

## Phenol & Aromatic Compounds Mixes

These mixes have been designed by our customers, many for European methodology. Should you not find a mix that meets your needs, please telephone, fax or email us with your requirements, including a list of components, concentrations, solvent and quantity required. Alternatively, please use the Custom Mix Request page at [www.qmx.com](http://www.qmx.com). We can produce any mix and will be delighted to provide a quotation.

### Phenol-Mix 1

Phenol  
2-Methylphenol  
3-Methylphenol  
4-Methylphenol  
2,3-Dimethylphenol  
2,4-Dimethylphenol  
2,5-Dimethylphenol  
2,6-Dimethylphenol  
3,4-Dimethylphenol  
3,5-Dimethylphenol  
2,3,5-Trimethylphenol  
2,3,6-Trimethylphenol  
2,4,6-Trimethylphenol  
3,4,5-Trimethylphenol

50 ng/µl each component  
in Methanol 10ml  
L19000001ME

### Phenol-Mix 2

2-Chlorophenol  
4-Chloro-2-methylphenol  
2,4-Dichlorophenol  
2,4,6-Trichlorophenol  
2,3,4,6-Tetrachlorophenol  
Pentachlorophenol

10 ng/µl each component  
in Acetonitrile 10ml  
L19000002AL

### Phenol-Mix 3

4-Chloro-3-methylphenol  
2-Chlorophenol  
2,4-Dichlorophenol  
2,4-Dimethylphenol  
2,4-Dinitrophenol  
2-Methyl-4,6-dinitrophenol  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,4,6-Trichlorophenol

100 ng/µl each component  
in Acetonitrile 10ml  
X19000003AL

### Phenol-Mix 5

2-Bromophenol  
4-Chloro-3-methylphenol  
2-Chlorophenol  
2,4-Dichlorophenol  
2,4-Dimethylphenol  
2,4-Dinitrophenol  
2-Methyl-4,6-dinitrophenol  
2-Methylphenol  
3-Methylphenol  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,3,4,6-Tetrachlorophenol  
2,4,6-Trichlorophenol

2500 ng/µl each component  
in Acetonitrile 1ml  
YA19000005AL

### Phenol-Mix 10

2-Chlorophenol  
3-Chlorophenol  
4-Chlorophenol  
2,3-Dichlorophenol  
2,4-Dichlorophenol  
2,5-Dichlorophenol  
2,6-Dichlorophenol  
3,4-Dichlorophenol  
3,5-Dichlorophenol  
2,3,4-Trichlorophenol  
2,3,5-Trichlorophenol  
2,3,6-Trichlorophenol  
2,4,5-Trichlorophenol  
2,4,6-Trichlorophenol  
3,4,5-Trichlorophenol  
2,3,4,5-Tetrachlorophenol  
2,3,4,6-Tetrachlorophenol  
2,3,5,6-Tetrachlorophenol  
Pentachlorophenol

50 ng/µl each component  
in Acetonitrile  
LA19000010AL 1ml  
L19000010AL 10ml

### Phenol-Mix 16

4-Chloro-3-methylphenol  
2-Chlorophenol  
4-Chlorophenol  
2,4-Dichlorophenol  
2,4-Dimethylphenol  
2,5-Dimethylphenol  
3,5-Dimethylphenol  
2-Methylphenol  
3-Methylphenol  
4-Methylphenol  
Pentachlorophenol  
Phenol  
2,4,5-Trichlorophenol  
2,4,6-Trichlorophenol

2000 ng/µl each component  
in Acetone 1ml  
YA19000016AC

### Phenol-Mix 17

2-Chlorophenol  
3-Chlorophenol  
2-Methylphenol (o-Cresol)  
3-Methylphenol (m-Cresol)  
4-Methylphenol (p-Cresol)  
Pentachlorophenol  
Phenol  
2,4,6-Trichlorophenol

1000 ng/µl each component  
in Methanol 1ml  
YA19000017ME

### Phenol-Mix 18

2-Chlorophenol  
3-Chlorophenol  
4-Chlorophenol  
2,3-Dichlorophenol  
2,4-Dichlorophenol  
2,5-Dichlorophenol  
2,6-Dichlorophenol  
3,4-Dichlorophenol  
3,5-Dichlorophenol  
2,3,4-Trichlorophenol  
2,3,5-Trichlorophenol  
2,3,6-Trichlorophenol  
2,4,5-Trichlorophenol  
2,4,6-Trichlorophenol  
3,4,5-Trichlorophenol  
Pentachlorophenol

10 ng/µl each component  
in Acetonitrile 1ml  
LA19000018AL

### Phenol-Mix 19

2-sec-Butyl-4,6-dinitrophenol (Dinoseb)  
4-Chloro-3-methylphenol  
2-Chlorophenol  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
2,4-Dimethylphenol  
2,4-Dinitrophenol  
2-Methyl-4,6-dinitrophenol (DNOC)  
2-Methylphenol  
3-Methylphenol  
4-Methylphenol  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,3,4,6-Tetrachlorophenol  
2,4,5-Trichlorophenol  
2,4,6-Trichlorophenol

2000 ng/µl each component  
in iso-Propanol 1ml  
YA08271900IP

**Phenol-Mix 27**

2,3-Dimethylphenol  
2,4-Dimethylphenol  
2,5-Dimethylphenol  
2,6-Dimethylphenol  
3,4-Dimethylphenol  
3,5-Dimethylphenol  
2-Methylphenol  
3-Methylphenol  
4-Methylphenol  
Phenol

50 ng/μl each component  
in Methanol 10ml  
L19000027ME

**Phenol-Mix 8040A**

4-Chloro-3-methylphenol  
2,4-Dichlorophenol  
2-Methyl-4,6-dinitrophenol (DNOC)  
3-Methylphenol (m-Cresol)  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,4,6-Trichlorophenol

2000 ng/μl each component  
in iso-Propanol 1ml  
YA08040400IP

**Phenol-Mix 604**

4-Chloro-3-methyl phenol 2500 ng/μl  
2-Chlorophenol 500 ng/μl  
2,4-Dichlorophenol 500 ng/μl  
2,4-Dimethylphenol 500 ng/μl  
2,4-Dinitrophenol 1500 ng/μl  
2-Methyl-4,6-dinitrophenol 2500 ng/μl  
2-Nitrophenol 500 ng/μl  
4-Nitrophenol 2500 ng/μl  
Pentachlorophenol 2500 ng/μl  
Phenol 500 ng/μl  
2,4,6-Trichlorophenol 1500 ng/μl

in Methanol 1ml  
YA06040100ME

**Aromatic Compounds-Mix 16**

DIN V 38407-F16

4-Bromoaniline 10 ng/μl  
2-Chloroaniline 10 ng/μl  
3-Chloroaniline 10 ng/μl  
4-Chloroaniline 10 ng/μl  
3-Chloro-4-methylaniline 10 ng/μl  
4-Chloro-2-methylaniline 10 ng/μl  
2,4-Dichloroaniline 10 ng/μl  
2,6-Dichloroaniline 10 ng/μl  
3,4-Dichloroaniline 10 ng/μl  
3,5-Dichloroaniline 10 ng/μl  
N,N-Dimethylaniline 10 ng/μl  
2,6-Dimethylaniline 10 ng/μl  
o-Toluidine 10 ng/μl  
2,3,4-Trichloroaniline 10 ng/μl  
2,4,5-Trichloroaniline 10 ng/μl  
2-Trifluoromethylaniline 20 ng/μl  
3-Trifluoromethylaniline 10 ng/μl

in Methanol 1ml  
LA19070016ME

**Aromatics-Mix 80**

Chlorobenzene  
2-Chlorotoluene  
3-Chlorotoluene  
4-Chlorotoluene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
2,3-Dichlorotoluene  
2,4-Dichlorotoluene  
2,5-Dichlorotoluene  
2,6-Dichlorotoluene  
3,4-Dichlorotoluene  
Hexachlorobenzene  
Pentachlorobenzene  
2,3,4,5,6-Pentachlorotoluene  
1,2,3,4-Tetrachlorobenzene  
1,2,3,5-Tetrachlorobenzene  
1,2,4,5-Tetrachlorobenzene  
α,α,α-2-Tetrachlorotoluene  
α,α,α-4-Tetrachlorotoluene  
α,α,α-2,6-Tetrachlorotoluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,3,5-Trichlorobenzene  
2,3,6-Trichlorotoluene  
2,4,5-Trichlorotoluene

50 ng/μl each component  
in Methanol 1ml  
XA19070080ME

**Inorganic Standards****PlasmaCAL ICP-AES & MS Calibration Standards**

70 Single Element Standards - available at 1000 & 10,000 μg/ml  
2 volumes - 125 & 500 ml  
2 expiry dates - up to 21 months unopened & 15 months opened

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**Ion Chromatography Standards & Reagents**

1000 μg/ml anion & cation Calibration Standards  
Eluents available as concentrates or working solutions

**Custom Multi-element Calibration Standards**

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Certificate of Analysis and have direct traceability to NIST.  
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at [sales@qmx.com](mailto:sales@qmx.com) or telephone 01371 831611.



## US EPA Methods (500, 600, 8000 and CLP Series) Standards and Mixes

Should you not find a mix that meets your needs, please telephone, fax or email us with your requirements, including a list of components, concentrations, solvent and quantity required. We can produce any mix and will be delighted to provide a quotation. Individual compounds can be found in the Individual Reference Standard section on page 93.

## Drinking Water - 500 Series

## EPA Method 501.1 501.2 501.3

## Trihalomethanes

## VOC - Mix 1

Bromodichloromethane  
Bromoform  
Chloroform  
Dibromochloromethane

100 ng/µl each component  
in Methanol 1 ml  
XA05000001ME

200 ng/µl each component  
in Methanol 1 ml  
XA06010200ME

## Surrogate Standard Solution

Fluorobenzene  
2000 ng/µl  
in Methanol 1 ml  
YA13781000ME

## EPA Method 502.2 &amp; 524.2

## Volatile Organic Compounds

## VOC - Mix 2

Bromomethane  
Chloroethane  
Chloromethane  
Dichlorodifluoromethane  
Trichlorofluoromethane  
Vinyl chloride

200 ng/µl each component  
in Methanol 1 ml  
XA05000002ME

2000 ng/µl each component  
in Methanol 1 ml  
YA05000002ME

## VOC - Mix 3

Bromochloromethane  
Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromomethane  
1,1-Dichloroethane  
2,2-Dichloropropane  
Tetrachloroethene  
1,1,1-Trichloroethane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000003ME

## VOC - Mix 4

1,2-Dibromo-3-chloropropane  
1,2-Dibromoethane (EDB)  
1,2-Dichloroethane  
1,2-Dichloropropane  
1,3-Dichloropropane  
1,1-Dichloropropene  
1,3-Dichloropropene\*  
Hexachlorobutadiene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
1,1,2-Trichloroethane  
Trichloroethylene  
1,2,3-Trichloropropane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000004ME  
\*4000 ng/µl total, 52% cis, 48% trans

## VOC - Mix 5

Benzene  
Bromobenzene  
n-Butyl Benzene  
Ethylbenzene  
p-Isopropyl Toluene  
Naphthalene  
Styrene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000005ME

## VOC - Mix 6

sec-Butyl Benzene  
tert-Butyl Benzene  
Chlorobenzene  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Isopropylbenzene  
n-Propyl Benzene  
o-Xylene  
p-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000006ME

## Performance Standard Solution

4-Bromofluorobenzene  
2000 ng/µl  
in Methanol 1 ml  
YA10731000ME

## VOC - Mix EPA 524

Bromodichloromethane  
Dibromochloromethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
Dichloromethane (Methylene chloride)

2000 ng/µl each component  
in Methanol 1 ml  
YA05000010ME

## VOC - Mix 7

Benzene  
Bromodichloromethane  
Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromochloromethane  
1,4-Dichlorobenzene  
1,2-Dichloroethane  
1,1-Dichloroethene  
1,1,1-Trichloroethane  
Trichloroethene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000007ME

## VOC - Mix 8

Chlorobenzene  
1,2-Dichlorobenzene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
1,2-Dichloropropane  
Ethylbenzene  
Styrene  
Tetrachloroethene  
Toluene  
o-Xylene  
m-Xylene  
p-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000008ME

## VOC - Mix 9

Benzene  
cis-1,2-Dichloroethene  
Dichloromethane  
Tetrachloroethene  
Tetrachloromethane  
Toluene  
1,1,1-Trichloroethane  
Trichloroethene  
Trichloromethane  
o-Xylene  
m-Xylene  
p-Xylene

