Appendix D. Calibration Certificates

EQUIPMENT CALIBRATION RECORD

Type :	Laser Dust Monitor
Manufacturer / Brand :	SIBATA
Model No.:	LD-3B
Equipment No.:	LD-3B-002
Serial No.:	974350
Sensitivity Adjustment Scale Setting :	622 CPM

Standard Equipment

Equipment :	MFC High Volume Air Sampler
Venue :	Tung Chung Pier
Model No.:	TE-5170 Total Suspended Particulate
Serial No.:	S/N3641
Previous Calibration Date:	12/Jul/2018

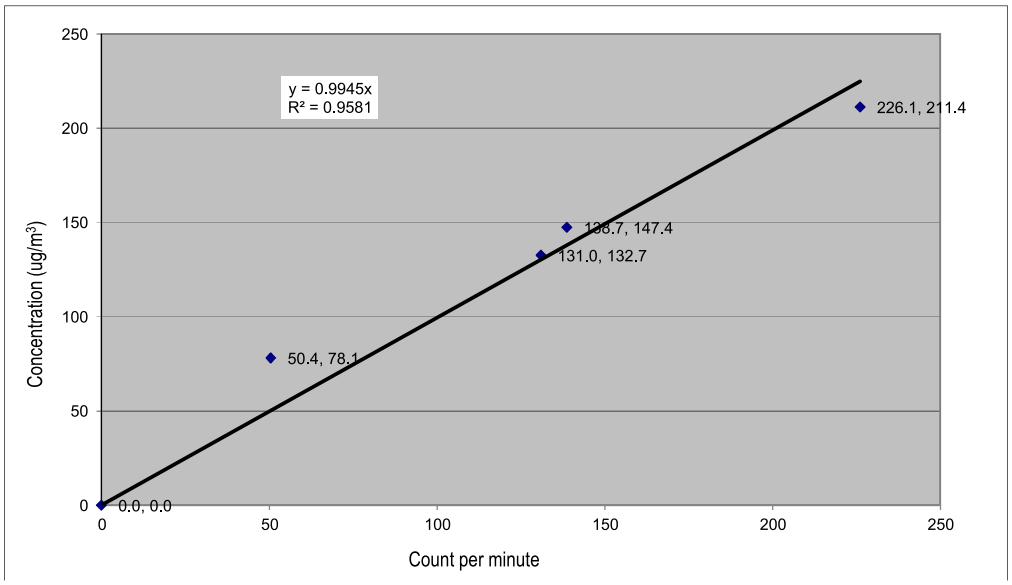
Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration) :	624 CPM
Sensitivity Adjustment Scale Setting (After Calibration) :	624 CPM

Hour	Date (dd-mm-yyyy)	Time		Ambient Condition		Concentration (ug/m^3) Y-axis	Total Count	Count/Minute X-axis
				Temp (^oC)	R.H. (%)			
1	24-Aug-18	09:07	09:37	29.4	80%	78.1	1513	50.4
2	24-Aug-18	10:00	11:00	30.5	76%	132.7	7857	131.0
3	24-Aug-18	11:12	12:42	30.6	76%	147.4	12486	138.7
4	24-Aug-18	13:21	15:21	31.0	71%	211.4	27133	226.1

Be Linear Regression of Y or X
Slope (K-factor): 0.9945
Correlation coefficient (R): 0.9788

Remark: _____



Recorded by: Shing Mak Signature: Shing Date: 07/Sep/2018

Checked by: Eva Keung Signature: Eva Date: 07/Sep/2018

EQUIPMENT CALIBRATION RECORD

Type :	Laser Dust Monitor
Manufacturer / Brand :	SIBATA
Model No.:	LD-3B
Equipment No.:	LD-3B-003
Serial No.:	276018
Sensitivity Adjustment Scale Setting :	799 CPM

Standard Equipment

Equipment :	MFC High Volume Air Sampler
Venue :	Tung Chung Pier
Model No.:	TE-5170 Total Suspended Particulate
Serial No.:	S/N3641
Previous Calibration Date:	12/Jul/2018

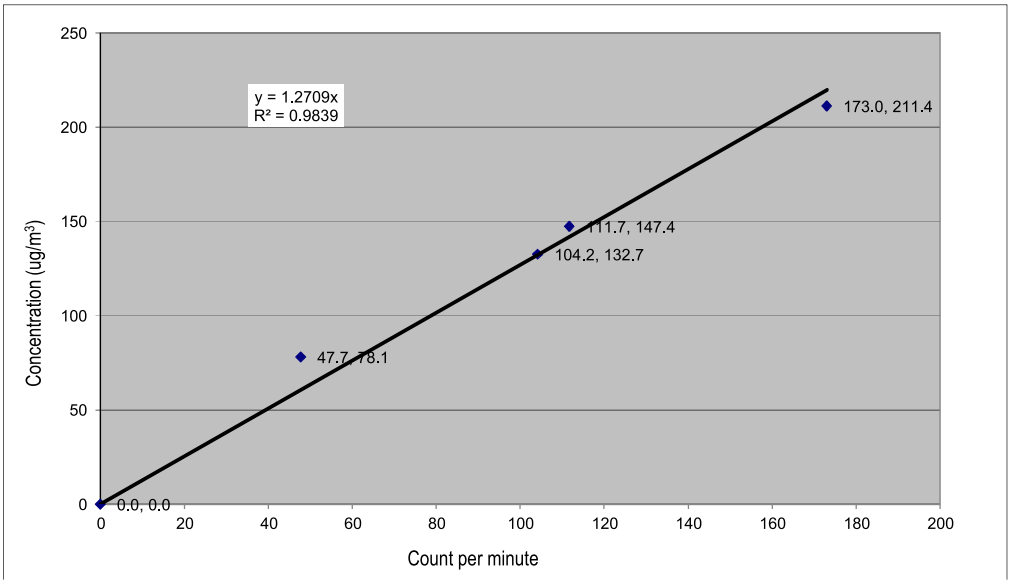
Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration) :	701 CPM
Sensitivity Adjustment Scale Setting (After Calibration) :	701 CPM

