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## Dissipation of VOC Compounds and Odors at Room Temperature.

In this experiment the water from the burn area was sampled for both chemical analysis and odor testing. Throughout the study, the sample was held at room temperature in a 2 liter beaker placed in a fume hood. The VOCs continued to volatilize throughout the 33 hour study (33 hours = 1980 minutes). There were no losses of VOC compounds in a room temperature control held for 33 hours (e.g., due to chemical reactions with residual chlorine or oxygen or microbes).

All odor panel testers (5 individuals) were able to smell the odor in samples at 720, 1140 and 1980 minutes (12, 24 and 33 hrs) minutes. Testers evaluated samples blind and independently.



Dissipation of VOC Compound With Heating

In this experiment the water from the burn area was sampled for both chemical analysis and odor testing. Initially, the sample was at room temperature (see dark red line) but the flask was placed on a hot plate – the water temperature did not reach the boiling point  $(100^{\circ}C)$  until 1 hour.

All odor panel testers (5 individuals) were able to smell odor in samples at 15 and 30 minutes, but none of the testers detected odor in samples at 45, 60 and 120 minutes. Testers evaluated samples blind and independently.

## Selection of Odor Panel and Odor Testing.

Testers were initially selected based on their ability to detect an odor in the t0 burn samples. The test was conducted by allowing them to sniff (but not inhale) a half-full VOA vial. Two testers were eliminated because they were not able to smell any odor at all.

Testers selected descriptions from a list of terms (e.g., plastic, solvent, fruity, gasoline, sulfury, sour, vinegary, sweet, pleasant, harsh, irritating, and nauseating). They also volunteered descriptions. Several of the testers noted throat irritation and constriction after smelling the test sample(s). One tester could not smell an odor, but observed throat irritation (e.g., urge to clear throat).

While odor testers were in universal agreement as to the odor detection threshold(s) – they described the odor differently. The following descriptions were provided:

Odor Tester	Descriptor	Descriptor	Descriptor	Descriptor
	(selected from	(selected from	(selected from	(volunteered)
	list)	list)	list)	
A (v)	Fruity	Sweet	Nauseating	Gasoline
B (sr)	Harsh	Nauseating		Old warehouse
C (sp )				Rubbery/chlorine/cleaning
E (b)				Chlorine/sweet/chemical/solvent
F (e)	Gasoline	Harsh	Irritating	Gasoline/toluene
G ( c )	Solvent	Sour		
H (n)	No odor			
	detectable			
l(r)	No odor			
	detectable			

The letters in parentheses are initials of testers.

\Dissipation of Burn Related VOC from Water\_Draft