

## Fuel Oil Degradation Test

Subsurface degradation of fuel oil spills can be estimated by examining the ratios of C17/pristane and C18/phytane.<sup>1</sup> To assist in identifying these four compounds from the complex fuel oil analysis, we offer a product that contains these compounds for retention time determination.

### Fuel Oil Degradation Mix

heptadecane (C17)  
octadecane (C18)  
pristane (2,6,10,14-tetramethylpentadecane)  
phytane (2,6,10,14-tetramethylhexadecane)

2,000µg/mL each in methylene chloride, 1mL/ampul  
cat. # 31240 (ea.)

<sup>1</sup>Interpretation of Gas Chromatographic Data in Subsurface Hydrocarbon Investigations, R. Senn and M. Johnson, *Ground Water Monitoring Review*, Winter 1987.

## Mineral Spirits

There are four general types of mineral spirits, classified according to boiling point range (BPR):

- Type I (Stoddard solvent) BPR 149–182°C
- Type II (high flash point) BPR 177–196°C
- Type III (odorless) BPR 149–196°C
- Type IV (low dry point) BPR 149–174°C

We prepare our solutions from an equal volume blend of Type I, II, and III mineral spirits.

### Mineral Spirits Standards

5,000µg/mL in methylene chloride, 1mL/ampul  
cat. # 31225 (ea.)

50,000µg/mL in methylene chloride, 1mL/ampul  
cat. # 31260 (ea.)

50,000µg/mL in methylene chloride, 5mL/ampul  
cat. # 31261 (ea.)

### Stoddard Solvent Standard

Stoddard solvent is also known as Type I mineral spirits, Teksolve S<sup>®</sup>, or Varsol 1<sup>®</sup> mineral spirits. We offer this reference material for those who need to calibrate Stoddard solvent separately. This standard is dissolved in methanol for analysis by either direct injection or purge and trap.

10,000µg/mL in P&T methanol, 1mL/ampul  
cat. # 30487 (ea.)

## Petroleum Volatile Organic Compounds (PVOC), Gasoline Range Organics (GRO), & Benzene-Toluene-Ethylbenzene-Xylenes (BTEX)

### PVOC Mix (California) (7 components)

benzene	<i>m</i> -xylene
ethylbenzene	<i>o</i> -xylene
methyl <i>tert</i> -butyl ether (MTBE)	<i>p</i> -xylene
toluene	

1,000µg/mL each in P&T methanol, 1mL/ampul  
cat. # 30231 (ea.)

### PVOC/GRO Mix (Wisconsin) (10 components)

benzene	1,2,4-trimethylbenzene
ethylbenzene	1,3,5-trimethylbenzene
methyl <i>tert</i> -butyl ether (MTBE)	<i>m</i> -xylene
naphthalene	<i>o</i> -xylene
toluene	<i>p</i> -xylene

1,000µg/mL each in P&T methanol, 1mL/ampul  
cat. # 30095 (ea.)

### GRO Mix (9 components)

benzene	1,2,4-trimethylbenzene
ethylbenzene	2,2,4-trimethylpentane (isooctane)
3-methylpentane	
naphthalene	<i>m</i> -xylene
toluene	<i>o</i> -xylene

1,000µg/mL each in P&T methanol, 1mL/ampul  
cat. # 30069 (ea.)

### GRO Mix (EPA) (9 components)

benzene	500µg/mL	1,2,4-trimethylbenzene	1,000
ethylbenzene	500	2,2,4-trimethylpentane	1,500
heptane	500	<i>m</i> -xylene	1,000
2-methylpentane	1,500	<i>o</i> -xylene	1,000
toluene	1,500		

In P&T methanol, 1mL/ampul  
cat. # 30065 (ea.)

### BTEX Standard

benzene	<i>m</i> -xylene
ethylbenzene	<i>o</i> -xylene
toluene	<i>p</i> -xylene

200µg/mL each in P&T methanol, 1mL/ampul  
cat. # 30051 (ea.)

2,000µg/mL each in P&T methanol, 1mL/ampul  
cat. # 30213 (ea.)

2,000µg/mL each in P&T methanol, (*m*-xylene and *p*-xylene at 1,000µg/mL), 1mL/ampul  
cat. # 30488 (ea.)

### BTEX Gas Mix

**Cylinder Construction:** aluminum  
**Cylinder Fitting:** CGA-180 outlet

benzene	<i>m</i> -xylene
ethylbenzene	<i>o</i> -xylene
toluene	<i>p</i> -xylene

In nitrogen, 104 liters @ 1,800psi  
**1ppm** cat. # 34414 (ea.)

**100ppb** cat. # 34428 (ea.)

In nitrogen, 110 liters @ 1,800psi (Pi-marked Cylinder)

**1ppm** cat. # 34414-PI (ea.)

**100ppb** cat. # 34428-PI (ea.)

Requires a high-purity VOC single-stage regulator. See page 415.  
No data pack available.

## free literature

EPA Office of Underground Storage Tanks (OUST)  
**Recommended Methods**

Download your free copy from  
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Fast Facts  
**lit. cat. # 59397**

See pages 491-497 for  
information on UST technical  
literature for individual states.