



東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

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**TEST REPORT**

**Calibration Report**  
of  
**High Volume Air Sampler**

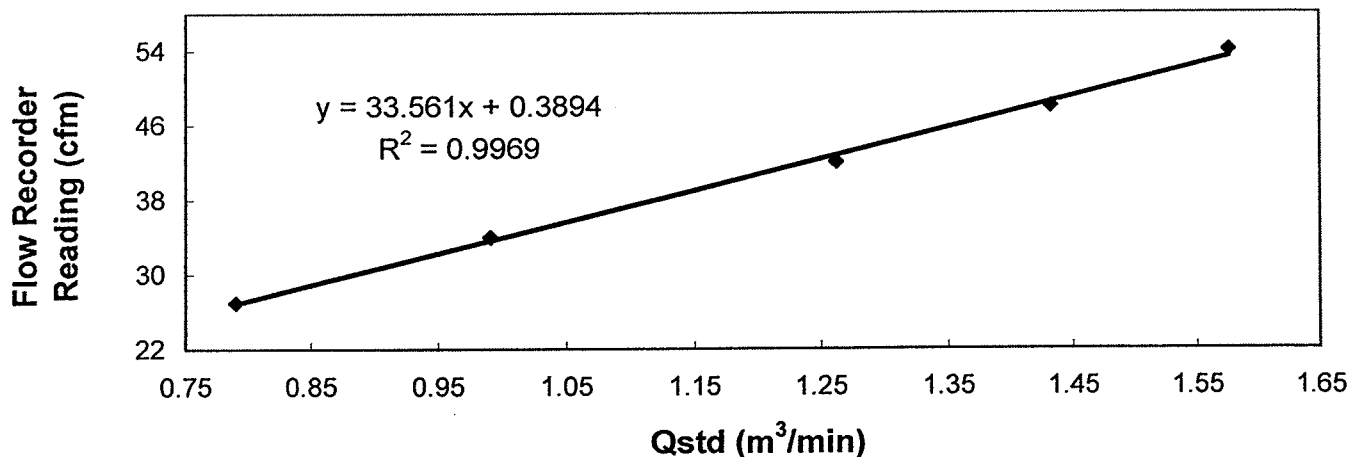
Manufacturer : Graseby GMW Date of Calibration : 05 March 2008

Serial No. : 9035 (ET / EA / 003 / 09) Calibration Due Date : 04 May 2008

Method : Based on Operations Manual for in series calibration method by TISCH  
ENVIROMENTAL Model Te-5025A calibration kit

Results	Flow recorder reading (cfm)	54	48	42	34	27
	Qstd (Actual flow rate, m <sup>3</sup> /min)	1.58	1.43	1.26	0.99	0.79
	Pressure :	768.81 mm Hg			Temp. :	296 K

**Sampler 9035 Calibration Curve**  
**Site: Kwai Chung I P (L-1)**  
**Date of Calibration: 05 March 2008**



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies \* / does not comply \* with the specified requirements and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
CHOW, Hoi Tat  
(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
(Senior Environmental Officer)



