

MSA Hong Kong Ltd.

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Date: 22-May-20

Ref.2020/05/008CustomerLeighton China State Joint Venture

CERTIFICATE FOR CALIBRATION CHECK TEST

Model	Serial No.	Calibration Check Gas	Regulator	Full Scale	Response
		1.45% Methane,	1	100% LEL	29%LEL
		15% Oxygen		30% Vol	15% O2
Altair 5X	152097	60ppm Carbon Monoxide	.25litre/min	1999 ppm	60ppm CO
Anali JA	152097	20ppm Hydrogen Sulfide	1	200 ppm	20ppm H2S
		2.5% Carbon Dioxide	-l	10% Vol	2.5% CO2
		25ppm Ammonia	Demand	100 ppm	25ppm NH3

Remarks: Regular inspection completed. Calibration passed

MSA Hong Kong Ltd. certify that instrument/s listed above has/have been calibrated check tested on: 22-May-20

This instrument was calibrated in accordance with all requirements of the specifications of MSA.

This instrument must be calibration checked prior to use in accordance with the instruction manual.

This instrument was calibrated using NIST traceable equipment and was in accordance with all requirements of the drawings and specifications of MSA.

For and on behalf of MSA Hong Kong Ltd.

Authorised Signature



File No. MA16034/05/0027

Project No.	AM1 - Tin Ha	ı Temple				
Date:	10-1	Dec-20	Next Due Date:	10-Feb-21	Operator:	SK
Equipment No.:	A-	01-05	Model No.:	GS2310	Serial No.	10599
			Ambient Condit	ion		
Temperatu	ıre, Ta (K)	293.9	Pressure, Pa (mml	Hg)	762.5	

Orifice Transfer Standard Information									
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740									
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}				
Next Calibration Date:	Next Calibration Date: 17-Jan-21 $Qstd = \{ [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2} - bc \} / mc$								

		Calibration of	TSP Sampler		
Calibration		Orfice			HVS
Point	ΔH (orifice), in. of water	$[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$\frac{[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}}{Y-axis}$
1	13.1	3.65	62.13	8.7	2.97
2	9.5	3.11	52.98	6.4	2.55
3	7.6	2.78	47.43	4.8	2.21
4	4.9	2.23	38.18	3.1	1.78
5	2.6	1.63	27.93	1.9	1.39
Slope, mw =	ession of Y on X 0.0471		Intercept, bw	0.026	0
	coefficient* =	0.9972	_		
*If Correlation C	Coefficient < 0.99	0, check and recalibrate.			
			Calculation		
		urve, take Qstd = 43 CFM			
From the Regres	sion Equation, the	e "Y" value according to			
		mw x Qstd + bw = $[\Delta W$	x (Pa/760) x (29	98/Ta)] ^{1/2}	
Therefore, So	et Point; W = (mv	$(x + bw)^2 x (760 / Pa) x ($	(Ta / 298) =	4.14	
Remarks:					
Conducted by:	SK Wong	Signature:	(.		Date: 10 December 2020
Checked by:	Henry Leung	Signature: <u> </u>	Xon j	-	Date: 10 December 2020

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293.9

Temperature, Ta (K)



762.5

File No. MA16034/08/0027

Project No.	AM2 - Sai Tso Wan Recreat	tion Ground								
Date:	10-Dec-20	Next Due Date:	10-Feb-21	Operator:	SK					
Equipment No.:	A-01-08	Model No.:	GS2310	Serial No.	1287					
	Ambient Condition									

Pressure, Pa (mmHg)

Orifice Transfer Standard Information									
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740									
Last Calibration Date:	17-Jan-20	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$							
Next Calibration Date:	Next Calibration Date: 17-Jan-21 $Qstd = \{ [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc \} / mc$								

		Calibration of	TSP Sampler		
Calibration		Orfice			HVS
Point	ΔH (orifice), in. of water	$[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$\frac{[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}}{Y-axis}$
1	13.1	3.65	62.13	8.7	2.97
2	9.9	3.17	54.07	6.2	2.51
3	7.8	2.82	48.05	4.7	2.19
4	4.9	2.23	38.18	3.1	1.78
5	2.8	1.69	28.97	1.9	1.39
Slope , mw = Correlation	coefficient* =		Intercept, bw = _	-0.018	36
		Set Point C	alculation		
		urve, take Qstd = 43 CFM			
From the Regres	sion Equation, the	e "Y" value according to			
Therefore, Se	et Point; W = (mv	$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W}]^2$ v x Qstd + bw) ² x (760 / Pa) x (
Remarks:					
Conducted by:	SK Wong	Signature:	<u></u>		Date: 10 December 2020
Checked by:	Henry Leung	Signature: <u> </u>	(Xang		Date: <u>10 December 2020</u>

293.9

Temperature, Ta (K)



762.5

File No. MA16034/03/0027

Project No.	AM3 - Yau Lai Estate, Bik I				
Date:	10-Dec-20	Next Due Date:	10-Feb-21	Operator:	SK
Equipment No.:	A-01-03	Model No.:	GS2310	Serial No.	10379
		Ambient Condit	ion		

Pressure, Pa (mmHg)

Orifice Transfer Standard Information									
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740									
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}				
Next Calibration Date:	1/2								

