

File No. MA16034/05/0041

Project No.	AM1 - Tin Hau	Temple					
Date:	12-Apr-23		Next Due Date: 13-		Jun-23	Operator:	SK
Equipment No.:	A-0	1-05	Model No.:	GS	52310	Serial No.	10599
			Ambient C	ondition			
Temperatur	re, Ta (K)	298	Pressure, Pa			759.3	
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05928	Intercept		-0.03491
Last Calibra		16-Jan-23			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	tion Date:	16-Jan-24		$\mathbf{Qstd} = \{ [\Delta \mathbf{H} \mathbf{x}] \}$	(Pa/760) x (298/7	[a)] <sup>1/2</sup> -bc} / mo	c
		•					
		0	Calibration of Z	ISP Sampler		HVS	
Calibration Point	$\Delta H$ (orifice), in. of water		50) x $(298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/76	0) x (298/Ta)] <sup>1/2</sup> -axis
1	13.2		3.63	61.85	9.9	3	3.14
2	10.3		3.21	54.70	7.3	2	2.70
3	7.5		2.74	46.77	5.4	2	2.32
4	5.6		2.37	40.49	3.4	1	1.84
5	3.2		1.79	30.75	1.8	1	1.34
By Linear Regr Slope , mw =	0.0583	_		Intercept, bw =	-0.463	9	
Correlation of		-	.9982				
*If Correlation C	0 = 0.9	90, check and red	calibrate.				
			Set Point Ca	alculation			
From the TSP Fie	eld Calibration (	Curve, take Qstd					
From the Regress	sion Equation, tl	ne "Y" value acc	ording to				
					a m a 1/2		
		mw x Q	$\mathbf{b}\mathbf{x} = [\Delta \mathbf{W} \mathbf{x}]$	(Pa/760) x (29	98/Ta)]"2		
Therefore, Se	t Point; W = ( n	w x Qstd + bw )	<sup>2</sup> x ( 760 / Pa ) x ( 1	Га / 298 ) =	4.18		
Remarks:							
				1	1		
Conducted by:	Wong Sł	ing Kwai	Signature:	R	·//-	Date:	12-Apr-23
Checked by:	Henry	Leung	Signature:	\-lem	7 X-7	Date:	12-Apr-23



