

Chloroform in soil gas, from sampling on Mt. Mansfield, 6/10 & 6/11, '95
data collected by Mike Aucott; NJDEP, Trenton, NJ and Rutgers University

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                                chloroform concentration in soil gas
                                adjusted so lowest = 0
                                location lowest  highest
tube      elev      type      ppt      ppt
  228      3620  away      229.0148 424.8608
  229      3620  ambient    122.1733 210.6376
  255      3620  under      144.9922 399.4975
  105      3050  away      128.3432 279.1618
  149      3050  under       0.000028 90.93159
  137      2590  away      62.72831 177.0650
  134      2590  ambient    43.04779 110.8157
  143      2590  under      206.5875 553.6120

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samples were soil air pulled from approximately 20 cm
"away" means not directly under overhang of trees
"under" means directly under substantial tree canopy
"ambient" was air pulled directly from atmosphere at g

Two samples, tube 228 and tube 143, appear to show chloroform concentrat
ambient. This study thus shows some confirmation of findings of others*
forests in enriched in chloroform. * Frank, et al., Atmospheric Environ

Raw data, calculations, etc. below

calibration of gas chromatograph

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conc      response
  5.157    222978
                                Regression Output:
                                calc'd
                                133286.2

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10.314    275763 Constant
  59.68    1998272 Std Err of Y Est
107.44    2687324 R Squared
214.88    5469305 No. of Observations
                                5 5553722.
                                Degrees of Freedom
                                4

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X Coefficient(s)      25845.69
Std Err of Coef.     969.7876

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                                location
tube      elev      type      minutes  pump      lo rate  mid rate  hi rate
  228      3620  away           44  m10           55    84.73    85.58
  229      3620  ambient        90  m8           37.61  43.14666    67

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255	3620	under	44	m1	32.19	55	74.18
105	3050	away	41	m10	55	84.73	85.58
149	3050	under	40	m1	32.19	55	74.18
137	2590	away	41	m10	55	84.73	85.58
134	2590	ambient	65	m8	37.61	43.14666	67
143	2590	under	42	m1	32.19	55	74.18
251	1900	ambient	67	m10	55	84.73	85.58

, Dept. of Environmental Sciences, New Brunswick, NJ

depth

round level on Mt. Mansfield

ions clearly above

that soil gas in conifer
ment, 23, 1333-1335, 1989.

avg rate	lo blank	hi blank	avg blank	response	corrected response	ng	vol (l)
75.10333	34360	80021	57190.5	119527	85167	3.295210	3.304546
49.25222	34360	80021	57190.5	62027	27667	1.070468	4.4327
53.79	34360	80021	57190.5	79675	45315	1.753290	2.36676
75.10333	34360	80021	57190.5	72281	37921	1.467207	3.079236
53.79	34360	80021	57190.5	25444	-8916	-0.34497	2.1516
75.10333	34360	80021	57190.5	43243	8883	0.343693	3.079236
49.25222	34360	80021	57190.5	23563	-10797	-0.41774	3.201394
53.79	34360	80021	57190.5	103895	69535	2.690390	2.25918
75.10333	34360	80021	57190.5				

				lowest	highest			
ng/M3	ppt	lowest	vohigh	vol	response	response	tube	elev
997.1747	204.3390	2.42	3.76552	39506	85167	228	3620	

241.4935	49.48638	3.3849	6.03	-17994	27667	229	3620
740.7976	151.8027	1.41636	3.26392	-346	45315	255	3620
476.4842	97.64020	2.255	3.50878	-7740	37921	105	3050
-160.332	-32.8549	1.2876	2.9672	-54577	-8916	149	3050
111.6165	22.87223	2.255	3.50878	-36778	8883	137	2590
-130.489	-26.7396	2.44465	4.355	-56458	-10797	134	2590
1190.870	244.0307	1.35198	3.11556	23874	69535	143	2590

location	lowest		highest		adjusted so lowest = 0	
	ppt	ppt	ppt	ppt	ppt	ppt
away	83.18214	279.0281	229.0148	424.8608		
ambient	-23.6593	64.80495	122.1733	210.6376		
under	-0.84048	253.6648	144.9922	399.4975		
away	-17.4894	133.3291	128.3432	279.1618		
under	-145.832	-54.9011	0.000028	90.93159		
away	-83.1043	31.23238	62.72831	177.0650		
ambient	-102.784	-35.0169	43.04779	110.8157		
under	60.75486	407.7793	206.5875	553.6120		