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**TEST REPORT**

**Internal Calibration Report**  
of  
**Dust Trak Monitor**

Manufacturer : TSI - 8520 Dust Trak Date of Calibration : 12 January 2008

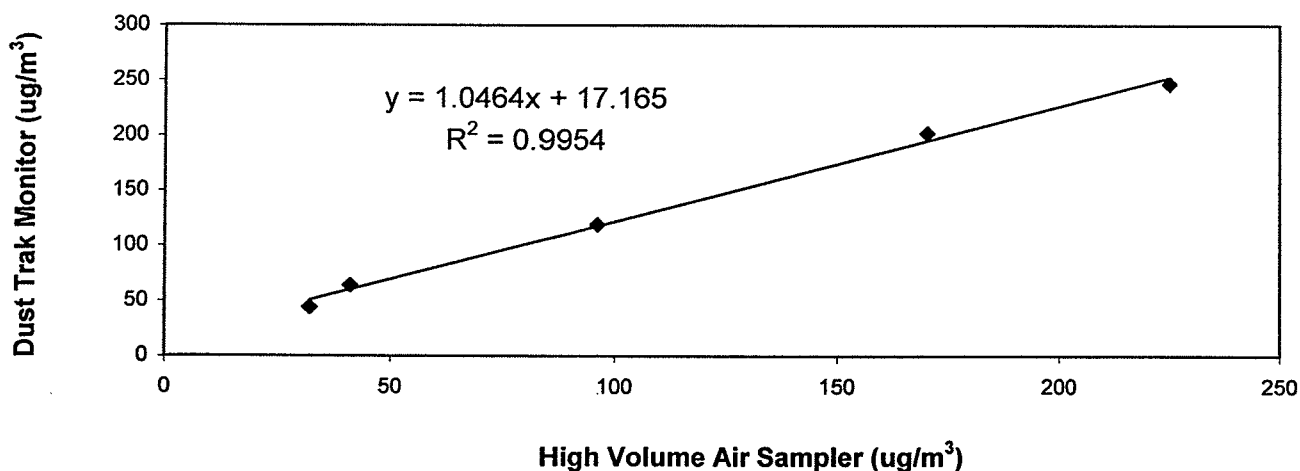
Serial No. : 14230 ( ET/EA/001/04 ) Due Date : 11 July 2008

Method : Parallel measurement (five-point calibration) by placing the Dust Trak Monitor and High Volume Air Samper together under the same environmental condition

Results :

Dust Trak Monitor ( $\mu\text{g}/\text{m}^3$ )	44	64	119	202	247
High Volume Air Sampler ( $\mu\text{g}/\text{m}^3$ )	32	41	96	170	225
High Volume Air Sampler Serail No.: 1178			Calibration Due Date: 20 January 2008		

**Calibration of Dust Trak Monitor (Serial No. 14230)**



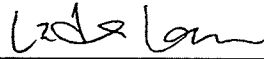
Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies \* / ~~does not comply~~ \* with the internal calibration procedures and is deemed acceptable \* / ~~unacceptable~~ \* for use.

Calibrated by :

  
LEUNG, Ka Chun  
(Assistant Environmental Officer)

Approved by :

  
LAW, Sau Yee  
(Senior Environmental Officer)



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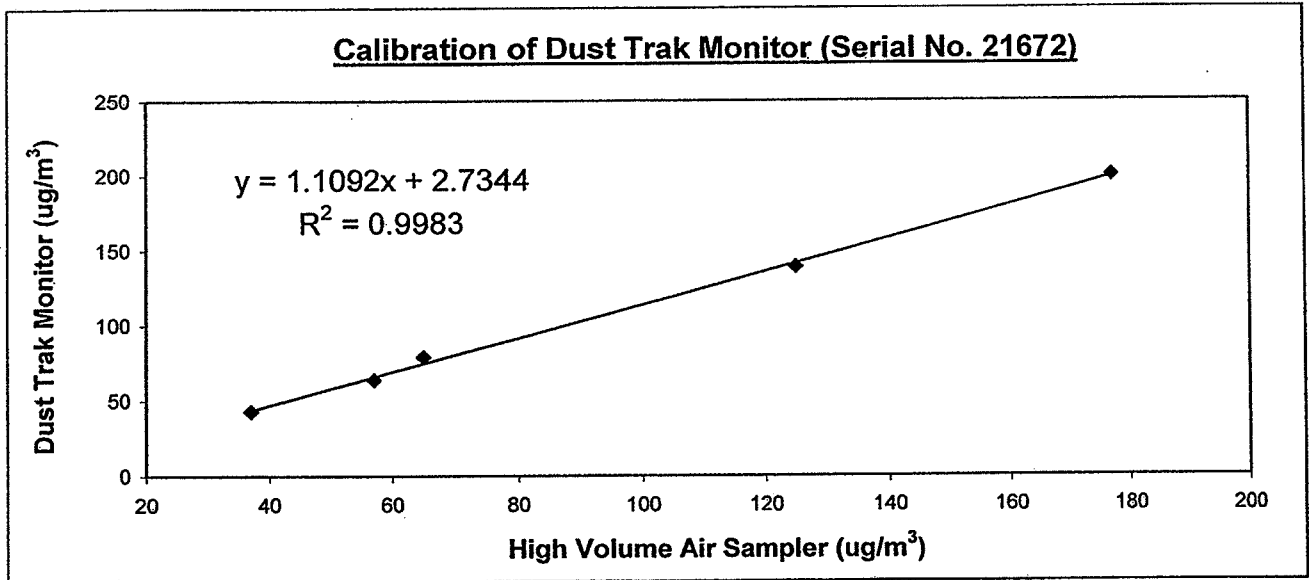
**TEST REPORT**