1000 ng/µl each component  
in Acetone 1 ml  
YA05000009AC

**VOC - Mix 14**

Bromobenzene  
 Bromochloromethane  
 Bromodichloromethane  
 Bromoform  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroform  
 4-Chlorotoluene  
 2-Chlorotoluene  
 Dibromochloromethane  
 1,2-Dibromoethane  
 Dibromomethane  
 1,3-Dichlorobenzene  
 1,2-Dichlorobenzene  
 1,4-Dichlorobenzene  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 cis-1,2-Dichloroethene  
 trans-1,2-Dichloroethene  
 1,1-Dichloroethene  
 1,3-Dichloropropane  
 1,2-Dichloropropane  
 2,2-Dichloropropane  
 1,1-Dichloropropene  
 1,3-Dichloropropene\*  
 Dichloromethane  
 1,1,1,2-Tetrachloroethane  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 1,2,3-Trichloropropane  
 (34 compounds)

200 ng/µl each component  
 in Methanol 1 ml  
 XA05000014ME  
 \* (400 ng/µl total 52% cis, 48% trans)

**Internal Standard Solution Mix 16**

1-Chloro-2-bromopropane  
 Fluorobenzene

2000 ng/µl each component  
 in Methanol 1 ml  
 YA05000016ME

**Internal Standards**

Fluorobenzene  
 2000 ng/µl in Methanol 1 ml  
 YA13781000ME

2-Bromo-1-chloropropane  
 2000 ng/µl in Methanol 1 ml  
 YA10722200ME

**VOC - Mix 42**

Acetone  
 2-Butanone  
 2-Hexanone  
 4-Methyl-2-pentanone

2000 ng/µl each component  
 in Methanol:Water (9:1) 1 ml  
 YA05000042MW

**VOC - Mix 15**

Benzene  
 Bromobenzene  
 Bromochloromethane  
 Bromodichloromethane  
 Bromoform  
 n-Butyl Benzene  
 sec-Butyl Benzene  
 tert-Butyl Benzene  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroform  
 2-Chlorotoluene  
 4-Chlorotoluene  
 1,2-Dibromo-3-chloropropane  
 Dibromochloromethane  
 1,2-Dibromoethane  
 Dibromomethane  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 1,1-Dichloroethene  
 cis-1,2-Dichloroethene  
 trans-1,2-Dichloroethene  
 Dichloromethane (Methylenechloride)  
 1,2-Dichloropropane  
 1,3-Dichloropropane  
 2,2-Dichloropropane  
 1,1-Dichloropropene  
 \*1,3-Dichloropropene  
 Ethylbenzene  
 Hexachlorobutadiene  
 Isopropylbenzene  
 p-Isopropyltoluene  
 Naphthalene  
 N-Propylbenzene  
 Styrene  
 1,1,1,2-Tetrachloroethane  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 Toluene  
 1,2,3-Trichlorobenzene  
 1,2,4-Trichlorobenzene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 1,2,3-Trichloropropane  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene  
 m-Xylene  
 o-Xylene  
 p-Xylene  
 (54 compounds)

200 ng/µl each component  
 in Methanol 1 ml  
 XA05000015ME  
 \* (400 ng/µl total 52% cis, 48% trans)

**Fortification Solution - Mix 19**

4-Bromofluorobenzene  
 1,2-Dichlorobenzene  
 Fluorobenzene

2000 ng/µl each component  
 in Methanol 1 ml  
 YA05000019ME

**VOC - Mix 20**

Benzene  
 Bromobenzene  
 Bromochloromethane  
 Bromodichloromethane  
 Bromoform  
 Bromomethane  
 n-Butyl Benzene  
 tert-Butyl Benzene  
 sec-Butyl Benzene  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroethane  
 Chloroform  
 Chloromethane  
 2-Chlorotoluene  
 4-Chlorotoluene  
 1,2-Dibromo-3-chloropropane  
 Dibromochloromethane  
 1,2-Dibromoethane  
 Dibromomethane  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Dichlorodifluoromethane  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 1,1-Dichloroethene  
 cis-1,2-Dichloroethene  
 trans-1,2-Dichloroethene  
 Dichloromethane (Methylenechloride)  
 1,2-Dichloropropane  
 1,3-Dichloropropane  
 2,2-Dichloropropane  
 1,1-Dichloropropene  
 \*1,3-Dichloropropene  
 Ethylbenzene  
 Hexachlorobutadiene  
 Isopropylbenzene  
 p-Isopropyl Toluene  
 Naphthalene  
 n-Propyl Benzene  
 Styrene  
 1,1,1,2-Tetrachloroethane  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 Toluene  
 1,2,3-Trichlorobenzene  
 1,2,4-Trichlorobenzene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 1,2,3-Trichloropropane  
 1,2,4-Trimethylbenzene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 Trichlorofluoromethane  
 1,2,3-Trichloropropane  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene  
 m-Xylene  
 o-Xylene  
 p-Xylene  
 (59 compounds)

200 ng/µl each component  
 in Methanol 1 ml  
 XA05000020ME  
 \* (400 ng/µl total 52% cis, 48% trans)

**Surrogate Standard Solution**

1,2-Dichlorobenzene D4  
 2000 ng/µl in Methanol 1 ml  
 YA12370100ME

4-Bromofluorobenzene  
 2000 ng/µl in Methanol 1 ml  
 YA10731000ME

**VOC - Mix 21**

Bromodichloromethane  
 Chlorodibromomethane  
 1,2-Dibromoethane  
 1,2-Dichloroethane  
 Tetrachloroethene  
 Tetrachloromethane  
 Tribromomethane  
 1,1,1-Trichloroethane  
 Trichloroethene  
 Trichloromethane

200 ng/μl each component  
 in Methanol 1 ml  
 XA05000021ME

**VOC - Mix 23**

Bromodichloromethane 50 ng/μl  
 Bromoform 50 ng/μl  
 Carbon tetrachloride 6 ng/μl  
 Chlorodibromomethane 50 ng/μl  
 Chloroform 50 ng/μl  
 Tetrachloroethene 20 ng/μl  
 Trichloroethene 60 ng/μl

in Methanol 1 ml  
 XA05000023ME

**VOC - Mix 108**

Bromochloromethane 100 ng/μl  
 Bromodichloromethane 100 ng/μl  
 Chlorobenzene 100 ng/μl  
 Dibromochloromethane 100 ng/μl  
 Dibromomethane 100 ng/μl  
 1,2-Dichlorobenzene 1000 ng/μl  
 1,3-Dichlorobenzene 1000 ng/μl  
 1,1-Dichloroethane 1000 ng/μl  
 1,2-Dichloroethane 1000 ng/μl  
 1,1-Dichloroethene 1000 ng/μl  
 cis-1,2-Dichloroethene 1000 ng/μl  
 trans-1,2-Dichloroethene 1000 ng/μl  
 Dichloromethane 1000 ng/μl  
 1,2-Dichloropropane 1000 ng/μl  
 1,3-Dichloropropane 1000 ng/μl  
 Hexachlorobutadiene 100 ng/μl  
 1,1,1,2-Tetrachloroethane 100 ng/μl  
 1,1,1,2,2-Tetrachloroethane 100 ng/μl  
 Tetrachloroethene 50 ng/μl  
 Tetrachloromethane 50 ng/μl  
 Tribromomethane 100 ng/μl  
 1,1,1-Trichloroethane 100 ng/μl  
 1,1,2-Trichloroethane 100 ng/μl  
 1,1,2-Trichloroethene 100 ng/μl  
 Trichloromethane 100 ng/μl

in Methanol 10 x 1.5 ml  
 YS05000108ME

**Internal Standard**

α, α, α-Trifluorotoluene  
 2000 ng/μl  
 in Methanol 1 ml  
 YA17846000ME

**VOC - Mix 61**

Headspace determination DIN 38407-F5

Bromodichloromethane 1000 ng/μl  
 Dibromochloromethane 1000 ng/μl  
 1,2-Dichloroethane 10000 ng/μl  
 cis-1,2-Dichloroethene 10000 ng/μl  
 Dichloromethane 5000 ng/μl  
 Tetrachloroethene 1000 ng/μl  
 Tetrachloromethane 1000 ng/μl  
 Tribromomethane 1000 ng/μl  
 1,1,1-Trichloroethane 1000 ng/μl  
 Trichloroethene 1000 ng/μl  
 Trichloromethane 1000 ng/μl

in Methanol 1 ml  
 YA05000061ME

**EPA Method 503.1****Volatile Aromatic & Unsaturated Organic Compounds****Method 503.1 - Mix 1**

Benzene  
 Bromobenzene  
 n-Butyl Benzene  
 sec-Butyl Benzene  
 tert-Butyl Benzene  
 Chlorobenzene  
 2-Chlorotoluene  
 4-Chlorotoluene  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Ethylbenzene  
 Hexachlorobutadiene  
 Isopropylbenzene  
 p-Isopropyl Toluene  
 Naphthalene  
 n-Propyl Benzene  
 Styrene  
 Tetrachloroethene  
 Toluene  
 1,2,3-Trichlorobenzene  
 1,2,4-Trichlorobenzene  
 Trichloroethene  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene  
 m-Xylene  
 o-Xylene  
 p-Xylene  
 (28 compounds)

200 ng/μl each component  
 in Methanol 1 ml  
 XA05030100ME

**Method 503.1 - Mix 2**

Hexachlorobutadiene  
 Tetrachloroethene  
 Trichloroethene

2000 ng/μl each component  
 in Methanol 1 ml  
 YA05030200ME

**EPA Method 505****Organohalide Pesticides & PCBs****Chlordane, Toxaphene, Aroclors**

Compound	Code
Chlordane	YA11200000ME
Toxaphene	YA10940000HE
Aroclor 1016	YA20101600CY
Aroclor 1221	YA20122100CY
Aroclor 1232	YA20123200CY
Aroclor 1242	YA20124200CY
Aroclor 1248	YA20124800CY
Aroclor 1254	YA20125400CY
Aroclor 1260	YA20126000CY

YA = 1000 ng/μl  
 each 1 ml as stated  
 in Methanol, Hexane or Cyclohexane

**Organohalide Pesticide Mix 1**

Alachlor  
 Aldrin  
 Atrazine  
 trans-Chlordane (gamma-Chlordane)  
 Dieldrin  
 Endrin  
 Heptachlor  
 Heptachlor-exo-epoxide (Isomer B)  
 Heptachlor-endo-epoxide (Isomer A)  
 Hexachlorobenzene  
 Hexachlorocyclopentadiene  
 gamma-HCH (Lindane)  
 Methoxychlor  
 cis-Nonachlor  
 trans-Nonachlor  
 Simazine

100 ng/μl each component  
 in Acetone 1 ml  
 XA05050100AC

**Organohalide Pesticide Mix 2**

Alachlor  
 Aldrin  
 Dieldrin  
 Endrin  
 Heptachlor  
 Heptachlor epoxide  
 Hexachlorobenzene  
 gamma-HCH (Lindane, gamma-BHC)  
 Methoxychlor

100 ng/μl each component  
 in Methanol 1 ml  
 XA05050200ME

**Performance Check Solutions**

Endrin  
 100 ng/μl  
 in iso-Octane 1 ml  
 XA13160000IO

Endrin aldehyde  
 100 ng/μl  
 in Cyclohexane 1 ml  
 XA13161000CY

Endrin ketone  
 100 ng/μl  
 in Cyclohexane 1 ml  
 XA13165000CY



**EPA Method 506****Phthalate and Adipate Esters**

Adipic acid-bis-2-ethylhexyl ester  
 Phthalic acid, benzylbutyl ester  
 Phthalic acid, bis-butyl ester  
 Phthalic acid, bis-ethyl ester  
 Phthalic acid, bis-2-ethylhexyl ester  
 Phthalic acid, bis-methyl ester  
 Phthalic acid, bis-1-octyl ester

100 ng/µl each component  
 in Methanol 1 ml  
 XA05060100ME

**EPA Method 508****Chlorinated Pesticide Mix 1**

Aldrin  
 α-BHC  
 β-BHC  
 δ-BHC  
 γ-BHC  
 4,4'-DDD  
 4,4'-DDE  
 4,4'-DDT  
 Dieldrin  
 Endosulfan I  
 Endosulfan II  
 Endosulfan sulfate  
 Endrin  
 Endrin aldehyde  
 Heptachlor  
 Heptachlor epoxide (isomer B)  
 Methoxychlor

1000 ng/µl each component  
 in Methyl tert-butyl ether 1 ml  
 YA05080100MB

**Chlorinated Pesticide Mix 2**

cis-Chlordane (alpha)  
 trans-Chlordane (gamma)  
 Chlorobenzilate  
 Chloroneb  
 Chlorothalonil  
 Chlorthal-dimethyl (Dacthal, DCP)  
 Etridiazole  
 Hexachlorobenzene  
 cis-Permethrin  
 trans-Permethrin  
 Propachlor  
 Trifluralin

1000 ng/µl each component  
 in Methyl tert-butyl ether 1 ml  
 YA05080200MB

**Chlorinated Pesticide Mix 3**

Alachlor  
 Atrazine  
 Butachlor  
 Hexachlorocyclopentadiene  
 Metolachlor  
 Simazine

