

Drinking Water Testing at the Delaware Public Health Laboratory



Organic Chemistry Testing

Volatile Organic Compounds (VOC) EPA method 524.4

Regulated Compounds:

- Vinyl Chloride
- 1,1-dichloroethane
- Methylene Chloride
- Trans-1,2-dichloroethane
- Methyl-t-butyl ether
- Cis-1,2-dichloroethene
- Chloroform
- 1,1,1-trichloroethane
- Carbon tetrachloride
- Benzene
- 1,2-dichloroethane
- Trichloroethene
- 1,2-dichloropropane
- Bromodichloromethane
- Toluene
- 1,1,2-trichloroethane
- Tetrachloroethene
- Dibromochloromethane
- Chlorobenzene
- Ethylbenzene
- Total xylene
- Styrene
- Bromoform
- 1,4-dichlorobenzene
- 1,2-dichlorobenzene
- 1,2,4-trichlorobenzene

Unregulated Compounds:

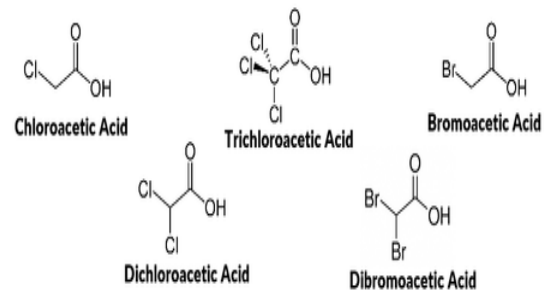
- Dichlorodifluoromethane
- Chloromethane
- Bromomethane

- Chloroethane
- Trichlorofluoromethane
- 1,1-dichloroethane
- 2,2-dichloropropane
- Bromochloromethane
- 1,1-dichloropropene
- Dibromomethane
- cis-1,3-dichloropropene
- Trans-1,3-dichloropropene
- 1,3-dichloropropane
- 1,2-dichloroethane
- 1,1,1,2-tetrachloroethane
- m,p-xylene
- o-xylene
- Isopropylbenzene
- 1,1,2,2-tetrachloroethane
- Bromobenzene
- 1,2,3-trichloropropane
- n-propylbenzene
- 2-chlorotoluene
- 1,3,5-trimethylbenzene
- 4-chlorotoluene
- tert-butylbenzene
- 1,2,4-trimethylbenzene
- sec-butylbenzene
- 4-isopropyltoluene
- 1,3-dichlorobenzene
- n-butylbenzene
- 1,2-dibromo-3-chloropropane
- Hexachloro-butadiene
- Naphthalene
- 1,2,3-trichlorobenzene

Organic Chemistry Testing

Haloacetic Acid (HAA5) EPA method 552.2

- Trichloroacetic Acid (TCAA)
- Monobromoacetic Acid (MBAA)
- Dibromoacetic Acid (DBAA)
- Dichloroacetic Acid (DCAA)
- Monochloroacetic Acid (MCAA)



Inorganic Chemistry Testing



Anions EPA method 300.0









- Nitrate
- Fluoride
- Nitrite
- Chloride
- Sulfate

Trace Metals EPA method 200.8, Mercury EPA method 245.1

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Copper
- Lead
- Mercury
- Selenium
- Thallium

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra																

Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lw

	Elements of major concern		Radioactive Elements
	Elements of moderate concern		Elements of concern, but with negligible concentrations
	Elements of minor concern		Elements of no immediate concern
US National Research Council, 1980			
US Clean Air Amendments Act, 1990			 Australian National Pollutant Inventory, 1998

Inorganic Chemistry Testing

Routine Metals SM3111B

- Sodium
- Iron
- Calcium for Hardness

Cyanide SM4500CN-F

pH (EPA method 150.1), Conductivity (SM2510B), Alkalinity (SM 2320B) and Total Dissolved Solids (SM 2540C) *Standard Method (SM)

Bacteriological Testing

- Presence/Absence for Total Coliforms/*Escherichia coli*
- Heterotrophic Plate Count
- Quanti-Tray



Media being added to a drinking water sample for testing the presence of total coliforms/*Escherichia coli*



Florescence produced by a sample that has the presence of *Escherichia coli*