	Calibration of TSP Sampler								
Calibration		Orfice			HVS				
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$\frac{[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}}{Y-axis}$				
1	13.0	3.64	61.89	8.6	2.96				
2	9.6	3.13	53.25	6.5	2.57				
3	7.7	2.80	47.74	5.3	2.32				
4	5.1	2.28	38.94	3.3	1.83				
5	2.6	1.63	27.93	2.0	1.42				
Slope, mw =	ression of Y on X 0.0463 coefficient* =		Intercept, bw =	0.095	0				
	*If Correlation Coefficient < 0.990, check and recalibrate.								
		o, encek and recariorate.							
		Set Point C	alculation						
From the TSP Fi	eld Calibration C	urve, take Qstd = 43 CFM							
From the Regres	sion Equation, the	e "Y" value according to							
Therefore, Se	et Point; W = (mv	$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \mathbf{x}]$ w x Qstd + bw) ² x (760 / Pa) x (98/Ta)] ^{1/2} 4.27					
Remarks:									
Conducted by:	SK Wong	Signature:	<u>.</u>		Date: <u>10 December 2020</u>				
Checked by:	Henry Leung	Signature:	Xoz		Date: <u>10 December 2020</u>				

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293.9

Temperature, Ta (K)

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762.5

File No. MA16034/54/0027

Project No.	AM4(A) - Cha Kwo Ling Pu				
Date:	10-Dec-20	Next Due Date:	10-Feb-21	Operator:	SK
Equipment No.:	A-01-54	Model No.:	TE-5170	Serial No.	1536
		Ambient Condit	ion		

Pressure, Pa (mmHg)

Orifice Transfer Standard Information									
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740									
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}				
Next Calibration Date:	Next Calibration Date: 17-Jan-21 $Qstd = \{[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2} - bc\} / mc$								

		Calibration of	TSP Sampler			
Calibration		Orfice			HVS	
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (P	Pa/760) x (298/Ta)] ^{1/2} Y-axis
1	13.0	3.64	61.89	8.8		2.99
2	9.9	3.17	54.07	6.4		2.55
3	7.5	2.76	47.12	5.0		2.26
4	5.3	2.32	39.69	3.3		1.83
5	3.0	1.75	29.97	1.9		1.39
Slope, mw =	ession of Y on X 0.0501 coefficient* =	0.9991	Intercept, bw	-0.128	1	_
), check and recalibrate.	_			
		·,				
		Set Point (Calculation			
From the TSP Fi	eld Calibration Co	urve, take Qstd = 43 CFM				
From the Regres	sion Equation, the	e "Y" value according to				
Therefore, Se	et Point; W = (mv	$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W}]$ v x Qstd + bw) ² x (760 / Pa) x (98/Ta)] ^{1/2} 4.04		_
Remarks:						
Conducted by:	SK Wong	Signature:	<u>,</u> Xvo j	-	Date:	10 December 2020
Checked by:	Henry Leung	Signature:	X27		Date:	10 December 2020

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File No. MA16034/05/0028

Project No.	AM1 - Tin Hau	1 Temple				
Date:	10-]	Feb-21	Next Due Date:	10-Apr-21	Operator:	SK
Equipment No.:	A-	01-05	Model No.:	GS2310	Serial No.	10599
			Ambient Condit	ion		
Temperatu	ıre, Ta (K)	289.5	Pressure, Pa (mml	Hg)	760	

Orifice Transfer Standard Information								
Serial No.	Serial No. 3864 Slope, mc 0.05846 Intercept, bc -0.00313							
Last Calibration Date:	11-Jan-21	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}			
Next Calibration Date:	11-Jan-22		$Qstd = \{ [\Delta H x]$	(Pa/760) x (298/Ta)] ^{1/2} -bc} /	mc			

		Calibration of	TSP Sampler			
Calibration		Orfice			HVS	
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (I	Pa/760) x (298/Ta)] ^{1/2} Y-axis
1	13.0	3.66	62.63	8.7		2.99
2	9.4	3.11	53.26	6.4		2.57
3	7.5	2.78	47.58	4.8		2.22
4	4.8	2.22	38.08	3.1		1.79
5	2.5	1.60	27.49	1.9		1.40
	coefficient* =	0, check and recalibrate.	Intercept, bw	.080	7	_
		Set Point C	alculation			
		urve, take Qstd = 43 CFM				
	-	e "Y" value according to mw x Qstd + bw = [ΔW x v x Qstd + bw)² x (760 / Pa) x (98/Ta)] ^{1/2}		_
Remarks: Conducted by:	SK Wong	Signature:			Date:	10 February 2021
·				-		
Checked by:	Henry Leung	Signature: \-lemp	Log		Date:	10 February 2021

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Temperature, Ta (K)

289.5



760

File No. MA16034/08/0028

Project No.	AM2 - Sai Tso Wan Recreat	tion Ground				
Date:	10-Feb-21	Next Due Date:	10-Apr-21	Operator:	SK	
Equipment No.:	A-01-08	Model No.:	GS2310	Serial No.	1287	
		Ambient Condi	ion			

Pressure, Pa (mmHg)

Orifice Transfer Standard Information							
Serial No. 3864 Slope, mc 0.05846 Intercept, bc -0.00313							
Last Calibration Date:	11-Jan-21	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}		
Next Calibration Date:	11-Jan-22		$Qstd = \{ [\Delta H x]$	(Pa/760) x (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)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (P	a/760) x (298/Ta)] ^{1/2} Y-axis		
1	13.0	3.66	62.63	8.8		3.01		
2	9.9	3.19	54.66	6.2		2.53		
3	7.8	2.83	48.52	4.8		2.22		
4	4.9	2.25	38.47	3.1		1.79		
5	2.9	1.73	29.61	1.9		1.40		
Slope , mw = Correlation	By Linear Regression of Y on X Slope , mw = 0.0480 Correlation coefficient* = 0.9972 FIf Correlation Coefficient < 0.990, check and recalibrate.							
From the TSD Fi	ald Calibration C	Set Point C urve, take Qstd = 43 CFM	alculation					
		e "Y" value according to						
Therefore, Se	et Point; W = (my	$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \mathbf{x}]$ $\mathbf{v} \mathbf{x} \mathbf{Qstd} + \mathbf{bw}^{2} \mathbf{x} (760 / Pa) \mathbf{x} (760 / Pa)$		98/Ta)] ^{1/2} 		_		
Remarks:								
Conducted by:	SK Wong	Signature:			Date:	10 February 2021		
Checked by:	Henry Leung	Signature:	Xnor		Date:	10 February 2021		