1000 ng/µl each component  
 in Acetone 1 ml  
 YA05080300AC

**Internal Standard**

Quintozene  
 (Pentachloronitrobenzene/PCNB)  
 100 ng/µl in Cyclohexane or Acetonitrile  
 XA16730000CY 1 ml  
 XA16730000AL 1 ml

Triphenyl phosphate  
 500 ng/µl  
 in Methyl tert-butyl ether 1 ml  
 XA17893000MB

**Individual Compounds**

Compound	Code
Biphenyl	XA10630000ME
Biphenyl	C10630000
Chlordane	YA11200000ME
cis-Chlordane	XA11201000CY
trans-Chlordane	XA11202000CY
Cyanazine	XA11790000AL

Hexachlorocyclopentadiene  
 100 ng/µl  
 in iso-Octane 1 ml  
 XA14171000IO

Toxaphene	YA10940000HE
Aroclor 1016	YA20101600CY
Aroclor 1221	YA20122100CY
Aroclor 1232	YA20123200CY
Aroclor 1242	YA20124200CY
Aroclor 1248	YA20124800CY
Aroclor 1254	YA20125400CY
Aroclor 1260	YA20126000CY

YA = 1000 ng/µl  
 each 1 ml as stated  
 in Hexane or Cyclohexane

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**EPA Method 524.1 & 524.2****VOC - Mix 20**

Benzene  
 Bromobenzene  
 Bromochloromethane  
 Bromodichloromethane  
 Bromoform  
 Bromomethane  
 n-Butyl Benzene  
 tert-Butyl Benzene  
 sec-Butyl Benzene  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroethane  
 Chloroform  
 Chloromethane  
 2-Chlorotoluene  
 4-Chlorotoluene  
 1,2-Dibromo-3-chloropropane  
 Dibromochloromethane  
 1,2-Dibromoethane  
 Dibromomethane  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Dichlorodifluoromethane  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 1,1-Dichloroethene  
 cis-1,2-Dichloroethene  
 trans-1,2-Dichloroethene  
 Dichloromethane (Methylenechloride)  
 1,2-Dichloropropane  
 1,3-Dichloropropane  
 2,2-Dichloropropane  
 1,1-Dichloropropene  
 \*1,3-Dichloropropene  
 Ethylbenzene  
 Hexachlorobutadiene  
 Isopropylbenzene  
 p-Isopropyl Toluene  
 Naphthalene  
 n-Propyl Benzene  
 Styrene  
 1,1,1,2-Tetrachloroethane  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 Toluene  
 1,2,3-Trichlorobenzene  
 1,2,4-Trichlorobenzene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 Trichlorofluoromethane  
 1,2,3-Trichloropropane  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene  
 m-Xylene  
 o-Xylene  
 p-Xylene  
 (59 compounds)

200 ng/µl each component  
 in Methanol 1 ml  
 XA05000020ME  
 \* (400 ng/µl total 52% cis, 48% trans)

**Surrogate Standard Solution**

1,2-Dichlorobenzene D4  
 2000 ng/µl in Methanol 1 ml  
 YA12370100ME

4-Bromofluorobenzene  
 2000 ng/µl in Methanol 1 ml  
 YA10731000ME

**Iodomethane Standard**

2000 ng/µl  
in Methanol:Water (8:2) 1 ml  
YA14343000MW

**VOC - Mix 1**

Bromodichloromethane  
Bromoform  
Chloroform  
Dibromochloromethane

100 ng/µl each component  
in Methanol 1 ml  
XA05000001ME

**VOC - Mix 4**

1,2-Dibromo-3-chloropropane  
1,2-Dibromoethane (EDB)  
1,2-Dichloroethane  
1,2-Dichloropropane  
1,3-Dichloropropane  
1,1-Dichloropropene  
1,3-Dichloropropene\*  
Hexachlorobutadiene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
1,1,2-Trichloroethane  
Trichloroethylene  
1,2,3-Trichloropropane  
\*(4000 ng/µl total, 52% cis, 48% trans)

2000 ng/µl each component  
in Methanol 1 ml  
YA05000004ME

**VOC - Mix 3**

Bromochloromethane  
Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromomethane  
1,1-Dichloroethane  
2,2-Dichloropropane  
Tetrachloroethene  
1,1,1-Trichloroethane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000003ME

**VOC - Mix 5**

Benzene  
Bromobenzene  
n-Butyl Benzene  
Ethylbenzene  
p-Isopropyl Toluene  
Naphthalene  
Styrene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000005ME

**VOC - Mix 6**

sec-Butyl Benzene  
tert-Butyl Benzene  
Chlorobenzene  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Isopropylbenzene  
n-Propyl Benzene  
o-Xylene  
p-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000006ME

**VOC - Mix EPA 524**

Bromodichloromethane  
Dibromochloromethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
Dichloromethane (Methylene chloride)

2000 ng/µl each component  
in Methanol 1 ml  
YA05000010ME

**Internal Standards**

Fluorobenzene YA13781000ME  
1,2-Dichlorobenzene D4 YA12370100ME  
4-Bromofluorobenzene YA10731000ME

2000 ng/µl in Methanol 1 ml

**EPA Method 525****PAH Mix 525**

Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(g,h,i)perylene  
Benzo(a)pyrene  
Chrysene  
Dibenzo(a,h)anthracene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Phenanthrene  
Pyrene

100 ng/µl each component  
in Acetone 1 ml  
XA05250100AC

**Phthalate and Adipate Esters**

Adipic acid-bis-2-ethylhexyl ester  
Phthalic acid, benzylbutyl ester  
Phthalic acid, bis-butyl ester  
Phthalic acid, bis-ethyl ester  
Phthalic acid, bis-2-ethylhexyl ester  
Phthalic acid, bis-methyl ester  
Phthalic acid, bis-1-octyl ester

100 ng/µl each component  
in Methanol 1 ml  
XA05060100ME

**EPA Method 525 cont.****Pesticide-Mix 525**

Alachlor  
Aldrin  
Atrazine  
alpha-Chlordane  
gamma-Chlordane  
Endrin  
Heptachlor  
Heptachlor epoxide (isomer B)  
gamma-HCH (Lindane, gamma-BHC)  
4,4'-Methoxychlor  
trans-Nonachlor  
Simazine

100 ng/µl each component  
in Acetone 1 ml  
XA05250400AC

**Tuning Standard**

Decafluorotriphenylphosphine  
1000 ng/µl  
in Acetone 1 ml  
YA12093000AC

**Internal Standards Mix 25**

Acenaphthene D10  
Chrysene D12  
Perylene D12  
Phenanthrene D10

500 ng/µl each component  
in Acetone 1 ml  
XA05250600AC

**Toxaphene Standard Solution**

Camphechlor (Toxaphene)  
4000 ng/µl  
in Hexane 1 ml  
YA10940000HE

single congeners are available  
please see Toxaphene section on pg 62

**Tuning Solution**

Perylene D12  
2000 ng/µl  
in Toluene 1 ml  
YA20915100TO

**EPA Method 531.1**

**Carbamate Pesticides**

**N-Methylcarbamates & N-Methyl carbamoyloximes Mix 1**

Aldicarb	
Aldicarb sulfone	
Aldicarb sulfoxide	
Carbaryl	
Carbofuran	
3-Hydroxycarbofuran	
Methiocarb	
Methomyl	
1-Naphthol	
Oxamyl	
Propoxur	
100 ng/µl each compound in Methyl tert-butyl ether XA05310100ME	1 ml

**Internal Standards**

4-Bromo-3,5-dimethylphenyl-N-methylcarbamate (BDMC) C10727000	0.1g
Fluorobenzene 2000 ng/µl in Methanol YA13781000ME	1 ml
1,2-Dichlorobenzene D4 2000 ng/µl in Methanol YA12370100ME	1 ml
4-Bromofluorobenzene 2000 ng/µl in Methanol YA10731000ME	1 ml

**EPA Method 550**

**Polycyclic Aromatic Hydrocarbons**

**PAH Mix 50**

Acenaphthene	1000 ng/µl
Acenaphthylene	1000 ng/µl
Anthracene	50 ng/µl
Benzo(a)anthracene	1 ng/µl
Benzo(a)pyrene	5 ng/µl
Benzo(b)fluoranthene	1 ng/µl
Benzo(g,h,i)perylene	5 ng/µl
Benzo(k)fluoranthene	1 ng/µl
Chrysene	50 ng/µl
Dibenzo(a,h)anthracene	10 ng/µl
Fluoranthene	50 ng/µl
Fluorene	100ng/µl
Indeno(1,2,3-cd)pyrene	10 ng/µl
Naphthalene	1000 ng/µl
Phenanthrene	50 ng/µl
Pyrene	50 ng/µl
(16 compounds)	
in Acetonitrile XA05500100AL	1 ml

**EPA Method 551**

**Chlorinated Organic & Disinfectant By-Products Mix 1**

Bromochloroacetonitrile	
Bromodichloromethane	
Bromoform	
Carbon tetrachloride	
Chloroform	
Chloropicrin	
1,2-Dibromo-3-chloropropane	
Dibromoacetonitrile	
Dibromochloromethane	
1,2-Dibromoethane	
Dichloroacetonitrile	
1,1-Dichloropropanone-2	
Tetrachloroethene	
Trichloroacetonitrile	
1,1,1-Trichloroethane	
Trichloroethene	
100 ng/µl each component in Acetone XA05510100AC	1 ml
Chloralhydrate 1000 ng/µl in Acetonitrile YA11098000AL	1 ml

**EPA Method 552.2**

**Halogenated Acetic Acids Mix 4**

Bromoacetic acid	400 ng/µl
Bromochloroacetic acid	400 ng/µl
Bromodichloroacetic acid	400 ng/µl
Chloroacetic acid	600 ng/µl
Dibromoacetic acid	200 ng/µl
Dibromochloroacetic acid	1000 ng/µl
Dichloroacetic acid	600 ng/µl
Tribromoacetic acid	2000 ng/µl
TCA (Trichloroacetic acid)	200 ng/µl
in Methyl tert-butyl ether XA05520400MB	1 ml

**Methyl Derivatives Mix 6**

Bromoacetic acid	400 ng/µl
Bromochloroacetic acid	400 ng/µl
Bromodichloroacetic acid	400 ng/µl
Chloroacetic acid	600 ng/µl
Dibromoacetic acid	200 ng/µl
Dibromochloroacetic acid	1000 ng/µl
Dichloroacetic acid	600 ng/µl
Tribromoacetic acid	2000 ng/µl
TCA (Trichloroacetic acid)	200 ng/µl
all components as methyl ester in Methyl tert-butyl ether XA05520600MB	1 ml

**Drinking Water Odor Mix 1**

Geosmin	
2-Methylisoborneol	
100 ng/µl each component in Methanol XA05520700ME	1 ml

**Individual Odor Standards**

see page 29

**Water Odor Standards**

Geosmin, 2-Methylisoborneol et al. see page 29

**Halogenated Acetic Acids**

see Individual Reference Materials section on page 93

- Bromoacetic acid
- Bromochloroacetic acid
- Bromodichloroacetic acid
- Chloroacetic acid
- Dibromochloroacetic acid
- Dalapon
- Dibromoacetic acid
- Dichloroacetic acid
- TCA (Trichloroacetic acid)
- Tribromoacetic acid

- Bromoacetic acid methyl ester
- Bromochloroacetic acid-methyl ester
- Bromodichloroacetic acid-methyl ester
- Chloroacetic acid methyl ester
- Dalapon-methyl ester
- Dibromoacetic acid-methyl ester
- Dibromochloroacetic acid-methyl ester
- Dichloroacetic acid-methyl ester
- Tribromoacetic acid-methyl ester
- TCA-methyl ester

2,4-Dichlorophenol 5000 ng/µl in Methanol YA12451000ME 1 ml

2,4,6-Trichlorophenol 5000 ng/µl in Methanol YA17774600ME 1 ml

**Internal Standard**

1,2,3-Trichloropropane 100 ng/µl in Methanol XA17780000ME 1 ml

**Surrogate Standards**

3,5-Dichlorobenzoic acid 1000 ng/µl in Methyl tert-butyl ether YA12403100MB 1 ml

2-Bromopropionic acid 1000 ng/µl in Methyl tert-butyl ether YA10760700MB 1 ml

2-Bromopropionic acid-methyl ester 1000 ng/µl in Methyl tert-butyl ether YA10761000MB 1 ml

2,3-Dibromopropionic acid 1000 ng/µl in Methyl tert-butyl ether YA12242500MB 1 ml

2,3-Dibromopropionic acid-methyl ester 1000 ng/µl in Methyl tert-butyl ether YA12242600MB 1 ml



