 11 6	4*		
Serial	No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra		16-Jan-23			$c = [\Delta H \times (Pa/760]]$		
Next Calibra		16-Jan-24			(Pa/760) x (298/7		
	•						
			Calibration of	TSP Sampler			
Calibration		Oı	fice	T		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		50) x (298/Ta)] <sup>1/2</sup> -axis
1	13.1		3.63	61.76	8.7		2.96
2	10.2		3.20	54.57	6.4		2.53
3	7.4		2.73	46.57	4.5		2.13
4	5.1		2.26	38.76	3.0		1.74
5	2.9		1.71	29.37	1.5		1.23
Slope, mw = Correlation *If Correlation C	coefficient* =		.9997	-	-0.323		
			Set Point C	alculation			
From the TSP Fi	eld Calibration C	Curve, take Qstd					
From the Regress		_					
				(D. /5(0) (2)	NO/TE \11/2		
		mw x (	$\mathbf{Qstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	x (Pa//60) x (29	98/1a)]		
Therefore, Se	et Point; W = ( m	w x Qstd + bw)	<sup>2</sup> x ( 760 / Pa ) x ( ′	Γa / 298 ) =	3.77		
Remarks:							
							_
Conducted by:	Wong Sh	ing Kwai	Signature:	X	<u></u>	Date:	12-Dec-23
		-		1 0	~ X27		
Checked by:	Henry	Leung	Signature:	tem	Just -	Date:	12-Dec-23

## **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET



File No. MA16034/03/0045

Project No.	AM3 - Yau Lai	Estate, Bik Lai I	House				
Date:	12-De	ec-23	Next Due Date:	12-	Feb-24	Operator:	SK
Equipment No.:	A-0	1-03	Model No.:	GS	S2310	Serial No.	10379
			•				
			Ambient C	ondition			
Temperatur	re, Ta (K)	297.7	Pressure, Pa	(mmHg)		762.2	
0 : 1	N.		ifice Transfer Star			, 1	0.02401
Serial		3864	Slope, mc	0.05928	Intercept $c = [\Delta H \times (Pa/760)]$		-0.03491
Last Calibra Next Calibra		16-Jan-23 16-Jan-24			$(Pa/760) \times (298/7)$		
Next Calibra	mon Date.	10-Jan-24			(1 a/ 700) X (270/ 1	(a)j -bc//11	
		•	Calibration of T	ΓSP Sampler			
Calibration		Or	fice	•		HVS	
Point	$\Delta H$ (orifice), in. of water	[ΔH x (Pa/76	(0) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	ΔW (HVS), in. of water		760) x (298/Ta)] <sup>1/2</sup> Y-axis
1	12.9		3.60	61.30	8.5		2.92
2	10.6		3.26	55.62	6.5		2.55
3	7.8		2.80	47.79	4.6		2.15
4	5.0		2.24	38.38	2.9		1.71
5	3.0		1.74	29.86	1.7		1.31
By Linear Regre	ossion of V on V	-					
Slope, mw =		<b>L</b>	1	ntercent hw :	-0.232	9	
Correlation of		- 0	.9983	intercept, sw	0,202		
*If Correlation C				,			
		,					
			Set Point Ca	lculation			
From the TSP Fig	eld Calibration C	Curve, take Qstd	= 43 CFM				
From the Regress	sion Equation, th	e "Y" value acco	ording to				
		mw v C	$\mathbf{pstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) v (20	18/Ta)1 <sup>1/2</sup>		
		IIIW X Q	įstu + DW – įΔW A	(1 a/ /00) X (2)	76/1 <i>a)</i> ]		
Therefore, Se	t Point; W = ( m	w x Qstd + bw)	$^{2}$ x ( 760 / Pa ) x ( $^{7}$	Γa / 298 ) =	3.77		
Remarks:							
Conducted by:	Wong Sh	ing Kwai	Signature:	X	<u></u>	Date:	12-Dec-23
	., ong pii	<i>3 3</i>		``	N. m. 1		30 20
Checked by:	Henry	Leung	Signature:	\-lem	7 Dong	Date:	12-Dec-23