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289.5

Temperature, Ta (K)



760

Date:

10 February 2021

File No. MA16034/03/0028

Project No.	AM3 - Yau Lai Estate, Bik I	Lai House				
Date:	10-Feb-21	Next Due Date:	10-Apr-21	Operator:	SK	
Equipment No.:	A-01-03	Model No.:	GS2310	Serial No.	10379	
		Ambient Condit	tion			

Pressure, Pa (mmHg)

Orifice Transfer Standard Information							
Serial No. 3864 Slope, mc 0.05846 Intercept, bc -0.00313							
Last Calibration Date:	11-Jan-21	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}		
Next Calibration Date:	11-Jan-22		$Qstd = \{ [\Delta H x]$	(Pa/760) x (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)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$\frac{[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}}{Y-axis}$			
1	12.9	3.64	62.39	8.7	2.99			
2	9.6	3.14	53.83	6.5	2.59			
3	7.8	2.83	48.52	5.3	2.34			
4	5.2	2.31	39.63	3.4	1.87			
5	2.6	1.64	28.04	2.0	1.43			
By Linear Regression of Y on X Slope , mw =0.0462 Intercept, bw :0.0975								
Correlation coefficient* = 0.9984								
*If Correlation C	Coefficient < 0.990), check and recalibrate.						
		Set Point C	alculation					
		urve, take Qstd = 43 CFM						
From the Regres	sion Equation, the	e "Y" value according to						
		$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \mathbf{x}]$	x (Pa/760) x (29	98/Ta)] ^{1/2}				
Therefore, Se	et Point; W = (mv	$(x + y + y)^{2} x (760 / Pa) x (760 / Pa)$	Ta / 298) =	4.21				
Remarks:								
Conducted by:	SK Wong	Signature:			Date: 10 February 2021			

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Signature:

Checked by: Henry Leung

289.5

Temperature, Ta (K)



760

File No. MA16034/54/0028

Project No.	AM4(A) - Cha Kwo Ling Pu	blic Cargo Working Area A	dministrative Office		
Date:	10-Feb-21	Next Due Date:	10-Apr-21	Operator:	SK
Equipment No.:	A-01-54	Model No.:	TE-5170	Serial No.	1536
		Ambient Condit	ion		

Pressure, Pa (mmHg)

Orifice Transfer Standard Information							
Serial No. 3864 Slope, mc 0.05846 Intercept, bc -0.00313							
Last Calibration Date:	11-Jan-21	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$] ^{1/2}		
Next Calibration Date:	11-Jan-22		$Qstd = \{ [\Delta H x] \}$	$(Pa/760) \ge (298/Ta)]^{1/2} -bc\} /$	mc		

		Calibration of	TSP Sampler			
Calibration		Orfice			HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (P	² a/760) x (298/Ta)] ^{1/2} Y-axis
1	13.1	3.67	62.87	8.9		3.03
2	9.9	3.19	54.66	6.4		2.57
3	7.5	2.78	47.58	5.0		2.27
4	5.4	2.36	40.38	3.3		1.84
5	3.0	1.76	30.11	1.9		1.40
If Correlation (Coefficient < 0.99), check and recalibrate.				
		Set Point C	alculation			
From the TSP Fi	ield Calibration C	urve, take Qstd = 43 CFM				
From the Regres	sion Equation, the	e "Y" value according to				
		mw x Qstd + bw = $[\Delta W]$	x (Pa/760) x (29	98/Ta)1 ^{1/2}		
Therefore, Se	et Point; W = (mv	$(x + bw)^2 x (760 / Pa) x ($	Ta / 298) =	3.95		_
Remarks:						
Cillarks.						
		ا م ۱				
Conducted by:	SK Wong	Signature:	<u>, '</u>		Date:	10 February 202
		<i>b</i> -				

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0024993

Customer :		Object 1 : BSWA 308 SLM	
Cinotech Consultants Limited		Serial No. /Ref. No. : 570183 / 550233	
RM 1710, Technology Park,		Object 2 :	
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No. :	
Hong Kong			
Customer Code : SVEC09005		Manufacturer : BSWAtech	
Date of calibration:	07/10/2020	Certificate No.: 0024993	
Date of the recommended re-calibration:	07/10/2021	Handle by: E0002	

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.4dB	-0.6dB	+/- 1.5dB	1
114.0dB	113.2dB	-0.8dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Appleone Calibration Laboratory Ltd.

Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. 5 The calibrations certificate may not be reproduced

5. The calibrations certificate may not be reproduced.

Measured value(s) within the allowable deviation.

Performed by
Calibration Technician Mr. K.L. Ng

Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR Tel: +852 2370 4437 Fax: +852 2114 0393



0024995

Customer :		Object 1 : BSWA 308 SLM	
Cinotech Consultants Limited		Serial No. /Ref. No. : 570187 / 550841	
RM 1710, Technology Park,		Object 2 :	
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No.	
Hong Kong			
Customer Code : SVEC09005		Manufacturer : BSWAtech	
Date of calibration:	07/10/2020	Certificate No.: 0024995	
Date of the recommended re-calibration:	07/10/2021	Handle by: E0002	

Measuring results

	Reference value	Indication value	Deviation	Allowed deviation	Object
Γ	94.0dB	93.1dB	-0.9dB	+/- 1.5dB	1
ſ	114.0dB	113.1dB	-0.9dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. 5. The calibrations certificate may not be reproduced.

Measured value(s)

Calibration Technician

the allowable deviation.