**EPA Method 555****Chlorinated Herbicides****Chlorinated Acids - Mix 1**

Acifluorfen  
Bentazon  
Chloramben  
2,4-D  
Dicamba  
Dichlorprop  
Fenoprop (Silvex; 2,4,5-TP)  
Picloram

1000 ng/μl each component  
in Acetonitrile 1 ml  
YA05550100AL

**Chlorinated Acids - Mix 2**

2,4-DB  
3,5-Dichlorobenzoic acid  
Dinoseb  
MCPA  
MCPD  
4-Nitrophenol  
Pentachlorophenol  
2,4,5-T

1000 ng/μl each component  
in Acetonitrile 1 ml  
YA05550200AL

**EPA Method 601****Purgeables Halocarbons****EPA 601/602 Calibration Mix**

Benzene  
Bromodichloromethane  
Bromoform  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
2-Chloroethyl-vinylether  
Dibromochloromethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
1,1-Dichloroethane  
1,2-Dichloroethane  
trans-1,2-Dichloroethene  
1,1-Dichloroethene  
Dichloromethane  
1,2-Dichloropropane  
cis-1,3-Dichloropropene  
trans-1,3-Dichloropropene  
Ethylbenzene  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene

2000 ng/μl each component  
in Methanol 1 ml  
YA06010400ME

**VOC - Mix 2**

Bromomethane  
Chloromethane  
Chloroethane  
Dichlorodifluoromethane  
Trichlorofluoromethane  
Vinyl chloride

200 ng/μl each component  
in Methanol 1 ml  
XA05000002ME

2000 ng/μl each component  
in Methanol 1 ml  
YA05000002ME

**Purgeables Halocarbons Mix 5**

Bromodichloromethane  
Chlorobenzene  
Dibromochloromethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethene  
trans-1,2-Dichloroethene  
Dichloromethane  
1,2-Dichloropropane  
cis-1,3-Dichloropropene  
trans-1,3-Dichloropropene  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Tetrachloromethane  
Tribromomethane  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
Trichloromethane

2000 ng/μl each component  
in Methanol 1 ml  
YA06010500ME

**VOC - Mix 1**

Bromodichloromethane  
Bromoform  
Chloroform  
Dibromochloromethane

100 ng/μl each component  
in Methanol 1 ml  
XA05000001ME

200 ng/μl each component  
in Methanol 1 ml  
XA06010200ME

2000 ng/μl each component  
in Methanol 1 ml  
YA06010200ME

**Individual Standards**

Bromodichloromethane YA10726700ME  
2-Chloroethyl-vinylether YA11410400ME  
Tribromomethane YA17665500ME  
Trichloromethane YA17739500ME

individual compounds  
5000 ng/μl in Methanol 1 ml

**Internal & Surrogate Standards**

Bromochloromethane YA10720800ME  
Dibromochloromethane YA12234700ME  
2-Bromo-1-chloropropane YA10722200ME

individual compounds  
2000 ng/μl in Methanol 1 ml

**EPA Method 602****EPA 601/602 Calibration Mix**

Benzene  
Bromodichloromethane  
Bromoform  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
2-Chloroethyl-vinylether  
Dibromochloromethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
1,1-Dichloroethane  
1,2-Dichloroethane  
trans-1,2-Dichloroethene  
1,1-Dichloroethene  
Dichloromethane  
1,2-Dichloropropane  
cis-1,3-Dichloropropene  
trans-1,3-Dichloropropene  
Ethylbenzene  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene

2000 ng/μl each component  
in Methanol 1 ml  
YA06010400ME

**Surrogate Standard**

α, α, α -Trifluorotoluene

2000 ng/μl  
in Methanol 1 ml  
YA17846000ME

**EPA Method 603****Purgeable Aromatics for Gasoline Identification Mix 3**

Benzene  
Chlorobenzene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Ethylbenzene  
Methyl tert-butyl ether  
Toluene  
m-Xylene  
o-Xylene  
p-Xylene

200 ng/μl each component  
in Methanol 1 ml  
XA06020300ME

Acrolein (2-Propenal)  
certified neat  
CA10045000 1 ml

### EPA Method 604

#### Phenols Mix 604

4-Chloro-3-methyl phenol	2500 ng/μl
2-Chlorophenol	500 ng/μl
2,4-Dichlorophenol	500 ng/μl
2,4-Dimethylphenol	500 ng/μl
2,4-Dinitrophenol	1500 ng/μl
2-Methyl-4,6-dinitrophenol	2500 ng/μl
2-Nitrophenol	500 ng/μl
4-Nitrophenol	2500 ng/μl
Pentachlorophenol	2500 ng/μl
Phenol	500 ng/μl
2,4,6-Trichlorophenol	1500 ng/μl

in Methanol 1 ml  
YA06040100ME

### EPA Method 605

#### Benzidine Mix 2

Benzidine  
3,3'-Dichlorobenzidine

2000 ng/μl each component  
in Methanol 1 ml  
YA08270600ME

### EPA Method 606

#### Phthalate Esters Mix 1

Phthalic acid, benzylbutyl ester  
Phthalic acid, bis-butyl ester  
Phthalic acid, bis-ethyl ester  
Phthalic acid, bis-2-ethylhexyl ester  
Phthalic acid, bis-methyl ester  
Phthalic acid, bis-1-octyl ester

200 ng/μl each component  
in Methanol 1 ml  
XA08060100ME

2000 ng/μl each component  
in iso-Octane 1 ml  
YA08060100IO

2000 ng/μl each component  
in Methanol 1 ml  
YA08060100ME

### EPA Method 607

#### Nitrosoamines Mix 1

N-Nitroso-di-methylamine  
N-Nitroso-di-phenylamine  
N-Nitroso-di-n-propylamine

2000 ng/μl each component  
in Methanol 1 ml  
YA08070100ME

### EPA Method 608

#### Organochlorine Pesticide Mix 1

Aldrin	100 ng/μl
alpha-BHC	100 ng/μl
beta-BHC	100 ng/μl
gamma-BHC	100 ng/μl
delta-BHC	100 ng/μl
4,4'-DDD	600 ng/μl
4,4'-DDE	200 ng/μl
4,4'-DDT	600 ng/μl
Dieldrin	200 ng/μl
alpha-Endosulfan	200 ng/μl
beta-Endosulfan	200 ng/μl
Endosulfan sulfate	600 ng/μl
Endrin	200 ng/μl
Endrin aldehyde	600 ng/μl
Heptachlor	100 ng/μl
Heptachlor-endo-epoxide	100 ng/μl

in Ethylacetate 1 ml  
XA06080100EA

(with 10% of concentration indicated)  
in Ethylacetate 1 ml  
LA06080100EA

#### Organochlorine Pesticide Mix 3

Aldrin	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
4,4'-DDD	
4,4'-DDE	
4,4'-DDT	
Dieldrin	
alpha-Endosulfan	
beta-Endosulfan	
Endosulfan sulfate	
Endrin	
Endrin aldehyde	
Heptachlor	
Heptachlor-endo-epoxide (Isomer A)	
Methoxychlor	

1000 ng/μl each component  
in Toluene:Hexane (1:1) 1 ml  
YA06170100TH

20 ng/μl each component  
in Toluene:Hexane (1:1) 1 ml  
LA06170100TH

### EPA Method 610

#### PAH Mix 61

Acenaphthene	1000 ng/μl
Acenaphthylene	2000 ng/μl
Anthracene	100 ng/μl
Benzo(a)anthracene	100 ng/μl
Benzo(a)pyrene	100 ng/μl
Benzo(b)fluoranthene	200 ng/μl
Benzo(g,h,i)perylene	200 ng/μl
Benzo(k)fluoranthene	100 ng/μl
Chrysene	100 ng/μl
Dibenzo(a,h)anthracene	200 ng/μl
Fluoranthene	200 ng/μl
Fluorene	200 ng/μl
Indeno(1,2,3-cd)pyrene	100 ng/μl
Naphthalene	1000 ng/μl
Phenanthrene	100 ng/μl
Pyrene	100 ng/μl

(16 compounds)

in Methanol:Acetone (1:1) 1 ml  
XA06100100AM

#### PAH Mix 9

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(g,h,i)perylene  
Benzo(k)fluoranthene  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Naphthalene  
Phenanthrene  
Pyrene

100 ng/μl each component  
in Acetonitrile 1 ml  
XA20950009AL

in Cyclohexane 1 ml  
XA20950009CY

#### PAH Mix 63

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(g,h,i)perylene  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Naphthalene  
Phenanthrene  
Pyrene  
(16 compounds)

1000 ng/μl each component  
in Toluene 1 ml  
YA06100300TO

**PAH Mix 64**

Acenaphthene  
 Acenaphthylene  
 Anthracene  
 Benzo(a)anthracene  
 Benzo(a)pyrene  
 Benzo(b)fluoranthene  
 Benzo(k)fluoranthene  
 Benzo(g,h,i)perylene  
 Carbazole  
 Chrysene  
 Dibenzo(a,h)anthracene  
 Fluoranthene  
 Fluorene  
 Indeno(1,2,3-cd)pyrene  
 Naphthalene  
 Phenanthrene  
 Pyrene  
 (17 compounds)

2000 ng/μl each component  
 in Benzene:Dichloromethane (1:1) 1 ml  
 YA06100400BD

**EPA Method 611****Haloethers Mix 1**

4-Bromophenyl phenyl ether  
 bis(2-Chloroethoxy) methane  
 bis(2-Chloroethyl) ether  
 bis(2-Chloroisopropyl) ether  
 4-Chlorophenyl phenyl ether

2000 ng/μl each component  
 in Methanol 1 ml  
 YA06110100ME

**EPA Method 614****Organophosphor. Pesticide Mix 1**

Azinphos methyl  
 Demeton  
 Diazinon  
 Disulfoton  
 Ethion  
 Malathion  
 Parathion-ethyl  
 Parathion-methyl

200 ng/μl each component  
 in Acetone 1 ml  
 XA06140100AC

**EPA Method 615****Chlorin. Herbicides Acids Mix 1**

2,4-D	100 ng/μl
2,4-DB	100 ng/μl
Dalapon	250 ng/μl
Dicamba	100 ng/μl
Dichlorprop	100 ng/μl
Dinoseb	50 ng/μl
MCPA	10000 ng/μl
MCPP	10000 ng/μl
Fenoprop (Silvex; 2,4,5-TP)	10 ng/μl
2,4,5-T	10 ng/μl

in Methanol 1 ml  
 XA06150100ME

**EPA Method 617****Organochlorine Pesticide Mix 3**

Aldrin  
 alpa-BHC  
 beta-BHC  
 gamma-BHC  
 delta-BHC  
 4,4'-DDD  
 4,4'-DDE  
 4,4'-DDT  
 Dieldrin  
 alpha-Endosulfan  
 beta-Endosulfan  
 Endosulfan sulfate  
 Endrin  
 Endrin aldehyde  
 Heptachlor  
 Heptachlor-endo-epoxide (Isomer A)  
 Methoxychlor

1000 ng/μl each component  
 in Toluene:Hexane (1:1) 1 ml  
 YA06170100TH

20 ng/μl each component  
 in Toluene:Hexane (1:1) 1 ml  
 LA06170100TH

**EPA Method 619****Triazine Pesticide Mix 1**

Ametryn  
 Atraton  
 Atrazine  
 Prometon  
 Prometryn  
 Propazine  
 Secbumeton  
 Simetryn  
 Simazine  
 Terbutylazine  
 Terbutryn

100 ng/μl each component  
 in Acetone 1 ml  
 XA06190100AC

**EPA Method 622****Organophosphor. Pesticide Mix 4**

Azinphos methyl  
 Coumaphos  
 Demeton  
 Disulfoton  
 Fensulfothion  
 Fenthion  
 Phorate  
 Bolstar (Sulprophos)  
 Trichloronate  
 Tokuthion (Prothiophos)

100 ng/μl each component  
 in Cyclohexane 1 ml  
 XA06220100CY

**EPA Method 624****Purgeable Internal Standard Mix 15**

Bromochloromethane  
 Chlorobenzene D5  
 1,4-Difluorobenzene

2500 ng/μl each component  
 in Methanol 1 ml  
 YA04000500ME

**EPA 624 Calibration Mix 2**

Benzene  
 Bromodichloromethane  
 Bromoform  
 Bromomethane  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroethane  
 Chloroform  
 Chloromethane  
 Dibromochloromethane  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 1,1-Dichloroethene  
 Dichloromethane  
 cis-1,3-Dichloropropene \*  
 trans-1,3-Dichloropropene \*  
 Ethylbenzene  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 Toluene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 Trichlorofluoromethane

100 ng/μl each component  
 in Methanol 1 ml  
 XA06240200ME  
 \* (400 ng/μl total 52% cis, 48% trans)

