

GC/GCMS Application solution

HS VOC in (Drinking) water-60 Compounds

Fast GCMS RTX 624 20 m, 0.18, 1 μ m



ID#	Name	Ret. Time	m/z
1	Dichlorodifluoromethane	0.945	85.00
2	Chloromethane	1.077	50.00
3	Vinyl chloride	1.156	62.00
4	Bromomethane	1.375	94.00
5	Chloroethane	1.443	64.05
6	Trichlorofluoromethane	1.587	101.00
7	1,1-Dichloroethene	1.970	96.00
8	Methylene chloride	2.432	84.00
9	trans-1,2-Dichloroethene	2.645	96.00
10	1,1-Dichloroethane	3.163	63.05
11	2,2-Dichloropropane	3.890	77.05
12	cis-1,2-Dichlorethen	3.967	96.00
13	Bromochloromethane	4.346	129.95
14	Trichloromethane	4.521	83.00
15	1,1,1-Trichloroethane	4.683	97.00
16	Tetrachloromethane	4.900	116.95
17	1,1-Dichloropropene	5.005	110.00
18	Benzene	5.313	78.10
19	1,2-Dichlorethan	5.475	62.00
20	Trichloroethene	6.000	130.00
21	1,2-Dichloropropane	6.197	63.00
22	Dibromomethane	6.284	173.90
23	Bromodichloromethane	6.414	83.00
24	cis-1,3-Dichloropropene	6.675	75.05
25	Toluene	6.813	91.10

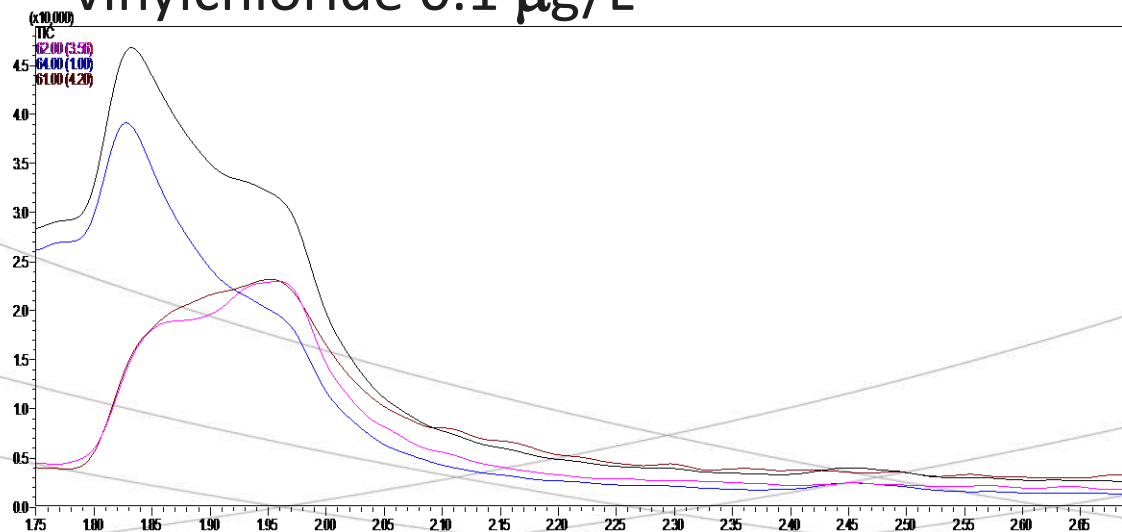
26	trans-1,3-Dichloropropene	6.992	75.00
27	Tetrachloroethene	7.084	165.95
28	1,1,2-Trichloroethane	7.084	94.00
29	1,3-Dichloropropane	7.165	76.05
30	Dibromochloromethane	7.260	128.95
31	1,2-Dibromoethane	7.319	107.00
32	Chlorobenzene	7.547	112.05
33	Ethylbenzene	7.582	91.10
34	1,1,1,2-Tetrachloroethane	7.586	130.95
35	p-Xylene	7.639	91.10
36	m-Xylene	7.639	91.10
37	o-Xylene	7.835	91.10
38	Styrene	7.849	104.10
39	Tribromomethane	7.957	172.90
40	Isopropylbenzene	8.002	105.10
41	Bromobenzene	8.177	156.00
42	1,1,2,2-Tetrachloroethane	8.186	167.90
43	1,2,3-Trichloropropane	8.216	110.00
44	n-Propylbenzene	8.200	91.15
45	2-Chlorotoluene	8.262	91.10
46	1,3,5-Trimethylbenzene	8.286	105.10
47	4-Chlorotoluene	8.319	91.10
48	tert-Butylbenzene	8.438	119.15
49	1,2,4-Trimethylbenzene	8.466	105.10
50	sec-Butylbenzen	8.538	105.25
51	4-Isopropyltoluene	8.599	134.20
52	1,3- Dichlorobenzene	8.616	146.05
53	1,4-Dichlorobenzene	8.658	146.05
54	n-Butylbenzene	8.780	91.15
55	1,2-Dichlorobenzene	8.825	146.05
56	1,2-Dibromo-3-chloropropane	9.159	157.00
57	1,2,4-Trichlorobenzene	9.489	179.95
58	1,1,2,3,4,4-Hexachloro-1,3-butadiene	9.532	224.85
59	Naphthalene	9.612	128.10
60	1,2,3-trichlorobenzene	9.724	179.95