Performed by

Approved by

Mr. K.S. Ng

Quality Manager

Appleone Calibration Laboratory Ltd. Rm1309, 13/F, No.77 Wing Hong St, KIn, HKSAR

Mr. K.L. Ng

Tel: +852 2370 4437 Fax: +852 2114 0393



0024996

Customer :		Object 1 : BSWA 308 SLM	
Cinotech Consultants Limited		Serial No. /Ref. No. : 570188 / 550850	
RM 1710, Technology Park,		Object 2 :	
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No. :	
Hong Kong			
Customer Code : SVEC09005		Manufacturer : BSWAtech	
Date of calibration:	07/10/2020	Certificate No.: 0024996	
Date of the recommended re-calibration:	07/10/2021	Handle by: E0002	

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	92.9dB	-1.1dB	+/- 1.5dB	1
114.0dB	112.8dB	-1.2dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949, sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

5. The calibrations certificate may not be reproduced.						
Measured value(s) within	the allowable deviation.					
Performed by		Approved by				
le/5		Mr. K.S. Ng				
Calibration Technician	Mr. K.L. Ng	Quality Manager				
Appleone Calibration Laboratory Ltd.	Rm1309, 13/F, No.77 Wing Hong St	i, Kin, HKSAR Tel: +852 2370 4437 Fax: +852 2114 0393				



0025247

Customer :		Object 1 :	ST-120 sound calibrator
Cinotech Consultants Limited	Cinotech Consultants Limited		181001608
RM 1710, Technology Park,		Object 2 :	
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No. :	
Hong Kong	Hong Kong		
Customer Code : SVEC09005		Manufacturer : Sour	ndtek
Date of calibration:	05/11/2020	Certificate No .:	0025247
Date of the recommended re-calibration:	05/11/2021	Handle by:	E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.7dB	-0.3dB	+/- 0.3dB	1
114.0dB	113.6dB	-0.4dB	+/- 0.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949, sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source -

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

5. The calibrations certificate may not be reproduced.

Measured value(s)	within the	e allowable deviation		
Performed by	1		Approved	ьу
	at		L	~ ``
Calibration Technicia	an	Mr. K.L. Ng	Quality Ma	nager
Appleone Calibration Lat	poratory Ltd. Rm	1309, 13/F, No.77 Wing Hor	ng St, Kln, HKSAR	Tel: +852 2370 4437 Fax: +852 2114 0393



0025249

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 : Serial No. /Ref. No. : Object 2 : Serial No. /Ref. No. :	ST-120 sound calibrator 181001636
Customer Code : SVEC09005 Date of calibration: 0)5/11/2020)5/11/2021	Manufacturer : Sour Certificate No.: Handle by:	ndtek 0025249 E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.7dB	-0.3dB	+/- 0.3dB	1
114.0dB	113.6dB	-0.4dB	+/- 0.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949, sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source ...

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

5. The calibrations certificate may not be reproduced.

Measured value(s) within	the allowable deviation.	
Performed by		Approved by
ar		L
Calibration Technician	Mr. K.L. Ng	Quality Manager
Appleone Calibration Laboratory Ltd.	Rm1309, 13/F, No.77 Wing Hong S	t, KIn, HKSAR Tel: +852 2370 4437 Fax: +852 2114 0393



0025248

Customer :		Object 1 :	ST-120 sound calibrator
Cinotech Consultants Limited		Serial No. /Ref. No. :	181001637
RM 1710, Technology Park,		Object 2 :	
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No. :	
Hong Kong			
Customer Code : SVEC09005		Manufacturer : Sou	ndtek
Date of calibration:	05/11/2020	Certificate No .:	0025248
Date of the recommended re-calibration:	05/11/2021	Handle by:	E0002

Measuring results

	Reference value	Indication value	Deviation	Allowed deviation	Object
Γ	94.0dB	93.8dB	-0.2dB	+/- 0.3dB	1
	114.0dB	113.6dB	-0.4dB	+/- 0.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. 5.The calibrations certificate may not be reproduced.

 Measured value(s) within
 the allowable deviation.

 Performed by
 Approved by

 Calibration Technician
 Mr. K.L. Ng

 Appleone Calibration Laboratory Ltd.
 Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR

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

Description:	Digital Dust Indicator	Date of Calibr	ration 5-Dec-20
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibration Re	ecord 5-Feb-21
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 Sensitivity Adjustment652	2
Tisch Calibratio	n Orifice No.: 3607	After Sensitivity Adjustment 652	2

	Calibration of 1	hr TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ($\mu g/m^3$)
Tomt	X-axis	Y-axis
1	50.0	88.4
2	46.0	84.2
3	42.0	79.3
Average	46.0	84.0
By Linear Regress Slope , mw =	1.1375 Inte	rcept, bw = 31.6417
	1.1375 Integration 'ficient* = 0.9990	-
Slope , mw = Correlation coef	1.1375 Integration `ficient* = 0.9990 Set Correlation	-
Slope , mw = Correlation coef	1.1375 Integration 'ficient* = 0.9990	- Factor
Slope , mw = Correlation coef	1.1375 Intermediate 'ficient* = 0.9990 Set Correlation ntration by High Volume Sampler ($\mu g/m^3$) ntration by Dust Meter ($\mu g/m^3$)	
Slope , mw = Correlation coef Particaulate Conce Particaulate Conce	1.1375 Integration ificient* = 0.9990 Set Correlation ntration by High Volume Sampler ($\mu g/m^3$) ntration by Dust Meter ($\mu g/m^3$) min)	Factor 84.0 46.0

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.

