High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



						File No.	MA20003/18/020
•	CKL 1 - Flat 121					-	
Date:	04-Ma	ay-23	Next Due Date:	04-	Jul-23	Operator:	SK
Equipment No.:	nt No.: A-01-18 Model No.: TE 5170		E 5170	Serial No.	0723		
			Ambient	Condition			
Temperatur	re, Ta (K)	300	Pressure, Pa	(mmHg)		756.7	
		Or	ifice Transfer Sta	andard Inform	nation		
Serial	No	3864	Slope, mc	0.05928	Intercept	t be	-0.03491
Last Calibra		16-Jan-23	вторе, те		$c = [\Delta H \times (Pa/76)]$		
Next Calibra		16-Jan-24			x (Pa/760) x (298)		
Next Canora	ation Date.			Q ы н — ([Д П 2	(1 u/ 100) N (250)	(1u)j bej	, me
			Calibration of	TSP Sampler			
Calibration		Orfice		T		HVS	1.0
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/7	(60) x (298/Ta)] ^{1/2} Y axis
1	12.7	3	3.54	60.37	9.7		3.10
2	10.0	3	3.14	53.64	7.7		2.76
3	8.2	2	2.85	48.63	5.5		2.33
4	6.0	2	2.44	41.68	3.4		1.83
5	3.0	1	.72	29.65	1.7		1.30
Slope, mw =		_		Intercept, bw :	-0.571	.7	
Correlation o	coefficient* = Coefficient < 0.99		9932	_			
ii correlation c	ochicient < 0.77	o, check and rec	anoraic.				
			Set Point (Calculation			
From the TSP Fig	eld Calibration C	urve, take Qstd	= 43 CFM				
From the Regress	sion Equation, th	e "Y" value acco	ording to				
		mw v ($\mathbf{pstd} + \mathbf{bw} = \mathbf{\Delta W}$	v (Po/760) v (2	208/Ta)] ^{1/2}		
		IIIW X (gstu + bw – μΔνν	x (1 a//00) x (2	290/1a)]		
Therefore, Se	et Point; W = (m	$w \times Qstd + bw$) ²	x (760 / Pa) x (Ta / 298) =	4.18		
Remarks:							
•							
•				<u></u>			
Conducted by:	Wong Sh	ing Kwai	Signature:		<u></u>	Date:	04-May-23
·	_	_		\ 0	~	_	0.4
Chaoland by	Hanry	Launa	Signotino.	1	1 A 9 A	Dota	04 May 22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA20003/55/019

Project No.	CKL 2 - Flat 10	3 Cha Kwo Ling	Village				
Date:	04-May-23		Next Due Date: 04-Jul-23		Jul-23	Operator:	SK
Equipment No.:	A-0	A-01-55 Model No.: TE 5170		Serial No.	1956		
			Ambient C	ondition			
Temperature, Ta (K) 290.4 Pressure, Pa (mmHg)						767.6	
		Ori	fice Transfer Star	ndard Informa	ation		
Serial	No.	3864	Slope, mc	0.05928 Intercept		, bc	-0.03491
Last Calibra	ntion Date:	16-Jan-23			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	16-Jan-24	($Qstd = \{ [\Delta H \ x] $	(Pa/760) x (298/7	[a)] ^{1/2} -bc} / m	c
			Calibration of	ΓSP Sampler			
Calibration		Or	fice			HVS	1/0
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	Δ W (HVS), in. of water		50) x (298/Ta)] ^{1/2} -axis
1	13.0		3.67	62.51	10.2		3.25
2	10.8		3.35	57.03	8.2		2.92
3	8.7		3.00	51.24	6.3		2.56
4	5.3		2.34	40.13	3.1		1.79
5	2.9		1.73	29.83	1.8		1.37
By Linear Regr Slope , mw =	ession of Y on 2 0.0592	K _	1	intercept, bw =	-0.473	4	
Correlation	coefficient* =	0	9963				
*If Correlation C	Coefficient < 0.99	90, check and rec	alibrate.				
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration C	Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, th	ne "Y" value acco	ording to				
		mw x Q	$\mathbf{std} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore Se	et Point: W = (m	w v Ostd + bw)	² x (760 / Pa) x (7	Га / 298) —	4.14		
Therefore, Se	20 T Oline, ** = (In	w x Qsta + ow)	x (700 / 1 u) x (!	290) =	4014		
Remarks:							
Conducted by:	Wong Sh	ing Kwai	Signature:	X	<u></u> \.	Date:	04-May-23
Charles 11am	Henry	T	Signature:	\ 0	0/	Date:	04-May-23

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



File No. MA20003/04/0018

Project No.	KER 1 - Future Residential Development at Kerry Godown						
Date:	10-May-23		Next Due Date:	10-Jul-23		Operator:	SK
Equipment No.:	A-0	1-04	Model No.:	Model No.: TE 5170		Serial No.	10595
			Ambient C	Condition			
Temperatur	re, Ta (K)	296.9	Pressure, Pa			760.3	
		Or	ifice Transfer Sta	ndard Informa	ation		
Serial		3864			0.05928 Intercept,		-0.03491
Last Calibra	ation Date:	16-Jan-23			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H x] $	(Pa/760) x (298/	Γa)] ^{1/2} -bc} / mo	2
				TOD G			
		0-	Calibration of Trice	1SP Sampler		HVS	
Calibration Point	ΔH (orifice), in. of water		50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in.	[ΔW x (Pa/76	(0) x (298/Ta)] ^{1/2} -axis
1	12.9		3.60	61.30	9.5		3.09
2	10.4		3.23	55.10	7.1	2	2.67
3	8.4		2.90	49.58	5.7	2	2.39
4	5.5		2.35	40.23	3.4	1	1.85
5	3.3		1.82	31.30	2.0	1	1.42
	0.0554 coefficient* = Coefficient < 0.99	-	.9986	Intercept, bw : -	-0.349	08	
			Set Point C	alculation			
	eld Calibration C sion Equation, th	e "Y" value acco		x (Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (m	w x Qstd + bw)	² x (760 / Pa) x (′	Ta / 298) =	4.12		
Remarks:							
Cheeked by:		ing Kwai	Signature:	10	X	Date:	10-May-23
F:\Cillocett Solution	s\Equipment\Callenty	PEHHES\new\MA20	003_202305 Signature:	01-04) L-len	~ V V V V I	Date:	10-May-23

