

Conversion of Vapor Concentrations From ppmv To ug/L or mg/m³ Sample

VOC's	Mol. Wt	Conv Factor (MW/24.47)	Light Hydrocarbons	Mol.Wt	Conv Factor (MW/24.47)
Chloromethane	50.49	2.064	Methane	16.04	0.657
Methanol	32.04	1.310	Ethane	30.07	1.232
Vinyl Chloride	62.50	2.555	Ethene	28.05	1.150
Bromomethane	94.94	3.880	Propane	44.11	1.808
Chloroethane	64.52	2.637	Propene	42.08	1.725
Fluorotrichloromethane	137.37	5.615	I-Butane	58.12	2.382
Acetone	58.08	2.374	n-Butane	58.12	2.382
Methyl Ethyl Ketone	72.12	2.948			
t-Butanol	74.12	3.029	Gasoline Range Aliphatics		
1,1-Dichloroethylene	96.94	3.962	Pentane	72.15	2.957
Methylene Chloride	84.93	3.471	Hexane	86.18	3.532
Methy-t-butyl ether	88.15	3.603	Heptane	100.21	4.107
trans-1,2-Dichloroethylene	96.94	3.962	Octane	114.23	4.682
1,1-Dichloroethane	98.96	4.045	Nonane	128.26	5.257
cis-1,2-Dichloroethylene	96.94	3.962	Decane	142.29	5.832
2-Butanone (MEK)	72.12	2.948			
Chloroform	119.38	4.879	Gasoline Range Aromatics		
Cyclohexane	84.16	3.440	Benzene	78.12	3.202
1,1,1-Trichloroethane	133.41	5.453	Toluene	92.13	3.776
Carbon tetrachloride	153.82	6.287	Ethyl Benzene	106.17	4.351
1,2-Dichloroethane	98.96	4.045	m&p-Xylene	106.17	4.351
2-Hexanone	100.16	4.094	o-Xylene	106.17	4.351
Trichloroethylene	131.39	5.370	Chlorobenzene	112.56	4.613
Methyl isobutyl ketone	100.16	4.094	Styrene	104.16	4.269
1,2-Dichloropropane	112.99	4.618	Total C5-C10 (as Hexane)	86.18	3.532
Bromodichloromethane	163.83	6.696	Naphthalene	126.12	5.169
cis-1,3-Dichloropropylene	110.97	4.536			
trans-1,3-Dichloropropylene	110.97	4.536	Diesel Range Aliphatics		
1,1,2-Trichloroethane	133.41	5.453	Undecane (C11)	156.32	6.407
Tetrachloroethylene	165.83	6.778	Dodecane (C12)	170.34	6.981
Chlorodibromomethane	208.29	8.513	Tridecane (C13)	184.37	7.556
1,2-Dibromomethane	187.87	7.679	Tetradecane (C14)	198.40	8.131
Bromoform	252.75	10.331	Pentadecane (C15)	212.42	8.706
1,1,2,2-Tetrachloroethane	167.85	6.860	Hexadecane (C16)	226.45	9.281
1,3-Dichlorobenzene	147.01	6.009	Heptadecane (C17)	240.48	9.856
1,4-Dichlorobenzene	147.01	6.009	Octadecane (C18)	254.51	10.431
1,2-Dichlorobenzene	147.01	6.009			
1,2,4-Trichlorobenzene	181.45	7.416			

MW = Molecular Wt
P = Pressure in Atm

R = Gas Constant (0.08206 l*atm/(mol*K))
T = Temp in deg K (25 + 273.15)
Assume 25 C at sampling point.

$$\text{ug/L} = \text{PPMV} \times (\text{MW} \times \text{P}) / (\text{R} \times \text{T})$$