

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)] ^{1/2} -bc} / mo | c |
| | | • | | | | | |
| | | 0 | Calibration of Z | ISP Sampler | | HVS | |
| Calibration Point | ΔH (orifice), in. of water | | 50) x $(298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/76 | 0) x (298/Ta)] ^{1/2} -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) | ² 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 = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} -0.03491Next Calibration Date:16-Jan-24Qstd = {[Δ H x (Pa/760) x (298/Ta)] ^{1/2} - bc] / mcCalibration Date:16-Jan-24Qstd = {[Δ H x (Pa/760) x (298/Ta)] ^{1/2} - bc] / mcCalibration of TSP SamplerCalibrationOrffceHVS Δ H (orifice), in of water[Δ H x (Pa/760) x (298/Ta)] ^{1/2} 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 = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} -0.03491Next Calibration Date:16-Jan-24Qstd = {[Δ H x (Pa/760) x (298/Ta)] ^{1/2} - bc] / mcCalibration Date:16-Jan-24Qstd = {[Δ H x (Pa/760) x (298/Ta)] ^{1/2} - bc] / mcCalibration of TSP SamplerCalibrationOrffceHVS Δ H (orifice), in of water[Δ H x (Pa/760) x (298/Ta)] ^{1/2} 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) ΔW (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 ΔH (orifice), in. of water $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ Qstd (CFM) ΔW (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 = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Qstd = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Mc Next Calibration Date: 16-Jan-24 Qstd = [[Δ H x (Pa/760) x (298/Ta)] ^{1/2} Mc Mc Calibration Point Δ H (orifice), in. of water [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Qstd (CFM) Δ W (HVS), in. [Δ W x (Pa/760) x (298/Ta)] ^{1/2} 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 = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Qstd = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Mc Next Calibration Date: 16-Jan-24 Qstd = [[Δ H x (Pa/760) x (298/Ta)] ^{1/2} Mc Mc Calibration Point Δ H (orifice), in. of water [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Qstd (CFM) Δ W (HVS), in. [Δ W x (Pa/760) x (298/Ta)] ^{1/2} Δ Std (CFM) Δ W (HVS), in. [Δ 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 = 0.0502 Intercept, bw : -0.0940 Correlation Coefficient < 0.990, check and recalibrate. | | | 0 | ···· | | 4 ° | | |
| Last Calibration Date: 16-Jan-23 mc x Qstd + bc = [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Next Calibration Date: 16-Jan-24 Qstd = {[Δ H x (Pa/760) x (298/Ta)] ^{1/2} -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 = {[Δ H x (Pa/760) x (298/Ta)] ^{1/2} -bc} / mc Calibration of TSP Sampler Calibration Orfice HVS Δ H (orifice), in. of water [Δ H x (Pa/760) x (298/Ta)] ^{1/2} Qstd (CFM) X - axis Δ W (HVS), in. [Δ 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 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)] ^{1/2} Qstd (CFM) ΔW (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 Stope , mw = | | | | | | | | |
| Orfice HVS Calibration 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 $[\Delta W x (Pa/760) x (298/Ta)]^{1/2}$ 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 ΔH (orifice), in. of water $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ Qstd (CFM) X - axis ΔW (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 ΔH (orifice), in. of water $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ Qstd (CFM) X - axis ΔW (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)] ^{1/2} | | | | |
| 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) | 70/1 a)] | | |
| 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) | ² x (760 / Pa) x (| Ta / 298) = | 4.27 | | |
| | L | | | | | | | |
| Remarks: | Domarka | | | | | | | |
| | Kemarks. | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ml | | W 7 | | C : | Xr | 24 | Dite | 10 4 |
| Conducted by: Wong Shing Kwai Signature: ///// Date: 12-Apr-23 | Conducted by: | wong S | mig k 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)] ¹ | /2 |
| Next Calibra | ation Date: | 16-Jan-24 | | $Qstd = \{[\Delta H x]$ | (Pa/760) x (298/ | Ta)] ^{1/2} -bc} / n | nc |
| | | • | Calibration of [| FSP Sampler | | | |
| | | Or | fice | F | | HVS | |
| Calibration Point | ΔH (orifice), in. of water | | 50) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/7 | 60) x (298/Ta)] ^{1/2} Z- axis |
| 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)] ^{1/2} 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)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/760) x (298/Ta)] ^{1/2} Y-axis | | | | |
| 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) ² 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)] ¹ | 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 | ΔH (orifice), in. of water | | i0) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/76 | 50) x (298/Ta)] ^{1/2} 7 -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 | |
| Slope, mw = | ression of Y on X 0.0592 | - | | Intercept, bw = | -0.473 | 34 | |
| | <pre>coefficient* = Coefficient < 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)] ^{1/2} | | |
| Therefore, S | et Point; W = (m | w x Qstd + bw) | ² 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

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 : 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

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 : 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

T

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 : 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 X-axis | Mass co | oncentration () Y-axis | μg/m ³) |
| 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, (μ 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 ³) 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 (μ g/m ³) ration by Dust Meter (μ g/m ³) | 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 ³) | 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 ³) | | 116.0 | | | | |
| Particaulate Concentration by Dust Meter (µg/m ³) | | 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 ³) | _ |
| 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 ³) | |
|--|--|--|--|
| 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 ³) | | 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 ³) | 62.7 |
| | 60.0 |
| , | |
| | 1.8 |
| , | by High Volume Sampler (µg/m ³) by Dust Meter (µg/m ³) 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= | Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$ | | | 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