

GASMET CALIBRATION COMPONENTS				GAS-REF-001*	GAS-REF-002**		26.3.2014
#	Compound name	Formula	CAS number	Maximum range	Maximum range	Unit	Notes
<b>Typical CEM components</b>							
1	Water	H <sub>2</sub> O	7732-18-5	40	60	vol-%	
2	Carbon dioxide	CO <sub>2</sub>	124-38-9	30	100	vol-%	
3	Carbon monoxide	CO	630-08-0	1	100	vol-%	
4	Nitrous oxide	N <sub>2</sub> O	10024-97-2	500	5000	ppm	
5	Nitrogen monoxide (Nitric oxide)	NO	10102-43-9	2000	10000	ppm	
6	Nitrogen dioxide	NO <sub>2</sub>	10102-44-0	500	5000	ppm	
7	Sulfur dioxide	SO <sub>2</sub>	7446-09-5	2000	10000	ppm	
8	Ammonia	NH <sub>3</sub>	7664-41-7	500	5000	ppm	
9	Hydrogen chloride	HCl	7647-01-0	500	5000	ppm	
10	Hydrogen fluoride	HF	7664-39-3	100	500	ppm	
11	Methane	CH <sub>4</sub>	74-82-8	1	100	vol-%	
12	Ethane	C <sub>2</sub> H <sub>6</sub>	74-84-0	500	5000	ppm	
13	Ethylene (Ethene)	C <sub>2</sub> H <sub>4</sub>	74-85-1	500	5000	ppm	
14	<i>n</i> -Propane	C <sub>3</sub> H <sub>8</sub>	74-98-6	500	5000	ppm	
15	<i>n</i> -Hexane	C <sub>6</sub> H <sub>14</sub>	110-54-3	200	5000	ppm	
16	Formaldehyde	HCOH	50-00-0	NB	NB	ppm	
<b>Hydrocarbons</b>							
17	<i>n</i> -Butane	C <sub>4</sub> H <sub>10</sub>	106-97-8	200	5000	ppm	
18	Isobutane (2-Methyl propane)	CH <sub>3</sub> CH(CH <sub>3</sub> )CH <sub>3</sub>	75-28-5	200	5000	ppm	
19	<i>n</i> -Pentane	C <sub>5</sub> H <sub>12</sub>	109-66-0	200	5000	ppm	
20	Isopentane (2-Methyl butane)	(CH <sub>3</sub> ) <sub>2</sub> CHC <sub>2</sub> H <sub>5</sub>	78-78-4	200	5000	ppm	
21	Isohexane (2-Methyl pentane)	(CH <sub>3</sub> ) <sub>2</sub> CHC <sub>3</sub> H <sub>7</sub>	107-83-5	200	5000	ppm	
22	<i>n</i> -Heptane	C <sub>7</sub> H <sub>16</sub>	142-82-5	200	5000	ppm	
23	<i>n</i> -Octane	C <sub>8</sub> H <sub>18</sub>	111-65-9	200	5000	ppm	
24	Isooctane (2,2,4-Trimethyl pentane)	(CH <sub>3</sub> ) <sub>3</sub> CCH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	540-84-1	200	5000	ppm	
25	<i>n</i> -Nonane	C <sub>9</sub> H <sub>20</sub>	111-84-2	200	2000	ppm	
26	<i>n</i> -Decane	C <sub>10</sub> H <sub>22</sub>	124-18-5	200	2000	ppm	
27	<i>n</i> -Undecane	C <sub>11</sub> H <sub>24</sub>	1120-21-4	200	2000	ppm	
28	<i>n</i> -Dodecane	C <sub>12</sub> H <sub>26</sub>	112-40-3	200	2000	ppm	
29	<i>n</i> -Tridecane	C <sub>13</sub> H <sub>28</sub>	629-50-5	200	2000	ppm	
30	<i>n</i> -Tetradecane	C <sub>14</sub> H <sub>30</sub>	629-59-4	200	1000	ppm	
31	Cetane ( <i>n</i> -Hexadecane)	C <sub>16</sub> H <sub>34</sub>	544-76-3	200	1000	ppm	Calibration only for heated analyzer
32	Acetylene (Ethyne)	C≡C	74-86-2	500	5000	ppm	
33	<i>n</i> -Propene	C <sub>3</sub> H <sub>6</sub>	115-07-1	200	5000	ppm	
34	1-Butene	C <sub>4</sub> H <sub>8</sub>	106-98-9	200	5000	ppm	
35	Isobutene (2-Methyl-1-propene)	CH <sub>2</sub> =C(CH <sub>3</sub> ) <sub>2</sub>	115-11-7	NB	NB	ppm	
36	<i>cis</i> -2-Butene	CH <sub>3</sub> CH=CHCH <sub>3</sub>	590-18-1	NB	NB	ppm	
37	<i>trans</i> -2-Butene	CH <sub>3</sub> CH=CHCH <sub>3</sub>	624-64-6	NB	NB	ppm	
38	1,3-Butadiene	CH <sub>2</sub> =CHCH=CH <sub>2</sub>	106-99-0	200	5000	ppm	
39	1-Pentene	CH <sub>2</sub> =CHCH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	109-67-1	200	5000	ppm	
40	Isopentene (2-Methyl-2-butene)	CH <sub>3</sub> CH=C(CH <sub>3</sub> ) <sub>2</sub>	513-35-9	200	5000	ppm	
41	<i>cis</i> -2-Pentene	C <sub>2</sub> H <sub>5</sub> CH=CHCH <sub>3</sub>	627-20-3	NB	NB	ppm	
42	<i>trans</i> -2-Pentene	C <sub>2</sub> H <sub>5</sub> CH=CHCH <sub>3</sub>	646-04-8	NB	NB	ppm	
43	1-Hexene	CH <sub>2</sub> =CHC <sub>4</sub> H <sub>9</sub>	592-41-6	200	5000	ppm	
44	1-Heptene	C <sub>7</sub> H <sub>14</sub>	25339-56-4	200	5000	ppm	
45	1-Octene	C <sub>8</sub> H <sub>16</sub>	111-16-0	200	5000	ppm	
46	1-Nonene	C <sub>9</sub> H <sub>18</sub>	27215-95-8	200	5000	ppm	
<b>Aromatic or cyclic hydrocarbons</b>							
47	Cyclopentane	C <sub>5</sub> H <sub>10</sub>	287-92-3	200	5000	ppm	
48	Cyclopentene	C <sub>5</sub> H <sub>8</sub>	142-29-0	200	5000	ppm	
49	Methylcyclopentane	C <sub>6</sub> H <sub>10</sub> CH <sub>3</sub>	96-37-7	200	5000	ppm	
50	Cyclohexane	C <sub>6</sub> H <sub>12</sub>	110-82-7	200	5000	ppm	
51	Methylcyclohexane	C <sub>6</sub> H <sub>11</sub> CH <sub>3</sub>	108-87-2	200	5000	ppm	
52	Ethylcyclohexane	C <sub>6</sub> H <sub>11</sub> C <sub>2</sub> H <sub>5</sub>	1678-91-7	200	5000	ppm	
53	Benzene	C <sub>6</sub> H <sub>6</sub>	71-43-2	200	5000	ppm	
54	Toluene	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	108-88-3	500	5000	ppm	
55	Styrene	C <sub>6</sub> H <sub>5</sub> CH=CH <sub>2</sub>	100-42-5	500	5000	ppm	
56	Ethyl benzene	C <sub>6</sub> H <sub>5</sub> C <sub>2</sub> H <sub>5</sub>	100-41-4	500	5000	ppm	
57	<i>m</i> -Xylene	1,3-(CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>4</sub>	108-38-3	500	5000	ppm	
58	<i>o</i> -Xylene	1,2-(CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>4</sub>	95-47-6	500	5000	ppm	
59	<i>p</i> -Xylene	1,4-(CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>4</sub>	106-42-3	500	5000	ppm	
60	1,2,3-Trimethylbenzene	1,2,3-(CH <sub>3</sub> ) <sub>3</sub> C <sub>6</sub> H <sub>3</sub>	526-73-8	500	5000	ppm	
61	1,2,4-Trimethylbenzene	1,2,4-(CH <sub>3</sub> ) <sub>3</sub> C <sub>6</sub> H <sub>3</sub>	95-63-6	500	5000	ppm	