#### File No. MA16034/08/0041

Date:         12-Apr-23         Next Due Date:         13-Jun-23         Operator:         SK           Equipment No:         A-01-08         Model No.:         GS2310         Serial No.         1287           Ambient Condition           Temperature, Ta (K)         298         Pressure, Pa (mmHg)         759.3           Orifice Transfer Standard Information           Serial No.         3864         Slope, mc         0.05928         Intercept, bc         -0.03491           Last Calibration Date:         16-Jan-23         mc x Qstd + bc = [AH x (Pa/760) x (298/Ta)]^{1/2}         Next Calibration Date:         16-Jan-24         Qstd = {[AH x (Pa/760) x (298/Ta)]^{1/2} - Next Calibration Date:         16-Jan-24         Qstd = [AH x (Pa/760) x (298/Ta)]^{1/2}         Next Calibration of TSP Sampler           Calibration of TSP Sampler           Calibration of TSP Sampler           Calibration         AH (orifice), in. of water         [AH x (Pa/760) x (298/Ta)]^{1/2}         Qstd (CFM) AW (HVS), in. [AW x (Pa/760) x (298/Ta)]^{1/2}         Qstd (294/Ta)] AV (Pa/760) x (298/Ta)]^{1/2}           1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.22.5         55.49         7.0         2.64           3         7.8	Project No.	AM2 - Sai Tso	Wan Recreation	Ground				
Ambient ConditionTemperature, Ta (K)298Pressure, Pa (mmHg)759.3Orifice Transfer Standard InformationSerial No.3864Slope, mc0.05928Intercept, bc-0.03491Last Calibration Date:16-Jan-23mc x Qstd + be = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> -0.03491Next Calibration Date:16-Jan-24Qstd = {[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> - bc] / mcCalibration Date:16-Jan-24Qstd = {[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> - bc] / mcCalibration of TSP SamplerCalibrationOrffceHVS $\Delta$ H (orifice), in of water[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd (CFM) X - axis113.53.6762.549.53.08210.63.2555.497.02.6437.82.7947.685.32.3045.42.3239.773.71.9253.21.7930.752.11.45By Linear Regression of Y on XSlope, mw =	Date:	12-Apr-23		Next Due Date: 13		Jun-23	Operator:	SK
Ambient ConditionTemperature, Ta (K)298Pressure, Pa (mmHg)759.3Orifice Transfer Standard InformationSerial No.3864Slope, mc0.05928Intercept, bc-0.03491Last Calibration Date:16-Jan-23mc x Qstd + be = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> -0.03491Next Calibration Date:16-Jan-24Qstd = {[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> - bc] / mcCalibration Date:16-Jan-24Qstd = {[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> - bc] / mcCalibration of TSP SamplerCalibrationOrffceHVS $\Delta$ H (orifice), in of water[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd (CFM) X - axis113.53.6762.549.53.08210.63.2555.497.02.6437.82.7947.685.32.3045.42.3239.773.71.9253.21.7930.752.11.45By Linear Regression of Y on XSlope, mw =	Equipment No.:			Model No.:	GS	52310	Serial No.	1287
Temperature, Ta (K)         298         Pressure, Pa (mmHg)         759.3           Orifice Transfer Standard Information           Serial No.         3864         Slope, mc         0.05928         Intercept, bc         -0.03491           Last Calibration Date:         16-Jan-23         mc x Qstd + bc = [AH x (Pa/760) x (298/Ta)]^{1/2}         Ostd = {[AH x (Pa/760) x (298/Ta)]^{1/2} - bc] / mc           Next Calibration Date:         16-Jan-24         Qstd = {[AH x (Pa/760) x (298/Ta)]^{1/2} - bc] / mc           Calibration of TSP Sampler           Calibration         Orifice         HVS           Óftice         Jast (Pa/760) x (298/Ta)]^{1/2}         Qstd (CFM) $\Delta W$ (HVS), in.         [AW x (Pa/760) x (298/Ta)]^{1/2} + bc] / mc           1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X           Set Point Calculation     <	• •							
Orifice Transfer Standard Information           Serial No.         3864         Slope, mc         0.05928         Intercept, bc         -0.03491           Last Calibration Date:         16-Jan-23         mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ Next Calibration Date:         16-Jan-24         Qstd = $\{[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ - bc} / mc           Calibration Date:         16-Jan-24         Qstd = $\{[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ - bc} / mc           Calibration of TSP Sampler           Calibration of TSP Sampler           Calibration         Orfice         HVS $\Delta H$ (orifice), in. of water $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ Qstd (CFM) $\Delta W$ (HVS), in. of water $[\Delta W x (Pa/760) x (298/Ta)]^{1/2}$ 2         10.6         3.25         55.49         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X				Ambient C	Condition			
Serial No.         3864         Slope, mc         0.05928         Intercept, bc         -0.03491           Last Calibration Date:         16-Jan-23         mc x Qstd + bc = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Mc           Next Calibration Date:         16-Jan-24         Qstd = [[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Mc         Mc           Calibration Point $\Delta$ H (orifice), in. of water         [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd (CFM) $\Delta$ W (HVS), in. [ $\Delta$ W x (Pa/760) x (298/Ta)] <sup>1/2</sup> Mc         Mc           1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           Set Point Calculation           Calibration Coefficient < 0.990, check and recalibrate.	Temperatu	re, Ta (K)	298	Pressure, Pa	a (mmHg)		759.3	
Serial No.         3864         Slope, mc         0.05928         Intercept, bc         -0.03491           Last Calibration Date:         16-Jan-23         mc x Qstd + bc = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Mc           Next Calibration Date:         16-Jan-24         Qstd = [[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Mc         Mc           Calibration Point $\Delta$ H (orifice), in. of water         [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd (CFM) $\Delta$ W (HVS), in.         [ $\Delta$ W x (Pa/760) x (298/Ta)] <sup>1/2</sup> $\Delta$ Std (CFM) $\Delta$ W (HVS), in.         [ $\Delta$ W x (Pa/760) x (298/Ta)] <sup>1/2</sup> 1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X         Slope , mw =         0.0502         Intercept, bw :         -0.0940           Correlation Coefficient < 0.990, check and recalibrate.			0	····		4 <b>°</b>		