**EPA 624 Purgeable Mix 4**

Carbon tetrachloride  
 Chlorobenzene  
 2-Chloroethyl vinyl ether  
 Chloroform  
 Dibromochloromethane  
 1,2-Dichlorobenzene  
 1,1-Dichloroethane  
 1,1-Dichloroethene  
 Dichloromethane  
 Demeton  
 1,2-Dichloropropene  
 Tetrachloroethene  
 1,1,2-Trichloroethane  
 Trichloroethene  
 Trichlorofluoromethane  
 (14 compounds)

2000 ng/μl each component  
 in Methanol 1 ml  
 YA06240400ME

**EPA 624 Purgeable Calib. Mix 3**

Benzene  
 Bromodichloromethane  
 Bromoform  
 Carbon tetrachloride  
 Chlorobenzene  
 2-Chloroethyl vinyl ether  
 Chloroform  
 Dibromochloromethane  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 1,1-Dichloroethene  
 trans-1,2-Dichloroethene  
 Dichloromethane  
 1,2-Dichloropropane  
 cis-1,3-Dichloropropene \*  
 trans-1,3-Dichloropropene \*  
 Ethylbenzene  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 Toluene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 (26 compounds)

2000 ng/µl each component  
 in Methanol 1 ml  
 YA06240300ME

\* (400 ng/µl total 52% cis, 48% trans)

**Surrogate Standards**

Benzene D6	YA10535200ME
4-Bromofluorobenzene	YA10731000ME
1,2-Dichloroethane D4	YA12422300ME
1,4-Difluorobenzene	YA12632000ME
Fluorobenzene	YA13781000ME
Pentafluorobenzene	YA15974000ME

**EPA Method 625****Organochlorine Pesticide Mix 1**

Aldrin	100 ng/µl
alpha-BHC	100 ng/µl
beta-BHC	100 ng/µl
gamma-BHC	100 ng/µl
delta-BHC	100 ng/µl
4,4'-DDD	600 ng/µl
4,4'-DDE	200 ng/µl
4,4'-DDT	600 ng/µl
Dieldrin	200 ng/µl
alpha-Endosulfan	200 ng/µl
beta-Endosulfan	200 ng/µl
Endosulfan sulfate	600 ng/µl
Endrin	200 ng/µl
Endrin aldehyde	600 ng/µl
Heptachlor	100 ng/µl
Heptachlor-endo-epoxide	100 ng/µl

in Ethylacetate 1 ml  
 XA06080100EA

(with 10% of concentration indicated)  
 in Ethylacetate 1 ml  
 LA06080100EA

**Phenol Mix 604**

4-Chloro-3-methyl phenol	2500 ng/µl
2-Chlorophenol	500 ng/µl
2,4-Dichlorophenol	500 ng/µl
2,4-Dimethylphenol	500 ng/µl
2,4-Dinitrophenol	1500 ng/µl
2-Methyl-4,6-dinitrophenol	2500 ng/µl
2-Nitrophenol	500 ng/µl
4-Nitrophenol	2500 ng/µl
Pentachlorophenol	2500 ng/µl
Phenol	500 ng/µl
2,4,6-Trichlorophenol	1500 ng/µl

in Methanol 1 ml  
 YA06040100ME

see Individual Reference Materials section  
 on page 93 for other semi-volatiles.

Aniline D5	YA10262600MB
Anthracene D10	YA20520100MB
Chlordane (technical)	YA11200000ME
Camphechlor (Toxaphene)	YA10940000HE
Decafluorobiphenyl	YA12092500MB
Decafluorotriphenylphosphine	YA12093000AC
4,4'-Dibromobiphenyl	YA21001500MB
4,4'-Dibromooctafluorobiphenyl	YA12240600MB
2,2'-Difluorobiphenyl	YA12632500MB
1-Fluoronaphthalene	YA13794000MB
2-Fluoronaphthalene	YA13794200MB
2-Fluorophenol	YA13797000MB
Naphthalene D8	YA20905100MB
Nitrobenzene D5	YA15557100MB
Pentafluorophenol	YA15974300MB
Perfluorotributylamine (PFTBA)	C15987500
Phenanthrene D10	YA20920100MB
Phenol D6	YA16025200MB
Pyridine D5	YA16646100MB

**EPA Method 627 & 629 & 631**

Benfluralin	C10470000
Trifluralin	C17850000
Cyanazine	C11790000
Benomyl	C10490000

**EPA Method 8010****EPA 8010 Halogenated VOC Mix 2**

Bromoform	
Carbon tetrachloride	
Chloroform	
Dibromomethane	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,2-Dichloropropane	
1,1,1,2-Tetrachloroethane	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethene	
1,2,3-Trichloropropane	

2000 ng/µl each component  
 in Methanol 1 ml  
 YA08010200ME

**VOC Mix 2**

Bromomethane  
 Chloroethane  
 Chloromethane  
 Dichlorodifluoromethane  
 Trichlorofluoromethane  
 Vinyl chloride

200 ng/µl each component  
 in Methanol 1 ml  
 XA05000002ME

2000 ng/µl each component  
 in Methanol 1 ml  
 YA05000002ME

**Individual compounds**

1,2-Dibromo-3-chloropropane	YA12235000ME
1,2-Dibromoethane	XA12240000ME

**Surrogate Standards**

Bromochloromethane	YA10720800ME
2-Bromochlorobenzene	YA10717000ME
4-Bromochlorobenzene	YA10718000ME
4-Bromofluorobenzene	YA10731000ME

**EPA Method 8020****Aromatic VOC Mix 1**

Benzene  
 Chlorobenzene  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Ethylbenzene  
 Toluene  
 m-Xylene  
 o-Xylene  
 p-Xylene

2000 ng/µl each component  
 in Methanol 1 ml  
 YA08020100ME

**Individual compounds**

Styrene	YA16982000ME
p-Xylene	YA17945200ME

**Aromatic VOC Mix 3**

Benzene  
 Chlorobenzene  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Ethylbenzene  
 Styrene  
 Toluene  
 m-Xylene  
 o-Xylene  
 p-Xylene

100 ng/µl each component  
 in Methanol 1 ml  
 XA08020300ME

2000 ng/µl each component  
 in Methanol 1 ml  
 YA08020300ME

**Internal Standard**

$\alpha$ ,  $\alpha$ ,  $\alpha$ -Trifluorotoluene  
2000 ng/ $\mu$ l in Methanol 1 ml  
YA17846000ME

**Surrogate Standards**

2-Bromochlorobenzene YA10717000ME  
4-Bromochlorobenzene YA10718000ME  
Bromochloromethane YA10720800ME  
4-Bromofluorobenzene YA10731000ME  
1,4-Difluorobenzene YA12632000ME  
Fluorobenzene YA13781000ME

**EPA Method 8021****VOC - Mix 2**

Bromomethane  
Chloromethane  
Chloroethane  
Dichlorodifluoromethane  
Trichlorofluoromethane  
Vinyl chloride

200 ng/ $\mu$ l each component  
in Methanol 1 ml  
XA05000002ME

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000002ME

**VOC - Mix 3**

Bromochloromethane  
Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromomethane  
1,1-Dichloroethane  
2,2-Dichloropropane  
Tetrachloroethene  
1,1,1-Trichloroethane

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000003ME

**VOC - Mix 4**

1,2-Dibromo-3-chloropropane  
1,2-Dibromoethane (EDB)  
1,2-Dichloroethane  
1,2-Dichloropropane  
1,3-Dichloropropane  
1,3-Dichloropropene\*  
1,1-Dichloropropene  
Hexachlorobutadiene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
1,1,2-Trichloroethane  
Trichloroethylene  
1,2,3-Trichloropropane

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000004ME  
\*(4000 ng/ $\mu$ l total, 52% cis, 48% trans)

**VOC - Mix 5**

Benzene  
Bromobenzene  
n-Butyl Benzene  
Ethylbenzene  
p-Isopropyl Toluene  
Naphthalene  
Styrene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000005ME

**VOC - Mix 6**

sec-Butyl Benzene  
tert-Butyl Benzene  
Chlorobenzene  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Isopropylbenzene  
n-Propyl Benzene  
o-Xylene  
p-Xylene

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000006ME

**VOC - Mix EPA 524**

Bromodichloromethane  
Dibromochloromethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
Dichloromethane (Methylene chloride)

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000010ME

**Individual compound**

2-Chloroethyl-vinylether

5000 ng/ $\mu$ l  
in Methanol 1 ml  
YA11410400ME

**VOC - Mix 15**

Benzene  
Bromobenzene  
Bromochloromethane  
Bromodichloromethane  
Bromoform  
n-Butyl Benzene  
sec-Butyl Benzene  
tert-Butyl Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dibromo-3-chloropropane  
Dibromochloromethane  
1,2-Dibromoethane  
Dibromomethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
Dichloromethane (Methylenechloride)  
1,2-Dichloropropane  
1,3-Dichloropropane  
2,2-Dichloropropane  
1,1-Dichloropropene  
\*1,3-Dichloropropene  
Ethylbenzene  
Hexachlorobutadiene  
Isopropylbenzene  
p-Isopropyltoluene  
Naphthalene  
N-Propylbenzene  
Styrene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
1,2,3-Trichloropropane  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene  
o-Xylene  
p-Xylene  
(54 compounds)

200 ng/ $\mu$ l each component  
in Methanol 1 ml  
XA05000015ME  
\* (400 ng/ $\mu$ l total 52% cis, 48% trans)

**Internal Standard Solution Mix 16**

1-Chloro-2-bromopropane  
Fluorobenzene

2000 ng/ $\mu$ l each component  
in Methanol 1 ml  
YA05000016ME

**Surrogate Standards**

2-Bromochlorobenzene YA10717000ME  
4-Bromochlorobenzene YA10718000ME  
Bromochloromethane YA10720800ME  
2-Bromo-1-chloropropane YA10722200ME  
1,4-Difluorobenzene YA12632000ME



**EPA Method 8030 & 8031 & 8033**

Acetonitrile	C10021000
Acrolein	CA10045000
Acrylonitrile	C10045500
Acrylonitrile	YA10045500ME

**EPA Method 8040****Phenol Mix 8040A**

4-Chloro-3-methylphenol  
2,4-Dichlorophenol  
2-Methyl-4,6-dinitrophenol (DNOC)  
3-Methylphenol (m-Cresol)  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,4,6-Trichlorophenol

2000 ng/µl each component  
in Isopropanol 1 ml  
YA08040400IP

**EPA Method 8061****Phthalate Esters Mix 1**

Bis-(2-ethylhexyl) phthalate  
Butyl benzyl phthalate  
Diethyl phthalate  
Dimethyl phthalate  
Di-n-butyl phthalate  
Di-n-octyl phthalate

200 ng/µl each component  
in Methanol 1 ml  
XA08060100ME

2000 ng/µl each component  
in iso-Octane 1 ml  
YA08060100IO

2000 ng/µl each component  
in Methanol 1 ml  
YA08060100ME

**Phthalate Esters - Analytes Mix 3**

Benzyl benzoate  
Bis(2-n-butoxyethyl)phthalate  
Bis(2-ethoxyethyl)phthalate  
Bis(2-ethylhexyl)phthalate  
Bis(2-methoxyethyl)phthalate  
Bis(4-Methyl-2-pentyl)phthalate  
Butylbenzylphthalate  
Diamyl phthalate  
Di-n-butyl phthalate  
Dicyclohexyl phthalate  
Diethyl phthalate  
Dihexyl phthalate  
Diisobutyl phthalate  
Dimethylphthalate  
Dinonyl phthalate  
Di-n-octyl phthalate  
Hexyl-2-ethylhexyl phthalate  
(17 Compounds)

1000 ng/µl each component  
in Hexane 1ml  
YA08060300HE

**Internal Standard**

Benzyl benzoate  
5000 ng/µl  
in Hexane 1 ml  
YA10537700HE

**Surrogate Standard Mix 5**

Dibenzyl phthalate  
Diphenyl phthalate  
Diphenyl isophthalate

500 ng/µl each component  
in Acetone 1 ml  
XA08060500AC

**EPA Method 8070****Nitrosamines Mix 1**

N-Nitroso-dimethylamine  
N-Nitroso-diphenylamine  
N-Nitroso-di-n-propylamine

2000 ng/µl each component  
in Methanol 1 ml  
YA08070100ME

**EPA Method 8081****Individual Aroclors**

Compound	Code
Aroclor 1016	YA20101600CY
Aroclor 1221	YA20122100CY
Aroclor 1232	YA20123200CY
Aroclor 1242	YA20124200CY
Aroclor 1248	YA20124800CY
Aroclor 1254	YA20125400CY
Aroclor 1260	YA20126000CY

1000 ng/µl each 1 ml  
in Cyclohexane

**Organochlorine Pesticide Mix 2**

Aldrin  
alpha-BHC  
beta-BHC  
gamma-BHC  
delta-BHC  
4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
Dieldrin  
alpha-Endosulfan  
beta-Endosulfan  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Endrin ketone  
Heptachlor  
Heptachlor-endo-epoxide (Isomer A)  
Methoxychlor  
(18 compounds)