62	1,3,5-Trimethylbenzene	1,3,5-(CH <sub>3</sub> ) <sub>3</sub> C <sub>6</sub> H <sub>3</sub>	108-67-8	500	5000	ppm	
63	Propylbenzene	C <sub>6</sub> H <sub>5</sub> C <sub>3</sub> H <sub>7</sub>	103-65-1	200	5000	ppm	
64	$\alpha$ -Methylstyrene	C <sub>6</sub> H <sub>5</sub> C(CH <sub>3</sub> )=CH <sub>2</sub>	98-83-9	200	5000	ppm	
65	2-Ethyltoluene	2-CH <sub>3</sub> CH <sub>2</sub> -C <sub>6</sub> H <sub>4</sub> CH <sub>3</sub>	611-14-3	200	5000	ppm	
66	3-Ethyltoluene	3-CH <sub>3</sub> CH <sub>2</sub> -C <sub>6</sub> H <sub>4</sub> CH <sub>3</sub>	620-14-4	200	5000	ppm	
67	4-Ethyltoluene	4-CH <sub>3</sub> CH <sub>2</sub> -C <sub>6</sub> H <sub>4</sub> CH <sub>3</sub>	622-96-8	200	5000	ppm	
68	Naphthalene	C <sub>10</sub> H <sub>8</sub>	91-20-3	NB	NB	ppm	
69	1-Methylnaphthalene	C <sub>10</sub> H <sub>7</sub> CH <sub>3</sub>	90-12-0	NB	NB	ppm	
70	Acenaphthene	C <sub>12</sub> H <sub>10</sub>	83-32-9	NB	NB	ppm	
71	2-Methylnaphthalene	C <sub>10</sub> H <sub>7</sub> CH <sub>3</sub>	91-57-6	NB	NB	ppm	
72	1-Ethyl-naphthalene	C <sub>10</sub> H <sub>7</sub> C <sub>2</sub> H <sub>5</sub>	1127-76-0	NB	NB	ppm	
73	Cumene	C <sub>6</sub> H <sub>5</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	98-82-8	200	5000	ppm	
74	Phenyl acetylene (1-Phenylethyne)	C <sub>6</sub> H <sub>5</sub> C≡CH	536-74-3	200	5000	ppm	
75	Methoxybenzene (Anisol)	C <sub>6</sub> H <sub>5</sub> OCH <sub>3</sub>	100-66-3	200	5000	ppm	
76	Limonene	C <sub>10</sub> H <sub>16</sub>	138-86-3	200	5000	ppm	
77	$\alpha$ -Pinene	C <sub>10</sub> H <sub>16</sub>	80-56-8	200	5000	ppm	
78	$\beta$ -Pinene	C <sub>10</sub> H <sub>16</sub>	127-91-3	200	5000	ppm	
79	3-Carene	C <sub>10</sub> H <sub>16</sub>	13466-78-9	200	5000	ppm	
80	Isosafrole	C <sub>10</sub> H <sub>10</sub> O <sub>2</sub>	120-58-1	NB	NB	ppm	
<b>Acids and derivatives</b>							
81	Formic acid	CH <sub>2</sub> O	64-18-6	200	2000	ppm	
82	Acetic acid	CH <sub>3</sub> COOH	64-19-7	200	2000	ppm	
83	Propionic acid	CH <sub>3</sub> CH <sub>2</sub> COOH	79-09-4	200	2000	ppm	
84	Acrylic acid	CH <sub>2</sub> =CHCOOH	79-10-7	200	2000	ppm	
85	Methyl formate	HCOOCH <sub>3</sub>	107-31-3	200	2000	ppm	
86	Methyl acetate	CH <sub>3</sub> COOCH <sub>3</sub>	79-20-9	200	2000	ppm	
87	Ethyl acetate	CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub>	141-78-6	200	2000	ppm	
88	Vinyl acetate	CH <sub>2</sub> COOCH=CH <sub>2</sub>	108-05-4	200	2000	ppm	

89	Propyl acetate	CH <sub>3</sub> COOC <sub>3</sub> H <sub>7</sub>	109-60-4	200	2000	ppm	
90	Isopropyl acetate	CH <sub>3</sub> COOCH(CH <sub>3</sub> ) <sub>2</sub>	108-21-4	200	2000	ppm	
91	Butyl acetate	CH <sub>3</sub> COO(CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>	123-86-4	200	2000	ppm	
92	tert-Butyl acetate	C <sub>6</sub> H <sub>12</sub> O <sub>2</sub>	540-88-5	200	2000	ppm	
93	Isopentyl acetate	C <sub>7</sub> H <sub>14</sub> O <sub>2</sub>	123-92-2	200	2000	ppm	
94	2-Methoxyethyl acetate (Methyl cellosolve acetate)	C <sub>6</sub> H <sub>10</sub> O <sub>3</sub>	110-49-6	200	2000	ppm	
95	2-Ethoxyethyl acetate (Cellosolve acetate)	C <sub>6</sub> H <sub>12</sub> O <sub>3</sub>	111-15-9	200	2000	ppm	
96	1-Methoxy-2-propyl acetate	C <sub>6</sub> H <sub>12</sub> O <sub>3</sub>	108-65-6	200	2000	ppm	
97	2-(2-Butoxyethoxy)ethyl acetate	C <sub>10</sub> H <sub>20</sub> O <sub>4</sub>	124-17-4	200	2000	ppm	
98	2-Methoxy-1-propyl acetate	C <sub>6</sub> H <sub>12</sub> O <sub>3</sub>	70657-70-4	200	2000	ppm	
99	2-Butoxyethyl acetate	C <sub>8</sub> H <sub>16</sub> O <sub>3</sub>	112-07-2	200	2000	ppm	
100	n-Pentylacetate (Banana oil)	CH <sub>3</sub> COOC <sub>5</sub> H <sub>11</sub>	628-63-7	200	2000	ppm	
101	Methyl acrylate	C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>	96-33-3	200	2000	ppm	
102	Ethyl lactate (Ethyl α-hydroxypropionate)	C <sub>5</sub> H <sub>10</sub> O <sub>3</sub>	97-64-3	200	2000	ppm	
103	Methyl methacrylate	C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>	80-62-6	200	2000	ppm	
104	Ethyl acrylate	C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>	140-88-5	NB	NB	ppm	
105	Acetic acid anhydride	C <sub>4</sub> H <sub>6</sub> O <sub>3</sub>	108-24-7	200	1000	ppm	
106	Methacrylic acid	C <sub>4</sub> H <sub>6</sub> O <sub>2</sub>	79-41-4	NB	NB	ppm	
107	Ethyl-3-ethoxypropionate	C <sub>7</sub> H <sub>14</sub> O <sub>3</sub>	763-69-9	200	1000	ppm	
108	Butyric acid (butanoic acid)	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	107-92-6	NB	NB	ppm	
109	Hexanoic acid (caproic acid)	C <sub>6</sub> H <sub>12</sub> O <sub>2</sub>	142-62-1	NB	NB	ppm	
110	Dimethyl carbonate (DCM; Methyl carbonate)	CH <sub>3</sub> OCOOCH <sub>3</sub>	616-38-6	NB	NB	ppm	
<b>Aldehydes</b>							
111	Acetaldehyde	CH <sub>3</sub> CHO	75-07-0	200	2000	ppm	
112	Propionaldehyde (Propanal)	C <sub>2</sub> H <sub>5</sub> CHO	123-38-6	200	2000	ppm	
113	Acrolein (Acrylic aldehyde)	CH <sub>2</sub> =CHCHO	107-02-8	200	500	ppm	
114	Butyl aldehyde (Butanal)	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> CHO	123-72-8	200	2000	ppm	
115	Isobutyraldehyde (2-Methylpropanal)	(CH <sub>3</sub> ) <sub>2</sub> CHCHO	78-84-2	200	2000	ppm	
116	Methacrylaldehyde (2-Methyl-2-propenal)	C <sub>4</sub> H <sub>6</sub> O	78-85-3	200	2000	ppm	
117	2-Ethyl-2-hexenal	CH <sub>10</sub> O	645-62-5	200	2000	ppm	