Last Calibration Date:       16-Jan-23       mc x Qstd + bc = [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Next Calibration Date:       16-Jan-24       Qstd = {[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> -bc} / mc         Calibration Date:       (Calibration of TSP Sampler         Calibration       Orfice       HVS         Orfice       U       HVS         1       13.5       3.67       62.54       9.5       3.08         2       10.6       3.25       55.49       7.0       2.64         3       7.8       2.79       47.68       5.3       2.30         4       5.4       2.32       39.77       3.7       1.92         5       3.2       1.79       30.75       2.1       1.45         By Linear Regression of Y on X         Set Point Calculation         Fort Calibration Coefficient < 0.990, check and recalibrate.         Set Point Calculation         Fort Calibration Calibration Curve, take Qstd = 43 CFM	Serial	No					t he	-0.03/91
Next Calibration Date:         16-Jan-24         Qstd = {[ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> -bc} / mc           Calibration of TSP Sampler           Calibration         Orfice         HVS $\Delta$ H (orifice), in. of water         [ $\Delta$ H x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd (CFM) X - axis $\Delta$ W (HVS), in.         [ $\Delta$ W x (Pa/760) x (298/Ta)] <sup>1/2</sup> 1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X           Set Point Calculation           Correlation coefficient* = 0.9908           *If Correlation Coefficient < 0.990, check and recalibrate.         Set Point Calculation           Frend Kalibration Curve, take Qstd = 43 CFM								
Calibration of TSP Sampler           Calibration Point         AH (orifice), in. of water         [AH x (Pa/760) x (298/Ta)] <sup>1/2</sup> Qstd (CFM) $\Delta W$ (HVS), in. of water         [ $\Delta W x (Pa/760) x (298/Ta)$ ] <sup>1/2</sup> 1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X           Stope , mw =								
Orfice         HVS           Calibration Point $\Delta H$ (orifice), in. of water $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ Qstd (CFM) X - axis $\Delta W$ (HVS), in. of water $[\Delta W x (Pa/760) x (298/Ta)]^{1/2}$ 1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X           Slope , mw =								
Cambration Point $\Delta H$ (orifice), in. of water $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ Qstd (CFM) X - axis $\Delta W$ (HVS), in. of water $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ 1       13.5       3.67       62.54       9.5       3.08         2       10.6       3.25       55.49       7.0       2.64         3       7.8       2.79       47.68       5.3       2.30         4       5.4       2.32       39.77       3.7       1.92         5       3.2       1.79       30.75       2.1       1.45         By Linear Regression of Y on X         Stope, mw = 0.0502         Intercept, bw : -0.0940         Correlation coefficient* = 0.9988         *If Correlation Coefficient < 0.990, check and recalibrate.         Set Point Calculation         From the TSP Field Calibration Curve, take Qstd = 43 CFM				Calibration of	TSP Sampler			
Point $\Delta H$ (orifice), in. of water $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ Qstd (CFM) X - axis $\Delta W$ (HVS), in. of water $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ 1         13.5         3.67         62.54         9.5         3.08           2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X           Slope , mw =	Calibration		Or	fice				
2         10.6         3.25         55.49         7.0         2.64           3         7.8         2.79         47.68         5.3         2.30           4         5.4         2.32         39.77         3.7         1.92           5         3.2         1.79         30.75         2.1         1.45           By Linear Regression of Y on X         Slope , mw =0.0502         Intercept, bw :0.0940			[ΔH x (Pa/76	50) x (298/Ta)] <sup>1/2</sup>				
3       7.8       2.79       47.68       5.3       2.30         4       5.4       2.32       39.77       3.7       1.92         5       3.2       1.79       30.75       2.1       1.45         By Linear Regression of Y on X         Slope , mw =0.0502         Correlation coefficient* =0.9988         *If Correlation Coefficient < 0.990, check and recalibrate.	1	13.5		3.67	62.54	9.5		3.08
4       5.4       2.32       39.77       3.7       1.92         5       3.2       1.79       30.75       2.1       1.45         By Linear Regression of Y on X         Slope , mw =0.0502         Intercept, bw :0.0940         Correlation coefficient* =0.9988         *If Correlation Coefficient < 0.990, check and recalibrate.	2	10.6		3.25	55.49	7.0		2.64
5       3.2       1.79       30.75       2.1       1.45         By Linear Regression of Y on X         Slope , mw =0.0502       Intercept, bw :0.0940         Correlation coefficient* =0.9988	3	7.8		2.79	47.68	5.3		2.30
By Linear Regression of Y on X         Slope , mw =0.0502       Intercept, bw :0.0940         Correlation coefficient* =0.9988         *If Correlation Coefficient < 0.990, check and recalibrate.	4	5.4		2.32	39.77	3.7		1.92
Slope , mw =0.0502       Intercept, bw :0.0940         Correlation coefficient* =0.9988         *If Correlation Coefficient < 0.990, check and recalibrate.	5	3.2		1.79	30.75	2.1		1.45
From the TSP Field Calibration Curve, take Qstd = 43 CFM	Slope , mw = Correlation	0.0502 coefficient* =	0	.9988	Intercept, bw = _	-0.094	10	
				Set Point C	alculation			
From the Regression Equation, the "Y" value according to	From the TSP Fi	eld Calibration	Curve, take Qstd	= 43 CFM				
	From the Regres	sion Equation, t	he "Y" value acco	ording to				
mw x Qstd + bw = $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$			mw v (	hard + har = [AW]	v (Da/760) v (20	(12) (1/2) (1/2)		
$\lim_{n \to \infty} x \operatorname{Qstu} + \operatorname{Dw} = [\Delta \operatorname{W} x (\operatorname{I} a / \operatorname{Vol}) x (230/\operatorname{I} a)]$			III w X Q	$z_{\text{stu}} + b_{\text{w}} - [\Delta w_{\text{st}}]^2$	X (1 a / 100) X (2)	<b>70/1 a</b> )]		
Therefore, Set Point; $W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) =$ 4.27	Therefore, Se	et Point; W = (1	mw x Qstd + bw )	<sup>2</sup> x ( 760 / Pa ) x (	Ta / 298 ) =	4.27		
	L							
Remarks:	Domarka							
	Kemarks.							
ml		<b>W</b> 7		<b>C</b> :	Xr	24	Dite	10 4
Conducted by: Wong Shing Kwai Signature: ///// Date: 12-Apr-23	Conducted by:	wong S	mig <b>k</b> wal	Signature:			Date:	12-Apt-23
Checked by:     Wong Shing Kwai     Signature:     Image: Provide Signature:       Checked by:     Henry Leung     Signature:     Lewy Marging   Date: 12-Apr-23	Checked by:	Henr	y Leung	Signature:	- \-lem	1 Xon	Date:	12-Apr-23