## High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



File No. MA20003/55/023 Project No. CKL 2 - Flat 103 Cha Kwo Ling Village 4-Nov-23 Next Due Date: 4-Jan-24 Operator: SK Date: Equipment No.: A-01-55 Model No.: TE 5170 Serial No. 1956 **Ambient Condition** Temperature, Ta (K) 299.3 Pressure, Pa (mmHg) 760.5 **Orifice Transfer Standard Information** 0.05928 Intercept, bc 3864 Slope, mc -0.03491 Serial No.  $mc \times Ostd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ Last Calibration Date: 16-Jan-23 Qstd =  $\{ [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} -bc \} / mc$ 16-Jan-24 Next Calibration Date: **Calibration of TSP Sampler** Orfice Calibration  $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$  $\Delta H$  (orifice), Ostd (CFM)  $\Delta W$  (HVS), in. Point  $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ in. of water X - axis of water Y-axis 1 13.3 3.64 62.00 9.8 3.12 2.79 2 11.0 3.31 56.43 7.8 9.1 3.01 51.38 6.0 2.44 4 5.4 2.32 39.72 2.8 1.67 1.7 5 3.4 1.84 31.64 1.30 By Linear Regression of Y on X Slope , mw = 0.0614 Intercept, bw : -0.6964 Correlation coefficient\* = 0.9981 \*If Correlation Coefficient < 0.990, check and recalibrate. **Set Point Calculation** From the TSP Field Calibration Curve, take Qstd = 43 CFM From the Regression Equation, the "Y" value according to mw x Qstd + bw =  $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Therefore, Set Point;  $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.79 Remarks: Conducted by: Wong Shing Kwai Checked by: Henry Leung

## **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET



File No. MA16034/05/0044

Project No.	AM1 - Tin Hau	Temple				,	
Date:	12-C	Oct-23	Next Due Date:	12-1	Dec-23	Operator:	SK
Equipment No.:	A-0	01-05	Model No.:	GS	S2310	Serial No.	10599
			Ambient C	andition			
Temperatur	re Ta (K)	298.7	Pressure, Pa		Ī	763.3	
Temperatur	ie, 1a (K)	290.1	Tiessuie, Ta	(IIIIII Ig)		703.3	
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05928	Intercept	, bc	-0.03491
Last Calibra	tion Date:	16-Jan-23			$c = [\Delta H \times (Pa/760]]$		
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H \ x ] \}$	(Pa/760) x (298/7	Γa)] <sup>1/2</sup> -bc} / mc	
			Calibration of	TSP Sampler	T		
Calibration		Oı	fice			HVS	1/2
Point	ΔH (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		0) x (298/Ta)] <sup>1/2</sup> axis
1	13.1		3.62	61.71	9.1	3	.02
2	10.4		3.23	55.04	6.8	2	.61
3	7.4		2.72	46.52	4.9	2	.22
4	5.4		2.33	39.83	2.9	1	.70
5	2.9		1.70	29.34	1.6	1	.27
By Linear Regr	ession of V on Y	<b>X</b>					
Slope, mw =		-	]	Intercept, bw :	-0.388	2	
	coefficient* =		.9964	1 1, 1			
		90, check and red		•			
1 map p:	11.0.11	7	Set Point Ca	alculation			
		Curve, take Qstd					
from the Regress	sion Equation, th	ne "Y" value acco	ording to				
		mw x (	$\mathbf{Qstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] <sup>1/2</sup>		
TEN C C	· D · · W · /	0.1.1.	2 (760 / P.) (5	E (200)	2.00		
Therefore, Se	et Point; W = ( m	iw x Qstd + bw )	$^{2}$ x ( 760 / Pa ) x ( $^{7}$	Ta / 298) =	3.88		
Remarks:							
·					 λ		
Conducted by:	Wong Sh	ning Kwai	Signature:			Date:	12-Oct-23
				\ 0	X 2 27		
Checked by:	Henry	Leung	Signature:	1 tem	Just 1	Date:	12-Oct-23

