

## Certificate of Calibration - Wind Monitoring Station

Description: Yau Lai Estate, Bik Lai House  
 Manufacturer: Davis Instruments  
 Model No.: Davis7440  
 Serial No.: MC01010A44  
 Equipment No.: SA-03-04  
 Date of Calibration: 17-Aug-2025  
 Next Due Date: 17-Feb-2026

### 1. Performance check of Wind Speed

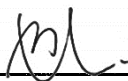
Wind Speed, m/s		Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V2)	$D = V1 - V2$
0.0	0.0	0.0
1.5	1.5	0.0
2.5	2.4	0.1
4.0	3.9	0.1

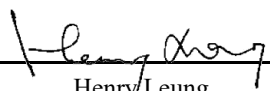
### 2. Performance check of Wind Direction

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

### Test Specification:

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

Calibrated by:   
 Wong Shing Kwai

Approved by:   
 Henry Leung



# Certificate of Calibration

Calibration Certification Information			
Cal. Date: January 7, 2025	Rootsmeter S/N: 438320	Ta: 293	°K
Operator: Jim Tisch		Pa: 759.0	mm Hg
Calibration Model #: TE-5025A	Calibrator S/N: <b>3864</b>		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4590	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9160	8.0	5.00
4	7	8	1	0.8800	8.8	5.50
5	9	10	1	0.7270	12.7	8.00

Data Tabulation						
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left( Ta/Pa \right)}$ (y-axis)	
1.0114	0.6932	1.4252	0.9958	0.6825	0.8787	
1.0071	0.9721	2.0156	0.9916	0.9571	1.2427	
1.0050	1.0971	2.2535	0.9895	1.0802	1.3893	
1.0039	1.1408	2.3635	0.9884	1.1232	1.4572	
0.9987	1.3737	2.8505	0.9833	1.3525	1.7574	
<b>QSTD</b>	<b>m= 2.08969</b>		<b>QA</b>	<b>m= 1.30853</b>		
	<b>b= -0.02374</b>			<b>b= -0.01464</b>		
	<b>r= 0.99985</b>			<b>r= 0.99985</b>		

Calculations			
<b>Vstd=</b>	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	<b>Va=</b>	$\Delta Vol((Pa-\Delta P)/Pa)$
<b>Qstd=</b>	$Vstd/\Delta Time$	<b>Qa=</b>	$Va/\Delta Time$
<b>For subsequent flow rate calculations:</b>			
<b>Qstd=</b> $1/m \left( \left( \sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)} \right) - b \right)$		<b>Qa=</b> $1/m \left( \left( \sqrt{\Delta H \left( Ta/Pa \right)} \right) - b \right)$	

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH: calibrator manometer reading (in H2O)	
ΔP: rootsmeter manometer reading (mm Hg)	
Ta: actual absolute temperature (°K)	
Pa: actual barometric pressure (mm Hg)	
b: intercept	
m: slope	

RECALIBRATION
US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



# Certificate of Calibration

Calibration Certification Information			
Cal. Date: January 7, 2026	Rootsmeter S/N: 438320	Ta: 294	°K
Operator: Jim Tisch		Pa: 749.0	mm Hg
Calibration Model #: TE-5025A	Calibrator S/N: <b>3864</b>		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4310	3.2	2.00
2	3	4	1	1.0260	6.4	4.00
3	5	6	1	0.9150	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7200	12.8	8.00

Data Tabulation					
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$ (y-axis)
0.9947	0.6951	1.4135	0.9957	0.6958	0.8860
0.9905	0.9654	1.9990	0.9915	0.9663	1.2530
0.9885	1.0803	2.2349	0.9895	1.0814	1.4009
0.9873	1.1309	2.3440	0.9883	1.1320	1.4693
0.9819	1.3638	2.8270	0.9829	1.3652	1.7720
<b>QSTD</b>	<b>m=</b>	<b>2.11337</b>	<b>QA</b>	<b>m=</b>	<b>1.32336</b>
	<b>b=</b>	<b>-0.04919</b>		<b>b=</b>	<b>-0.03083</b>
	<b>r=</b>	<b>0.99993</b>		<b>r=</b>	<b>0.99993</b>

Calculations	
<b>Vstd=</b> $\Delta Vol \left( \frac{Pa - \Delta P}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)$	<b>Va=</b> $\Delta Vol \left( \frac{Pa - \Delta P}{Pa} \right)$
<b>Qstd=</b> $Vstd / \Delta Time$	<b>Qa=</b> $Va / \Delta Time$
<b>For subsequent flow rate calculations:</b>	
<b>Qstd=</b> $1/m \left( \left( \sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)} \right) - b \right)$	<b>Qa=</b> $1/m \left( \left( \sqrt{\Delta H \left( \frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
<b>Key</b>	
ΔH:	calibrator manometer reading (in H2O)
ΔP:	rootsmeter manometer reading (mm Hg)
Ta:	actual absolute temperature (°K)
Pa:	actual barometric pressure (mm Hg)
b:	intercept
m:	slope

