



VOC (Volatile Organic Compounds) Output

Client : [Redacted]
Date : 22nd June 2006
Test : VOC output comparison between different makes of Fume Extraction System
Gas Detection Meter : RAE Systems PGM 7600, MiniRAE 2000
Serial N^o : 110-005903
Calibration due : 21st September 2006
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Witnessed by : [Redacted]

Object:
To compare the output of VOC's from 5 different Fume Extraction Systems located within CEA.

Method:
A soldering iron set at approx 350°C was used to heat flux (Multicore X33-06I, low residue) to a level where a smoke stream was detected. An extraction nozzle was placed approximately 5cm from the smoke source and VOC output was recorded with the MiniRAE 2000 located at the exhaust area of the system under test, for approximately 30 seconds.
Before taking any output readings from the extraction systems, ambient and at smoke source readings were recorded as reference points.

Reference Readings:

	Reference	PPM
1	Ambient	0
2	At smoke source	190

Output Readings:

	Make	Peak PPM	% Purification (gas)
1	Filtronic	<0.2	99.9%
2	Pace	<8.3	95.6%
3	Metcal	<22	88.4%
4	Airidus	<26.8	85.9%
5	Boffa	<65.5	65.5%

Conclusion:

None of the fume extraction systems had new filters, which ensures a more meaningful set of results. There were relatively low readings of VOC's at source, possibly due to the low residue flux being used for the test, and there was only 1 decimal place in the hand held MiniRAE 2000. However, the Filtronic system was the only one to exceed 99% air purification (gas filter), indicating well its potential for handling more volatile situations, should that ever arise.