Calibrated by: ______. Wong Shing Kwai

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

Description:	Digital Dust Indicator		Date	of Calibration	5-Feb-21
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibi	ration Record	5-Apr-21
Model No.:	LD-5R				
Serial No.:	8Y2374				
Equipment No.:	SA-01-04	Sensitivity	0.001 mg/m3	-	
High Volume Sa	ampler No.: <u>A-01-03</u>	Before Sensiti	vity Adjustment	652	
Tisch Calibration	n Orifice No.: <u>3607</u>	After Sensitivi	ity Adjustment	652	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	r		HVS	
Point	Mass Concentration (µg/ X-axis	′m3)	Mas	ss concentration (µ Y-axis	ug/m ³)
1	52.0			107.0	
2	47.0			101.0	
3	43.0			95.0	
Average	47.3			101.0	
	ression of Y on X 		cept, bw =	38.1475	
		et Correlation F	actor		
	centration by High Volume Sampler	$(\mu g/m^3)$		101.0	
Particaulate Con	ncentration by Dust Meter (µg/m ³)			47.3	
Measureing time	e, (min)			60.0	
Set Correlation I					
SCF = [K=Hig	h Volume Sampler / Dust Meter, (µ	g/m3)]	2.1		

In-house method in according to the instruction manual:

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

Calibrated by: ______ Wong Shing Kwai

Approved by: <u>lemy Kay</u> Henry Leung

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

Description:	Digital Dust Indicator	Date	of Calibration	5-Dec-20
Manufacturer:	Sibata Scientific Technology LTD.	Validity of Calibr	ation Record	5-Feb-21
Model No.:	LD-5R			
Serial No.:	8Y2373			
Equipment No.:	SA-01-05	Sensitivity 0.001 mg/m3	_	
High Volume Sa	mpler No.: A-01-03	Before Sensitivity Adjustment	657	
Tisch Calibration	n Orifice No.: 3607	After Sensitivity Adjustment	657	

	Calibration of 1 l	nr TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ($\mu g/m^3$)
Tollit	X-axis	Y-axis
1	38.0	88.4
2	33.0	84.2
3	29.0	79.3
Average	33.3	84.0
Slope, mw =		cept, bw =50.4967
•	1.0041 Inter efficient* = 0.9941	-
Slope , mw = Correlation co	1.0041 Inter efficient* = 0.9941 Set Correlation I	Factor
Slope , mw = Correlation co Particaulate Cone	1.0041 Inter efficient* = 0.9941 Set Correlation I centration by High Volume Sampler (μg/m³)	-
Slope , mw = Correlation co Particaulate Cone	1.0041 Inter efficient* = 0.9941 Set Correlation I	Factor
Slope , mw = Correlation co Particaulate Cone	1.0041 Inter efficient* = 0.9941 Set Correlation I centration by High Volume Sampler ($\mu g/m^3$) centration by Dust Meter ($\mu g/m^3$)	Factor 84.0
Slope , mw = Correlation co Particaulate Cone Particaulate Cone	1.0041 Inter efficient* = 0.9941 Set Correlation I centration by High Volume Sampler ($\mu g/m^3$) centration by Dust Meter ($\mu g/m^3$) (min)	Factor 84.0 33.3

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.

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

Description:	Digital Dust Indicator		Date	of Calibration	5-Feb-21
Manufacturer:	Sibata Scientific Technology LTD.		Validity of Calibr	ration Record	5-Apr-21
Model No.:	LD-5R				
Serial No.:	8Y2373				
Equipment No.:	SA-01-05	Sensitivity	0.001 mg/m3	-	
High Volume Sa	ampler No.: <u>A-01-03</u>	Before Sensiti	vity Adjustment	657	
Tisch Calibratio	on Orifice No.: <u>3607</u>	After Sensitivi	ity Adjustment	657	
	Ca	alibration of 1 h	r TSP		
Calibration	Laser Dust Monitor			HVS	
Point	Mass Concentration (μg. X-axis	/m3)	Mas	ss concentration (µ Y-axis	.g/m ³)
1	42.0			88.4	
2	38.0			84.2	
3	34.0			79.3	
Average	38.0			84.0	
•	ression of Y on X <u>1.1375</u> oefficient* = <u>0.9990</u>		cept, bw = -	40.7417	
		et Correlation F	`actor		
-	ncentration by High Volume Sampler	$(\mu g/m^3)$		84.0	
Particaulate Cor	ncentration by Dust Meter ($\mu g/m^3$)			38.0	
Measureing time	e, (min)			60.0	
Set Correlation					
SCF = [K=Hig	h Volume Sampler / Dust Meter, (μ	ug/m3)]	2.2		

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.

Calibrated by: Wong Shing Kwai

Approved by: <u>lemy Xong</u> Henry Leung

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

Description:	Digital Dust Indicator		Date of	f Calibration	5-Dec-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibra	tion Record	5-Feb-21
Model No.:	LD-5R				
Serial No.:	972778				
Equipment No.:	SA-01-07	Sensitivity	0.001 mg/m3		
High Volume Sa	umpler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	735 CPM	
Tisch Calibration	n Orifice No.: 3607	After Sensitivi	ty Adjustment	735 CPM	

	Calibration of 1	hr TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ($\mu g/m^3$)
Tollit	X-axis	Y-axis
1	48.0	88.4
2	43.0	84.2
3	38.0	79.3
Average	43.0	84.0
By Linear Regre Slope , mw = _	0.9100 Inte	rcept, bw = 44.8367
	<u>0.9100</u> Inter fficient* = <u>0.9990</u>	-
Slope , mw = Correlation coe	0.9100 Inte	-
Slope , mw = Correlation coe	0.9100 Inter efficient* = 0.9990 Set Correlation	Factor
Slope , mw = Correlation coe	$\frac{0.9100}{efficient^*} = \frac{0.9990}{efficient^*}$ $\frac{Set \ Correlation}{entration \ by \ High \ Volume \ Sampler \ (\mu g/m^3)}$ $entration \ by \ Dust \ Meter \ (\mu g/m^3)$	
Slope , mw = Correlation coe Particaulate Conc Particaulate Conc	0.9100 Interpretendent efficient* = 0.9990 Set Correlation entration by High Volume Sampler ($\mu g/m^3$) entration by Dust Meter ($\mu g/m^3$) (min)	Factor 84.0 43.0

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.