2000 ng/µl each component  
in Toluene:Hexane (1:1) 1 ml  
YA08080100TH

**Single Column Analytes Mix 4**

Aldrin  
alpha-BHC  
beta-BHC  
gamma-BHC  
delta-BHC  
alpha-Chlordane  
gamma-Chlordane  
4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
Dieldrin  
alpha-Endosulfan  
beta-Endosulfan  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Endrin ketone  
Heptachlor  
Heptachlor-endo-epoxide (Isomer A)  
Methoxychlor  
(20 Compounds)

100 ng/µl each component  
in Toluene:Hexane (1:1) 1 ml  
XA08080400TH

2000 ng/µl each component  
in Toluene:Hexane (1:1) 1 ml  
YA08080400TH

**Single Component Standards**

Camphechlor (Toxaphene)

4000 ng/µl in Hexane 1 ml  
YA10940000HE

Chlordane (technical)  
2000 ng/µl in Methanol 1 ml  
YA11200000ME

**Surrogate Standard Mix 9**

Tetrachloro-m-xylene  
Decachlorobiphenyl

200 ng/µl each component  
in Acetone 1 ml  
XA08080900AC

**DDT Endrin Mix 1**

4,4'-DDT  
Endrin

500 ng/µl each component  
in Methanol 1 ml  
YA08080800ME

**Single Surrogate Standards**

Dibutyl chlorendate C11242500  
2,4,5,6-Tetrachloro-m-xylene XA17382500ME  
PCB No. 209 X20020900IO

**Internal Standards**

Quintozone (Pentachloronitrobenzene/PCNB)  
100 ng/µl in Cyclohexane or Acetonitrile 1 ml  
XA16730000CY  
XA16730000AL

α, α'-Dibromo-m-xylene  
100 ng/µl in Acetone 1 ml  
XA12246000AC

**EPA Method 8090****EPA 8090 Mix 1**

1,3-Dinitrobenzene  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
Isophorone  
1,4-Naphthoquinone  
Nitrobenzene

2000 ng/µl  
in n-Hexane:Acetone (94:6) 1 ml  
YA08090100HA

**Surrogate Standard**

2-Fluorobiphenyl

2000 ng/µl  
in Cyclohexane 1 ml  
YA13785000CY

**EPA Method 8100****PAH Mix 63**

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(g,h,i)perylene  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Naphthalene  
Phenanthrene  
Pyrene  
(16 compounds)

1000 ng/µl each component  
in Toluene 1 ml  
YA06100300TO

**Surrogate Standards**

2-Fluorobiphenyl

2000 ng/µl in Cyclohexane  
YA13785000CY 1 ml

1-Fluoronaphthalene

2000 ng/µl in Methyl-tert-butyl ether  
YA13794000MB 1 ml

**EPA Method 8110****Haloethers Mix 1**

4-Bromophenylphenyl ether  
bis(2-Chloroethoxy) methane  
bis(2-Chloroethyl) ether  
bis(2-Chloroisopropyl) ether  
4-Chlorophenylphenyl ether

2000 ng/µl each component  
in Methanol 1 ml  
YA06110100ME

**EPA Method 8120****Chlorinated Hydrocarbons Mix 2**

2-Chloronaphthalene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Hexachlorobenzene  
Hexachloro-1,3-butadiene  
Hexachlorocyclopentadiene  
Hexachloroethane  
1,2,4,5-Tetrachlorobenzene  
1,2,4-Trichlorobenzene

2000 ng/µl each component  
in n-Hexane 1 ml  
YA08120200HE

**EPA Method 8150****Chlorin. Herbicides Acids Mix 1**

2,4-D	100 ng/µl
2,4-DB	100 ng/µl
Dalapon	250 ng/µl
Dicamba	100 ng/µl
Dichlorprop	100 ng/µl
Dinoseb	50 ng/µl
MCPA	10000 ng/µl
MCPP	10000 ng/µl
Fenoprop (Silvex; 2,4,5-TP)	10 ng/µl
2,4,5-T	10 ng/µl

in Methanol 1 ml  
XA06150100ME

**Herbicide Methyl Deriv. Mix 4**

2,4-D-methyl ester	200ng/µl
Dalapon-methyl ester	200ng/µl
2,4-DB-methyl ester	200ng/µl
Dicamba-methyl ester	200ng/µl
Dichlorprop-methyl ester	200ng/µl
Dinoseb-methyl ether	200ng/µl
MCPA-methyl ester	2000ng/µl
Mecoprop-methyl ester	2000ng/µl
2,4,5-T-methyl ester	200ng/µl
Fenoprop-methyl ester	200ng/µl

in n-Hexane 1 ml  
XA08150400HE

**Internal Standards**

4,4'-Dibromooctafluorobiphenyl

100 ng/µl in Cyclohexane  
XA12240600CY 1 ml

2000 ng/µl in Methyl-tert-butyl ether  
YA12240600MB 1 ml

**Surrogate Standard**

2,4-Dichlorophenyl acetic acid methyl ester

2000 ng/µl in Acetone  
YA12468500AC 1 ml

**EPA Method 8240 & 8260****Aromatic VOC Mix 3**

Benzene  
Chlorobenzene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Ethylbenzene  
Styrene  
Toluene  
m-Xylene  
o-Xylene  
p-Xylene

100 ng/µl each component  
in Methanol 1 ml  
XA08020300ME

2000 ng/µl each component  
in Methanol 1 ml  
YA08020300ME

**EPA 8010 Halogenated VOC Mix 2**

Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromomethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,2-Dichloropropane  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
1,2,3-Trichloropropane

2000 ng/µl each component  
in Methanol 1 ml  
YA08010200ME

**VOC Mix 2**

Bromomethane  
Chloromethane  
Chloroethane  
Dichlorodifluoromethane  
Trichlorofluoromethane  
Vinyl chloride

200 ng/µl each component  
in Methanol 1 ml  
XA05000002ME

2000 ng/µl each component  
in Methanol 1 ml  
YA05000002ME

**EPA Method 8260****VOC - Mix 2**

Bromomethane  
Chloromethane  
Chloroethane  
Dichlorodifluoromethane  
Trichlorofluoromethane  
Vinyl chloride

200 ng/µl each component  
in Methanol 1 ml  
XA05000002ME

2000 ng/µl each component  
in Methanol 1 ml  
YA05000002ME

**VOC - Mix 3**

Bromochloromethane  
Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromomethane  
1,1-Dichloroethane  
2,2-Dichloropropane  
Tetrachloroethene  
1,1,1-Trichloroethane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000003ME

**VOC - Mix 4**

1,2-Dibromo-3-chloropropane  
1,2-Dibromoethane (EDB)  
1,2-Dichloroethane  
1,2-Dichloropropane  
1,3-Dichloropropane  
1,3-Dichloropropene\*  
1,1-Dichloropropene  
Hexachlorobutadiene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
1,1,2-Trichloroethane  
Trichloroethylene  
1,2,3-Trichloropropane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000004ME  
\*(4000 ng/µl total, 52% cis, 48% trans)

**VOC - Mix 5**

Benzene  
Bromobenzene  
n-Butyl Benzene  
Ethylbenzene  
p-Isopropyl Toluene  
Naphthalene  
Styrene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000005ME

**VOC - Mix 6**

sec-Butyl Benzene  
tert-Butyl Benzene  
Chlorobenzene  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Isopropylbenzene  
n-Propyl Benzene  
o-Xylene  
p-Xylene

2000 ng/µl each component  
in Methanol 1 ml  
YA05000006ME

**VOC - Mix EPA 524**

Bromodichloromethane  
Dibromochloromethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
Dichloromethane (Methylene chloride)

2000 ng/µl each component  
in Methanol 1 ml  
YA05000010ME

**Individual VOCs**

Acrolein (2-Propenal)  
certified neat  
CA10045000 1 ml

Carbondisulfide  
5000 ng/µl in Methanol  
YA11016000ME 1 ml

Chloralhydrate  
1000 ng/µl in Acetonitrile  
YA11098000AL 1 ml

Chloroprene  
100 ng/µl in Cyclohexane  
XA11502000CY 1 ml

Iodomethane  
certified neat  
CA14343000 0.25 g

Iodomethane  
2000 ng/µl in Methanol:Water (80:20)  
YA14343000MW 1 ml

Vinylacetate  
certified neat  
CA17922500 1 ml

**Surrogate Standard Mix 13**

4-Bromofluorobenzene  
1,2-Dichloroethane D4  
Toluene D8

2000 ng/µl each component  
in Methanol 1 ml  
YA08241300ME

**Purgeable Intern. Standard Mix 15**

Bromochloromethane  
Chlorobenzene D5  
1,4-Difluorobenzene

2500 ng/µl each component  
in Methanol 1 ml  
YA04000500ME

**VOC - Mix 20**

Benzene  
Bromobenzene  
Bromochloromethane  
Bromodichloromethane  
Bromoform  
Bromomethane  
n-Butyl Benzene  
tert-Butyl Benzene  
sec-Butyl Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroethane  
Chloroform  
Chloromethane  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dibromo-3-chloropropane  
Dibromochloromethane  
1,2-Dibromoethane  
Dibromomethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Dichlorodifluoromethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
1,2-Dichloropropane  
1,3-Dichloropropane  
2,2-Dichloropropane  
1,1-Dichloropropene  
\*1,3-Dichloropropene  
Ethylbenzene  
Hexachlorobutadiene  
Isopropylbenzene  
p-Isopropyl Toluene  
Dichloromethane  
Naphthalene  
n-Propyl Benzene  
Styrene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
Trichlorofluoromethane  
1,2,3-Trichloropropane  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene  
o-Xylene  
p-Xylene  
(59 compounds)

200 ng/µl each component  
in Methanol 1 ml  
XA05000020ME  
\*(400 ng/µl total 52% cis, 48% trans)

**VOC - Mix 15**

Benzene  
 Bromobenzene  
 Bromochloromethane  
 Bromodichloromethane  
 Bromoform  
 n-Butyl Benzene  
 tert-Butyl Benzene  
 sec-Butyl Benzene  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroform  
 2-Chlorotoluene  
 4-Chlorotoluene  
 1,2-Dibromo-3-chloropropane  
 Dibromochloromethane  
 1,2-Dibromoethane  
 Dibromomethane  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 1,1-Dichloroethane  
 1,2-Dichloroethane  
 cis-1,2-Dichloroethene  
 trans-1,2-Dichloroethene  
 1,1-Dichloroethene  
 1,2-Dichloropropane  
 1,3-Dichloropropane  
 2,2-Dichloropropane  
 1,1-Dichloropropene  
 \*1,3-Dichloropropene  
 Ethylbenzene  
 Hexachlorobutadiene  
 Isopropylbenzene  
 p-Isopropyl Toluene  
 Dichloromethane  
 Naphthalene  
 N-Propyl Benzene  
 Styrene  
 1,1,1,2-Tetrachloroethane  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethene  
 Toluene  
 1,2,3-Trichlorobenzene  
 1,2,4-Trichlorobenzene  
 1,1,1-Trichloroethane  
 1,1,2-Trichloroethane  
 Trichloroethene  
 1,2,3-Trichloropropane  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene  
 m-Xylene  
 o-Xylene  
 p-Xylene  
 (54 compounds)

200 ng/μl each component  
 in Methanol 1 ml  
 XA05000015ME

\* (400 ng/μl total 52% cis, 48% trans)

**VOC - Mix 42**

Acetone  
 2-Butanone  
 2-Hexanone  
 4-Methyl-2-pentanone

2000 ng/μl each component  
 in Methanol:Water (9:1) 1 ml  
 YA05000042MW

**Instrument Performance Check**

4-Bromofluorobenzene  
 2000 ng/μl in Methanol 1 ml  
 YA10731000ME

**Individual VOCs**

Iodomethane  
 certified neat  
 CA14343000 0.25 g

Iodomethane  
 2000 ng/μl in Methanol  
 YA14343000MW 1 ml

Acrolein (2-Propenal)  
 certified neat  
 CA10045000 1 ml

Vinylacetate  
 certified neat  
 CA17922500 1 ml

**Purgeable Intern. Standards Mix 4**

Chlorobenzene D5  
 1,4-Dichlorobenzene D4  
 1,4-Difluorobenzene  
 Pentafluorobenzene

2000 ng/μl each component  
 in Methanol 1 ml  
 YA08260400ME

**Surrogate Standard Mix 13**

4-Bromofluorobenzene  
 1,2-Dichloroethane D4  
 Toluene D8

2000 ng/μl each component  
 in Methanol 1 ml  
 YA08241300ME

**Instrument Performance Check Solution**

4-Bromofluorobenzene

2000 ng/μl  
 in Methanol 1 ml  
 YA10731000ME

**EPA Method 8270****Phenol Mix 15**

4-Chloro-3-methylphenol  
 2-Chlorophenol  
 2,4-Dichlorophenol  
 2,6-Dichlorophenol  
 2,4-Dimethylphenol  
 2,4-Dinitrophenol  
 2-Methyl-4,6-dinitrophenol  
 2-Nitrophenol  
 4-Nitrophenol  
 Pentachlorophenol  
 Phenol  
 2,3,4,6-Tetrachlorophenol  
 2,4,6-Trichlorophenol  
 (13 compounds)