118	2-Ethylhexylaldehyde (2-Ethylhexanal)	C <sub>8</sub> H <sub>16</sub> O	123-05-7	200	2000	ppm	
119	Furfural (2-Furaldehyde)	C <sub>5</sub> H <sub>4</sub> O <sub>2</sub>	98-01-1	200	2000	ppm	
120	5-Methylfurfural (5-Methyl-2-furaldehyde)	C <sub>6</sub> H <sub>8</sub> O <sub>2</sub>	620-02-0	200	2000	ppm	
121	o-Tolualdehyde	2-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> CHO	529-20-4	200	2000	ppm	
122	5-Hydroxymethylfurfural (5-Hydroxymethyl-2-furaldehyde)	C <sub>6</sub> H <sub>8</sub> O <sub>3</sub>	67-47-0	200	2000	ppm	
123	Glutaraldehyde	C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>	111-30-8	NB	NB	ppm	
124	Crotonaldehyde	C <sub>4</sub> H <sub>6</sub> O	4170-30-3	NB	NB	ppm	
125	Isovaleraldehyde	(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> CHO	590-86-3	NB	NB	ppm	
126	Hexanal (Hexanaldehyde)	C <sub>6</sub> H <sub>12</sub> O	66-25-1	NB	NB	ppm	
127	Benzaldehyde	C <sub>7</sub> H <sub>6</sub> O	100-52-7	NB	NB	ppm	
128	o-Phthaldehyde (OPA)	C <sub>8</sub> H <sub>6</sub> O <sub>2</sub>	643-79-8	NB	NB	ppm	Only non-instrument specific reference
129	Pentanal (Pentanaldehyde; Valeraldehyde; Valeric aldehyde)	C <sub>5</sub> H <sub>10</sub> O	110-62-3	NB	NB	ppm	
<b>Ketones</b>							
130	Acetone	CH <sub>3</sub> COCH <sub>3</sub>	67-64-1	200	2000	ppm	
131	Methyl ethyl ketone (MEK)	CH <sub>3</sub> COC <sub>2</sub> H <sub>5</sub>	78-93-3	200	2000	ppm	
132	Methyl propyl ketone (2-Pentanone)	CH <sub>3</sub> COC <sub>3</sub> H <sub>7</sub>	107-87-9	200	2000	ppm	
133	Diethyl ketone (DEK; 3-Pentanone)	C <sub>2</sub> H <sub>5</sub> COC <sub>2</sub> H <sub>5</sub>	96-22-0	200	2000	ppm	
134	Methyl butyl ketone (MBK; 2-Hexanone)	CH <sub>3</sub> COC <sub>4</sub> H <sub>9</sub>	591-78-6	200	2000	ppm	
135	Methyl isobutyl ketone (MIBK; 4-Methyl-2-pentanone)	CH <sub>3</sub> COCH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	108-10-1	200	2000	ppm	
136	Methyl pentyl ketone (2-Heptanone)	CH <sub>3</sub> COC <sub>5</sub> H <sub>11</sub>	110-43-0	200	2000	ppm	
137	Cyclohexanone (Cyclohexyl ketone)	C <sub>6</sub> H <sub>10</sub> O	108-94-1	200	2000	ppm	
138	2-Acetyl furan (2-Furyl methyl ketone)	C <sub>6</sub> H <sub>6</sub> O <sub>2</sub>	1192-62-7	200	2000	ppm	
139	4-Hydroxy-4-methyl-2-pentanone	CH <sub>3</sub> COCH <sub>2</sub> C(OH)(CH <sub>3</sub> ) <sub>2</sub>	123-42-2	200	2000	ppm	
140	Acetophenone (Phenyl methyl ketone)	CH <sub>3</sub> COC <sub>6</sub> H <sub>5</sub>	98-86-2	200	2000	ppm	
141	Diketen	C <sub>4</sub> H <sub>6</sub> O <sub>2</sub>	674-82-2	NB	NB	ppm	
142	2,3-butanedione	C <sub>4</sub> H <sub>6</sub> O <sub>2</sub>	431-03-8	NB	NB	ppm	
143	Benzyl Methyl Ketone	C <sub>9</sub> H <sub>10</sub> O	103-79-7	NB	NB	ppm	
144	(+)-Menthone	C <sub>10</sub> H <sub>18</sub> O	3391-87-5	NB	NB	ppm	
145	(+)-Carvone	C <sub>10</sub> H <sub>16</sub> O	2244-16-8	NB	NB	ppm	
<b>Alcohols</b>							
146	Methanol	CH <sub>3</sub> OH	67-56-1	500	5000	ppm	
147	Ethanol	C <sub>2</sub> H <sub>5</sub> OH	64-17-5	500	5000	ppm	
148	1-Propanol	C <sub>3</sub> H <sub>7</sub> OH	71-23-8	200	2000	ppm	
149	Isopropanol (2-Propanol; Isopropyl alcohol)	CH <sub>3</sub> CHOHCH <sub>3</sub>	67-63-0	200	2000	ppm	
150	1-Butanol	C <sub>4</sub> H <sub>9</sub> OH	71-36-3	200	2000	ppm	
151	2-Butanol (sec-Butyl alcohol)	CH <sub>3</sub> CHOHCH <sub>2</sub> CH <sub>3</sub>	78-92-2	200	2000	ppm	
152	Isobutanol (2-Methyl-1-propanol)	(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> OH	78-83-1	200	2000	ppm	
153	tert-Butanol (1,1-Dimethyl ethanol)	(CH <sub>3</sub> ) <sub>3</sub> COH	75-65-0	200	2000	ppm	
154	1-Pentanol (Amyl alcohol)	C <sub>5</sub> H <sub>11</sub> OH	71-41-0	200	2000	ppm	
155	Isopentanol (3-Methyl-1-butanol)	(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> CH <sub>2</sub> OH	123-51-3	200	2000	ppm	
156	2-Methyl-1-butanol	CH <sub>3</sub> CH <sub>2</sub> CH(CH <sub>3</sub> )CH <sub>2</sub> OH	137-32-6	200	2000	ppm	
157	Pinacoly alcohol (3,3-Dimethyl-2-butanol)	(CH <sub>3</sub> ) <sub>3</sub> CCH(CH <sub>3</sub> )OH	464-07-3	200	2000	ppm	
158	Ethylene glycol (1,2-Ethandiol)	OHCH <sub>2</sub> CH <sub>2</sub> OH	107-21-1	200	2000	ppm	
159	1,2-Propanediol (propylene glycol)	CH <sub>3</sub> CH(OH)CH <sub>2</sub> OH	57-55-6	200	2000	ppm	
160	1,3-Butanediol	OHCH(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>2</sub> OH	107-88-0	200	2000	ppm	
161	Diethylene glycol monoethyl ether acetate	C <sub>8</sub> H <sub>16</sub> O <sub>4</sub>	112-15-2	200	2000	ppm	
162	1-Butoxy-2-propanol (1,2-Propylene glycol 1-monobutyl ether)	C <sub>7</sub> H <sub>16</sub> O <sub>2</sub>	5131-66-8	200	2000	ppm	
163	2-Methoxy ethanol	CH <sub>3</sub> O-CH <sub>2</sub> CH <sub>2</sub> OH	109-86-4	200	2000	ppm	
164	1-Propoxy-2-propanol (Propylene glycol n-propyl ether)	OHCH(CH <sub>3</sub> )CH <sub>2</sub> OC <sub>3</sub> H <sub>7</sub>	1569-01-3	200	2000	ppm	
165	Benzylalcohol	C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> OH	100-51-6	200	2000	ppm	
166	2-Ethoxyethanol (Cellosolve)	CH <sub>3</sub> CH <sub>2</sub> -O-CH <sub>2</sub> CH <sub>2</sub> OH	110-80-5	200	2000	ppm	
167	Cyclohexanol	C <sub>6</sub> H <sub>11</sub> OH	108-93-0	200	2000	ppm	
168	Phenol	C <sub>6</sub> H <sub>5</sub> OH	108-95-2	200	2000	ppm	