RECALIBRATION
US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/18/035

Project No. CKL 1 - Flat 121 Cha Kwo Ling Village  
 Date: 4-Nov-25 Next Due Date: 4-Jan-26 Operator: SK  
 Equipment No.: A-01-18 Model No.: TE 5170 Serial No. 0723

Ambient Condition			
Temperature, Ta (K)	<b>295.3</b>	Pressure, Pa (mmHg)	<b>762.5</b>

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05914	Intercept, bc	-0.02377
Last Calibration Date:	7-Jan-25	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	7-Jan-26	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<b>13.3</b>	3.67	62.45	<b>8.8</b>	2.98
2	<b>10.4</b>	3.24	55.27	<b>7.1</b>	2.68
3	<b>8.1</b>	2.86	48.82	<b>5.2</b>	2.29
4	<b>6.2</b>	2.51	42.77	<b>3.6</b>	1.91
5	<b>3.4</b>	1.86	31.77	<b>1.4</b>	1.19

**By Linear Regression of Y on X**  
 Slope, mw = 0.0593 Intercept, bw = -0.6495  
 Correlation coefficient\* = 0.9968  
 \*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM  
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.57

Remarks: \_\_\_\_\_  
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Conducted by: Wong Shing Kwai Signature:  Date: 4-Nov-25  
 Checked by: Henry Leung Signature:  Date: 4-Nov-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/18/036

Project No. CKL 1 - Flat 121 Cha Kwo Ling Village  
 Date: 2-Jan-26 Next Due Date: 2-Mar-26 Operator: SK  
 Equipment No.: A-01-18 Model No.: TE 5170 Serial No. 0723

Ambient Condition			
Temperature, Ta (K)	<u>288</u>	Pressure, Pa (mmHg)	<u>767.6</u>

Orifice Transfer Standard Information					
Serial No.	<u>3864</u>	Slope, mc	<u>0.05914</u>	Intercept, bc	<u>-0.02377</u>
Last Calibration Date:	<u>7-Jan-25</u>	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			
Next Calibration Date:	<u>7-Jan-26</u>				

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<u>13.5</u>	<u>3.76</u>	<u>63.91</u>	<u>9.2</u>	<u>3.10</u>
2	<u>10.3</u>	<u>3.28</u>	<u>55.88</u>	<u>7.2</u>	<u>2.74</u>
3	<u>8.2</u>	<u>2.93</u>	<u>49.90</u>	<u>5.4</u>	<u>2.38</u>
4	<u>6.3</u>	<u>2.57</u>	<u>43.79</u>	<u>3.4</u>	<u>1.89</u>
5	<u>3.7</u>	<u>1.97</u>	<u>33.65</u>	<u>1.5</u>	<u>1.25</u>

**By Linear Regression of Y on X**

Slope, mw = 0.0627 Intercept, bw = -0.8266  
 Correlation coefficient\* = 0.9957

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.34

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 2-Jan-26

Checked by: Henry Leung Signature:  Date: 2-Jan-26

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/55/035

Project No. CKL 2 - Flat 103 Cha Kwo Ling Village  
 Date: 4-Nov-25 Next Due Date: 4-Jan-26 Operator: SK  
 Equipment No.: A-01-55 Model No.: TE 5170 Serial No. 1956

Ambient Condition			
Temperature, Ta (K)	<b>295.3</b>	Pressure, Pa (mmHg)	<b>762.5</b>

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05914	Intercept, bc	-0.02377
Last Calibration Date:	7-Jan-25	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	7-Jan-26	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<b>13.4</b>	3.68	62.68	<b>9.1</b>	3.04
2	<b>11.0</b>	3.34	56.83	<b>7.2</b>	2.70
3	<b>9.4</b>	3.08	52.57	<b>5.3</b>	2.32
4	<b>5.2</b>	2.29	39.20	<b>2.6</b>	1.62
5	<b>3.7</b>	1.94	33.13	<b>2.0</b>	1.42

**By Linear Regression of Y on X**

Slope, mw = 0.0554 Intercept, bw = -0.4900  
 Correlation coefficient\* = 0.9933

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**


From the TSP Field Calibration Curve, take Qstd = 43 CFM

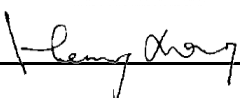
From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.54

Remarks: \_\_\_\_\_  
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Conducted by: Wong Shing Kwai Signature:  Date: 4-Nov-25

Checked by: Henry Leung Signature:  Date: 4-Nov-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/55/036