File No. MA16034/03/0041

Project No.	AM3 - Yau Lai	Estate, Bik Lai H	House				
Date:	12-Apr-23		Next Due Date:	12-	Jun-23	Operator:	SK
Equipment No.:	A-0	1-03	Model No.:	GS	52310	Serial No.	10379
			Ambient C	ondition			
Temperatur	re, Ta (K)	298	Pressure, Pa	(mmHg)		759.3	
		Ori	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	I	nc x Qstd + bo	$c = [\Delta H x (Pa/760)]$	)) x (298/Ta)] <sup>1</sup>	/2
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{[\Delta H x]$	(Pa/760) x (298/	Ta)] <sup>1/2</sup> -bc} / n	nc
		•	Calibration of [	<b>FSP Sampler</b>			
		Or	fice	<b>F</b>		HVS	
Calibration Point	$\Delta H$ (orifice), in. of water		50) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/7	60) x (298/Ta)] <sup>1/2</sup> Z- <b>axis</b>
1	13.1		3.62	61.62	9.0		3.00
2	10.3		3.21	54.70	6.7		2.59
3	8.2		2.86	48.87	5.1		2.26
4	5.2		2.28	39.04	3.2		1.79
5	2.9		1.70	29.30	1.9		1.38
By Linear Regr Slope , mw = Correlation ( *If Correlation C	0.0499 coefficient* =	0	.9973	Intercept, bw =	-0.131	1	
			Set Point Ca	alculation			
From the TSP Fi From the Regres Therefore, Se	sion Equation, tl	ne "Y" value acco mw x Q			98/Ta)] <sup>1/2</sup> 4.07		
Remarks:				1-	1		
Conducted by:	Wong Sł	ning Kwai	Signature:	X	<u>у</u> .	Date:	12-Apr-23
Checked by:	Henry	Leung	Signature:	Flem	J Xm J	Date:	12-Apr-23