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

Description:	Digital Dust Indicator		Date	of Calibration	5-Feb-21
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibi	ration Record	5-Apr-21
Model No.:	LD-5R				
Serial No.:	972778				
Equipment No.:	SA-01-07	Sensitivity	0.001 mg/m3		
High Volume Sa	ampler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	735 CPM	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivi	ity Adjustment	735 CPM	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	r		HVS	
Point	Mass Concentration (µg/	/m3)	Mas	ss concentration (µ	ug/m ³)
	X-axis			Y-axis	
1	51.0			107.0	
2	45.0			101.0	
3	40.0			95.0	
Average	45.3			101.0	
Ry Linear Reg	ession of Y on X				
Slope, mw =	1.0879	Interd	cept, bw =	51.6813	
Correlation co			cept, bu	51.0015	
	Se	et Correlation F	actor		
Particaulate Con	centration by High Volume Sampler	$(\mu g/m^3)$		101.0	
Particaulate Con	centration by Dust Meter ($\mu g/m^3$)			45.3	
Measureing time	e, (min)			60.0	
Set Correlation	Factor, SCF				
SCF = [K=Hig	h Volume Sampler / Dust Meter, (μ	g/m3)]	2.2		

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)

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

Description:	Digital Dust Indicator		Date o	of Calibration	5-Dec-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibra	ation Record	5-Feb-21
Model No.:	LD-5R				
Serial No.:	972779				
Equipment No.:	SA-01-08	Sensitivity	0.001 mg/m3		
High Volume Sa	ampler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	744 CPM	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivi	ty Adjustment	744 CPM	

	Calibration of 1 h	r TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ($\mu g/m^3$)
Tomit	X-axis	Y-axis
1	51.0	88.4
2	47.0	84.2
3	41.0	79.3
Average	46.3	84.0
By Linear Regress Slope , mw =	0.9026 Interc	ept, bw = 42.1447
	<u>0.9026</u> Interc icient* = <u>0.9975</u>	
Slope, mw =	0.9026 Interc	
Slope , mw = Correlation coeff	<u>0.9026</u> Interc icient* = <u>0.9975</u>	
Slope , mw = Correlation coeff	0.9026 Interc icient* = 0.9975 Set Correlation F	actor
Slope , mw = Correlation coeff	0.9026Intercicient* =0.9975Set Correlation Ftration by High Volume Sampler ($\mu g/m^3$)tration by Dust Meter ($\mu g/m^3$)	actor 84.0
Slope , mw = Correlation coeff Particaulate Concen Particaulate Concen	0.9026Intercicient* =0.9975Set Correlation Ftration by High Volume Sampler ($\mu g/m^3$)tration by Dust Meter ($\mu g/m^3$)nin)	actor 84.0 46.3

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.

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

Description:	Digital Dust Indicator		Date	of Calibration	5-Feb-21
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calib	ration Record	5-Apr-21
Model No.:	LD-5R				
Serial No.:	972779				
Equipment No.:	SA-01-08	Sensitivity	0.001 mg/m3	_	
High Volume Sa	ampler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	744 CPM	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivi	ity Adjustment	744 CPM	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	r		HVS	
Point	Mass Concentration (µg/	/m3)	Mas	ss concentration (µ	ug/m ³)
	X-axis			Y-axis	
1	52.0			107.0	
2	47.0			101.0	
3	42.0			95.0	
Average	47.0			101.0	
By Linear Regi	ression of Y on X				
Slope , mw =	1.2000	Intero	cept, bw =	44.6000	
Correlation co	pefficient* = 1.0000)	-		
	Se	et Correlation F	actor		
Particaulate Con	centration by High Volume Sampler	$(\mu g/m^3)$		101.0	
Particaulate Con	acentration by Dust Meter ($\mu g/m^3$)			47.0	
Measureing time	e, (min)			60.0	
Set Correlation	Factor, SCF				
SCF = [K=Hig	h Volume Sampler / Dust Meter, (μ	g/m3)]	2.1		
				_	

In-house method in according to the instruction manual:

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

Calibrated by: _______ Wong Shing Kwai

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

Description:	Digital Dust Indicator		Date of	f Calibration	5-Dec-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibra	tion Record	5-Feb-21
Model No.:	LD-5R				
Serial No.:	972780				
Equipment No.:	SA-01-09	Sensitivity	0.001 mg/m3		
High Volume Sa	umpler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	739 CPM	
Tisch Calibration	n Orifice No.: 3607	After Sensitivi	ty Adjustment	739 CPM	

	Calibration of 1 l	nr TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration (μ g/m ³)
Tollit	X-axis	Y-axis
1	50.0	88.4
2	45.0	84.2
3	40.0	79.3
Average	45.0	84.0
•	ession of Y on X 0.9100 Inter	cept, bw = 43.0167
•	0.9100 Inter efficient* = 0.9990	-
Slope , mw = Correlation co	0.9100 Inter efficient* = 0.9990 Set Correlation 1	Factor
Slope , mw = Correlation co Particaulate Con-	0.9100 Inter efficient* = 0.9990 Set Correlation I centration by High Volume Sampler (µg/m³)	Factor 84.0
Slope , mw = Correlation co Particaulate Com Particaulate Com	0.9100Interefficient* =0.9990Set Correlation Icentration by High Volume Sampler (μ g/m ³)centration by Dust Meter (μ g/m ³)	Factor 84.0 45.0
Slope , mw = Correlation co Particaulate Con-	0.9100Interefficient* =0.9990Set Correlation Icentration by High Volume Sampler (μ g/m ³)centration by Dust Meter (μ g/m ³)	Factor 84.0
Slope , mw = Correlation co Particaulate Com Particaulate Com	0.9100 Inter efficient* = 0.9990 Set Correlation 1 centration by High Volume Sampler (μ g/m ³) centration by Dust Meter (μ g/m ³) (min)	Factor 84.0 45.0

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.