Project No. CKL 2 - Flat 103 Cha Kwo Ling Village  
 Date: 2-Jan-26 Next Due Date: 2-Mar-26 Operator: SK  
 Equipment No.: A-01-55 Model No.: TE 5170 Serial No. 1956

Ambient Condition			
Temperature, Ta (K)	<b>288</b>	Pressure, Pa (mmHg)	<b>767.6</b>

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05914	Intercept, bc	-0.02377
Last Calibration Date:	7-Jan-25	$mc \times Q_{std} + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ $Q_{std} = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			
Next Calibration Date:	7-Jan-26				

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<b>13.6</b>	3.77	64.15	<b>9.3</b>	3.12
2	<b>11.0</b>	3.39	57.73	<b>7.3</b>	2.76
3	<b>9.5</b>	3.15	53.68	<b>5.1</b>	2.31
4	<b>5.1</b>	2.31	39.44	<b>2.8</b>	1.71
5	<b>3.5</b>	1.91	32.74	<b>1.8</b>	1.37

**By Linear Regression of Y on X**

Slope,  $m_w =$  0.0547 Intercept,  $b_w =$  -0.4574  
 Correlation coefficient\* = 0.9907

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take  $Q_{std} = 43$  CFM

From the Regression Equation, the "Y" value according to

$$m_w \times Q_{std} + b_w = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point;  $W = (m_w \times Q_{std} + b_w)^2 \times (760 / Pa) \times (Ta / 298) =$  3.44

Remarks: \_\_\_\_\_  
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Conducted by: Wong Shing Kwai Signature:  Date: 2-Jan-26

Checked by: Henry Leung Signature:  Date: 2-Jan-26

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/04/0033

Project No. KER 1 - Future Residential Development at Kerry Godown  
 Date: 11-Nov-25 Next Due Date: 11-Jan-26 Operator: SK  
 Equipment No.: A-01-04 Model No.: TE 5170 Serial No. 10595

Ambient Condition			
Temperature, Ta (K)	<b>296</b>	Pressure, Pa (mmHg)	<b>756.1</b>

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05914	Intercept, bc	-0.02377
Last Calibration Date:	7-Jan-25	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	7-Jan-26	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<b>12.6</b>	3.55	60.47	<b>8.2</b>	2.87
2	<b>10.5</b>	3.24	55.24	<b>7.1</b>	2.67
3	<b>8.3</b>	2.88	49.16	<b>5.5</b>	2.35
4	<b>5.4</b>	2.33	39.73	<b>2.9</b>	1.70
5	<b>3.3</b>	1.82	31.14	<b>2.2</b>	1.48

**By Linear Regression of Y on X**

Slope, mw = 0.0503 Intercept, bw = -0.1575

Correlation coefficient\* = 0.9903

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  4.01

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 11-Nov-25

Checked by: Henry Leung Signature:  Date: 11-Nov-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/04/0034

Project No. KER 1 - Future Residential Development at Kerry Godown  
 Date: 9-Jan-26 Next Due Date: 9-Mar-26 Operator: SK  
 Equipment No.: A-01-04 Model No.: TE 5170 Serial No. 10595

Ambient Condition			
Temperature, Ta (K)	<u>288.7</u>	Pressure, Pa (mmHg)	<u>767.1</u>

Orifice Transfer Standard Information					
Serial No.	<u>3864</u>	Slope, mc	<u>0.05980</u>	Intercept, bc	<u>-0.04908</u>
Last Calibration Date:	<u>7-Jan-26</u>	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	<u>7-Jan-27</u>	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<u>12.8</u>	3.65	61.89	<u>8.4</u>	2.96
2	<u>10.4</u>	3.29	55.87	<u>7.2</u>	2.74
3	<u>8.4</u>	2.96	50.29	<u>5.6</u>	2.42
4	<u>5.2</u>	2.33	39.74	<u>2.8</u>	1.71
5	<u>3.1</u>	1.80	30.87	<u>2.0</u>	1.44

By Linear Regression of Y on X

Slope, mw = 0.0521 Intercept, bw = -0.2334

Correlation coefficient\* = 0.9921

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.86

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 9-Jan-26

Checked by: Henry Leung Signature:  Date: 9-Jan-26

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/44/0032

Project No. KTD1 - Centre of Excellence in Paediatrics (Children's Hospital)/AM7 – Hong Kong Children's Hospital  
 Date: 11-Nov-25 Next Due Date: 11-Jan-26 Operator: SK  
 Equipment No.: A-01-44 Model No.: TE-5170 Serial No. 1316

Ambient Condition			
Temperature, Ta (K)	<b>296</b>	Pressure, Pa (mmHg)	<b>756.1</b>