169	o-Cresol (2-Methyl phenol)	2-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> OH	95-48-7	200	2000	ppm	
170	m-Cresol (3-Methyl phenol)	3-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> OH	108-39-4	200	2000	ppm	
171	p-Cresol (4-Methyl phenol)	4-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> OH	106-44-5	200	2000	ppm	
172	Glycerol (1,2,3-Propanetriol)	OHCH <sub>2</sub> CH(OH)CH <sub>2</sub> OH	56-81-5	200	2000	ppm	
173	Furfuryl alcohol (2-Furan methanol)	C <sub>5</sub> H <sub>6</sub> O <sub>2</sub>	98-00-0	200	2000	ppm	
174	Terpinen-4-ol [4-Methyl-1-(1-methylethyl)-3-cyclohexen-1-ol]	C <sub>10</sub> H <sub>16</sub> O	562-74-3	200	2000	ppm	
175	Terpineol	C <sub>10</sub> H <sub>18</sub> O	8000-41-7	200	2000	ppm	
176	(±)-Menthol (2-Isopropyl-5-methylcyclohexanol, Hexahydrothymol)	C <sub>10</sub> H <sub>20</sub> O	1490-04-6	NB	NB	ppm	
<b>Ethers</b>							
177	Methyl ether	CH <sub>3</sub> OCH <sub>3</sub>	115-10-6	NB	NB	ppm	
178	Diethyl ether (Ethoxy ethane)	C <sub>2</sub> H <sub>5</sub> OC <sub>2</sub> H <sub>5</sub>	60-29-7	200	2000	ppm	
179	Ethyl vinyl ether	CH <sub>2</sub> =CHOC <sub>2</sub> H <sub>5</sub>	109-92-2	200	2000	ppm	

180	2,2-Dimethoxypropane	CH <sub>3</sub> C(OCH <sub>3</sub> ) <sub>2</sub> CH <sub>3</sub>	77-76-9	200	2000	ppm
181	<i>tert</i> -Butyl methyl ether (MTBE; 2-Methoxy-2-methyl propane)	CH <sub>3</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	1634-04-4	200	2000	ppm
182	Diisopropyl ether	(CH <sub>3</sub> ) <sub>2</sub> CHOCH(CH <sub>3</sub> ) <sub>2</sub>	108-20-3	200	2000	ppm
183	Methylene dimethyl ether (Methylal; Dimethoxy methane)	CH <sub>3</sub> OCH <sub>2</sub> OCH <sub>3</sub>	109-87-5	200	2000	ppm
184	2-Hydroxybenzoic acid methyl ester (Methyl salicylate)	C <sub>9</sub> H <sub>8</sub> O <sub>3</sub>	119-36-8	200	2000	ppm
185	1,3-Dioxolane (1,3-Dioxacyclopentane)	C <sub>3</sub> H <sub>4</sub> O <sub>2</sub>	646-06-0	200	2000	ppm
186	1,3-Dioxane (trimethylene glycol methylene ether)	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	505-22-6	NB	NB	ppm
187	<i>p</i> -Dioxane (Glycol ethylene ether; 1,4-Dioxane)	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	123-91-1	200	2000	ppm
188	Ethylene dimethyl ether (1,2-Dimethoxyethane)	CH <sub>3</sub> OC <sub>2</sub> H <sub>4</sub> OCH <sub>3</sub>	110-71-4	200	2000	ppm
189	Diethylene glycol butyl ether [2-(2-Butoxyethoxy)ethanol]	C <sub>8</sub> H <sub>18</sub> O <sub>3</sub>	112-34-5	200	2000	ppm
190	<i>o</i> -Propylene glycol monomethyl ether (1-Methoxy-2-propanol)	CH <sub>3</sub> OCH <sub>2</sub> C(CH <sub>3</sub> )OH	107-98-2	200	2000	ppm
191	1,3-Dimethoxy-2-hydroxybenzene	C <sub>9</sub> H <sub>10</sub> O <sub>3</sub>	91-10-1	NB	NB	ppm
192	2-methoxyphenol (Guaiaicol)	C <sub>8</sub> H <sub>8</sub> (OCH <sub>3</sub> )OH	90-05-1	NB	NB	ppm
193	Ethylene glycol monobutyl ether (2-Butoxyethanol)	C <sub>8</sub> H <sub>18</sub> OCH <sub>2</sub> CH <sub>2</sub> OH	111-76-2	200	2000	ppm
194	Ethyl <i>tert</i> -butyl ether (ETBE; 2-Ethoxy-2-methyl-propane)	C <sub>8</sub> H <sub>18</sub> O	637-92-3	NB	NB	ppm
195	<i>Tert</i> -amyl methyl ether (TAME; 2-methoxy-2-methylbutane)	C <sub>8</sub> H <sub>18</sub> O	994-05-8	NB	NB	ppm
<b>Epoxy compounds</b>						
196	Ethylene oxide (Oxirane; Epoxyethane)	C <sub>2</sub> H <sub>4</sub> O	75-21-8	NB	NB	ppm
197	Propylene oxide (Methyl oxirane; Epoxypropane)	C <sub>3</sub> H <sub>6</sub> O	75-56-9	200	2000	ppm
198	Furan (Furfuran)	C <sub>4</sub> H <sub>4</sub> O	110-00-9	200	2000	ppm
199	Tetrahydrofuran (THF; 1,4-Epoxybutane)	C <sub>4</sub> H <sub>8</sub> O	109-99-9	200	2000	ppm
200	2,5-dimethylfuran	C <sub>6</sub> H <sub>8</sub> O	625-86-5	NB	NB	ppm
201	Maleic anhydride	C <sub>4</sub> H <sub>2</sub> O <sub>3</sub>	108-31-6	NB	NB	ppm
<b>Sulfur compounds</b>						
202	Carbon disulfide	CS <sub>2</sub>	75-15-0	200	2000	ppm
203	Methylmercaptan (Methanethiol)	CH <sub>3</sub> SH	74-93-1	NB	NB	ppm
204	Ethylmercaptan (Ethanethiol)	C <sub>2</sub> H <sub>5</sub> SH	75-08-1	NB	NB	ppm
205	Dimethyl sulfide (DMS)	(CH <sub>3</sub> ) <sub>2</sub> S	75-18-3	200	2000	ppm
206	Dimethyl disulfide (DMDS)	(CH <sub>3</sub> ) <sub>2</sub> S <sub>2</sub>	624-92-0	200	2000	ppm
207	Tetrahydrothiophene (Tetramethylene sulfide)	C <sub>4</sub> H <sub>8</sub> S	110-01-0	NB	NB	ppm
208	Carbonyl sulfide	COS	463-58-1	NB	NB	ppm
209	Thiophene (Thiacyclopentadiene)	C <sub>4</sub> H <sub>4</sub> S	110-02-1	NB	NB	ppm
210	Diethyl sulfate (Sulfuric acid diethyl ester)	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> SO <sub>4</sub>	64-67-5	NB	NB	ppm
211	Benzenethiol (Phenylthiol; Thiophenol)	C <sub>6</sub> H <sub>6</sub> S	108-98-5	NB	NB	ppm
212	Dimethyl sulfoxide	(CH <sub>3</sub> ) <sub>2</sub> SO	67-68-5	NB	NB	ppm
213	Dimethyl sulfate (DMS; Sulfuric acid dimethyl ester)	(CH <sub>3</sub> ) <sub>2</sub> SO <sub>4</sub>	77-78-1	NB	NB	ppm
214	1,2-Ethanethiol (1,2-Dimercaptoethane Dithioglycol Ethylene mercaptan)	C <sub>2</sub> H <sub>6</sub> S <sub>2</sub>	540-63-6	NB	NB	ppm
<b>Nitrogen compounds</b>						
215	Hydrogen cyanide	HCN	74-90-8	100	500	ppm
216	Methylamine	CH <sub>3</sub> NH <sub>2</sub>	74-89-5	NB	NB	ppm
217	Dimethylamine	(CH <sub>3</sub> ) <sub>2</sub> NH	124-40-3	NB	NB	ppm
218	Trimethylamine	(CH <sub>3</sub> ) <sub>3</sub> N	75-50-3	NB	NB	ppm