GC/GCMS New Application

Standard HS VOC

RTX624 30m, 0.25 mm, 1.4 μm

vinylchloride 0.1 $\mu\text{g/L}$

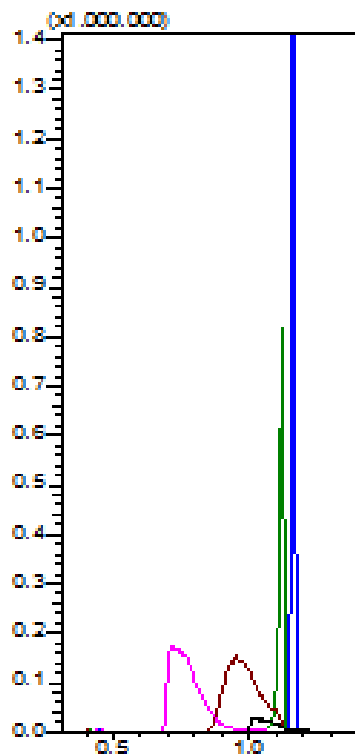
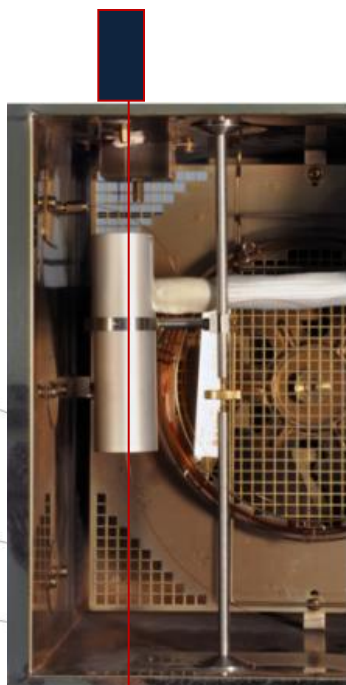


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Compound= Vinylchloride
M/Z = 62