## **High-Volume TSP Sampler**

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/08/0044

Project No.	AM2 - Sai Tso V	Van Recreation	Ground				
Date:	12-0	ct-23	Next Due Date:	12-]	Dec-23	Operator:	SK
Equipment No.:	A-0	1-08	Model No.:	G	52310	Serial No.	1287
			Ambient C	Condition			
Temperatur	re, Ta (K)	298.7	Pressure, Pa			763.3	
Serial	No	3864	Slope, mc	ndard Informa 0.05928	Intercept	- he	-0.03491
Last Calibra		16-Jan-23			$c = [\Delta H \times (Pa/760)]$		
Next Calibra		16-Jan-24			$(Pa/760) \times (298/7)$		
TYOKE CUITOTE	tion Bute.			<u> </u>	(= ••• • • • ) == (= • • • •		
			Calibration of	TSP Sampler			
Calibration		Oı	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		50) x (298/Ta)] <sup>1/2</sup> -axis
1	13.2		3.64	61.94	8.8	,	2.97
2	10.3		3.21	54.78	6.5		2.55
3	7.5		2.74	46.83	4.6		2.15
4	5.2		2.28	39.09	3.1		1.76
5	3.0		1.73	29.84	1.6		1.27
Slope, mw = Correlation C *If Correlation C	coefficient* =		.9997	-	-0.301	·	
			Set Point Ca	alculation			
From the TSP Fig	eld Calibration C	urve, take Qstd					
From the Regress	sion Equation, th	e "Y" value acco	ording to				
		mw v C	$\mathbf{pstd} + \mathbf{bw} = [\mathbf{\Delta W} \ \mathbf{x}]$	(Do/760) v (20	18/Ta)1 <sup>1/2</sup>		
		IIIW X (	zsta + υw – <u>[Δ</u> w x	(Fa/700) X (23	70/1a)j		
Therefore, Se	t Point; W = ( m	w x Qstd + bw)	$^{2}$ x ( 760 / Pa ) x ( $^{7}$	$\Gamma a / 298) =$	3.82		
Remarks:							
				10	-1		
Conducted by:	Wong Sh	ing Kwai	Signature:		<u></u>	Date:	12-Oct-23
Checked by:	Henry	Leung	Signature:	\-lem	, X27	Date:	12-Oct-23
٠.	J			<del></del>	1		

## **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET



File No. MA16034/03/0044

Project No.	AM3 - Yau Lai	Estate, Bik Lai I	House				
Date:	12-C	Oct-23	Next Due Date:	12-	Dec-23	Operator:	SK
Equipment No.:	A-0	1-03	Model No.:	GS	S2310	Serial No.	10379
			Ambient C	ondition			
Temperatur	re Ta(K)	298.7	Pressure, Pa			763.1	
Tomporata	ie, iu (ii)	270.7	11055410,14	(11111115)		703.1	
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	ntion Date:	16-Jan-23	ı	nc x Qstd + bo	$c = [\Delta H \times (Pa/760]]$	) x (298/Ta)] <sup>1/2</sup>	
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/7	Γa)] <sup>1/2</sup> -bc} / mo	•
			Calibration of	TSP Sampler			
Calibration		Oı	fice			HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	60) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	ΔW (HVS), in. of water		0) x (298/Ta)] <sup>1/2</sup> -axis
1	13.0		3.61	61.46	8.6	2	2.94
2	10.6		3.26	55.56	6.6	2	2.57
3	8.0		2.83	48.34	4.8	2	2.19
4	5.2		2.28	39.09	3.0	1	.73
5	3.0		1.73	29.83	1.8	1	.34
By Linear Regr Slope , mw = Correlation o		_	.9979	ntercept, bw	-0.195	2	
*If Correlation C				•			
			Set Point Ca	lculation			
From the TSP Fi	eld Calibration (	Curve, take Qstd	= 43 CFM				
From the Regress	sion Equation, th	ne "Y" value acc	ording to				
		mw x (	$\mathbf{pstd} + \mathbf{bw} = \mathbf{\Delta W} \mathbf{x}$	(Pa/760) x (29	98/Ta)  <sup>1/2</sup>		
Therefore, Se	et Point: W = ( m	nw x Ostd + bw )	<sup>2</sup> x ( 760 / Pa ) x ( 7	Γa / 298 ) =	3.84		
, 50	, ·· (H	( )	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. = /	2,01		
Remarks:							
				h			
Conducted by:	Wong Sh	ning Kwai	Signature:		<b>"</b>	Date:	12-Oct-23
Checked by:	Henry	Leung	Signature:	\-lem	y day	Date:	12-Oct-23

