

VOC Reduction – Measurable Results



Both in the lab and in the field, AtmosAir has proven testing results to reduce VOC's



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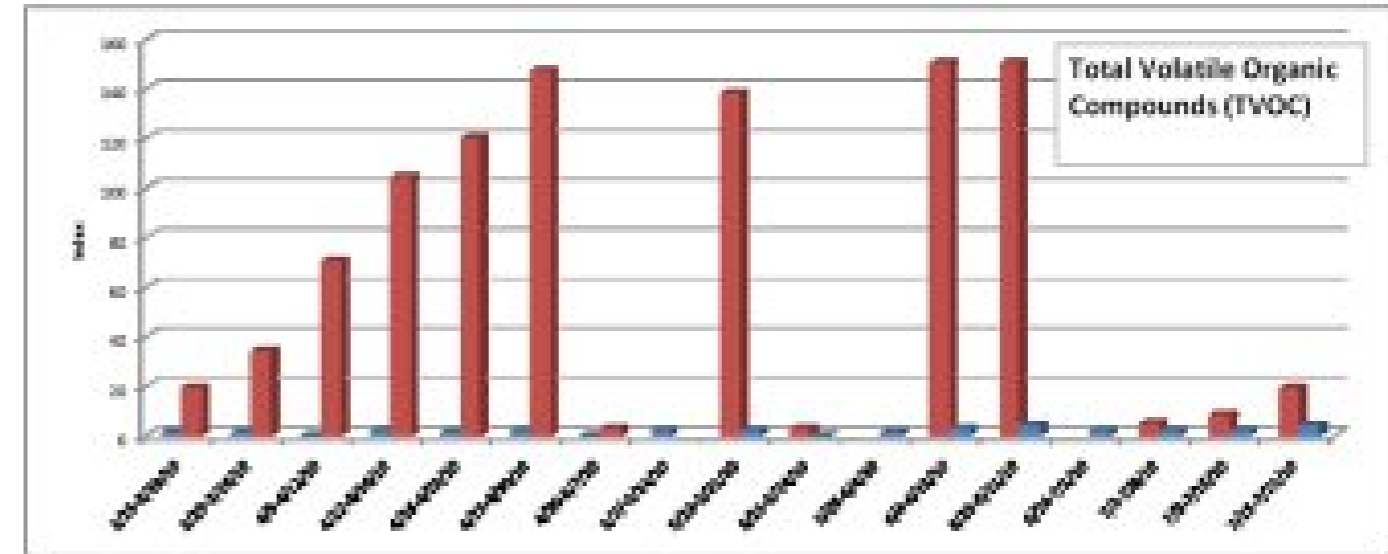
Full-scale Chamber Testing of Air Cleaner Performance for the Removal of Volatile Organic Compounds

Table 4 Test1 Reduction rate after turning on the air cleaner

Time from turn on AC (hr)	hexane	2-butanone	iso-butanol	toluene	tetrachloroethylene	hexanal	ethylbenzene	decane
0.000	100.0%	100.0%	100.0 %	100.0%	100.0%	100.0%	100.0%	100.0%
0.225	86.8%	84.8%	77.0%	83.6%	85.0%	78.8%	87.3%	90.7%
1.008	50.4%	48.6%	39.3%	46.2%	49.4%	33.3%	51.3%	53.0%
2.008	29.3%	30.9%	26.0%	23.3%	28.1%	16.1%	27.4%	30.5%
4.075	11.1%	12.9%	10.2%	6.4%	10.8%	3.3%	8.5%	8.9%
6.025	5.6%	8.9%	2.9%	2.0%	5.5%	2.5%	3.7%	3.6%

Conclusions

Test results showed good regression and repeatability between the two duplicate tests. Test indicated that the air cleaners reduced the concentrations in the chamber air (57.12 m³ in volume) for Hexane by 94.6%, 2-Butanone by 91.1%, Iso-butanol by 97.1%, Toluene by 98%, Tetrachloroethylene by 94.5%, Hexanal by 97.5%, Ethylbenzene by 96.3% and Decane by 96.4% over the 6 hours pull-down test period. These corresponded to the equivalent clean air delivery rate (CADR) for the two units tested to range from 12 cfm to 22.8 cfm depending of the VOCs.



Notes: Blue bars represent rooms treated with AtmosAir Bi-Polar Ionization
Red bars represent control room without AtmosAir
The AtmosAir system was installed into Room 206 on 3/15/09 and removed on 3/14/09
The AtmosAir system was installed into Room 212 on 5/14/09 and the end of the trial 7/29/09
TVOC is measured on a custom index developed by the air testing equipment manufacturer Airvity Inc.

Average Levels	Room 206	Room 212
3/15/09-3/14/09	1.1 index	11 index
5/14/09-7/29/09	67.5 index	2.2 index