2000 ng/μl each component  
 in Methanol 1 ml  
 YA04001500ME

**Phenol Mix 19**

2-sec-Butyl-4,6-dinitrophenol (Dinoseb)  
 4-Chloro-3-methylphenol  
 2-Chlorophenol  
 2,4-Dichlorophenol  
 2,6-Dichlorophenol  
 2,4-Dimethylphenol  
 2,4-Dinitrophenol  
 2-Methyl-4,6-dinitrophenol (DNOC)  
 2-Methylphenol  
 3-Methylphenol  
 4-Methylphenol  
 2-Nitrophenol  
 4-Nitrophenol  
 Pentachlorophenol  
 Phenol  
 2,3,4,6-Tetrachlorophenol  
 2,4,5-Trichlorophenol  
 2,4,6-Trichlorophenol  
 (18 compounds)

2000 ng/μl each component  
 in Isopropanol 1 ml  
 YA08271900IP

**Nitrosamines Mix 1**

N-Nitroso-dimethylamine  
 N-Nitroso-diphenylamine  
 N-Nitroso-di-n-propylamine

2000 ng/μl each component  
 in Methanol 1 ml  
 YA08070100ME

**Phthalate Esters Mix 1**

Bis-(2-ethylhexyl) phthalate  
 Butyl benzyl phthalate  
 Diethyl phthalate  
 Dimethyl phthalate  
 Di-n-butyl phthalate  
 Di-n-octyl phthalate

200 ng/μl each component  
 in Methanol 1 ml  
 XA08060100ME

2000 ng/μl each component  
 in iso-Octane 1 ml  
 YA08060100IO

2000 ng/μl each component  
 in Methanol 1 ml  
 YA08060100ME

**Chlorinated Hydrocarbons Mix 2**

2-Chloronaphthalene  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Hexachlorobenzene  
 Hexachloro-1,3-butadiene  
 Hexachlorocyclopentadiene  
 Hexachloroethane  
 1,2,4,5-Tetrachlorobenzene  
 1,2,4-Trichlorobenzene

2000 ng/μl each component  
 in n-Hexane 1 ml  
 YA08120200HE

**Haloethers Mix 1**

4-Bromophenyl phenyl ether  
bis(2-Chloroethoxy) methane  
bis(2-Chloroethyl) ether  
bis(2-Chloroisopropyl) ether  
4-Chlorophenyl phenyl ether

2000 ng/µl each component  
in Methanol 1 ml  
YA06110100ME

**EPA 8090 Mix 1**

1,3-Dinitrobenzene  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
Isophorone  
1,4-Naphtoquinone  
Nitrobenzene

2000 ng/µl  
in n-Hexane:Acetone (94:6) 1 ml  
YA08090100HA

**Organochlorine Pesticide Mix 2**

Aldrin  
alpha-BHC  
beta-BHC  
gamma-BHC  
delta-BHC  
4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
Dieldrin  
alpha-Endosulfan  
beta-Endosulfan  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Endrin ketone  
Heptachlor  
Heptachlor-endo-epoxide (Isomer A)  
Methoxychlor  
(18 compounds)

2000 ng/µl each component  
in Toluene:Hexane (1:1) 1 ml  
YA08080100TH

**PAH Mix 64**

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(g,h,i)perylene  
Carbazole  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Naphthalene  
Phenanthrene  
Pyrene  
(17 compounds)

2000 ng/µl each component  
in Benzene:Dichloromethane (1:1) 1 ml  
YA06100400BD

**Individual Standards**

Chlordane  
  
2000 ng/µl  
in Methanol 1 ml  
YA11200000ME

1,4-Phenylenediamine  
  
2000 ng/µl  
in Acetonitrile 1 ml  
YA16058000AL

Campechlor (Toxaphene)  
  
4000 ng/µl  
in Hexane 1 ml  
YA10940000HE

**Individual Aroclors**

Compound	Code
Aroclor 1016	YA20101600CY
Aroclor 1221	YA20122100CY
Aroclor 1232	YA20123200CY
Aroclor 1242	YA20124200CY
Aroclor 1248	YA20124800CY
Aroclor 1254	YA20125400CY
Aroclor 1260	YA20126000CY

1000 ng/µl  
in Cyclohexane 1 ml each

**Surrogate Standard Acid Mix 18**

2-Fluorophenol  
Phenol D6  
2,4,6-Tribromophenol

2000 ng/µl each component  
in Methanol 1 ml  
YA08271800ME

**Surrogate Standard Base/Neutrals Mix 19**

2-Fluorobiphenyl  
Nitrobenzene D5  
4-Terphenyl D14

1000 ng/µl each component  
in Dichloromethane 1 ml  
YA04001900DI

**GC/MS Calibration & Tuning Standards**

4,4'-Benzidine  
  
100 ng/µl  
in Acetonitrile 1 ml  
XA10536000AL

Pentachlorophenol  
  
100 ng/µl  
in Methanol 1 ml  
XA15970000ME

**Decafluorotriphenylphosphine (DFTPP)**

1000 ng/µl  
in Acetone 1 ml  
YA12093000AC

Perfluorotributylamine (PFTBA)  
C15987500 0.1 g

**Internal Standards Mix 26**

Acenaphthene D10  
Chrysene D12  
1,4-Dichlorobenzene D4  
Naphthalene D8  
Perylene D12  
Phenanthrene D10

4000 ng/µl each component  
in Benzene:Dichloromethane (1:1) 1 ml  
YA08272600BD

**Internal Standards Mix 33**

Acenaphthene D10  
Chrysene D12  
1,4-Dichlorobenzene D4  
Naphthalene D8  
Perylene D12  
Phenanthrene D10

2000 ng/µl each component  
in Toluene 1 ml  
YA08273300TO

2000 ng/µl each component  
in Toluene 10 ml  
Y08273300TO

**Tuning Standard Mix 25**

4,4'-Benzidine  
4,4'-DDT  
Decafluorotriphenylphosphine (DFTPP)  
Pentachlorophenol

500 ng/µl each component  
in Acetonitrile 1 ml  
XA08272500AL

**Semi-volatile Organic Compounds Mix 2**

Azobenzene  
2-Chloronaphthalene  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
Hexachlorobenzene  
Hexachlorobutadiene  
Hexachlorocyclopentadiene  
Hexachloroethane  
Isophorone  
Nitrobenzene  
1,2,4-Trichlorobenzene

2000 ng/µl each component  
in Dichloromethane 1 ml  
YA08270200DI



**EPA Method 8310****PAH Mix 14**

Mix of PAHs for US EPA Method 610 plus  
1-Methylnaphthalene and 2-Methylnaphthalene

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(g,h,i)perylene  
Benzo(a)pyrene  
Chrysene  
Dibenz(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3,c,d)pyrene  
1-Methylnaphthalene  
2-Methylnaphthalene  
Naphthalene  
Phenanthrene  
Pyrene

10 ng/µl each component  
in Acetonitrile or Cyclohexane  
L20950014AL 10 ml  
L20950014CY 10 ml

2000 ng/µl each component  
in Acetone:Benzene (1:1)  
YA20950014AB 1 ml

**PAH Mix 50 - (US EPA 16)**

Acenaphthene	1000 ng/µl
Acenaphthylene	1000 ng/µl
Anthracene	50 ng/µl
Benzo(a)anthracene	1 ng/µl
Benzo(a)pyrene	5 ng/µl
Benzo(b)fluoranthene	1 ng/µl
Benzo(g,h,i)perylene	5 ng/µl
Benzo(k)fluoranthene	1 ng/µl
Chrysene	50 ng/µl
Dibenzo(a,h)anthracene	10 ng/µl
Fluoranthene	50 ng/µl
Fluorene	100 ng/µl
Indeno(1,2,3-cd)pyrene	10 ng/µl
Naphthalene	1000 ng/µl
Phenanthrene	50 ng/µl
Pyrene	50 ng/µl

in Acetonitrile 1 ml  
XA05500100AL

**PAH Mix 61**

Acenaphthene	1000 ng/µl
Acenaphthylene	2000 ng/µl
Anthracene	100 ng/µl
Benzo(a)anthracene	100 ng/µl
Benzo(a)pyrene	100 ng/µl
Benzo(b)fluoranthene	200 ng/µl
Benzo(g,h,i)perylene	200 ng/µl
Benzo(k)fluoranthene	100 ng/µl
Chrysene	100 ng/µl
Dibenzo(a,h)anthracene	200 ng/µl
Fluoranthene	200 ng/µl
Fluorene	200 ng/µl
Indeno(1,2,3-cd)pyrene	100 ng/µl
Naphthalene	1000 ng/µl
Phenanthrene	100 ng/µl
Pyrene	100 ng/µl

in Methanol:Acetone (1:1) 1 ml  
XA06100100AM

**EPA Method 8330****Nitroaromatic-Explosive Mix 1**

1,3-Dinitrobenzene  
2,4-Dinitrotoluene  
Hexogen (RDX)  
Nitrobenzene  
Oktogen (HMX)  
1,3,5-Trinitrobenzene (TNB)  
2,4,6-Trinitrotoluene (TNT)

100 ng/µl each component  
in Acetonitrile 1 ml  
XA08330100AL

**Nitroaromatic-Explosive Mix 2**

2-Amino-4,6-dinitrotoluene  
4-Amino-2,6-dinitrotoluene  
2,6-Dinitrotoluene  
2-Nitrotoluene  
3-Nitrotoluene  
4-Nitrotoluene  
Tetryl

100 ng/µl each component  
in Acetonitrile 1 ml  
XA08330200AL

**Contract Laboratory Program  
- CLP****Aromatic Hydrocarbons Mix 11**

Benzene  
Ethyl Benzene  
Toluene  
m-Xylene  
o-Xylene  
p-Xylene

200 ng/µl each component  
in Methanol 1 ml  
XA04000100ME

2000 ng/µl each component  
in Methanol 1 ml  
YA04000100ME

**Phenol Mix 15**

4-Chloro-3-methyl phenol  
2-Chlorophenol  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
2,4-Dimethylphenol  
4,6-Dinitro-2-methylphenol  
2,4-Dinitrophenol  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,3,4,6-Tetrachlorophenol  
2,4,6-Trichlorophenol

2000 ng/µl each component  
in Methanol 1 ml  
YA04001500ME

**Volatiles Mix 13**

Acetone  
Benzene  
Bromodichloromethane  
Bromoform  
2-Butanone  
Carbon disulphide  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
Dibromochloromethane  
1,2-Dichloroethane  
1,1-Dichloroethane  
trans-1,2-Dichloroethene  
cis-1,2-Dichloroethene  
1,1-Dichloroethene  
Dichloromethane  
1,2-Dichloropropane  
1,3-Dichloropropene\*  
Ethyl Benzene  
2-Hexanone  
4-Methyl-2-pentanone  
Styrene  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
m-Xylene  
o-Xylene  
p-Xylene  
(32 compounds)

200 ng/µl each component  
in Methanol 1 ml  
XA04000300ME  
\*(400 ng/µl 52%cis, 48%trans)

**Purgeable Internal Standard  
Volatiles Mix 15**

Bromochloromethane  
Chlorobenzene D5  
1,4-Difluorobenzene

2500 ng/µl each component  
in Methanol 1 ml  
YA04000500ME

**Surrogate Standard Mix 13**

4-Bromofluorobenzene  
1,2-Dichloroethane D4  
Toluene D8

2000 ng/µl each component  
in Methanol 1 ml  
YA08241300ME

**CLP - Acid Surrogate Mix 16**

2-Chlorophenol D4  
2-Fluorophenol  
Phenol D6  
2,4,6-Tribromophenol

2000 ng/µl each component  
in Methanol 1 ml  
YA04001600ME

**Instrument Performance Check**

4-Bromofluorobenzene

2000 ng/µl  
in Methanol 1 ml  
YA10731000ME

**PAH Mix 64**

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(g,h,i)perylene  
Carbazole  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Naphthalene  
Phenanthrene  
Pyrene  
(17 compounds)

2000 ng/µl each component  
in Benzene:Dichloromethane (1:1) 1 ml  
YA06100400BD

**Phenol Mix 5**

2-Bromophenol  
4-Chloro-3-methylphenol  
2-Chlorophenol  
2,4-Dichlorophenol  
2,4-Dimethylphenol  
2,4-Dinitrophenol  
2-Methyl-4,6-dinitrophenol  
2-Methylphenol  
3-Methylphenol  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,3,4,6-Tetrachlorophenol  
2,4,6-Trichlorophenol