**Internal Calibration Report**  
of  
**Dust Trak Monitor**

**Manufacturer** : TSI - 8520-Dust Trak Date of Calibration : 14 September 2007  
**Serial No.** : 21672 (ET / EA / 001 / 01) Calibration Due Date : 13 March 2008  
**Method** : The Dust Trak Monitor and High Volume Air Sampler were placed together to perform five-point calibration under the same environmental condition.

**Results** :


Dust Trak Monitor (ug/m <sup>3</sup> )	43	64	79	139	200
High Volume Air Sampler (ug/m <sup>3</sup> )	37	57	65	125	177
High Volume Air Sampler Serial No.: 1178		Calibration Date: 16 / 09 / 2007			



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies \* / does not comply \* with the internal calibration procedures and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
LEUNG, Ka Chun  
(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
(Senior Environmental Officer)



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**TEST REPORT**

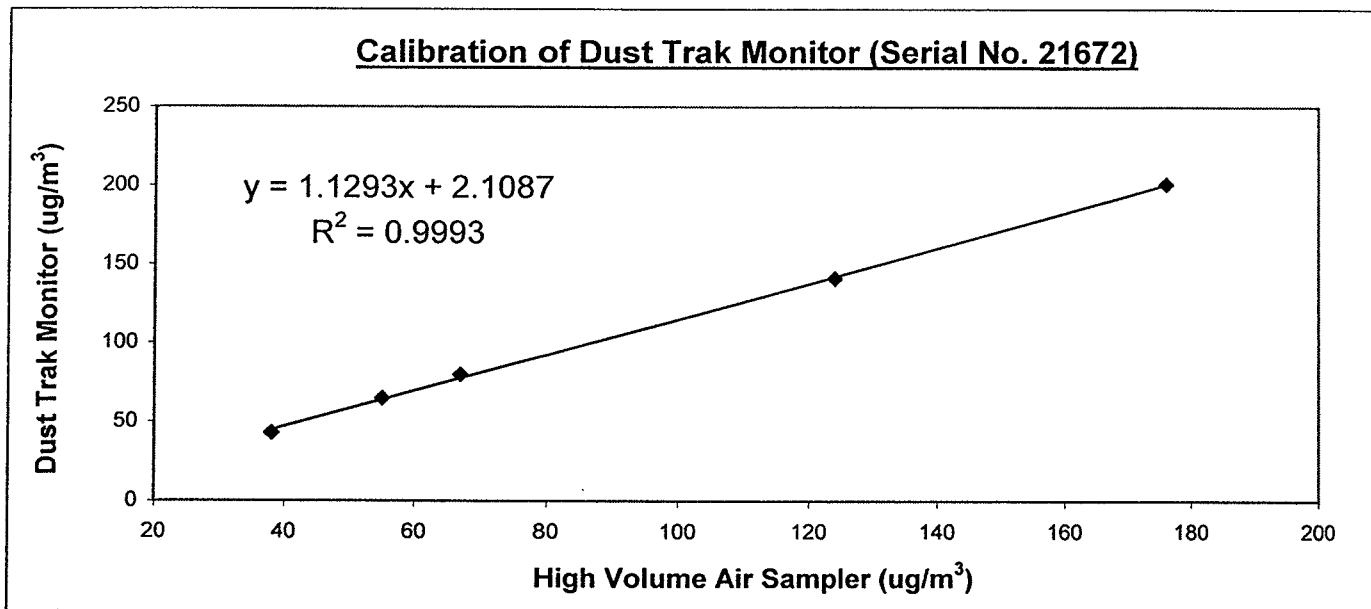
**Internal Calibration Report**  
of  
**Dust Trak Monitor**

