



## Method Summary

### Determination of Low Level VOCs in Waters

#### Scope and Range

This method is applicable to the 54 volatile organic compounds listed below. It is only suitable for water samples with <10µg/l per VOC compound (without dilutions). Holding time for VOC vials is 8 days.

Analyte	LOD µg/l	Analyte	LOD µg/l
Vinyl Chloride	0.1	1,1,1,2-tetrachloroethane	0.1
Chloroethane	0.2	Ethylbenzene	0.1
Trichlorofluoromethane	0.1	m/p-Xylene	0.2
1,1-Dichloroethene	0.1	o-Xylene	0.2
Trans-1,2-Dichloroethene	0.1	Styrene	0.1
1,1-Dichloroethane	0.1	Bromoform	0.1
Cis-1,2-Dichloroethene	0.1	Isopropylbenzene	0.1
Bromochloromethane	0.2	1,1,2,2-Tetrachloroethane	0.1
Chloroform	0.2	1,2,3-Trichloropropane	0.3
1,1,1-Trichloroethane	0.1	Bromobenzene	0.1
1,1-Dichloropropene	0.1	Propylbenzene	0.1
Carbon tetrachloride	0.1	2-Chlorotoluene	0.1
1,2-Dichloroethane	0.2	1,3,5-Trimethylbenzene	0.1
Benzene	0.2	4-Chlorotoluene	0.1
Trichloroethene	0.1	Tert-Butylbenzene	0.1
1,2-Dichloropropane	0.2	1,2,4-Trimethylbenzene	0.1
Dibromomethane	0.1	Sec-Butylbenzene	0.1
Bromodichloromethane	0.1	4-Isopropyltoluene	0.1
Cis-1,3-Dichloropropene	0.1	1,3-Dichlorobenzene	0.1
Toluene	0.2	1,4-Dichlorobenzene	0.1
Trans-1,3-Dichloropropene	0.2	n-Butylbenzene	0.1
1,1,2-Trichloroethane	0.1	1,2-Dichlorobenzene	0.1
1,3-Dichloropropane	0.1	1,2-Dibromo-3-Chloropropane	0.2
Tetrachloroethene	0.1	1,2,4-Trichlorobenzene	0.1
Dibromochloromethane	0.1	Hexachlorobutadiene	0.1
1,2-Dibromoethane	0.1	Naphthalene	0.1
Chlorobenzene	0.6	1,2,3-Trichlorobenzene	0.1

#### Principle

A headspace vial is part filled with sample and matrix modifiers. This is then agitated at an elevated temperature to portion the volatile compounds into the headspace. Analysis is undertaken by GC-MS



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#### **Interferences**

Any compound or mixture with a similar volatility to the target analytes, which may co-elute with the target compounds and hinder or mask their identification, e.g. solvents, hydrocarbons (petrol/kerosene).

Samples with values exceeding the range of TM265 Low Level VOC in Waters may be more appropriately run by TM208 VOC in Waters that has range of up to 500µg/l (without dilutions).