219	Ethylamine	C <sub>2</sub> H <sub>5</sub> NH <sub>2</sub>	75-04-7	NB	NB	ppm
220	Diethylamine	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> NH	109-89-7	200	1000	ppm
221	Triethylamine	(C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> N	121-44-8	200	1000	ppm
222	Isopropylamine (2-Propanamine)	CH(CH <sub>3</sub> ) <sub>2</sub> NH <sub>2</sub>	75-31-0	200	1000	ppm
223	1-Butylamine (1-Butanamine)	C <sub>4</sub> H <sub>9</sub> NH <sub>2</sub>	109-73-9	200	1000	ppm
224	<i>tert</i> -Butylamine (2-Methyl-2-propanamine)	(CH <sub>3</sub> ) <sub>3</sub> CNH <sub>2</sub>	75-64-9	NB	NB	ppm
225	Acetonitrile	CH <sub>3</sub> CN	75-05-8	200	1000	ppm
226	Acrylonitrile	CH <sub>2</sub> =CHCN	107-13-1	200	1000	ppm
227	Phenyl isothiocyanate (Isothiocyanatobenzene)	C <sub>6</sub> H <sub>5</sub> NCS	103-72-0	200	1000	ppm
228	Isopropyl isocyanate (2-Isocyanatopropane)	(CH <sub>3</sub> ) <sub>2</sub> CHCNO	1795-48-8	200	1000	ppm
229	Piperazine (Hexahydropyrazine)	C <sub>4</sub> H <sub>10</sub> N <sub>2</sub>	110-85-0	NB	NB	ppm
230	Pyridine	C <sub>5</sub> H <sub>5</sub> N	110-86-1	200	1000	ppm
231	Pyrrolidine (Azacyclopentane)	C <sub>4</sub> H <sub>9</sub> N	123-75-1	200	1000	ppm
232	Piperidine	C <sub>5</sub> H <sub>11</sub> NH	110-89-4	200	1000	ppm
233	Aniline (Benzenamine)	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>	62-53-3	200	1000	ppm
234	<i>o</i> -Toluidine (2-Aminotoluene; 2-Methylbenzenamine)	2-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> NH <sub>2</sub>	95-53-4	NB	NB	ppm
235	Isocyanic acid (Hydrogen isocyanate)	HNCO	75-13-8	NB	NB	ppm
236	1,6-Hexamethylene diisocyanate	C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	822-06-0	NB	NB	ppm
237	Methyl isocyanate (Isocyanatomethane)	CH <sub>3</sub> NCO	624-83-9	NB	NB	ppm
238	Ethanolamine (2-Aminoethanol; MEA)	OHCH <sub>2</sub> CH <sub>2</sub> NH <sub>2</sub>	141-43-5	200	1000	ppm
239	2-Amino-1-butanol	C <sub>4</sub> H <sub>9</sub> CH(NH <sub>2</sub> )CH <sub>2</sub> OH	96-20-8	200	1000	ppm
240	2-(2-Aminoethoxy)ethanol (Diethylene glycol amine)	OHC <sub>2</sub> H <sub>4</sub> OC <sub>2</sub> H <sub>4</sub> NH <sub>2</sub>	929-06-6	200	1000	ppm
241	<i>N,N</i> -Dimethylformamide (DMF)	HCON(CH <sub>3</sub> ) <sub>2</sub>	68-12-2	200	1000	ppm
242	Dimethylacetamide	CH <sub>3</sub> CON(CH <sub>3</sub> ) <sub>2</sub>	127-19-5	200	1000	ppm
243	Morpholine	C <sub>4</sub> H <sub>9</sub> NO	110-91-8	200	1000	ppm
244	<i>n</i> -Methylmorpholine (4-Methylmorpholine)	C <sub>5</sub> H <sub>11</sub> NO	109-02-4	200	1000	ppm
245	Diethylaminoethanol [2-(Diethylamino)-ethanol]	C <sub>6</sub> H <sub>15</sub> NO	100-37-8	200	1000	ppm
246	Nitromethane	CH <sub>3</sub> NO <sub>2</sub>	75-52-5	200	1000	ppm
247	Nitroethane	C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub>	79-24-3	200	1000	ppm
248	Nitrobenzene	C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>	98-95-3	200	1000	ppm
249	<i>o</i> -Nitrotoluene	C <sub>7</sub> H <sub>7</sub> NO <sub>2</sub>	88-72-2	NB	NB	ppm
250	1-Methyl-2-pyrrolidone	C <sub>5</sub> H <sub>9</sub> NO	872-50-4	NB	NB	ppm
251	1,1-Dimethylformamide	C <sub>2</sub> H <sub>6</sub> N <sub>2</sub>	57-14-7	NB	NB	ppm
252	Cyanogen	C <sub>2</sub> N <sub>2</sub>	460-19-5	NB	NB	ppm
253	Allyl cyanide (3-Butenenitrile)	C <sub>4</sub> H <sub>7</sub> N	109-75-1	NB	NB	ppm
254	Butyl isocyanate (1-Isocyanatobutane)	C <sub>5</sub> H <sub>9</sub> NO	111-36-4	NB	NB	ppm
255	Hexylamine	C <sub>6</sub> H <sub>15</sub> N	111-26-2	NB	NB	ppm
256	Dihexylamine	C <sub>12</sub> H <sub>27</sub> N	143-16-8	NB	NB	ppm
257	Cyclohexylamine	C <sub>6</sub> H <sub>11</sub> NH <sub>2</sub>	108-91-8	NB	NB	ppm
258	Ethylmorpholine	C <sub>6</sub> H <sub>13</sub> NO	100-74-3	NB	NB	ppm
259	Phenyl isocyanate (Carbanil; Phenylcarbimide)	C <sub>7</sub> H <sub>7</sub> NO	103-71-9	NB	NB	ppm
260	Propanenitrile	C <sub>3</sub> H <sub>7</sub> N	107-12-0	NB	NB	ppm
261	2,4-Toluene diisocyanate	C <sub>9</sub> H <sub>9</sub> N <sub>2</sub> O <sub>2</sub>	584-84-9	NB	NB	ppm
262	2-Amino-2-methylpropanol ( <i>β</i> -Aminoisobutyl alcohol, AMP)	C <sub>4</sub> H <sub>11</sub> NO	124-68-5	NB	NB	ppm
263	2-Methylaminoethanol (N-Methylethanolamine)	C <sub>3</sub> H <sub>9</sub> NO	109-83-1	NB	NB	ppm
264	<i>N,N</i> -Dimethylethylamine (N-Ethyl dimethylamine, DMEA)	(CH <sub>3</sub> ) <sub>2</sub> NC <sub>2</sub> H <sub>5</sub>	598-56-1	NB	NB	ppm
265	<i>N,N</i> -Diethylmethylamine (N-Methyldiethylamine)	CH <sub>3</sub> N(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub>	616-39-7	NB	NB	ppm
266	Methyl diethanolamine (MDEA)	CH <sub>3</sub> N(C <sub>2</sub> H <sub>4</sub> OH) <sub>2</sub>	105-59-9	NB	NB	ppm
267	2-(Ethylamino)ethanol (EMEA; N-Ethylethanolamine)	C <sub>2</sub> H <sub>5</sub> NHCH <sub>2</sub> CH <sub>2</sub> OH	110-73-6	NB	NB	ppm
268	<i>N</i> -Methyl-1,3-diaminopropane (MAPA; 3-(Methylamino)propylamine; <i>N</i> -Methyl-1,3-diaminopropane)	CH <sub>3</sub> NH(CH <sub>2</sub> ) <sub>3</sub> NH <sub>2</sub>	6291-84-5	NB	NB	ppm
269	Diethanolamine (DEA; 2,2'-Iminodiethanol, Bis(2-hydroxyethyl)amine)	HN(CH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>	111-42-2	NB	NB	ppm
270	2-Dimethylaminoethanol ( <i>N,N</i> -Dimethyl-2-hydroxyethylamine, <i>N,N</i> -Dimethylethanolamine)	(CH <sub>3</sub> ) <sub>2</sub> NCH <sub>2</sub> CH <sub>2</sub> OH	108-01-0	NB	NB	ppm