Manufacturer : TSI - 8520 Dust Trak Date of Calibration : 14 March 2008

Serial No. : 21672 (ET / EA / 001 / 01) Calibration Due Date : 13 September 2008


Method : The Dust Trak Monitor and High Volume Air Sampler were placed together to perform five-point calibration under the same environmental condition.

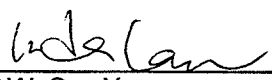
Results	Dust Trak Monitor (ug/m <sup>3</sup> )	43	65	80	141	201
	High Volume Air Sampler (ug/m <sup>3</sup> )	38	55	67	124	176
	High Volume Air Sampler Serial No.: 1178	Calibration Date: 21 / 03 / 2008				



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies \* / ~~does not comply~~ \* with the internal calibration procedures and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
LEUNG, Ka Chun  
(Assistant Environmental Officer)

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(Senior Environmental Officer)



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AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 24, 2007 Roots-meter S/N 9833620 Ta (K) - 295  
 Operator Tisch Orifice I.D. - 1172 Pa (mm) - 751.84

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORIFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3910	3.2	2.00
2	NA	NA	1.00	0.9730	6.4	4.00
3	NA	NA	1.00	0.8740	7.8	5.00
4	NA	NA	1.00	0.8340	8.7	5.50
5	NA	NA	1.00	0.6880	12.6	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9951	0.7153	1.4137	0.9957	0.7158	0.8859
0.9908	1.0183	1.9993	0.9915	1.0190	1.2528
0.9888	1.1314	2.2353	0.9895	1.1322	1.4007
0.9877	1.1843	2.3444	0.9884	1.1851	1.4690
0.9825	1.4281	2.8275	0.9832	1.4291	1.7717
Qstd slope (m) = 1.98750			Qa slope (m) = 1.24454		
intercept (b) = -0.01336			intercept (b) = -0.00837		
coefficient (r) = 0.99983			coefficient (r) = 0.99983		

y axis =  $\text{SQRT}[\text{H}_2\text{O}(\text{Pa}/760)(298/\text{Ta})]$

y axis =  $\text{SQRT}[\text{H}_2\text{O}(\text{Ta}/\text{Pa})]$

CALCULATIONS

$V_{std} = \text{Diff. Vol} [(\text{Pa} - \text{Diff. Hg}) / 760] (298 / \text{Ta})$   
 $Q_{std} = V_{std} / \text{Time}$

$V_a = \text{Diff Vol} [(\text{Pa} - \text{Diff Hg}) / \text{Pa}]$   
 $Q_a = V_a / \text{Time}$