## **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET



File No. MA16034/05/0045

Project No.	AM1 - Tin Hau	Temple				-	
Date:	12-D	Dec-23	Next Due Date:	12-	Feb-24	Operator:	SK
Equipment No.:	A-0	1-05	Model No.:	G:	S2310	Serial No.	10599
				71			
Tamananatu	To (V)	207.7	Ambient C			762.2	
Temperatu	re, 1a (K)	297.7	Pressure, Pa	(mmHg)		762.2	
		Or	ifice Transfer Star	ndard Informa	ation		
Seria	l No.	3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	ation Date:	16-Jan-23			$c = [\Delta H \times (Pa/760]]$		
Next Calibr	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/7	Γa)] <sup>1/2</sup> -bc} / mc	;
			Calibration of	ΓSP Sampler	T		
Calibration		Oı	fice			HVS	1/2
Point	ΔH (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		0) x (298/Ta)] <sup>1/2</sup> •axis
1	13.0		3.61	61.53	9.0	3	.01
2	10.3		3.22	54.83	6.7	2	59
3	7.3		2.71	46.26	4.8	2	20
4	5.3		2.31	39.50	2.8	1	.68
5	2.9		1.71	29.37	1.5	1	.23
Ry Linear Regi	ression of Y on Y	<b>Z</b>					
Slope, mw =		-	]	ntercept, bw :	-0.449	98	
	coefficient* =	- 0	.9970	1 /			
*If Correlation (	Coefficient < 0.99	90, check and rec	calibrate.				
			Set Point Ca	alculation			
From the TSP F	ield Calibration (	Curve, take Qstd					
	ssion Equation, th						
			N 4 I . I . FASS	(D. 15(0) (2)	NO/TE \11/2		
		mw x (	$\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa//60) x (29	98/1a)]		
Therefore, Se	et Point; W = ( m	nw x Qstd + bw)	<sup>2</sup> x ( 760 / Pa ) x ( 7	Γa / 298 ) =	3.81		
Remarks:							
Conducted by	Wong Cl	ina Vivoi	Cianatura	X	<u> </u>	Dotai	12 Dag 22
Conducted by:	Wong Sh	mig <b>K</b> wai	Signature:		X 29 27	Date:	12-Dec-23
Chaoland by	Henry	Leung	Signature:	-lem	y Xon	Date:	12-Dec-23



## **Certificate of Calibration**

Description:	Digital Dust Indicator	Date	of Calibration 30-Nov-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibr	ation Record 30-Jan-24
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 Sensitivity Adjustment	645
Tisch Calibratio	on Orifice No.: 3864	After Sensitivity Adjustment	645
	Ca	alibration of 1 hr TSP	
Calibration	Laser Dust Monito		HVS
Point	Mass Concentration (μg <b>X-axis</b>	z/m3) Mas	s concentration (μg/m³) <b>Y-axis</b>
1	75.0		139.0
2	65.0		120.0
3	53.0		100.0
Average	64.3		119.7
Slope . mw =	1.7692	Intercept, bw =	5.8462
Slope , mw = Correlation c		Intercept, bw =	5.8462
- '	oefficient* = 0.9993	- ·	5.8462
Correlation c	oefficient* = 0.9993  Sencentration by High Volume Sampler	et Correlation Factor	119.7
Correlation c Particaulate Cor	oefficient* = 0.9993  Some entration by High Volume Sampler recentration by Dust Meter (μg/m³)	et Correlation Factor	119.7 64.3
Particaulate Cor Particaulate Cor Measureing time	oefficient* = 0.9992  Sencentration by High Volume Sampler accentration by Dust Meter (μg/m³) e, (min)	et Correlation Factor	119.7
Particaulate Con Particaulate Con Measureing time Set Correlation	oefficient* = 0.9992  Sencentration by High Volume Sampler accentration by Dust Meter (μg/m³) e, (min)	et Correlation Factor (µg/m³)	119.7 64.3
Particaulate Con Particaulate Con Measureing time Set Correlation SCF = [ K=Hig	oefficient* = 0.9992  Sencentration by High Volume Sampler Incentration by Dust Meter (μg/m³) e, (min) Factor , SCF	et Correlation Factor (µg/m³)  1g/m3) 1.9	119.7 64.3
Particaulate Cor Particaulate Cor Measureing time Set Correlation SCF = [ K=Hig In-house method The Dust Monit Factor (CF) between	Sencentration by High Volume Sampler neentration by Dust Meter (μg/m³) e, (min) Factor, SCF ch Volume Sampler / Dust Meter, (μg/m²)	et Correlation Factor  (µg/m³)  1.9  1.9  1.9  1.9  1.9  1.9  1.9  1.	119.7 64.3 60.0
Particaulate Con Particaulate Con Particaulate Con Measureing time Set Correlation SCF = [ K=Hig  In-house method The Dust Monit Factor (CF) beta Those filter pa	Sencentration by High Volume Sampler (μg/m³) e, (min) Factor, SCF th Volume Sampler / Dust Meter, (μd in according to the instruction manuor was compared with a calibrated His ween the Dust Monitor and High Volumes are weighted by HOKLAS lab	et Correlation Factor  (µg/m³)  1.9  1.9  1.9  1.9  1.9  1.9  1.9  1.	119.7 64.3 60.0  was used to generate the Correlation

Digital Dust Indicator



Date of Calibration 30-Nov-23

## **Certificate of Calibration**

Description:

Manufacturer:	Sibata Scient	ific Technology LTD.		Validity of Calib	ration Record	30-Jan-24
Model No.:	LD-5R					
Serial No.:	972778					
Equipment No.:	SA-01-07		Sensitivity	0.001 mg/m3	_	
High Volume Sa	ampler No.:	A-01-03	Before Sensiti	vity Adjustment	735 CPM	
Tisch Calibratio	n Orifice No.:	3864	After Sensitiv	ity Adjustment	735 CPM	
		C	alibration of 1 h	ar TSP		
Calibration		Laser Dust Monito	r		HVS	
Point	Mass Concentration (μg/m3)		Mas	ss concentration (µ	$g/m^3$ )	
1		X-axis			Y-axis	
2		72.0 62.0			139.0 121.0	
3		52.0			100.0	
Average		62.0			120.0	
Slope , mw = Correlation co	1.95 pefficient* =	0.999		cept, bw = -	-0.9000	
		S	et Correlation I	actor		
		High Volume Sampler	$(\mu g/m^3)$		120.0	
		Dust Meter (μg/m <sup>3</sup> )		62.0		
Measureing time	(min)					
ISet Correlation I					60.0	
	Factor, SCF	npler / Dust Meter, (µ	ug/m3) ]	1.9	60.0	
SCF = [ K=Hig	Factor , SCF h Volume San	npler / Dust Meter, (p		1.9	60.0	
SCF = [ K=Hig In-house method The Dust Monito Factor (CF) betw	Factor, SCF  h Volume San  l in according to or was compariveen the Dust I		ual: igh Volume Sam ume Sampler.	pler and The result		ate the Correlation
In-house method The Dust Monite Factor (CF) betw Those filter pap	Factor, SCF h Volume San l in according to was compariveen the Dust learns are weight	to the instruction manued with a calibrated Hi	ual: igh Volume Sam ume Sampler.	pler and The result Litimed) Approved by:	was used to gener	y Xon

Digital Dust Indicator



Date of Calibration 30-Nov-23

## **Certificate of Calibration**

Description:

Manufacturer:	Sibata Scient	ific Technology LTD.	<u> </u>	Validity of Calib	ration Record	30-Jan-24
Model No.:	LD-5R					
Serial No.:	972780					
Equipment No.:	SA-01-09		Sensitivity	0.001 mg/m3	_	
High Volume Sa	impler No.:	A-01-03	Before Sensit	ivity Adjustment	739 CPM	
Tisch Calibratio	n Orifice No.:	3864	After Sensitiv	rity Adjustment	739 CPM	
		Ca	libration of 1 l	nr TSP		
Calibration		Laser Dust Monitor	•		HVS	
Point	Mass Concentration (μg/m3)		Mas	ss concentration (	ug/m³)	
1		X-axis			Y-axis	
2		73.0 63.0			139.0 119.0	
3		52.0			99.0	
Average		62.7			119.0	
Slope , mw = Correlation co	1.90 pefficient* =	0.9996		cept, bw = -	-0.2749	<u> </u>
		Se	t Correlation 1	Factor		
		High Volume Sampler	$(\mu g/m^3)$		119.0	
		Dust Meter (μg/m <sup>3</sup> )			62.7	
Measureing time					60.0	
Set Correlation I SCF = [ K=Hig		npler / Dust Meter, (μ	g/m3) ]	1.9		
In-house method	l in according	to the instruction manua	al:			
Factor (CF) betw	veen the Dust 1	ed with a calibrated Hig Monitor and High Volu ated by HOKLAS labo	me Sampler.		was used to gene	rate the Correlation
Calibrated by:		ong Shing Kwai)	_	Approved by:	ct Manager (Henr	J (Xoy

Digital Dust Indicator



30-Nov-23

Date of Calibration

## **Certificate of Calibration**

Description:

Manufacturer:	Sibata Scienti	ific Technology LTD.	Validity of Cali	bration Record 30-Jan-24	
Model No.:	LD-5R				
Serial No.:	972781				
Equipment No.:	SA-01-10		Sensitivity 0.001 mg/m3	_	
High Volume Sa	impler No.:	A-01-03	Before Sensitivity Adjustment	734 CPM	
Tisch Calibratio	n Orifice No.:	3864	After Sensitivity Adjustment	734 CPM	
		Ca	alibration of 1 hr TSP		
Calibration		Laser Dust Monito	r	HVS	
Point	Mass Concentration (μg/m3)		/m3) M	ass concentration (μg/m <sup>3</sup> )	
		X-axis		Y-axis	
1		80.0		132.0	
2		70.0		114.0	
3		60.0		98.0	
Average		70.0		114.7	
Slope , mw = Correlation co	1.700 pefficient* =	0.9994	Intercept, bw =	-4.3333	
		Se	et Correlation Factor		
Particaulate Con	centration by I	Se High Volume Sampler	_	114.7	
	•		_	114.7 70.0	
	centration by I	High Volume Sampler	_		
Particaulate Con	centration by I	High Volume Sampler	_	70.0	
Particaulate Con Measureing time Set Correlation I	centration by I e, (min) Factor, SCF	High Volume Sampler	(μg/m <sup>3</sup> )	70.0 60.0	
Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig	e, (min) Factor , SCF h Volume San	High Volume Sampler Dust Meter (μg/m <sup>3</sup> )	ıg/m³)1.	70.0 60.0	
Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig In-house method The Dust Monito	centration by I c, (min) Factor, SCF h Volume Sam I in according tor was compare	High Volume Sampler  Dust Meter (μg/m³)  npler / Dust Meter, (μ  to the instruction manued with a calibrated Hi	ng/m³)  1.  al: gh Volume Sampler and The resu	70.0 60.0	on
Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig  In-house method The Dust Monito Factor (CF) betw	centration by I e, (min) Factor , SCF h Volume San I in according to was compare ween the Dust N	High Volume Sampler  Dust Meter (µg/m³)  Inpler / Dust Meter, (µ  to the instruction manued with a calibrated Hi  Monitor and High Volume	ig/m³)  1.  al: gh Volume Sampler and The resu	70.0 60.0	on
Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig  In-house method The Dust Monito Factor (CF) betw	centration by I e, (min) Factor , SCF h Volume San I in according to was compare ween the Dust N	High Volume Sampler  Dust Meter (µg/m³)  Inpler / Dust Meter, (µ  to the instruction manued with a calibrated Hi  Monitor and High Volume	ng/m³)  1.  al: gh Volume Sampler and The resu	70.0 60.0	on
Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig  In-house method The Dust Monito Factor (CF) betw	centration by I e, (min) Factor , SCF h Volume San I in according to was compare ween the Dust N	High Volume Sampler  Dust Meter (µg/m³)  Inpler / Dust Meter, (µ  to the instruction manued with a calibrated Hi  Monitor and High Volume	ig/m³)  1.  al: gh Volume Sampler and The resu	70.0 60.0	on
Particaulate Con Measureing time Set Correlation I SCF = [K=Hig In-house method The Dust Monito Factor (CF) betw Those filter page	centration by I c, (min) Factor, SCF h Volume Sam I in according to or was compare ween the Dust N pers are weigh	High Volume Sampler  Dust Meter (µg/m³)  Inpler / Dust Meter, (µ  to the instruction manued with a calibrated Hi  Monitor and High Volume	al: gh Volume Sampler and The resume Sampler.  oratory (HPCT Litimed)	70.0 60.0  It was used to generate the Correlation	on
Particaulate Con Measureing time Set Correlation I SCF = [K=Hig In-house method The Dust Monito Factor (CF) betw Those filter pap Calibrated by:	centration by I e, (min) Factor, SCF h Volume Sam I in according to or was compare ween the Dust N pers are weigh	High Volume Sampler  Dust Meter (µg/m³)  Inpler / Dust Meter, (µ  to the instruction manued with a calibrated Hi  Monitor and High Volume	ng/m3) 1.  al: gh Volume Sampler and The resume Sampler.  oratory (HPCT Litimed)  Approved by	70.0 60.0  It was used to generate the Correlation	on

Digital Dust Indicator



30-Nov-23

Date of Calibration

## **Certificate of Calibration**

Description:

•						
Manufacturer:	Sibata Scient	ific Technology LTD.	_	Validity of Calibr	ration Record	30-Jan-24
Model No.:	LD-5R					
Serial No.:	8Y2374					
Equipment No.:	SA-01-04		Sensitivity	0.001 mg/m3	<u>.</u>	
High Volume Sa	mpler No.:	A-01-03	Before Sensitiv	rity Adjustment	652	
Tisch Calibration	n Orifice No.:	3864	After Sensitivit	y Adjustment	652	
		Ca	libration of 1 hi	TSP		
Calibration		Laser Dust Monitor	•		HVS	
Point	N.	Mass Concentration (μg/m3)		Mas	ss concentration (µ	ug/m <sup>3</sup> )
		X-axis			Y-axis	
1		74.0			135.0	
2		66.0			122.0	
3		54.0			100.0	
Average		64.7			119.0	
Slope , mw = Correlation co		0.9995		ept, bw =	5.4079	
		Se	t Correlation Fa	actor		
Particaulate Con	centration by I	High Volume Sampler (	$(\mu g/m^3)$		119.0	
Particaulate Con	centration by l	Dust Meter (μg/m <sup>3</sup> )			64.7	
Measureing time	e, (min)				60.0	
Set Correlation I	Factor, SCF					
SCF = [ K=Hig	h Volume San	npler / Dust Meter, (μ	g/m3) ]	1.8		
In-house method	in according t	to the instruction manua	al:			
	-	ed with a calibrated Hig	-	ler and The result	was used to gener	rate the Correlation
		Monitor and High Volu	=			
Those filter pap	ers are weigh	ted by HOKLAS labo	oratory (HPCT)	Litimed)		
Calibrated by:		M.	_	Approved by:	-len	y Xon
Technica	al Officer (Wo	ng Shing Kwai)	_	Projec	et Manager (Henry	Leung)