271	3-Amino-1-propanol	HO(CH <sub>2</sub> ) <sub>3</sub> NH <sub>2</sub>	156-87-6	NB	NB	ppm

Only non-instrument specific reference

272	(-)-Nicotine	C <sub>10</sub> H <sub>14</sub> N <sub>2</sub>	54-11-5	NB	NB	ppm	
<b>Chloro compounds</b>							
273	Methyl chloride (Freon 40)	CH <sub>3</sub> Cl	74-87-3	NB	NB	ppm	
274	Dichloromethane (Methylene chloride; Freon 30)	CH <sub>2</sub> Cl <sub>2</sub>	75-09-2	200	1000	ppm	
275	Chloroform (Trichloromethane; Freon 20)	CHCl <sub>3</sub>	67-66-3	200	1000	ppm	
276	Carbon tetrachloride (Freon 10)	CCl <sub>4</sub>	56-23-5	NB	NB	ppm	
277	Ethyl chloride	C <sub>2</sub> H <sub>5</sub> Cl	75-00-3	NB	NB	ppm	
278	1,1-Dichloroethane	CHCl <sub>2</sub> CH <sub>3</sub>	75-34-3	200	1000	ppm	
279	1,2-Dichloroethane (Freon 150)	CH <sub>2</sub> ClCH <sub>2</sub> Cl	107-06-2	200	1000	ppm	
280	1,1,1-Trichloroethane	CCl <sub>3</sub> CH <sub>3</sub>	71-55-6	200	1000	ppm	
281	1,1,2-Trichloroethane	CHCl <sub>2</sub> CH <sub>2</sub> Cl	79-00-5	200	1000	ppm	
282	1,1,2,2-Tetrachloroethane	CHCl <sub>2</sub> CHCl <sub>2</sub>	79-34-5	200	1000	ppm	
283	Pentachloroethane	CCl <sub>5</sub> CHCl <sub>3</sub>	76-01-7	200	1000	ppm	
284	Hexachloroethane	CCl <sub>5</sub> CCl <sub>3</sub>	67-72-1	200	1000	ppm	
285	Chloroethene (Vinyl chloride)	CHCl=CH <sub>2</sub>	75-01-4	NB	NB	ppm	
286	1,1-Dichloroethene (Vinylidene chloride)	CCl <sub>2</sub> =CH <sub>2</sub>	75-35-4	200	1000	ppm	
287	cis-1,2-Dichloroethene	CHCl=CHCl	156-59-2	200	1000	ppm	
288	trans-1,2-Dichloroethene	CHCl=CHCl	156-60-5	200	1000	ppm	
289	Trichloroethylene (Trichloroethene)	CHCl=CCl <sub>2</sub>	79-01-6	200	1000	ppm	
290	Tetrachloroethylene	CCl <sub>2</sub> =CCl <sub>2</sub>	127-18-4	200	1000	ppm	
291	1,2-Dichloropropane (Propylene dichloride)	CH <sub>2</sub> ClCHCl(CH <sub>3</sub> )	78-87-5	200	1000	ppm	
292	1,2,3-Trichloropropane	CH <sub>2</sub> ClCHClCH <sub>2</sub> Cl	96-18-4	200	1000	ppm	
293	3-Chloro-1-propene (Allyl chloride)	CH <sub>2</sub> =CHCH <sub>2</sub> Cl	107-05-1	200	1000	ppm	
294	Hexachloro-1,3-butadiene	CCl <sub>2</sub> =CClCl=CCl <sub>2</sub>	87-68-3	200	1000	ppm	
295	Chlorobenzene (Phenyl chloride)	C <sub>6</sub> H <sub>5</sub> Cl	108-90-7	200	1000	ppm	
296	1,2-Dichlorobenzene (o-Dichlorobenzene)	1,2-Cl <sub>2</sub> C <sub>6</sub> H <sub>4</sub>	95-50-1	200	1000	ppm	
297	1,4-Dichlorobenzene (p-Dichlorobenzene)	1,4-Cl <sub>2</sub> C <sub>6</sub> H <sub>4</sub>	106-46-7	NB	NB	ppm	
298	Benzyl chloride (α-Chlorotoluene)	C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> Cl	100-44-7	200	1000	ppm	
299	3-Chlorotoluene (1-Chloro-3-methylbenzene)	3-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> Cl	108-41-8	200	1000	ppm	
300	Phosgene	COCl <sub>2</sub>	75-44-5	NB	NB	ppm	
301	Acetyl chloride (Acetic chloride)	CH <sub>3</sub> COCl	75-36-5	200	1000	ppm	
302	Dichloroacetyl chloride	CHCl <sub>2</sub> COCl	79-36-7	NB	NB	ppm	
303	α-Epichlorohydrin (Chloromethyloxirane)	C <sub>3</sub> H <sub>5</sub> ClO	106-89-8	NB	NB	ppm	
304	Chloromethyl chloroformate	C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub> O <sub>2</sub>	22128-62-7	NB	NB	ppm	
305	Diphosgene	C <sub>2</sub> Cl <sub>4</sub> O <sub>2</sub>	503-38-8	NB	NB	ppm	
306	Butyl chloroformate (Butyl chlorocarbonate)	C <sub>4</sub> H <sub>9</sub> ClO <sub>2</sub>	592-34-7	NB	NB	ppm	
307	Chloroacetyl chloride	C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub> O	79-04-9	NB	NB	ppm	
308	Carbonochloridic acid, ethyl ester (Cathyl chloride; Ethyl chloroformate)	C <sub>3</sub> H <sub>5</sub> ClO <sub>2</sub>	541-41-3	NB	NB	ppm	
309	n-Propylchloroformate (Propyl chlorocarbonate)	C <sub>3</sub> H <sub>7</sub> ClO <sub>2</sub>	109-61-5	NB	NB	ppm	
310	Methyl chloroacetate	C <sub>3</sub> H <sub>5</sub> ClO <sub>2</sub>	96-34-4	NB	NB	ppm	
311	Methyl chloroformate (Methyl chlorocarbonate)	C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>	79-22-1	NB	NB	ppm	
312	Dimethylcarbamoyl chloride (Dimethyl carbamic chloride)	C <sub>2</sub> H <sub>4</sub> ClNO	79-44-7	NB	NB	ppm	
313	3-Chloro-Propanoyl chloride (3-Chloropropionic acid chloride)	C <sub>3</sub> H <sub>4</sub> Cl <sub>2</sub> O	625-36-5	NB	NB	ppm	
<b>Fluoro compounds (see also freons)</b>							
314	Octafluorocyclopentene (Perfluorocyclopentene)	C <sub>5</sub> F <sub>8</sub>	559-40-0	NB	NB	ppm	
315	2-Fluorotoluene (1-Fluoro-2-methylbenzene)	2-CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> F	95-52-3	200	1000	ppm	
316	Carbonyl difluoride	COF <sub>2</sub>	353-50-4	NB	NB	ppm	
317	Desflurane (1,2,2,2-tetrafluoroethyl difluoromethyl ether)	CF <sub>3</sub> CHFOCHF <sub>2</sub>	57041-67-5	NB	NB	ppm	
318	Sevoflurane [2,2,2-trifluoro-1-(trifluoromethyl) ethyl ether]	CF <sub>3</sub> CH(CF <sub>3</sub> )OCH <sub>2</sub> F	28523-86-6	NB	NB	ppm	
319	Fluorobenzene	C <sub>6</sub> H <sub>5</sub> F	462-06-6	NB	NB	ppm	
320	PFC (perfluoro-1,3-dimethylcyclohexane)	C <sub>6</sub> F <sub>10</sub> (CF <sub>3</sub> ) <sub>2</sub>	335-27-3	NB	NB	ppm	
<b>Freons</b>							
321	Freon 11 (Trichloromonofluoromethane)	CCl <sub>3</sub> F	75-69-4	NB	NB	ppm	
322	Freon 12 (Dichlorodifluoromethane)	CCl <sub>2</sub> F <sub>2</sub>	75-71-8	NB	NB	ppm	