2500 ng/µl each component  
in Acetonitrile 1 ml  
YA19000005AL

**Base Neutrals****Surrogate Standard Mix 19**

2-Fluorobiphenyl  
Nitrobenzene D5  
4-Terphenyl D14

1000 ng/µl each component  
in Dichloromethane 1 ml  
YA04001900DI

**Instrument Check**

Decafluorotriphenylphosphine  
1000 ng/µl  
in Acetone 1 ml  
YA12093000AC

**Internal Standards Mix 26**

Acenaphthene D10  
Chrysene D12  
1,4-Dichlorobenzene D4  
Naphthalene D8  
Perylene D12  
Phenanthrene D10

4000 ng/µl each component  
in Benzene:Dichloromethane (1:1) 1 ml  
YA08272600BD

**Internal Standards Mix 33**

Acenaphthene D10  
Chrysene D12  
1,4-Dichlorobenzene D4  
Naphthalene D8  
Perylene D12  
Phenanthrene D10

2000 ng/µl each component  
in Toluene  
YA08273300TO 1ml  
Y08273300TO 10ml

**Individual Aroclors**

Compound	Code
Aroclor 1016	YA20101600CY
Aroclor 1221	YA20122100CY
Aroclor 1232	YA20123200CY
Aroclor 1242	YA20124200CY
Aroclor 1248	YA20124800CY
Aroclor 1254	YA20125400CY
Aroclor 1260	YA20126000CY

1000 ng/µl 1 ml each  
in Cyclohexane

**Surrogate Standard Mix 9**

Decachlorobiphenyl  
2,4,5,6-Tetrachloro-m-xylene

200 ng/µl each component  
in Acetone 1 ml  
XA08080900AC

**Toxicity Characteristic Leaching Study****Volatile Spiking Mix 1**

Benzene	5000 ng/µl
2-Butanone	10000 ng/µl
Carbon tetrachloride	5000 ng/µl
Chlorobenzene	5000 ng/µl
Chloroform	5000 ng/µl
1,4-Dichlorobenzene	5000 ng/µl
1,2-Dichloroethane	5000 ng/µl
1,1-Dichloroethene	5000 ng/µl
Tetrachloroethene	5000 ng/µl
Trichloroethene	5000 ng/µl

in Methanol 1 ml  
YA04010100ME

**Vinyl chloride**

5000 ng/µl  
in Methanol 5 ml  
YA04010200ME

in Acetone 5 ml  
YA04010200AC

**Vinyl acetate**

Certified neat  
CA17922500 1 ml

**Pesticide Spiking Solutions****Chlordane Standard**

Chlordane

2000 ng/µl  
in Methanol 1 ml  
YA11200000ME

**Toxaphene Standard**

Camphechlor (Toxaphene)

4000 ng/µl  
in Hexane 1 ml  
YA10940000HE

**CLP GPC Calibration Mix 1**

Corn oil	250000 ng/µl
bis-(2-ethylhexyl) phthalate	10000 ng/µl
Methoxychlor	2000 ng/µl
Perylene	200 ng/µl
Sulfur	800 ng/µl

in Dichloromethane 1 ml  
XA01650100DI

set of 10 ampoules of 1 ml each  
XS01650100DI

## VOC Mixes

These mixes have been designed by our customers, many for European methodology. Should you not find a mix, that meets your need, please telephone, fax or email us with your requirements, including a list of components, concentrations, solvent and quantity required. We can produce any mix and will be delighted to provide a quote. More mixes may be found in the US EPA Methods Standards and Mixes section on page 63.

### VOC - Mix 1

Bromodichloromethane  
Bromoform  
Chloroform  
Dibromochloromethane

100 ng/µl each component  
in Methanol 1 ml  
XA05000001ME

### VOC - Mix 2

Bromomethane  
Chloroethane  
Chloromethane  
Dichlorodifluoromethane  
Trichlorofluoromethane  
Vinyl chloride

200 ng/µl each component  
in Methanol 1 ml  
XA05000002ME

2000 ng/µl each component  
in Methanol 1 ml  
YA05000002ME

### VOC - Mix 3

Bromochloromethane  
Bromoform  
Carbon tetrachloride  
Chloroform  
Dibromomethane  
1,1-Dichloroethane  
2,2-Dichloropropane  
Tetrachloroethene  
1,1,1-Trichloroethane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000003ME

### VOC - Mix 4

1,2-Dibromo-3-chloropropane  
1,2-Dibromoethane (EDB)  
1,2-Dichloroethane  
1,2-Dichloropropane  
1,3-Dichloropropane  
1,3-Dichloropropene\*  
1,1-Dichloropropene  
Hexachlorobutadiene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
1,1,2-Trichloroethane  
Trichloroethylene  
1,2,3-Trichloropropane

2000 ng/µl each component  
in Methanol 1 ml  
YA05000004ME  
\*(4000 ng/µl total 52% cis, 48% trans)

### VOC - Mix 15

Benzene  
Bromobenzene  
Bromochloromethane  
Bromodichloromethane  
Bromoform  
n-Butyl Benzene  
tert-Butyl Benzene  
sec-Butyl Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dibromo-3-chloropropane  
Dibromochloromethane  
1,2-Dibromoethane  
Dibromomethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
1,1-Dichloroethane  
1,2-Dichloroethane  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
1,1-Dichloroethene  
1,2-Dichloropropane  
1,3-Dichloropropane  
2,2-Dichloropropane  
1,1-Dichloropropene  
\*1,3-Dichloropropene  
Ethylbenzene  
Hexachlorobutadiene  
Isopropylbenzene  
p-Isopropyl Toluene  
Dichloromethane  
Naphthalene  
N-Propyl Benzene  
Styrene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
1,2,3-Trichloropropane  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene  
o-Xylene  
p-Xylene  
(54 compounds)

200 ng/µl each component  
in Methanol 1 ml  
XA05000015ME  
\*(400 ng/µl total 52% cis, 48% trans)

### VOC - Mix 20

Benzene  
Bromobenzene  
Bromochloromethane  
Bromodichloromethane  
Bromoform  
Bromomethane  
n-Butyl Benzene  
tert-Butyl Benzene  
sec-Butyl Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroethane  
Chloroform  
Chloromethane  
2-Chlorotoluene  
4-Chlorotoluene  
1,2-Dibromo-3-chloropropane  
Dibromochloromethane  
1,2-Dibromoethane  
Dibromomethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Dichlorodifluoromethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethene  
cis-1,2-Dichloroethene  
trans-1,2-Dichloroethene  
1,2-Dichloropropane  
1,3-Dichloropropane  
2,2-Dichloropropane  
1,1-Dichloropropene  
\*1,3-Dichloropropene  
Ethylbenzene  
Hexachlorobutadiene  
Isopropylbenzene  
p-Isopropyl Toluene  
Dichloromethane  
Naphthalene  
n-Propyl Benzene  
Styrene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethene  
Toluene  
1,2,3-Trichlorobenzene  
1,2,4-Trichlorobenzene  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
Trichlorofluoromethane  
1,2,3-Trichloropropane  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
m-Xylene  
o-Xylene  
p-Xylene  
(59 compounds)

200 ng/µl each component  
in Methanol 1 ml  
XA05000020ME  
\*(400 ng/µl total 52% cis, 48% trans)

**VOC - Mix 524**

Bromodichloromethane  
 Dibromochloromethane  
 1,1-Dichloroethene  
 cis-1,2-Dichloroethene  
 trans-1,2-Dichloroethene  
 Dichloromethane (Methylene chloride)

2000 ng/µl each component  
 in Methanol 1 ml  
 YA05000010ME

**VOC - Mix 21**

Bromodichloromethane  
 Chlorodibromomethane  
 1,2-Dibromoethane  
 1,2-Dichloroethane  
 Tetrachloroethene  
 Tetrachloromethane  
 Tribromomethane  
 1,1,1-Trichloroethane  
 Trichloroethene  
 Trichloromethane

200 ng/µl each component  
 in Methanol 1 ml  
 XA05000021ME

**VOC - Mix 23**

Bromodichloromethane	50 ng/µl
Bromoform	50 ng/µl
Carbon tetrachloride	6 ng/µl
Chlorodibromomethane	50 ng/µl
Chloroform	50 ng/µl
Tetrachloroethene	20 ng/µl
Trichloroethene	60 ng/µl

in Methanol 1 ml  
 XA05000023ME

**VOC - Mix 108**

Bromochloromethane	100 ng/µl
Bromodichloromethane	100 ng/µl
Chlorobenzene	100 ng/µl
Dibromochloromethane	100 ng/µl
Dibromomethane	100 ng/µl
1,2-Dichlorobenzene	1000 ng/µl
1,3-Dichlorobenzene	1000 ng/µl
1,1-Dichloroethane	1000 ng/µl
1,2-Dichloroethane	1000 ng/µl
1,1-Dichloroethene	1000 ng/µl
cis-1,2-Dichloroethene	1000 ng/µl
trans-1,2-Dichloroethene	1000 ng/µl
Dichloromethane	1000 ng/µl
1,2-Dichloropropane	1000 ng/µl
1,3-Dichloropropane	1000 ng/µl
Hexachlorobutadiene	100 ng/µl
1,1,1,2-Tetrachloroethane	100 ng/µl
1,1,2,2-Tetrachloroethane	100 ng/µl
Tetrachloroethene	50 ng/µl
Tetrachloromethane	50 ng/µl
Tribromomethane	100 ng/µl
1,1,1-Trichloroethane	100 ng/µl
1,1,2-Trichloroethane	100 ng/µl
1,1,2-Trichloroethene	100 ng/µl
Trichloromethane	100 ng/µl

in Methanol 10 x 1 ml  
 YS05000108ME

**Fortification Solution - Mix 19**

4-Bromofluorobenzene  
 1,2-Dichlorobenzene  
 Fluorobenzene

2000 ng/µl each component  
 in Methanol 1 ml  
 YA05000019ME

**VOC - Mix 1**

Bromodichloromethane  
 Bromoform  
 Chloroform  
 Dibromochloromethane

100 ng/µl each component  
 in Methanol 1 ml  
 XA05000001ME

**Aromatic VOC Mix 1**

Benzene  
 Chlorobenzene  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Ethylbenzene  
 Toluene  
 m-Xylene  
 o-Xylene  
 p-Xylene

2000 ng/µl each component  
 in Methanol 1 ml  
 YA08020100ME

**Mix of Aromatic Hydrocarbons 2**

Benzene  
 Ethylbenzene  
 Toluene  
 o-Xylene  
 m-Xylene  
 p-Xylene

10 ng/µl each component  
 in Methanol 10ml  
 L19070002ME

100 ng/µl each component  
 in Methanol 10ml  
 X19070002ME

**Aromatic Hydrocarbons Mix 11**

Benzene  
 Ethylbenzene  
 Toluene  
 o-Xylene  
 m-Xylene  
 p-Xylene

2000 ng/µl each component  
 in Methanol 1 ml  
 YA04000100ME

**Aromatic VOC Mix 3**

Benzene  
 Chlorobenzene  
 1,2-Dichlorobenzene  
 1,3-Dichlorobenzene  
 1,4-Dichlorobenzene  
 Ethylbenzene  
 Styrene  
 Toluene  
 m-Xylene  
 o-Xylene  
 p-Xylene

100 ng/µl each component  
 in Methanol 1 ml  
 XA08020300ME

2000 ng/µl each component  
 in Methanol 1 ml  
 YA08020300ME

**Mix of Aromatic Hydrocarbons 13**

DIN 38407-F19

Benzene  
 Ethylbenzene  
 Toluene  
 o-Xylene  
 m-Xylene  
 p-Xylene  
 1,2,3-Trimethylbenzene  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene

10000 ng/µl each component  
 in Hexane 1 ml  
 YA19070013HE

**Aromatic Comp.-Mix 16**

DIN V 38407-F16

4-Bromoaniline	10 ng/µl
2-Chloroaniline	10 ng/µl
3-Chloroaniline	10 ng/µl
4-Chloroaniline	10 ng/µl
3-Chloro-4-methylaniline	10 ng/µl
4-Chloro-2-methylaniline	10 ng/µl
2,4-Dichloroaniline	10 ng/µl
2,6-Dichloroaniline	10 ng/µl
3,4-Dichloroaniline	10 ng/µl
3,5-Dichloroaniline	10 ng/µl
N,N-Dimethylaniline	10 ng/µl
2,6-Dimethylaniline	10 ng/µl
o-Toluidine	10 ng/µl
2,3,4-Trichloroaniline	10 ng/µl
2,4,5-Trichloroaniline	10 ng/µl
2-Trifluoromethylaniline	20 ng/µl
3-Trifluoromethylaniline	10 ng/µl

in Methanol 1 ml  
 LA19000716ME