Digital Dust Indicator



30-Nov-23

Date of Calibration

## **Certificate of Calibration**

Description:

Manufacturer:	Sibata Scient	ific Technology LTD.	_	Validity of Calibr	ation Record	30-Jan-24
Model No.:	LD-5R					
Serial No.:	8Y2373					
Equipment No.:	SA-01-05		Sensitivity	0.001 mg/m3		
High Volume Sa	impler No.:	A-01-03	Before Sensiti	vity Adjustment	657	
Tisch Calibratio	n Orifice No.:	3864	After Sensitivi	ty Adjustment	657	
		Ca	alibration of 1 h	r TSP		
Calibration		Laser Dust Monitor	r		HVS	
Point	M	fass Concentration (μg/	/m3)	Mas	s concentration (µ	ug/m <sup>3</sup> )
		X-axis			Y-axis	
1		74.0			135.0	
2		64.0			116.0	
3		54.0			98.0	
Average		64.0			116.3	
Slope, mw =	1.05				2066	
Correlation co	1.85 pefficient* =	0.9999		ept, bw =	-2.0667	
• •		0.9999			-2.0667	
Correlation co	oefficient* =	0.9999	et Correlation F		116.3	
Correlation co	oefficient* =	0.9999 Se	et Correlation F			
Correlation co	centration by I	0.9999 Se High Volume Sampler	et Correlation F		116.3	
Correlation co	centration by I	0.9999 Se High Volume Sampler	et Correlation F		116.3 64.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I	ncentration by Incentration by	0.9999 Se High Volume Sampler	et Correlation F (μg/m³)		116.3 64.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [K=Hig	acentration by Incentration by	0.9999  Set High Volume Sampler Dust Meter (μg/m³)	et Correlation F (μg/m³)	actor	116.3 64.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [K=Hig	centration by Incentration by	0.9999  Set High Volume Sampler Dust Meter (μg/m³)	et Correlation F (μg/m³) ag/m3) ] al:	actor	116.3 64.0 60.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig In-house method The Dust Monito Factor (CF) betw	centration by Incentration by	0.9999  New York Meter (μg/m³)  Inpler / Dust Meter, (μ  to the instruction manual ed with a calibrated Hill Monitor and High Volume Sampler	et Correlation F (μg/m³)  ag/m3) ]  al: gh Volume Sampume Sampume Sampler.	1.8 oler and The result	116.3 64.0 60.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig In-house method The Dust Monito Factor (CF) betw	centration by Incentration by	0.9999  New York Meter (μg/m³)  Inpler / Dust Meter, (μ  To the instruction manual with a calibrated Hi	et Correlation F (μg/m³)  ag/m3) ]  al: gh Volume Sampume Sampume Sampler.	1.8 oler and The result	116.3 64.0 60.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig In-house method The Dust Monito Factor (CF) betw	centration by Incentration by	0.9999  New York Meter (μg/m³)  Inpler / Dust Meter, (μ  to the instruction manual ed with a calibrated Hill Monitor and High Volume Sampler	et Correlation F (μg/m³)  ag/m3) ]  al: gh Volume Sampume Sampume Sampler.	1.8 oler and The result	116.3 64.0 60.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [ K=Hig In-house method The Dust Monito Factor (CF) betw Those filter par	centration by I centration by	0.9999  New York Meter (μg/m³)  Inpler / Dust Meter, (μ  to the instruction manual ed with a calibrated Hill Monitor and High Volume Sampler	et Correlation F (μg/m³)  ag/m3) ]  al: gh Volume Sampume Sampume Sampler.	1.8 oler and The result	116.3 64.0 60.0	
Particaulate Con Particaulate Con Measureing time Set Correlation I SCF = [K=Hig] In-house method The Dust Monite Factor (CF) betw Those filter pap	centration by Incentration SCF  In the Volume San In according to the Core was compared to the Dust Incers are weight	0.9999  New York Meter (μg/m³)  Inpler / Dust Meter, (μ  to the instruction manual ed with a calibrated Hill Monitor and High Volume Sampler	et Correlation F (μg/m³)  ag/m3) ]  al: gh Volume Sampume Sampume Sampler.	1.8  bler and The result  Litimed)  Approved by:	116.3 64.0 60.0	rate the Correlation