323	Freon 13B1 (Bromotrifluoromethane; Halon 1301)	CF <sub>3</sub> Br	75-63-8	NB	NB	ppm	Only non-instrument specific reference. Chemical not available anymore
324	Freon 14 (Carbon tetrafluoride)	CF <sub>4</sub>	75-73-0	NB	NB	ppm	
325	Freon 21 (Dichlorofluoromethane)	CHCl <sub>2</sub> F	75-43-4	NB	NB	ppm	
326	Freon 22 (Chlorodifluoromethane)	CHClF <sub>2</sub>	75-45-6	NB	NB	ppm	
327	Freon 23 (Trifluoromethane)	CHF <sub>3</sub>	75-46-7	NB	NB	ppm	
328	Freon 32 (Difluoromethane)	CH <sub>2</sub> F <sub>2</sub>	75-10-5	NB	NB	ppm	
329	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	CCl <sub>2</sub> FCClF <sub>2</sub>	76-13-1	NB	NB	ppm	
330	Freon 113a (1,1,1-Trichloro-2,2,2-trifluoroethane)	CCl <sub>3</sub> CF <sub>3</sub>	354-58-5	NB	NB	ppm	
331	Freon 114 (1,2-Dichloro-1,1,2,2-tetrafluoroethane)	CHClF <sub>2</sub> CClF <sub>2</sub>	76-14-2	NB	NB	ppm	
332	Freon 114 B2 (1,2-dibromo-1,1,2,2-tetrafluoroethane)	C <sub>2</sub> Br <sub>2</sub> F <sub>4</sub>	124-73-2	NB	NB	ppm	
333	Freon 115 (Chloropentafluoroethane)	CClF <sub>2</sub> CF <sub>3</sub>	76-15-3	NB	NB	ppm	
334	Freon 116 (Hexafluoroethane)	C <sub>2</sub> F <sub>6</sub>	76-16-4	NB	NB	ppm	
335	Freon 123 (1,1-Dichloro-2,2,2-trifluoroethane)	CHCl <sub>2</sub> CF <sub>3</sub>	306-83-2	NB	NB	ppm	
336	Freon 124 (1-Chloro-1,2,2,2-tetrafluoroethane)	CHClCF <sub>3</sub>	2837-89-0	NB	NB	ppm	
337	Freon 125 (Pentafluoroethane)	CHF <sub>2</sub> CF <sub>3</sub>	354-33-6	NB	NB	ppm	
338	Freon 133a (1-Chloro-2,2,2-trifluoroethane)	CH <sub>2</sub> ClCF <sub>3</sub>	75-88-7	NB	NB	ppm	
339	Freon 134a (1,1,1,2-Tetrafluoroethane)	CF <sub>3</sub> CH <sub>2</sub> F	811-97-2	NB	NB	ppm	
340	Freon 141b (1,1-Dichloro-1-fluoroethane)	CCl <sub>2</sub> CHF <sub>3</sub>	1717-00-6	NB	NB	ppm	Only non-instrument specific reference. Chemical not available anymore
341	Freon 142b (1-Chloro-1,1-difluoroethane)	CClF <sub>2</sub> CH <sub>3</sub>	75-68-3	NB	NB	ppm	Only non-instrument specific reference. Chemical not available anymore
342	Freon 143a (1,1,1-Trifluoroethane)	CF <sub>3</sub> CH <sub>3</sub>	420-46-2	NB	NB	ppm	
343	Freon 152a (Difluoroethane; Ethylidene Difluoride)	C <sub>2</sub> H <sub>4</sub> F <sub>2</sub>	75-37-6	NB	NB	ppm	
344	Freon 218 (Perfluoropropane)	C <sub>3</sub> F <sub>8</sub>	76-19-7	NB	NB	ppm	
345	Freon C 318 (Octafluorocyclobutane)	C <sub>4</sub> F <sub>8</sub>	115-25-3	NB	NB	ppm	
<b>Other organic compounds</b>							
346	Cyanogen chloride	CICN	506-77-4	NB	NB	ppm	Only non-instrument specific reference
347	Dimethylcarbonate	CH <sub>3</sub> OCOOCH <sub>3</sub>	616-38-6	NB	NB	ppm	
348	Chloropicrine (Trichloronitromethane)	CCl <sub>3</sub> NO <sub>2</sub>	76-06-2	NB	NB	ppm	
349	Enthflurane [2-Chloro-1-(difluoromethoxy)-1,1,2-trifluoroethane]	CHF <sub>2</sub> OCF <sub>2</sub> CHClF	13838-16-9	NB	NB	ppm	Only non-instrument specific reference
350	Isoflurane (1-Chloro-2,2,2-trifluoroethyl difluoromethyl ether)	CF <sub>3</sub> CHClOCHF <sub>2</sub>	26675-46-7	NB	NB	ppm	
351	Halothane (2-Bromo-2-chloro-1,1,1-trifluoroethane)	CF <sub>3</sub> CHBrCl	151-67-7	NB	NB	ppm	
352	Phenylphosphonous dichloride (Dichlorophenylphosphine)	C <sub>6</sub> H <sub>5</sub> PCl <sub>2</sub>	644-97-3	NB	NB	ppm	
353	Methyl bromide (Bromomethane)	CH <sub>3</sub> Br	74-83-9	NB	NB	ppm	
354	Bromoform (Tribromomethane)	CHBr <sub>3</sub>	75-25-2	NB	NB	ppm	
355	Ethyl bromide (Bromoethane)	C <sub>2</sub> H <sub>5</sub> Br	74-96-4	NB	NB	ppm	
356	Ethylene dibromide	BrCH <sub>2</sub> CH <sub>2</sub> Br	106-93-4	NB	NB	ppm	
357	Methyl iodide	CH <sub>3</sub> I	74-88-4	NB	NB	ppm	
358	Trimethylsilanol (Hydroxytrimethylsilane)	(CH <sub>3</sub> ) <sub>3</sub> SiOH	1066-40-6	NB	NB	ppm	
359	1,1,3,3-Tetramethyldisiloxane	(CH <sub>3</sub> ) <sub>2</sub> SiHOSi(CH <sub>3</sub> ) <sub>2</sub>	3277-26-7	NB	NB	ppm	
360	Hexamethyldisiloxane	(CH <sub>3</sub> ) <sub>2</sub> SiOSi(CH <sub>3</sub> ) <sub>3</sub>	107-46-0	NB	NB	ppm	
361	Tetraethylorthosilicate	C <sub>8</sub> H <sub>20</sub> O <sub>4</sub> Si	78-10-4	NB	NB	ppm	
362	Hexamethyldisilazane [1,1,1-Trimethyl-N-(trimethylsilyl)-silanamine]	Si(CH <sub>3</sub> ) <sub>3</sub> NHSi(CH <sub>3</sub> ) <sub>3</sub>	999-97-3	NB	NB	ppm	

363	Hexamethylcyclotrisiloxane	C <sub>6</sub> H <sub>18</sub> O <sub>3</sub> Si <sub>3</sub>	541-05-9	NB	NB	ppm	
364	Trimethylborate (Trimethoxyborane)	B(OCH <sub>3</sub> ) <sub>3</sub>	121-43-7	NB	NB	ppm	
365	Tetramethyl silane	C <sub>4</sub> H <sub>12</sub> Si	75-76-3	NB	NB	ppm	
366	Trimethoxysilane	C <sub>3</sub> H <sub>10</sub> OSi	2487-90-3	NB	NB	ppm	
367	Diisopropyl methanephosphonate (DIMP)	C <sub>7</sub> H <sub>17</sub> O <sub>3</sub> P	1445-75-6	NB	NB	ppm	
368	Triethylphosphate	(C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> PO <sub>4</sub>	78-40-0	NB	NB	ppm	
369	Tetramethyl orthosilicate (Tetramethoxysilane)	Si(OCH <sub>3</sub> ) <sub>4</sub>	681-84-5	NB	NB	ppm	
370	Methyldichlorosilane	CH <sub>3</sub> SiHCl <sub>2</sub>	75-54-7	NB	NB	ppm	
371	Methylvinylchlorosilane	C <sub>3</sub> H <sub>6</sub> Cl <sub>2</sub> Si	124-70-9	NB	NB	ppm	
372	Ethylmethylchlorosilane	C <sub>3</sub> H <sub>8</sub> Cl <sub>2</sub> Si	4525-44-4	NB	NB	ppm	
373	Dimethylvinylchlorosilane	C <sub>4</sub> H <sub>8</sub> ClSi	1719-58-0	NB	NB	ppm	
