

## **Appendix B. 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	29/09/2016

### Calibration Result

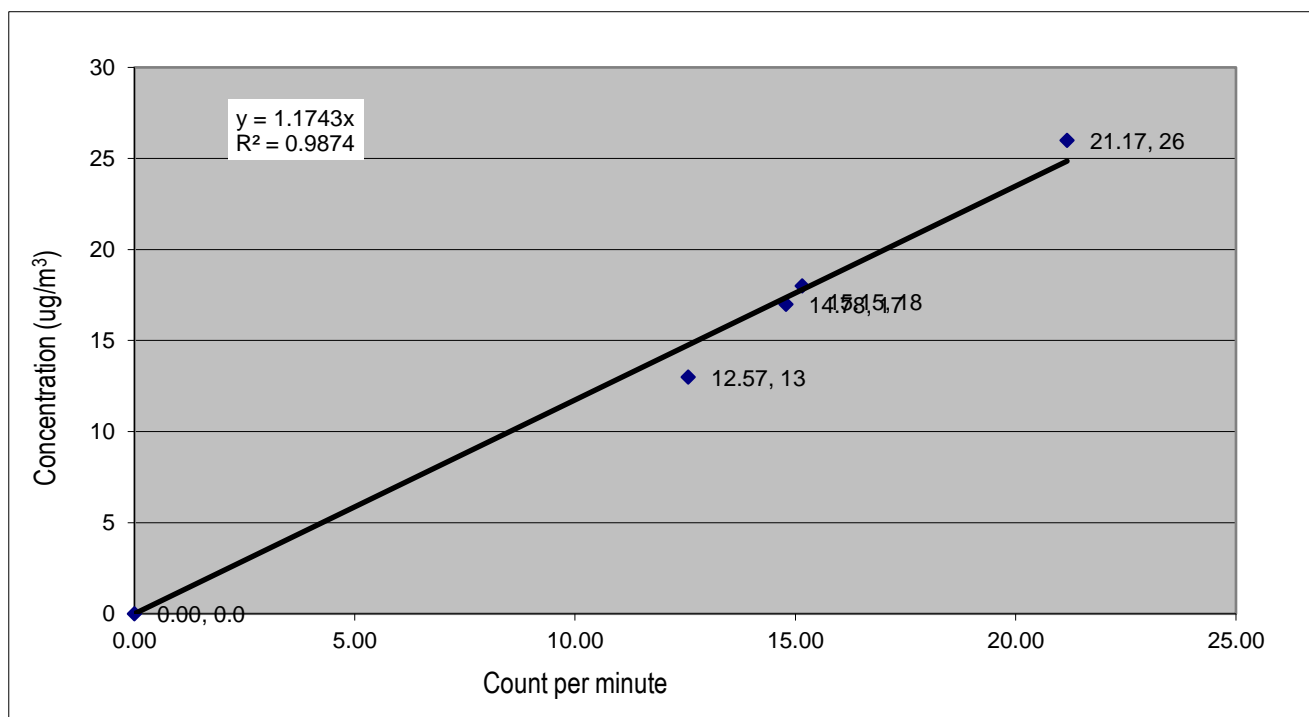
Sensitivity Adjustment Scale Setting (Before Calibration) :	622 CPM
Sensitivity Adjustment Scale Setting (After Calibration) :	622 CPM

Hour	Date (dd-mmm-yy)	Time		Ambient Condition		Concentration (ug/m <sup>3</sup> ) Y-axis	Total Count	Count/Minute X-axis
				Temp (C)	R.H. (%)			
1	26/10/2016	13:59	14:59	30.7	64%	18	909	15.15
2	26/10/2016	15:12	16:12	30.9	59%	13	754	12.57
3	26/10/2016	16:21	17:21	30.9	61%	17	887	14.78
4	26/10/2016	17:30	18:30	30.9	61%	26	1270	21.17

Be Linear Regression of Y or X

Slope (K-factor): 1.1743  
 Correlation coefficient (R) : 0.9937

Remark: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Recorded by: Ray Cheng

Signature: 

Date: 25/11/2016

Checked by: Ketih Chau

Signature: 

Date: 25/11/2016

ENVIROTECH SERVICES CO.

**High-Volume TSP Sampler**  
**5-Point Calibration Record**

Location : AMS2(Tung Chung Development Pier)  
Calibrated by : P.F.Yeung  
Date : 29/09/2016

**Sampler**

Model : TE-5170  
Serial Number : S/N3641

**Calibration Orifice and Standard Calibration Relationship**

Serial Number : 2454  
Service Date : 14 Mar 2016  
Slope (m) : 2.10326  
Intercept (b) : -0.06696  
Correlation Coefficient(r) : 0.99989

**Standard Condition**

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

**Calibration Condition**

Pa (hpa) : 1000  
Ta(K) : 304

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1   18 holes	11.4	3.321	1.611	55	54.10
2   13 holes	9.3	3.000	1.458	50	49.19
3   10 holes	7.0	2.603	1.269	45	44.27
4   7 holes	4.4	2.063	1.013	38	37.38
5   5 holes	2.7	1.616	0.800	31	30.49

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

**Sampler Calibration Relationship**

Slope(m): 28.536 Intercept(b): 7.978

Correlation Coefficient(r): 0.9992

Checked by: Magnum Fan

Date: 04/10/2016