## RECALIBRATION DUE DATE:

January 16, 2024

# Certificate of Calibration

**Calibration Certification Information** 

Cal. Date: January 16, 2023

Rootsmeter S/N: 438320

Ta: 293

°K

Operator: Jim Tisch
Calibration Model #:

TE-5025A Calibrator S/N: 3864

Pa: 749.0

mm Hg

ΔΗ Vol. Final ΔVol. ΔTime ΔΡ Vol. Init (in H2O) (m3)(min) (mm Hg) Run (m3)(m3)2.00 3.2 2 1.4440 1 6.4 4.00 2 3 4 1 1.0220 5.00 3 5 1 8.0 6 0.9100 5.50 4 8.8 7 8 1 0.8710 8.00 10 0.7210 12.8

	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)
0.9981	0.6912	1.4159	0.9957	0.6896	0.8845
0.9938	0.9724	2.0024	0.9915	0.9701	1.2509
0.9917	1.0898	2.2388	0.9893	1.0872	1.3985
0.9906	1.1373	2.3480	0.9883	1.1346	1.4668
0.9853	1.3665	2.8318	0.9829	1.3633	1.7690
	m=	2.09452		m=	1.31155
QSTD[	b=	-0.03493	QA	b=	-0.02182
	r=	0.99995	7	r=	0.99995

Calculations				
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)	
Qstd= Vstd/ΔTime		Qa=	ı= Va/ΔTime	
For subsequent flow rate calculations:				
Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$ Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$				

Standard Conditions		
Tstd:		
Pstd:	760 mm Hg	
	Key	
	or manometer reading (in H2O)	
	ter manometer reading (mm Hg)	
	solute temperature (°K)	
Pa: actual barometric 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 <u>18-Aug-2023</u>

Next Due Date <u>18-Feb-2024</u>

#### 1. Performance check of Wind Speed

Wind Sp	peed, 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	2.4	0.1
4.0	3.9	0.1

#### 2. Performance check of Wind Direction

Wind Di	rection (°)	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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00370 Issue Date : 02 May 2023

Application 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.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00370 Issue Date : 02 May 2023

Application 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.

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NT, Hong Kong

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



Report No. : 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.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00333 | Issue Date : 20 Jan 2023

Application 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.

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NT, Hong Kong

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Report No. : 00361 | Issue Date : 30 Mar 2023

Application No. : HP00236

**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 : N

Model No.	BSWA 308
Serial No.	580238
Microphone No.	570605

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.

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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00361 Issue Date : 30 Mar 2023

Application 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.

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NT, Hong Kong

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



Report No. : 00364 | Issue Date : 03 Apr 2023

Application No. : HP00240

**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.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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

:



Report No. : 00364 | Issue Date : 03 Apr 2023

Application 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.

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00393 | Issue Date : 02 Aug 2023

Application No. : HP00275

**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 : 28 Jul 2023

Test Period : 31 Jul 2023 to 31 Jul 2023

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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00393 | Issue Date : 02 Aug 2023

Application No. : HP00275

## **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	SVANTEK
Model No.	SVAN 977
Serial No.	92677
Microphone No.	10352
Equipment No.	N-14-01

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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NT, Hong Kong

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



Report No. : 00396 Issue Date : 02 Aug 2023

Application No. : HP00278

**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-13-02

Manufacturer: : SOUNDTEK

Other information : | Model No. | ST-120

Serial No. 181001636

Date Received : 01 Aug 2023

Test Period : 01 Aug 2023 to 01 Aug 2023

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

Page 1 of 2

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NT, Hong Kong

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Report No. : 00396 | Issue Date : 02 Aug 2023

Application No. : HP00278

## **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	SVANTEK
Model No.	SVAN 977
Serial No.	92677
Microphone No.	10352
Equipment No.	N-14-01

Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+ 0.1	± 0.3
114.0	114.3	+ 0.3	± 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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Report No. : 00389 | Issue Date : 20 Jul 2023

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.

Model No. AWA6021A
Serial No. 1023253

Date Received : 18 Jul 2023

Test Period : 19 Jul 2023 to 19 Jul 2023

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

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Report No. : 00389 Issue Date : 20 Jul 2023

Application No. : HP00262

## **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.	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.