File No. MA20003/55/018

Project No.	CKL 2 - Flat 1	03 Cha Kwo Lir	ng Village			
Date:	4-N	/lar-23	Next Due Date:	4-May-23	Operator:	SK
Equipment No.: A		01-55	Model No.:	TE 5170	Serial No.	1956
			Ambient Condit	ion		
Temperature, Ta (K) 292.6		Pressure, Pa (mmHg)		768.4		

Orifice Transfer Standard Information							
Serial No.	3864	Slope, mc 0.05928 Intercept, bc -0.034					
Last Calibration Date:	16-Jan-23	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$					
Next Calibration Date:	16-Jan-24		Qstd = { $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc				

Calibration of TSP Sampler									
Calibration		Orfice			HVS				
Point	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)] <sup>1/2</sup> <b>Y-axis</b>				
1	13.2	3.69	62.78	10.4	3.27				
2	11.0	3.37	57.36	8.4	2.94				
3	8.8	3.01	51.37	6.4	2.57				
4	5.4	2.36	40.37	3.2	1.82				
5	3.0	1.76	30.24	1.8	1.36				
By Linear Regression of Y on X Slope , mw =0.0600 Intercept, bw = Correlation coefficient* =0.9974 *If Correlation Coefficient < 0.990, check and recalibrate.									
From the TSP Fi	Set Point Calculation           From the TSP Field Calibration Curve, take Qstd = 43 CFM								
		"Y" value according to							
$mw \ x \ Qstd + bw = [\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$ Therefore, Set Point; W = ( mw x Qstd + bw ) <sup>2</sup> x ( 760 / Pa ) x ( Ta / 298 ) =									
Remarks:									
Conducted by:	Wong Shi	ng Kwai Signature:	k	у́ст	Date: 4-Mar-23				
Checked by:	Henry I	Leung Signature:		g Xog	Date: 4-Mar-23				



File No. MA20003/55/019

Project No.	CKL 2 - Flat 103	3 Cha Kwo Ling	Village			. –	
Date:	04-May-23		Next Due Date:		Jul-23	Operator:	SK
Equipment No.:			Model No.:	TE	2 5170	Serial No.	1956
			Ambient (	Condition			
Temperatu	ire, Ta (K)	290.4	Pressure, Pa	u (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	1	mc x Qstd + bo	$c = [\Delta H x (Pa/760)]$	) x (298/Ta)] <sup>1</sup>	2
Next Calibr	ation Date:	16-Jan-24		$\mathbf{Qstd} = \{ [\Delta \mathbf{H} \mathbf{x} ] \}$	(Pa/760) x (298/	$[\Gamma a)]^{1/2} - bc\} / m$	C
		Or	Calibration of fice	15P Sampler		HVS	
Calibration Point	$\Delta H$ (orifice), in. of water		i0) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/76	50) x (298/Ta)] <sup>1/2</sup> 7 <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	
Slope, mw =	ression of Y on X 0.0592	-		Intercept, bw =	-0.473	34	
	<pre>coefficient* = Coefficient &lt; 0.99</pre>		.9963 calibrate.	-			
			Set Point C	alculation			
	ield Calibration C ssion Equation, th	e "Y" value acco		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	X.	Date:	04-May-23
Checked by:	Henry	Leung	Signature:	1_0	Non 1	Date:	04-Mav-23

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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

 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 Bacalyad 77 Mar 2022

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

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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
	DOWNTEEnnology
Model No.	BSWA 308
Model No. Serial No.	81
	BSWA 308
Serial No.	BSWA 308 570183

### 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.

Report No.