Calibrated by: ______Wong Shing Kwai

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

Description:	Digital Dust Indicator		Date	of Calibration	5-Feb-21
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibi	ration Record	5-Apr-21
Model No.:	LD-5R				
Serial No.:	972780				
Equipment No.:	SA-01-09	Sensitivity	0.001 mg/m3	_	
High Volume Sa	ampler No.: A-01-01A	Before Sensiti	vity Adjustment	739 CPM	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivi	ty Adjustment	739 CPM	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	r		HVS	
Point	Mass Concentration (µg/	/m3)	Mas	ss concentration (µ	ug/m ³)
	X-axis		Y-axis		
1	51.0		107.0		
2	46.0		101.0		
3	42.0			95.0	
Average	46.3			101.0	
Der I fersore Door					
•	ression of Y on X	Tradama		20 4754	
- ·	<u>1.3279</u>		cept, bw =	39.4754	
Correlation co	oefficient* =0.9979				
	Se	et Correlation F	actor		
Particaulate Cor	ncentration by High Volume Sampler	$(\mu g/m^3)$		101.0	
Particaulate Concentration by Dust Meter (µg/m ³)			46.3		
Measureing time	e, (min)			60.0	
Set Correlation	Factor, SCF				
SCF = [K=Hig	h Volume Sampler / Dust Meter, (μ	g/m3)]	2.2		

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: _______. . Wong Shing Kwai

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

Description:	Digital Dust Indicator		Date o	f Calibration	5-Dec-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibra	ation Record	5-Feb-21
Model No.:	LD-5R				
Serial No.:	972781				
Equipment No.:	SA-01-10	Sensitivity	0.001 mg/m3		
High Volume Sa	mpler No.: <u>A-01-01A</u>	Before Sensitiv	vity Adjustment	734 CPM	
Tisch Calibration	n Orifice No.: 3607	After Sensitivi	ty Adjustment	734 CPM	

	Calibration of 1	hr TSP
Calibration	Laser Dust Monitor	HVS
Point	Mass Concentration (µg/m3)	Mass concentration ($\mu g/m^3$)
Tomit	X-axis	Y-axis
1	53.0	88.4
2	46.0	84.2
3	36.0	79.3
Average	45.0	84.0
	ession of Y on X 0.5322 Inter	rcept, bw =60.0180
	0.5322 Inter efficient* = 0.9984	-
Slope , mw = Correlation co	0.5322 Inter efficient* = 0.9984 Set Correlation 3	Factor
Slope , mw = Correlation coo	0.5322 Inter efficient* = 0.9984 Set Correlation tentration by High Volume Sampler (µg/m³)	Factor 84.0
Slope , mw = Correlation coor Particaulate Conce Particaulate Conce	0.5322 Inter efficient* = 0.9984 Set Correlation centration by High Volume Sampler ($\mu g/m^3$) centration by Dust Meter ($\mu g/m^3$)	Factor
Slope , mw = Correlation coo	0.5322 Inter efficient* = 0.9984 Set Correlation centration by High Volume Sampler ($\mu g/m^3$) centration by Dust Meter ($\mu g/m^3$)	Factor 84.0
Slope , mw = Correlation coor Particaulate Conce Particaulate Conce	0.5322 Inter efficient* = 0.9984 Set Correlation 3 centration by High Volume Sampler (μ g/m ³) centration by Dust Meter (μ g/m ³) (min)	Factor 84.0 45.0

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.

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

Description:	Digital Dust Indicator		Date	of Calibration	5-Feb-21
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibr	ration Record	5-Apr-21
Model No.:	LD-5R				
Serial No.:	972781				
Equipment No.:	SA-01-10	Sensitivity	0.001 mg/m3		
High Volume Sa	ampler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	734 CPM	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivi	ity Adjustment	734 CPM	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	r		HVS	
Point	Mass Concentration (µg/	/m3)	Mas	ss concentration (µ	ug/m ³)
	X-axis		Y-axis		
1	59.0		107.0		
2	51.0		101.0		
3	40.0			95.0	
Average	50.0			101.0	
	• • • • • •				
•	ression of Y on X	T ((0.(012	
• ^			cept, bw =	69.6813	
Correlation co	oefficient* =0.9959				
	Se	et Correlation F	actor		
Particaulate Cor	ncentration by High Volume Sampler	$(\mu g/m^3)$	101.0		
Particaulate Concentration by Dust Meter (µg/m ³)			50.0		
Measureing time	e, (min)			60.0	
Set Correlation	Factor, SCF				
SCF = [K=Hig	h Volume Sampler / Dust Meter, (μ	g/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.