OPTIC-4 CryoTrap or CryoFocus-4

HS of VOC in (Drinking) water-60 Compounds



Different trap temperatures

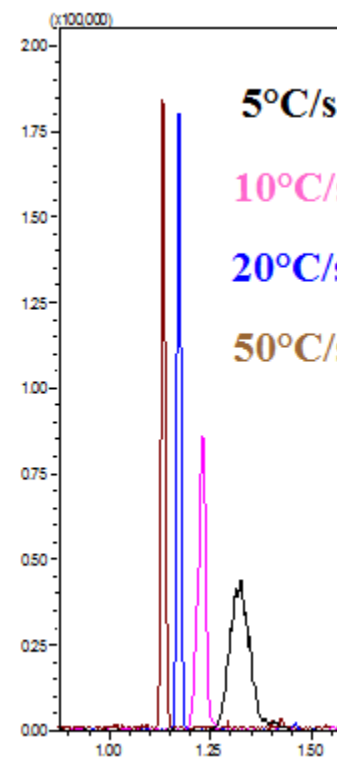
Without

-20°C

-70°C

-100°C

-150°C

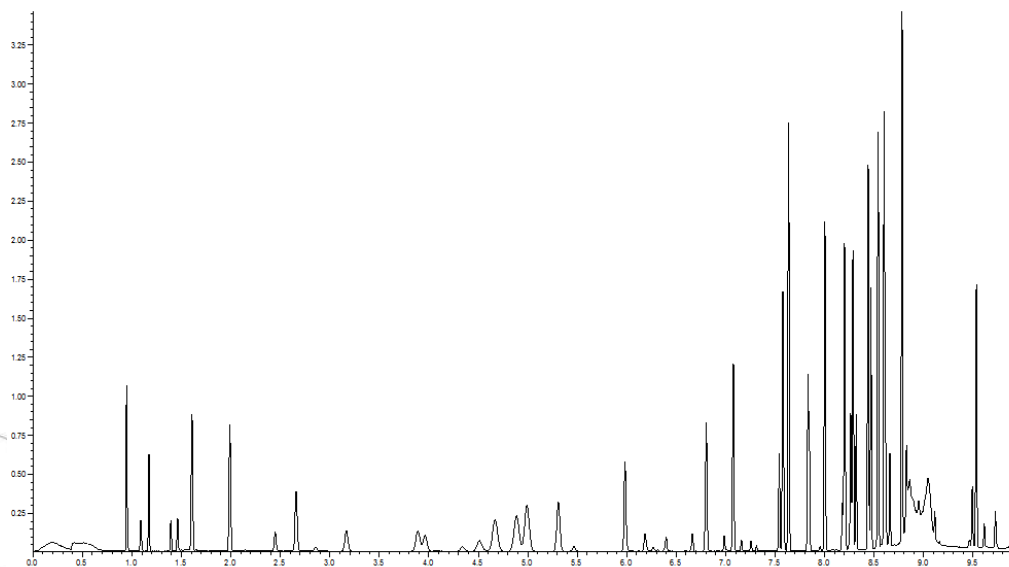


Different trap ramp rate

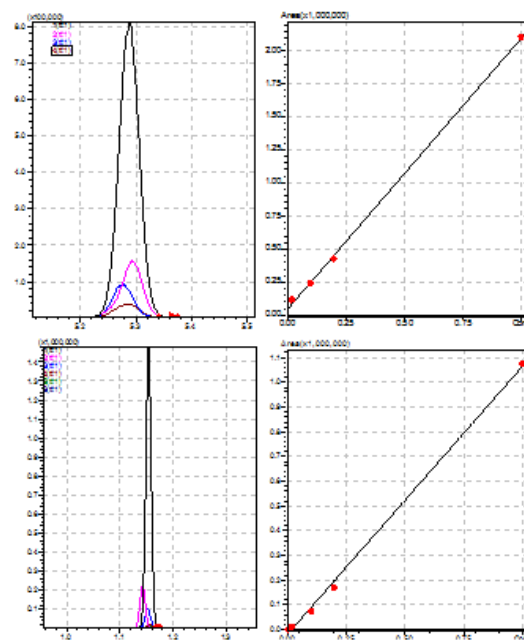
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OPTIC-4 CryoTrap or CryoFocus-4

VOC in Drinking water-60 Compounds



9.5 min



Benzol

$R^2 = 0.9992304$

Vinylchlorid

$R^2 = 0.9978483$

Calibration curve

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