374	Methyltrichlorosilane	CH <sub>3</sub> Cl <sub>3</sub> Si	75-79-6	NB	NB	ppm	
375	Dimethyldichlorosilane	C <sub>2</sub> H <sub>6</sub> Cl <sub>2</sub> Si	75-78-5	NB	NB	ppm	
376	Trimethylchlorosilane	C <sub>3</sub> H <sub>9</sub> ClSi	75-77-4	NB	NB	ppm	
377	Propyltrichlorosilane	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> SiCl <sub>3</sub>	141-57-1	NB	NB	ppm	
378	Phenyltrichlorosilane	C <sub>6</sub> H <sub>5</sub> Cl <sub>3</sub> Si	98-13-5	NB	NB	ppm	
379	Phenylmethylchlorosilane	C <sub>7</sub> H <sub>9</sub> Cl <sub>2</sub> Si	149-74-6	NB	NB	ppm	
380	Dimethyldimethoxysilane	C <sub>4</sub> H <sub>12</sub> O <sub>2</sub> Si	1112-39-6	NB	NB	ppm	
381	Dimethyldiethoxysilane	C <sub>6</sub> H <sub>16</sub> O <sub>2</sub> Si	78-62-6	NB	NB	ppm	
382	Vinyltrichlorosilane	C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> Si	75-94-5	NB	NB	ppm	

**Inorganic compounds**

383	Sulfuryl fluoride	SO <sub>2</sub> F <sub>2</sub>	2699-79-8	NB	NB	ppm	
384	Deuterium oxide (Heavy water; Dideuterium oxide)	D <sub>2</sub> O	7789-20-0	NB	NB	ppm	
385	Ozone	O <sub>3</sub>	10028-15-6	NB	NB	ppm	Only non-instrument specific reference
386	Oxygen difluoride	OF <sub>2</sub>	7783-41-7	NB	NB	ppm	
387	Nitric acid	HNO <sub>3</sub>	7697-37-2	NB	NB	ppm	Only non-instrument specific reference
388	Nitrogen trifluoride	NF <sub>3</sub>	7783-54-2	NB	NB	ppm	
389	Silicon tetrafluoride	SiF <sub>4</sub>	7783-61-1	NB	NB	ppm	
390	Sulfur hexafluoride	SF <sub>6</sub>	2551-62-4	NB	NB	ppm	
391	Tungsten hexafluoride	WF <sub>6</sub>	7783-82-6	NB	NB	ppm	Only non-instrument specific reference
392	Silicon tetrahydride (Silane)	SiH <sub>4</sub>	7803-62-5	NB	NB	ppm	
393	Arsine	AsH <sub>3</sub>	7784-42-1	NB	NB	ppm	
394	Phosphine	PH <sub>3</sub>	7803-51-2	NB	NB	ppm	
395	Diborane	B <sub>2</sub> H <sub>6</sub>	19267-45-7	NB	NB	ppm	
396	Phosphorus trichloride	PCl <sub>3</sub>	7719-12-2	NB	NB	ppm	
397	Phosphorus oxychloride	POCl <sub>3</sub>	10025-87-3	NB	NB	ppm	
398	Germanium tetrachloride	GeCl <sub>4</sub>	10038-98-9	NB	NB	ppm	
399	Boron trichloride	BCl <sub>3</sub>	10294-34-5	NB	NB	ppm	
400	Silicon tetrachloride	SiCl <sub>4</sub>	10026-04-7	NB	NB	ppm	
401	Hydrogen bromide	HBr	10035-10-6	NB	NB	ppm	
402	Chlorine dioxide	ClO <sub>2</sub>	10049-04-4	NB	NB	ppm	Only non-instrument specific reference
403	Phosphorus tribromide	Br <sub>3</sub> P	7789-60-8	NB	NB	ppm	
404	Dichlorosilane	SiH <sub>2</sub> Cl <sub>2</sub>	4109-96-0	NB	NB	ppm	
405	Boron trifluoride	BF <sub>3</sub>	7637-07-2	NB	NB	ppm	
406	Trichlorosilane	SiHCl <sub>3</sub>	10025-78-2	NB	NB	ppm	

**Chemical warfare agents and derivatives \*\*\***

407	Mustard gas [Bis(2-chloroethyl)sulphide]	(C <sub>2</sub> H <sub>4</sub> Cl) <sub>2</sub> S	505-60-2	NB	NB	ppm	Only non-instrument specific reference
408	Sarin (o-Isopropyl methylphosphonofluoridate)	(CH <sub>3</sub> ) <sub>2</sub> CHOP(CH <sub>3</sub> )FO	107-44-8	NB	NB	ppm	Only non-instrument specific reference
409	Soman (o-Pinacolyl methylphosphonofluoridate)	C <sub>7</sub> H <sub>16</sub> FO <sub>2</sub> P	96-64-0	NB	NB	ppm	Only non-instrument specific reference
410	Chlorosoman (1,2,2-Trimethyl propyl methyl phosphonochloridate)	C <sub>7</sub> H <sub>16</sub> O <sub>2</sub> PCl	7040-57-5	NB	NB	ppm	Only non-instrument specific reference
411	Tabun (o-Ethyl N,N-dimethyl phosphoramidocyanidate)	C <sub>3</sub> H <sub>11</sub> N <sub>2</sub> O <sub>2</sub> P	77-81-6	NB	NB	ppm	Only non-instrument specific reference
412	Lewisite (2-Chlorovinylchloroarsine)	C <sub>2</sub> H <sub>4</sub> AsCl <sub>3</sub>	541-25-3	NB	NB	ppm	Only non-instrument specific reference
413	VX (Methylphosphonothioic acid)	C <sub>11</sub> H <sub>26</sub> NO <sub>2</sub> PS	50782-69-9	NB	NB	ppm	Only non-instrument specific reference
414	Diethyl methanephosphonate (DEMP)	C <sub>3</sub> H <sub>13</sub> O <sub>3</sub> P	683-08-9	NB	NB	ppm	Only non-instrument specific reference
415	Dimethyl methylphosphonate (DMMP)	C <sub>3</sub> H <sub>9</sub> O <sub>3</sub> P	756-79-6	NB	NB	ppm	Only non-instrument specific reference
416	Dimethyl phosphite (Dimethyl hydrogen phosphite)	C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> P	868-85-9	NB	NB	ppm	Only non-instrument specific reference
417	Diisopropyl methylphosphonate (DIMP)	C <sub>7</sub> H <sub>17</sub> O <sub>3</sub> P	1445-75-6	NB	NB	ppm	Only non-instrument specific reference
418	Methylphosphonyl difluoride	CH <sub>3</sub> POF <sub>2</sub>	676-99-3	NB	NB	ppm	Only non-instrument specific reference
419	2-Chloroethyl ethyl sulfide	C <sub>2</sub> H <sub>5</sub> SC <sub>2</sub> H <sub>4</sub> Cl	693-07-2	NB	NB	ppm	Only non-instrument specific reference
420	Trimethyl phosphate	C <sub>3</sub> H <sub>9</sub> O <sub>4</sub> P	512-56-1	NB	NB	ppm	Only non-instrument specific reference

**Other components**

Not all the components are included in the list above. Please contact Gasmet Technologies Oy for availability and ranges for the components not mentioned.

\* GAS-REF-001 price applies only to components with maximum range indicated above.  
 \*\* GAS-REF-002 price applies only to components with maximum range indicated above.  
 \*\*\* Very limited availability, subject to export limitations.  
 NB GAS-REF-003 components. Please ask for a price quotation for each component separately.