Test Result

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

: 00379



Issue Date : 06 Mar 2023

Application No. : HP00251 **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 : 02 Mar 2023 Date Received Test Period : 03 Mar 2023 to 03 Mar 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%

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

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

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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Lee Wai Kit Laboratory Manager

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Issue Date : 06 Mar 2023

Report No.:00379Application No.:HP00251

# **<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.



# **Certificate of Calibration**

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

Description:	Laser Dust Mo	nitor	Date of 0	Calibration	31-Mar-23
Manufacturer:	Sibata Scientif	ic Technology LTD.	Validity of Calibration	on Record	31-May-23
Model No.:	LD-3B				
Serial No.:	2Y6194				
Equipment No.:	SA-01-02	Sensiti	ivity 0.001 mg/m3		
High Volume Sa	ampler No.:	A-01-03 Before	Sensitivity Adjustment	578	
Tisch Calibration	n Orifice No.:	<u>3864</u> After S	Sensitivity Adjustment	578	
		Calibration of 1	l hr TSP		
Calibration		Laser Dust Monitor		HVS	
Point	Total Count	Count / Minute <b>X-axis</b>	Mass co	oncentration () <b>Y-axis</b>	μg/m <sup>3</sup> )
1	4080	72.0		137.0	
2	3600	63.0		119.0	
3	2880	52.0		98.0	
Aver	rage	62.3		118.0	
By Linear Regr Slope , mw =			Intercept, bw =	-3.4568	3
Correl	ation coefficien	.t* = 0.9999			
Set Correlation I SCF = [ K=Hig		pler / Dust Meter, ( $\mu$ 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: \_\_\_\_\_ 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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibr	ration Record	31-May-23
Model No.:	LD-5R				
Serial No.:	8Y2374				
Equipment No.:	SA-01-04	Sensitivity	0.001 mg/m3	-	
High Volume Sa	ampler No.: A-01-03	Before Sensiti	ivity Adjustment	652	
Tisch Calibration	n Orifice No.: <u>3864</u>	After Sensitiv	ity Adjustment	652	
	Cal	libration of 1 h	r TSP		

	Ca	alibration of 1 hr TSP	
Calibration	Laser Dust Monito	r	HVS
Point	Mass Concentration (µg	g/m3)	Mass concentration ( $\mu g/m^3$ )
Tomit	X-axis		Y-axis
1	71.0		132.0
2	64.0		119.0
3	53.0		98.0
Average	62.7		116.3
By Linear Regressi Slope , mw =	1.8907	Intercept, bw =	-2.1498
	<u>1.8907</u> icient* = <u>1.000</u>	0	-2.1498
Slope , mw = Correlation coeffi	<u>1.8907</u> icient* = <u>1.000</u> S	0 et Correlation Factor	
Slope , mw = Correlation coeffi Particaulate Concent	1.8907           icient* =         1.000           tration by High Volume Sampler	0 et Correlation Factor	116.3
Slope , mw = Correlation coeffi Particaulate Concern Particaulate Concern	$\frac{1.8907}{\text{icient*}} = \frac{1.000}{\text{S}}$ $\frac{1.000}{\text{S}}$ $\frac{1.000}{\text{S}}$ $\frac{1.000}{\text{S}}$ $\frac{1.000}{\text{S}}$	0 et Correlation Factor	
Slope , mw = Correlation coeffi Particaulate Concent	$\frac{1.8907}{\text{icient*}} = \frac{1.000}{\text{Solution}}$ tration by High Volume Sampler tration by Dust Meter (µg/m <sup>3</sup> ) min)	0 et Correlation Factor	116.3 62.7

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)

Approved by: Project Manager (Henry Leung)

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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calib	ration Record	31-May-23
Model No.:	LD-5R			
Serial No.:	8Y2373			
Equipment No.:	SA-01-05	Sensitivity 0.001 mg/m3	_	
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensitivity Adjustment	657	
Tisch Calibration	n Orifice No.: <u>3864</u>	After Sensitivity Adjustment	657	

