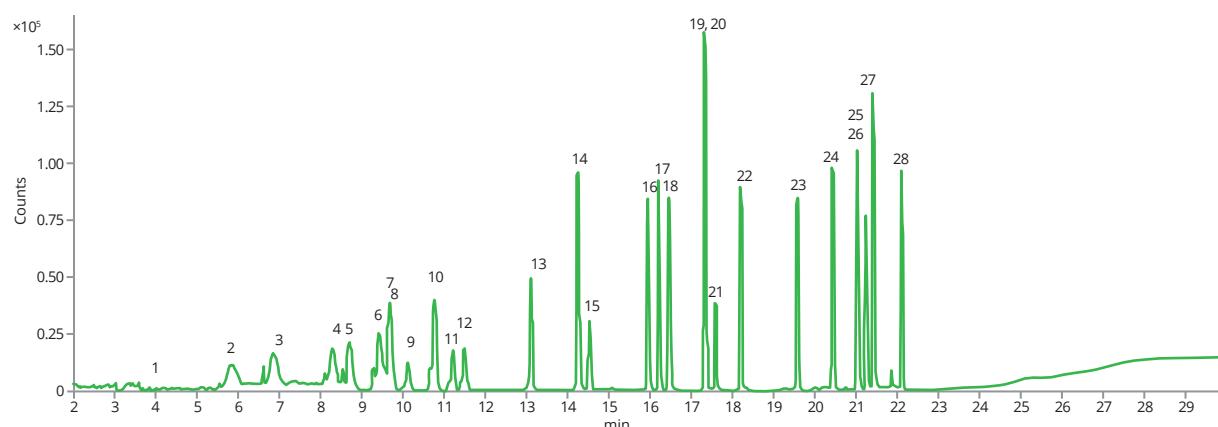
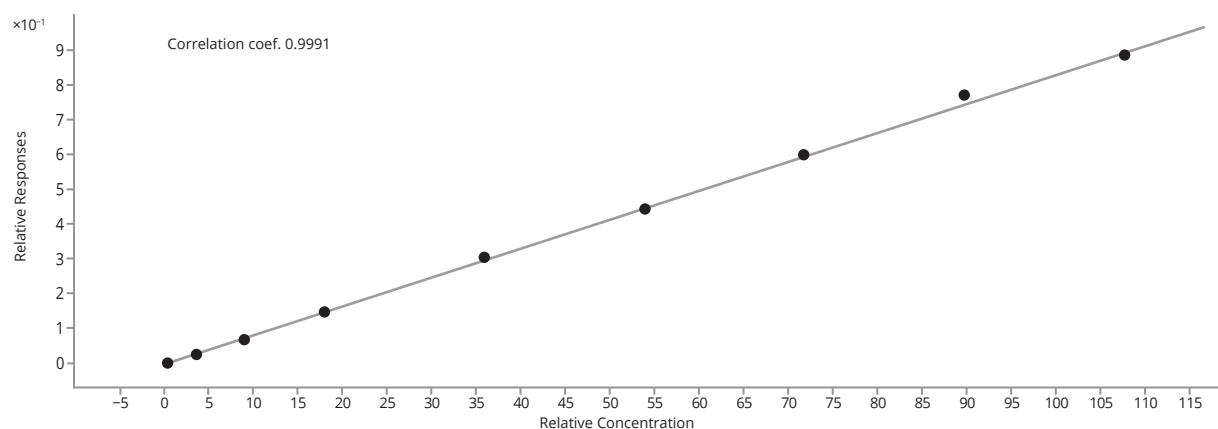


## Environmental pollutants by GC-MS

Analytical detection of hazardous chemicals in environmental water samples is challenging due to complex mixtures and trace concentrations of contaminants. This application shows an accurate GC-MS method for identification and control of volatile and semi-volatile organic pollutants in drinking water, surface water and wastewater.



Reference solution on LION™ LN-624 MS column



Calibration curve (1,2-dichloroethane)

Author of this application: GEOLAB, s.r.o.





## Environmental pollutants by GC-MS

<b>Column</b>	LION™ LN-624 MS
<b>Dimensions</b>	60 m × 0.32 mm × 1.80 µm
<b>Part number</b>	LNI-5770-GU60
<b>Injection volume</b>	Head Space Agilent 7695A, 80 °C, loop 1 mL
<b>Injection temperature</b>	250 °C
<b>Injection mode</b>	Splitless, hold 0.75 min, Split purge 15 mL/min, Setup purge 3 mL/min
<b>Column flowrate</b>	Carrier Gas- Helium, constant flow, 1.66 mL/min
<b>Oven program</b>	40 °C, hold 2 min 6 °C/min, 160 °C, hold 0 min 40 °C/min, 230 °C, hold 3 min
<b>Ionization energy</b>	70 eV
<b>Detection</b>	MSD Agilent 5977B, EI, positive mode
<b>Analytes</b>	<b>See table below</b>



## Environmental pollutants by GC-MS

Peak No.	Compound ID	Scan	MZ	RT
1	Vinyl chloride	SIM	62.0	4.00
2	1,1-Dichloroethylene	SIM	96.0	5.80
3	Trans-1,2-Dichloroethylene	SIM	96.0	7.00
4	Cis-1,2-Dichloroethylene	SIM	96.0	8.40
5	Chloroform	SIM	83.0	8.70
6	Carbon Tetrachloride	SIM	119.0	9.40
7	1,2-Dichloroethane	SIM	62.0	9.70
8	Benzene	SIM	78.0	9.80
9	Fluorobenzene	SIM	96.0	10.20
10	Trichloroethylene	SIM	130.0	10.80
11	Methylcyclohexane	SIM	83.0	11.20
12	Bromodichloromethane	SIM	83.0	11.50
13	Toluene	SIM	91.0	13.30
14	Tetrachloroethylene	SIM	166.0	14.30
15	Chlorodibromomethane	SIM	129.0	14.60
16	Chlorobenzene	SIM	112.0	16.00
17	Ethylbenzene	SIM	91.0	16.30
18	m,p-Xylene	SIM	91.0	16.50
19	Styrene	SIM	104.0	17.40
20	o-Xylene	SIM	91.0	17.40
21	Bromoform	SIM	173.0	17.60
22	Cumene	SIM	105.0	18.30
23	1,3,5-Trimethoxybenzene	SIM	105.0	19.60
24	1,2,4-Trimethylbenzene	SIM	105.0	20.40
25	1,2,3-Trimethylbenzene	SIM	105.0	21.00
26	1,3-Dichlorobenzene	SIM	146.0	21.00
27	1,4-Dichlorobenzene	SIM	146.0	21.30
28	1,2-Dichlorobenzene	SIM	146.0	22.10