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05914	Intercept, bc	-0.02377
Last Calibration Date:	7-Jan-25	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	7-Jan-26	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X-axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<b>13.2</b>	3.64	61.88	<b>9.3</b>	3.05
2	<b>11.4</b>	3.38	57.54	<b>7.1</b>	2.67
3	<b>9.5</b>	3.08	52.56	<b>5.7</b>	2.39
4	<b>6.2</b>	2.49	42.54	<b>3.7</b>	1.93
5	<b>3.4</b>	1.85	31.61	<b>1.8</b>	1.34

**By Linear Regression of Y on X**

Slope, mw = 0.0541 Intercept, bw = -0.3892  
 Correlation coefficient\* = 0.9952

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM  
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.75

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 11-Nov-25

Checked by: Henry Leung Signature:  Date: 11-Nov-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/44/0033

Project No. KTD1 - Centre of Excellence in Paediatrics (Children's Hospital)/AM7 – Hong Kong Children's Hospital  
 Date: 9-Jan-26 Next Due Date: 9-Mar-26 Operator: SK  
 Equipment No.: A-01-44 Model No.: TE-5170 Serial No. 1316

Ambient Condition			
Temperature, Ta (K)	<u>288.7</u>	Pressure, Pa (mmHg)	<u>767.1</u>

Orifice Transfer Standard Information					
Serial No.	<u>3864</u>	Slope, mc	<u>0.05980</u>	Intercept, bc	<u>-0.04908</u>
Last Calibration Date:	<u>7-Jan-26</u>	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			
Next Calibration Date:	<u>7-Jan-27</u>				

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<u>13.4</u>	3.74	63.30	<u>9.4</u>	3.13
2	<u>11.2</u>	3.42	57.94	<u>7.1</u>	2.72
3	<u>9.4</u>	3.13	53.15	<u>5.6</u>	2.42
4	<u>6.1</u>	2.52	42.98	<u>3.5</u>	1.91
5	<u>3.2</u>	1.83	31.35	<u>1.7</u>	1.33

By Linear Regression of Y on X

Slope, mw = 0.0550 Intercept, bw = -0.4335

Correlation coefficient\* = 0.9961

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.58

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 9-Jan-26

Checked by: Henry Leung Signature:  Date: 9-Jan-26

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/41/0032

Project No. KTD 2D - Next to the SOR Office of Trunk Road T2 in Kai Tak Area  
 Date: 11-Nov-25 Next Due Date: 11-Jan-26 Operator: SK  
 Equipment No.: A-01-41 Model No.: TE 5170 Serial No. 5280

Ambient Condition			
Temperature, Ta (K)	<b>296</b>	Pressure, Pa (mmHg)	<b>756.1</b>

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05914	Intercept, bc	-0.02377
Last Calibration Date:	7-Jan-25	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	7-Jan-26	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<b>13.7</b>	3.70	63.04	<b>9.2</b>	3.04
2	<b>11.4</b>	3.38	57.54	<b>8.4</b>	2.90
3	<b>9.8</b>	3.13	53.38	<b>6.1</b>	2.47
4	<b>7.2</b>	2.69	45.81	<b>4.5</b>	2.12
5	<b>4.4</b>	2.10	35.90	<b>2.3</b>	1.52

**By Linear Regression of Y on X**

Slope, mw = 0.0577 Intercept, bw = -0.5390  
 Correlation coefficient\* = 0.9922

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.76

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 11-Nov-25

Checked by: Henry Leung Signature:  Date: 11-Nov-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/41/0033

Project No. KTD 2D - Next to the SOR Office of Trunk Road T2 in Kai Tak Area  
 Date: 9-Jan-26 Next Due Date: 9-Mar-26 Operator: SK  
 Equipment No.: A-01-41 Model No.: TE 5170 Serial No. 5280

Ambient Condition			
Temperature, Ta (K)	<u>288.7</u>	Pressure, Pa (mmHg)	<u>767.1</u>

Orifice Transfer Standard Information					
Serial No.	<u>3864</u>	Slope, mc	<u>0.05980</u>	Intercept, bc	<u>-0.04908</u>
Last Calibration Date:	<u>7-Jan-26</u>	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	<u>7-Jan-27</u>	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	<u>13.9</u>	3.81	64.46	<u>9.3</u>	3.11
2	<u>11.5</u>	3.46	58.70	<u>8.5</u>	2.98
3	<u>9.7</u>	3.18	53.98	<u>6.0</u>	2.50
4	<u>7.1</u>	2.72	46.30	<u>4.4</u>	2.14
5	<u>4.2</u>	2.09	35.80	<u>2.2</u>	1.51

**By Linear Regression of Y on X**

Slope, mw = 0.0577 Intercept, bw = -0.5452

Correlation coefficient\* = 0.9921

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point;  $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.60

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature: [Signature] Date: 9-Jan-26

Checked by: Henry Leung Signature: [Signature] Date: 9-Jan-26