	Calibrati	on of 1 hr TSP		
Calibration	Laser Dust Monitor		HVS	
Point	Mass Concentration (µg/m3)	М	ass concentration ( $\mu g/m^3$ )	
Tohit	X-axis		Y-axis	
1	72.0		133.0	
2	63.0		113.0	
3	53.0		98.0	
Average	62.7		114.7	
By Linear Regression Slope , mw = Correlation coeffic	1.8358	Intercept, bw =	-0.3764	
Slope , mw =	<u>1.8358</u> cient* = <u>0.9937</u>		-0.3764	
Slope , mw = Correlation coeffic	<u>1.8358</u> cient* =0.9937 Set Corr	relation Factor		
Slope , mw = Correlation coeffic Particaulate Concent	1.8358           cient* =         0.9937           Set Corr           ration by High Volume Sampler (µg/m³)	relation Factor	114.7	
Slope , mw = Correlation coeffic Particaulate Concent Particaulate Concent	1.8358         cient* =       0.9937         Set Corr         ration by High Volume Sampler ( $\mu$ g/m <sup>3</sup> )         ration by Dust Meter ( $\mu$ g/m <sup>3</sup> )	relation Factor		
Slope , mw = Correlation coeffic Particaulate Concent	1.8358         cient* =       0.9937         Set Corr         ration by High Volume Sampler ( $\mu g/m^3$ )         ration by Dust Meter ( $\mu g/m^3$ )         in)	relation Factor	114.7 62.7	

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:



#### **Certificate of Calibration**

Average

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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calib	ration Record	31-May-23
Model No.:	LD-5R				
Serial No.:	972777				
Equipment No.:	SA-01-06	Sensitivity	0.001 mg/m3	_	
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensiti	vity Adjustment	645	
Tisch Calibration	n 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)	Ma	ss concentration (	$\mu g/m^3$ )
	X-axis			Y-axis	
1	69.0			136.0	
2	62.0			118.0	
3	51.0			100.0	

	Intercept, bw =	-1.3684
0.9919		
	0.9919	•

Set Correlation Factor				
Particaulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )	118.0			
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )	60.7			
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)

60.7

Calibrated by:

Approved by: Project Manager (Henry Leung)

118.0



#### **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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calib	ration Record	31-May-23
Model No.:	LD-5R				
Serial No.:	972778				
Equipment No.:	SA-01-07	Sensitivity	0.001 mg/m3	-	
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensit	ivity Adjustment	735 CPM	
Tisch Calibration	n Orifice No.: 3864	After Sensitiv	ity Adjustment	735 CPM	

	Calibration of 1 hr TSP					
Calibration	Laser Dust Monitor	HVS				
Point	Mass Concentration (µg/m3)	Mass concentration ( $\mu g/m^3$ )				
I onne	X-axis	Y-axis				
1	66.0	135.0				
2	58.0	117.0				
3	47.0	96.0				
Average	57.0	116.0				
Correlation co						
	Set Correlati	on Factor				
Particaulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )		116.0				
Particaulate Concentration by Dust Meter (µg/m <sup>3</sup> )		57.0				
Measureing time, (min)		60.0				
Set Correlation F	Factor, SCF					
SCF = [ K=Higl	n Volume Sampler / Dust Meter, (µg/m3) ]	2.0				

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)



#### **<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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibr	ation Record	31-May-23
Model No.:	LD-5R			
Serial No.:	972779			
Equipment No.:	SA-01-08	Sensitivity 0.001 mg/m3		
High Volume Sa	mpler No.: <u>A-01-03</u>	Before Sensitivity Adjustment	744 CPM	
Tisch Calibration	n Orifice No.: 3864	After Sensitivity Adjustment	744 CPM	
	Ca	libration of 1 hr TSP		

Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ( $\mu g/m^3$ )
rom	X-axis	Y-axis
1	69.0	136.0
2	58.0	117.0
3	49.0	96.0
Average	58.7	116.3
Slope , mw = Correlation co		ercept, bw = -0.4153
	Defficient* =0.9963	_
Correlation co	efficient* = 0.9963 Set Correlation	n Factor
Correlation co	centration by High Volume Sampler (µg/m <sup>3</sup> )	_
Correlation co Particaulate Con Particaulate Con	Defficient* =       0.9963         Set Correlation         centration by High Volume Sampler (μg/m³)         centration by Dust Meter (μg/m³)	n Factor 116.3
Correlation co	$0.9963$ Set Correlation         centration by High Volume Sampler ( $\mu g/m^3$ )         centration by Dust Meter ( $\mu g/m^3$ )         e, (min)	n Factor 116.3 58.7