Calibrated by: _______ Wong Shing Kwai



RECALIBRATION DUE DATE:

January 17, 2021

nmental Dertificate of Calibration

			Calibration	Certificati	on Informat	tion		
Cal. Date:	January 17	.7, 2020 Rootsmeter S/N: 438320		438320	Ta:	295	°К	
Operator:	Jim Tisch				Pa: 744.2		mm Hg	
Calibration Model #: TE-5025A Cal				brator S/N:	3746			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔН]
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4340	3.2	2.00	
	2	3	4	1	1.0180	6.4	4.00	
	3	5	6	1	0.9080	7.9	5.00	
	4	7	8	1	0.8700	8.7	5.50	
	5	9	10	1	0.7150	12.6	8.00	
			[Data Tabula	tion			
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H (Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	0.9849	0.6868	1.40		0.9957	0.6944	0.8904	
	0.9807	0.9633	1.98		0.9914	0.9739	1.2592	
	0.9787	1.0779	2.22		0.9894	1.0896	1.4078	
	0.9776	1.1237 1.3601	2.33		0.9883	1.1360	1.4765	
	0.3724	1.3001 m=	2.813		0.9831	1.3749 m=	1.7808 1.31010	
	QSTD	b=	-0.027		QA	b=	-0.01759	
	QJID	r=	0.999		QA	r=	0.99994	
				Calculatio	ns			
	Vstd=	ΔVol((Pa-ΔP)	/Pstd)(Tstd/Ta	a)	Va=	ΔVol((Pa-ΔF	P)/Pa)	
	Qstd=	Vstd/∆Time			Qa= Va/ATime			
			For subsequ	ent flow ra	te calculation	าร:		
	Qstd=	Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b$) -b)	Qa=	$1/m \left(\sqrt{\Delta H} \right)$	(Та/Ра))-b)	
		Conditions						
Tstd:	298.15	°K		[RECAI	IBRATION	
Tstd: Pstd:	298.15 760	°K mm Hg			US FPA reco			n ner 1000
Pstd:	298.15 760	°K mm Hg Key	n H2Q)			ommends ar	nual recalibratio	
Pstd: \H: calibrate	298.15 760 kor manomet	°K mm Hg K ey Ser reading (in			40 Code	ommends ar of Federal R	nual recalibratio	50 to 51,
Pstd: \H: calibrate \P: rootsme	298.15 760 or manomet ter manomet	°K mm Hg Key			40 Code Appendix E	ommends ar of Federal R 3 to Part 50,	nual recalibratio egulations Part 5 Reference Meth	50 to 51, od for the
Pstd:	298.15 760 r manomet eter manome psolute tem	°K mm Hg Key ter reading (in ter reading	(mm Hg)		40 Code Appendix E Determinat	ommends ar of Federal R 3 to Part 50, ion of Suspe	nual recalibratio	50 to 51, od for the Matter in

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

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





Certificate of Calibration

			Calibration	Certificati	on Informat	ion		
Cal. Date:	January 11	, 2021	2021 Rootsmeter S/N: 438320			Ta: 297		°К
Operator:	Jim Tisch					Pa: 750.1		mm Hg
Calibration	Model #:	TE-5025A	Calil	brator S/N:	3864			
								1
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4470	3.2	2.00	
	2	3	4	1	1.0210	6.4	4.00	
	3	5	6	1	0.9140	8.0 8.8	5.00	
	4	. /	8 10	1	0.8870	0.0 12.9	5.50	
		9	10	L	0.7140	12.5	8.00]
				Data Tabula	tion			
			Aur Pa	\/ Tstd \			$\int dx dx dx = \langle x \rangle$	
	Vstd	Qstd	√ ^{∆H} (<u>Pstd</u>)(<u>Tstd</u>)		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax	is)	Va	(x-axis)	(y-axis)	
	0.9860	0.6814	1.40	73	0.9957	0.6881	0.8899	
	0.9818	0.9616	1.99	02	0.9915	0.9711	1.2585	
	0.9797	1.0719	2.22		0.9893	1.0824	1.4071	
	0.9786	1.1288	2.33	and the second se	0.9883	1.1399	1.4757	
	0.9732	1.3630	2.814		0.9828	1.3765	1.7798	
			2.065			m=	1.29348	
		b=	0.003		QA	b=	0.00199 0.99996	
		r=	0.995	90		r=	0.99990]
				Calculatio				
			/Pstd)(Tstd/Ta	a)		ΔVol((Pa-Δ	P)/Pa)	
	Qstd=	Vstd/∆Time			Qa= Va/ΔTime			
			For subsequ	ent flow ra	te calculatio			
	Qstd=	Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$		-))-b)	Qa=	1/m ((√∆H	l(Ta/Pa))-b)	
	Standard	Conditions						-
Tstd:	298.15	°K				RECA	LIBRATION	
Pstd	the second se	mm Hg						
A11		(ey	- 1120)				nnual recalibration Regulations Part	-
		ter reading (i eter reading			5		0	
		perature (°K)					, Reference Meth	
		ressure (mm					ended Particulat	
b: intercept					th	e Atmosphe	ere, 9.2.17, page	30
m: slope								

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Cerificate of Calibration - Wind Monitoring Station

Yau Lai Estate, Bik Lai House
Davis Instruments
<u>Davis7440</u>
<u>MC01010A44</u>
<u>SA-03-04</u>
<u>21-Aug-2020</u>
<u>21-Feb-2021</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
1.5	1.5	0.0
2.2	2.3	-0.1
3.5	3.4	0.1

2. Performance check of Wind Direction

Wind Di	rection (°)	Difference D (°)
Wind Direction Reading (W1)	Marine Compass Value (W2)	$\mathbf{D} = \mathbf{W1} - \mathbf{W2}$
0	0	0.0
90	90	0.0
180	180	0.0
270	270	0.0

Test Specification:

1. Performance Wind Speed Test - The wind meter was on-site calibrated against the anemometer

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

Calibrated by:	tol.	Approved by:	-long than
	Wong Shing Kwai		Henry Leung



Certificate of Calibration - Wind Monitoring Station

Yau Lai Estate, Bik Lai House
Davis Instruments
<u>Davis7440</u>
<u>MC01010A44</u>
<u>SA-03-04</u>
<u>20-Feb-2021</u>
<u>20-Aug-2021</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
1.5	1.6	-0.1
2.5	2.5	0.0
3.5	3.4	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