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



File No. MA20003/44/0018

Project No.	KTD1 - Centre	of Excellence in	Paediatrics (Childr	en's Hospital)		_	
Date:	10-May-23		Next Due Date: 10		Jul-23	Operator:	SK
Equipment No.:	A-0	1-44	Model No.:	TE	TE-5170		1316
						_	
			Ambient C	ondition	Ī		
Temperatu	re, Ta (K)	296.9	Pressure, Pa	(mmHg)		760.3	
		Or	ifice Transfer Star	ndard Informa	ation		
Serial No.		3864	Slope, mc	0.05928	Intercept	t, bc	-0.03491
Last Calibra	ation Date:	16-Jan-23	1	mc x Qstd + bo	$c = [\Delta H \times (Pa/760)]$) x (298/Ta)]	1/2
Next Calibra	ation Date:	16-Jan-24			(Pa/760) x (298/7		
			G 111 / 07	Tab a			
		0	Calibration of	ISP Sampler		III	
Calibration	ΔH (orifice),		fice	Qstd (CFM)	AW (HVC) :	HVS	760) x (298/Ta)] ^{1/2}
Point	in. of water	[ΔH x (Pa/760) x (298/Ta)] ^{1/2}		X - axis	Δ W (HVS), in. of water		Y-axis
1	13.0		3.61	61.54	9.7		3.12
2	10.8		3.29	56.14	7.7		2.78
3	8.6		2.94	50.16	5.8		2.41
4	6.0	2.45		41.99	3.8		1.95
5	3.5		1.87	32.21	2.2		1.49
By Linear Regr Slope , mw =	· ression of Y on Y 0.0559	K	,	Intercent by	-0.353	27	
- '	coefficient* =	_ 0	.9983	intercept, bw -	-0.333	<u>, , , , , , , , , , , , , , , , , , , </u>	
		90, check and rec		-			
			Set Point Ca	alculation			
		Curve, take Qstd					
From the Regres	sion Equation, th	ne "Y" value acco	ording to				
		mw x Q	$\mathbf{pstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
			2				
Therefore, Se	et Point; W = (m	nw x Qstd + bw)	2 x (760 / Pa) x (7	$\Gamma a / 298) =$	4.18		
Remarks:							
Conducted by:	Wong Sh	ning Kwai	Signature:		<u> </u>	Date: _	10-May-23
F: Checked by	s\Equipment\Calburgia	Leungs\new\MA200	003_202305 Signature:	01-44) - Cem	, Xon	Date:	10-May-23

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA20003/41/0018

Project No.	KTD 2D - Next	to the SOR Offic	ce of Trunk Road 7	Γ2 in Kai Tak A	Area		
Date:	10-M	lay-23	Next Due Date:	: 10-Jul-23		Operator:	SK
Equipment No.:	A-0	1-41	Model No.:	del No.: TE 5170		Serial No.	5280
			Ambient C	ondition			
Temperature, Ta (K) 296.9			Pressure, Pa			760.3	
		Ori	fice Transfer Star	ndard Informa	ation		
Serial No.		3864	Slope, mc				-0.03491
Last Calibra	1	16-Jan-23					
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/7	[a)] ^{1/2} -bc} / m	<u>ic</u>
			Calibration of	FCD Commiss			
		O**	Calibration of T	18P Sampier		HVS	
Calibration Point	ΔH (orifice), in. of water		0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/76	60) x (298/Ta)] ^{1/2} 7-axis
1	13.4		3.67	62.47	9.8		3.14
2	11.0		3.32	56.65	8.4		2.90
3	9.0		3.01	51.30	6.4		2.54
4	6.6		2.57	44.02	4.2		2.05
5	3.7		1.93	33.10	2.2		1.49
By Linear Regr Slope, mw = Correlation of *If Correlation C	0.0581 coefficient* =	0.	9975	Intercept, bw :	-0.452	2	
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration (Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, tl	ne "Y" value acco	ording to				
		mw x Q	$\mathbf{std} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (m	nw x Qstd + bw)	² x (760 / Pa) x (7	Γa / 298) =	4.17		
Remarks:							
,							
Conducted by:	Wong Sh	ning Kwai	Signature:	<u> </u>	<u></u>	Date:	10-May-23
Checked by:	Henry	Leung	Signature:	\-len	g Xog	Date:	10-May-23



Certificate of Calibration - Wind Monitoring Station

Description: Yau Lai Estate, Bik Lai House

Manufacturer: <u>Davis Instruments</u>

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

Serial No.: MC01010A44

Equipment No.: SA-03-04

Date of Calibration <u>18-Feb-2023</u>

Next Due Date <u>18-Aug-2023</u>

1. Performance check of Wind Speed

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

2. Performance check of Wind Direction

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

Test Specification:

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

Calibrated by: Approved by: Approved by: Henry Leung