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)

Calibrated by:



#### **<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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calib	ration Record	31-May-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.: <u>3864</u>	After Sensitivity Adjustment	739 CPM	

Calibration Point	Laser Dust Monitor Mass Concentration (µg/m3) X-axis	HVS Mass concentration (µg/m <sup>3</sup> )	
Point 1			
1	X-axis		
		Y-axis	
	71.0	138.0	
2	61.0	118.0	
3	51.0	97.0	
Average	61.0	117.7	
Correlation coeffic			
	Set Correlation	n Factor	
Particaulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )		117.7	
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )		61.0	
Measureing time, (min)		60.0	
Set Correlation Factor	r , 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: <u>lemy Xay</u> 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-Mar-23
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibr	ration Record	31-May-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 Sensitivity Adjustment	734 CPM	
Tisch Calibration	n Orifice No.: 3864	After Sensitivity Adjustment	734 CPM	

Laser Dust Monitor Mass Concentration (μg/m3) X-axis 72.0 64.0 52.0 62.7 00 X 9276	HVS           Mass concentration (μg/m³)           Y-axis           134.0           115.0           95.0           114.7
X-axis 72.0 64.0 52.0 62.7 on X	Y-axis           134.0           115.0           95.0           114.7
72.0 64.0 52.0 62.7 on X	134.0 115.0 95.0 114.7
64.0 52.0 62.7 on X	115.0 95.0 114.7
52.0 62.7 on X	95.0 114.7
62.7 on X	114.7
on X	
	Intercent by - 61316
= <u>0.9950</u>	lation Factor
2	
	114.7
y Dust Meter (µg/m <sup>3</sup> )	62.7
	60.0
,	
	1.8
,	by High Volume Sampler (µg/m <sup>3</sup> ) by Dust Meter (µg/m <sup>3</sup> ) c c c campler / Dust Meter, (µg/m3) ]

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	tion		
Cal. Date:	January 16	, 2023	Roots	meter S/N:	438320	Ta:	293	°К
Operator:	Jim Tisch					Pa:	749.0	mm Hg
Calibration	Model #:	TE-5025A	Calib	prator S/N:	3864			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔН	]
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4440	3.2	2.00	4
	2	3	4	1	1.0220	6.4	4.00	
	3	5	6	1	0.9100	8.0	5.00	4
	4	7	8	1	0.8710	8.8	5.50	4
	5	9	10	1	0.7210	12.8	8.00	
	Data Tabulation						]	
	Vstd	Qstd	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right)}$	)( <u>Tstd</u> ) Ta)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(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		0.9829	1.3633	1.7690	
		m=	2.094			m=	1.31155	
	QSTD	b=	-0.034		QA	b=	-0.02182	
		r=				r=	0.99995	
		Calculations						
		Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)		a)		∆Vol((Pa-∆	P)/Pa)	
	Qstd=	Vstd/∆Time			-	Va/∆Time		
				ient flow ra	te calculatio	//		
	Qstd=	<b>Qstd=</b> $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$			Qa=	1/m((√∆ŀ	l(Та/Ра))-b)	
		Conditions						
Tstd						RECA	LIBRATION	
Pstd		mm Hg			US EPA rec	ommends a	nnual recalibratio	on ner 1999
ΔH: calibrat		Key ter reading (i	n H2O)				Regulations Part !	
		eter reading					, Reference Meth	
		perature (°K)					ended Particulat	
		ressure (mm				•	ere, 9.2.17, page	
b: intercept						c Autospite	, J.z.1/, page	
m: slope								

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002

# CINGTECH

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

Description:	Yau Lai Estate, Bik Lai House
Manufacturer:	Davis Instruments
Model No.:	<u>Davis7440</u>
Serial No.:	<u>MC01010A44</u>
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 Direction (°)		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