Hour	Date (dd-mm-yyyy)	Time		Ambient Condition		Concentration (ug/m^3) Y-axis	Total Count	Count/Minute X-axis
				Temp (^{o}C)	R.H. (%)			
1	24-Aug-18	09:07	09:37	29.4	80%	78.1	1432	47.7
2	24-Aug-18	10:00	11:00	30.5	76%	132.7	6251	104.2
3	24-Aug-18	11:12	12:42	30.6	76%	147.4	10055	111.7
4	24-Aug-18	13:21	15:21	31.0	71%	211.4	20762	173.0

Be Linear Regression of Y or X
Slope (K-factor): 1.2709
Correlation coefficient (R): 0.9919

Remark: _____



Recorded by: Icy Chan Signature: Icy Date: 07/Sep/2018

Checked by: Eva Keung Signature: Eva Date: 07/Sep/2018

ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : AMS2(Tung Chung Development Pier)
Calibrated by : P. F.Yeung
Date : 12/07/2018

Sampler
Model : TE-5170
Serial Number : S/N3641

Calibration Orifice and Standard Calibration Relationship
Serial Number : 2454
Service Date : 19 Mar 2018
Slope (m) : 2.05242
Intercept (b) : -0.01383
Correlation Coefficient(r) : 0.99994

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1003
Ta(K) : 304

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	12.8	3.525	1.724	56	55.17
2	13 holes	10.2	3.146	1.540	50	49.26
3	10 holes	7.8	2.751	1.347	46	45.32
4	7 holes	4.8	2.158	1.058	38	37.44
5	5 holes	3.2	1.762	0.865	30	29.56

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship

Slope(m):28.663 **Intercept(b): 5.886** **Correlation Coefficient(r): 0.9950**

Checked by: Magnum Fan **Date: 16/07/2018**

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

CALIBRATION REPORT

Test Report No. : AG090183
Date of Issue : 19 September, 2018

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas Wong

PART B – SAMPLE INFORMATION

Description of Samples	:	Titrette® bottle-top burette, 50mL
Brand Name	:	BRAND
Model Number	:	6761161
Manufacturer number	:	4760161
Serial Number	:	10N64701
Date of Received	:	Sep 15, 2018
Date of Calibration	:	Sep 18, 2018
Date of Next Calibration[(a)]	:	Dec 18, 2018

PART C – CALIBRATION REQUESTED

Parameter	Reference Method
Accuracy Test	In-house Method (Gravimetric Method)

~ Continued On Next Page ~

Remark(s): -

(a) *The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.*

APPROVED SIGNATORY : _____

FUNG Yuen-ching Aries
Laboratory Manager

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
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CALIBRATION REPORT

Test Report No. : AG090183
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PART D – RESULT[b],[c]

Water temperature: 22.4 ℃
Relative humidity: 51%
z-Factor: 1.0034

Trial	Nominal volume (mL) at interval				
	3	3	3	3	3
	Range: (1-4)	Range: (16-19)	Range: (23-26)	Range: (34-37)	Range: (42-45)
1	2.9816	2.9866	2.9815	2.9821	2.9814
2	2.9850	2.9852	2.9814	2.9833	2.9881
3	2.9912	2.9830	2.9885	2.9867	2.9889
4	2.9855	2.9867	2.9877	2.9914	2.9808
5	2.9882	2.9843	2.9793	2.9921	2.9883
6	2.9895	2.9908	2.9850	2.9878	2.9878
7	2.9941	2.9909	2.9873	2.9890	2.9822
8	2.9921	2.9891	2.9852	2.9862	2.9892
9	2.9888	2.9902	2.9878	2.9883	2.9858
10	2.9931	2.9921	2.9855	2.9938	2.9818
Average	2.9889	2.9879	2.9849	2.9881	2.9854
Standard deviation	0.0040	0.0031	0.0032	0.0037	0.0035
Calculated volume (mL)	2.9991	2.9980	2.9951	2.9982	2.9956
Error (%)	-0.0309	-0.0650	-0.1644	-0.0590	-0.1473
RSD (%)	0.1320	0.1050	0.1059	0.1243	0.1160

Acceptance Criteria [d]

Accuracy (%Error)	< ±1%	< ±1%	< ±1%	< ±1%	< ±1%
Precision (%RSD)	< 1%	< 1%	< 1%	< 1%	< 1%

~ END OF REPORT ~

Remark(s): -
[b] *The results relate only to the tested sample as received*
[c] *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
[d] *The "acceptance criteria" is applicable for similar equipment used by QPT or quoted form relevant international standards.*