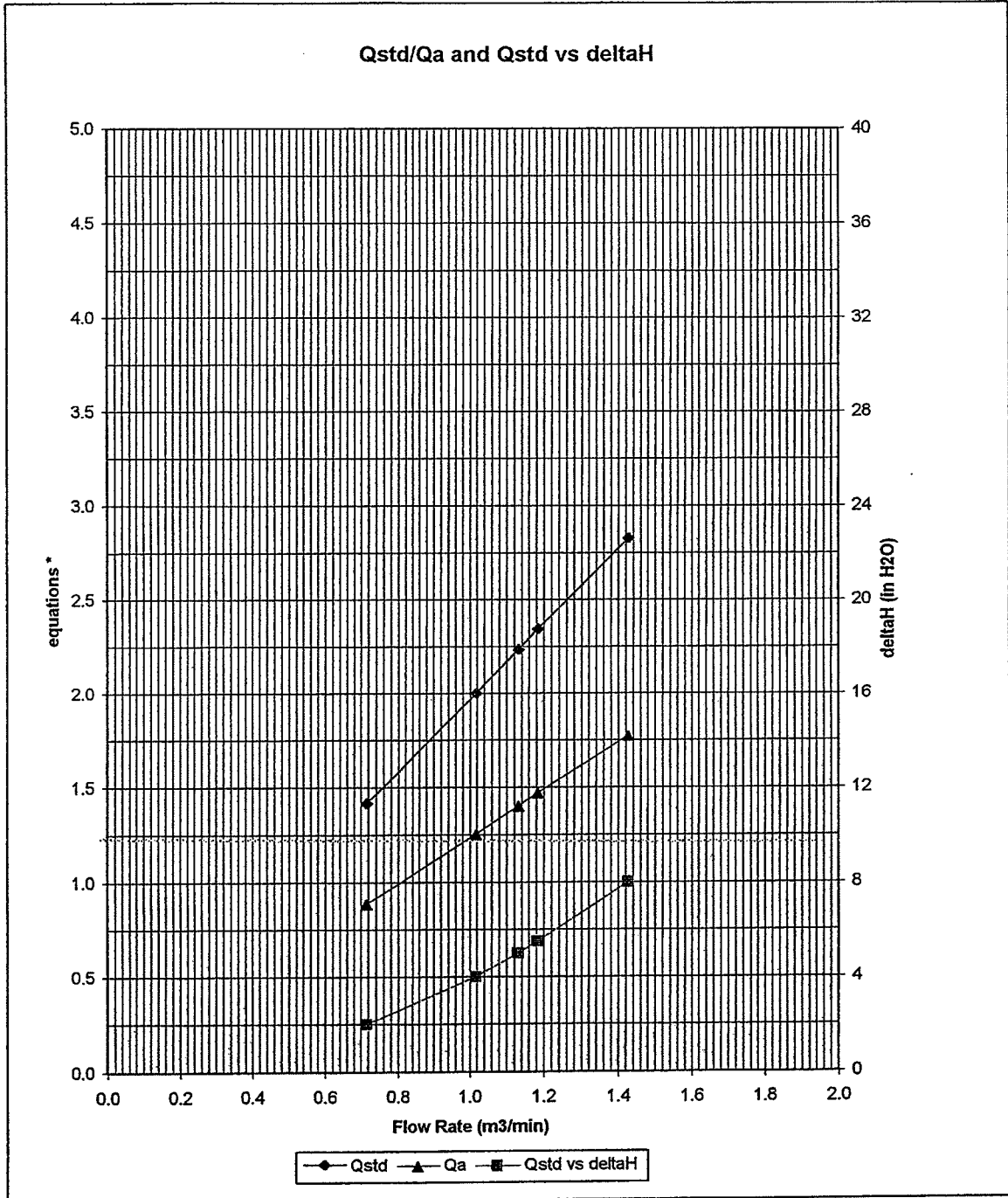
For subsequent flow rate calculations:

$Q_{std} = 1/m \{ [\text{SQRT}(\text{H}_2\text{O}(\text{Pa}/760)(298/\text{Ta}))] - b \}$   
 $Q_a = 1/m \{ [\text{SQRT}(\text{H}_2\text{O}(\text{Ta}/\text{Pa}))] - b \}$



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AIR POLLUTION MONITORING EQUIPMENT



\* y-axis equations:

Qstd series: 
$$\sqrt{\Delta H \left( \frac{P_a}{P_{std}} \right) \left( \frac{T_{std}}{T_a} \right)}$$

Qa series: 
$$\sqrt{(\Delta H (T_a / P_a))}$$

#1172