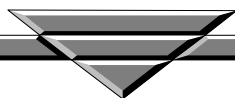


TechTIPs

The latest from PerkinElmer Photovac

Volume 3, Number 2



MicroFID Response Factors

Compound	Response Factor	Compound	Response Factor
Acetaldehyde	6.9 ^C	Epichlorohydrin	2.4 ^L
Acetone	2.7 ^G	Ethanol	5.2 ^C
Acetonitrile (Methyl Cyanide)	1.0 ^C	Ethyl Acrylate	2.7 ^C
Acrolein (2-Propenal)	6.9 ^C	Ethylbenzene	1.0 ^L
Acrylonitrile (Vinyl Cyanide)	1.3 ^C	Ethyl Cellosolve (2-Ethoxyethanol)	4.3 ^L
Allyl Chloride (3-Chloro-1-Propene)	2.7 ^C	Ethyl Chloride (Chloroethane)	1.9 ^C
Aniline (Benzenamine)	3.0 ^L	Ethyl Mercaptan (Ethanethiol)	3.7 ^L
Benzene	0.7 ^C	Ethylene	2.2 ^G
Benzyl Chloride (Chloromethyl Benzene)	1.2 ^L	Ethylene Dibromide (1,2-Dibromoethane)	2.0 ^L
Bromoform (Tribromomethane)	7.2 ^L	Ethylene Dichloride (1,2-Dichloroethane)	1.7 ^C
1,3-Butadiene	2.7 ^C	n-Heptane	1.3 ^L
iso-Butane	1.8 ^G	n-Hexane	1.6 ^G
n-Butane	1.9 ^G	Isobutylene	2.2 ^C
n-Butanol	2.6 ^L	Isoprene (2-Methyl-1,3-Butadiene)	2.2 ^L
n-Butyl Mercaptan (Butanethiol)	2.6 ^L	Isopropanol	2.4 ^C
Carbon Tetrachloride	25.9 ^C	Methanol	23.8 ^L
Chlorobenzene	0.8 ^C	Methyl Bromide (Bromomethane)	3.9 ^C
Chloroform (Trichloromethane)	3.5 ^L	Methyl Ethyl Ketone (2-Butanone)	1.9 ^C
Cumene (Isopropyl Benzene)	1.0 ^L	Methyl Isobutyl Ketone	1.9 ^L
Cyclohexane	1.4 ^C	Methyl Methacrylate	2.8 ^L
1,2-Dichlorobenzene (ortho-)	0.7 ^L	Methyl tert-Butyl Ether (MTBE)	2.0 ^C
cis-1,2-Dichloroethylene	2.6 ^C	Methyl Cellosolve (2-Methoxyethanol)	9.1 ^L
trans-1,2-Dichloroethylene	2.7 ^C	Methylene Chloride (Dichloromethane)	1.4 ^C
N,N-Dimethylformamide (DMF)	2.3 ^L	n-Nonane	1.1 ^L
1,4-Dioxane	4.6 ^C	iso-Octane (2,2,4-Trimethylpentane)	1.2 ^L

Compound	Response Factor	Compound	Response Factor
n-Pentane	1.6 ^L	1,1,2-Trichloroethane	1.7 ^L
Propane	1.8 ^G	Trichloroethylene (TCE)	2.8 ^C
Propionaldehyde (Propanal)	3.6 ^C	Triethylamine	1.1 ^L
Propylene	2.6 ^G	Vinyl Acetate	4.4 ^L
Propylene Dichloride (1,2-DCP)	2.0 ^C	Vinyl Bromide	1.5 ^C
Propylene Oxide	2.5 ^C	Vinyl Chloride (Chloroethylene)	2.1 ^C
Styrene	1.2 ^L	Vinylidene Chloride (1,1-DCE)	2.6 ^C
1,1,2,2-Tetrachloroethane	1.8 ^L	ortho-Xylene	1.1 ^L
Tetrachloroethylene (Perchloroethylene)	2.9 ^C	meta-Xylene	1.2 ^L
Toluene	0.9 ^C	para-Xylene	1.2 ^L
1,1,1-Trichloroethane	1.4 ^C		
1,2,4 Trichlorobenzene	1.1		

This list of *MicroFID* Response Factors was determined at (nominally) 500 PPM, based on a 500 PPM Methane calibration. Methane RF = 1.0. The following formula was used for calculation of Response Factors:

$$\text{Response Factor} = \frac{\text{Actual Concentration}}{\text{MicroFID Response}}$$

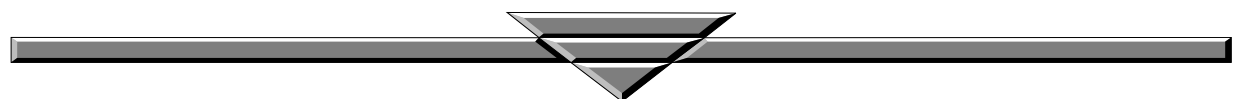
A Response Factor less than 1.0 indicates a compound response better than that of Methane. A Response Factor greater than 1.0 indicates a lower response than that of Methane.

When using Response Factors, results are expected to be accurate to +/- 10 PPM or +/- 25%, whichever is greater.

Standards used for determination of *MicroFID* Response Factors were derived from a variety of sources as referenced below:

- C - Certified gas cylinder, +/- 2% analytical accuracy (Isobutylene +/- 5% analytical accuracy)
- G - From standard prepared by dilution of neat gas into Zero Air, accuracy unknown
- L - From standard prepared by addition of neat liquid to Zero Air, accuracy unknown

For further information contact your area representative or the nearest Photovac office:



United States/International
PerkinElmer Photovac
761 Main Avenue
Norwalk, CT 06859-0219
203-761-5330

Europe
Photovac Europa
Sjælsø Allé 7A, P.O. Box 79
DK-3450 Allerød, Denmark
+ 45-48 100 400