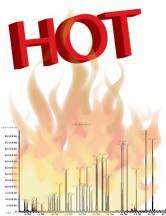


See What's Coming Down the Pike.....



MADEP VPH & EPH Methods

Rev. 1.1

Absolute Standards, Inc.



Phone: (800) 368-1131, Fax: (800) 410-2577

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Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH) are analytical methods that differentiate and quantitate collective concentrations of aliphatic & aromatic hydrocarbons in soil and water. Contact: StephenArpie@AbsoluteStandards.com

Volatile Petroleum Hydrocarbons (VPH)

Primary Calibration (VPH) Rev. 1.1

2000 ug/mL in Methanol

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) 1,2,4-Trimethylbenzene
- (8) Methyl tert-butyl ether (MTBE)
- (9) Naphthalene
- (10) n-Pentane
- (11) 2-Methylpentane
- (12) 2,2,4-Trimethylpentane
- (13) n-Nonane
- (14) n-Decane
- (15) n-Butylcyclohexane

Part # 51167 \$50/1 mL

Primary Calibration Spike (VPH) Rev. 1.1

Varied ug/mL in Methanol

- | | |
|-----------------------------|------|
| (1) Benzene | 500 |
| (2) Toluene | 1500 |
| (3) Ethyl benzene | 500 |
| (4) o-Xylene | 1000 |
| (5) m-Xylene | 1000 |
| (6) p-Xylene | 1000 |
| (7) 1,2,4-Trimethylbenzene | 1000 |
| (8) Methyl tert-butyl ether | 1500 |
| (9) Naphthalene | 1000 |
| (10) n-Pentane | 1000 |
| (11) 2-Methylpentane | 1500 |
| (12) 2,2,4-Trimethylpentane | 1500 |
| (13) n-Nonane | 1000 |
| (14) n-Decane | 1000 |
| (15) n-Butylcyclohexane | 1000 |
| (16) * 2,5-Dibromotoluene | 1000 |

Part # 51166 \$50/1 mL

* Surrogate

Matrix Spike (VPH) Rev. 1.1

50 ug/mL in Methanol

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) 1,2,4-Trimethylbenzene
- (8) Methyl tert-butyl ether
- (9) Naphthalene
- (10) n-Pentane
- (11) 2-Methylpentane
- (12) 2,2,4-Trimethylpentane
- (13) n-Nonane
- (14) n-Decane
- (15) n-Butylcyclohexane
- (16) *2,5-Dibromotoluene

Part # 93624 \$35/1 mL

* Surrogate

Surrogate Spike (VPH)

5000 ug/mL in Methanol

- (1) 2,5-Dibromotoluene

Part # 91771 \$20/1 mL

Petroleum Reference Standard

93 Octane Gasoline (VPH)

1mL in Methanol.

Part # 71359 \$20/ 1 mg/mL

Part # 51001 \$25/ 20 mg/mL

Performance Testing Samples (VPH)

VPH in Water

in Methanol. 2 mL

Blind PT	Part # 38118-EX	\$80
Practice PT	Part # 38118-IN	\$80
Calibration Mix*	Part # 51167	\$50

*2000 ug/mL in methanol. 1mL

VPH in Soil

in Soil.

Blind PT	Part # 38119-EX	\$95
Practice PT	Part # 38119-IN	\$95
Calibration Mix*	Part # 51167	\$50

*2000 ug/mL in methanol. 1mL

Extractable Petroleum Hydrocarbons (EPH)

Aromatic Hydrocarbons (EPH)

Rev. 1.0/1.1

2000 ug/mL in Methylene chloride

- (1) Acenaphthene
- (2) Acenaphthylene
- (3) Anthracene
- (4) Benzo(a)anthracene
- (5) Benzo(a)pyrene
- (6) Benzo(b)fluoranthene
- (7) Benzo(k)fluoranthene
- (8) Benzo(g,h,i)perylene
- (9) Chrysene
- (10) Dibenzo(a,h)anthracene
- (11) Fluoranthene
- (12) Fluorene
- (13) Indeno(1,2,3-cd)pyrene
- (14) 2-Methylnaphthalene
- (15) Naphthalene
- (16) Phenanthrene
- (17) Pyrene

Part # 51073 \$50/1 mL

Matrix Spike (EPH)

Rev. 1.0/1.1

200 ug/mL in Hexane:MeCl [9:1]

- | | |
|-----------------------------|------------------------|
| (1) Acenaphthene | (17) Pyrene |
| (2) Acenaphthylene | (18) n-Nonane |
| (3) Anthracene | (19) n-Decane |
| (4) Benzo(a)anthracene | (20) n-Dodecane |
| (5) Benzo(a)pyrene | (21) n-Tetradecane |
| (6) Benzo(b)fluoranthene | (22) n-Hexadecane |
| (7) Benzo(k)fluoranthene | (23) n-Octadecane |
| (8) Benzo(g,h,i)perylene | (24) n-Nonadecane |
| (9) Chrysene | (25) n-Eicosane |
| (10) Dibenzo(a,h)anthracene | (26) n-Docosane |
| (11) Fluoranthene | (27) n-Tetracosane |
| (12) Fluorene | (28) n-Hexacosane |
| (13) Indeno(1,2,3-cd)pyrene | (29) n-Octacosane |
| (14) 2-Methylnaphthalene | (30) n-Triacontane |
| (15) Naphthalene | (31) n-Hexatriacontane |
| (16) Phenanthrene | |

Part # 51074 \$40/1 mL

n-Hydrocarbons (EPH)

Rev. 1.0/1.1

2000 ug/mL in Hexane

- (1) n-Nonane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Tetradecane
- (5) n-Hexadecane
- (6) n-Octadecane
- (7) n-Nonadecane
- (8) n-Eicosane
- (9) n-Docosane
- (10) n-Tetracosane
- (11) n-Hexacosane
- (12) n-Octacosane
- (13) n-Triacontane
- (14) n-Hexatriacontane

Part # 91488 \$40/1 mL

Fractionation Surrogate (EPH)

2000 ug/mL in Hexane.

- (1) 2-Fluorobiphenyl
- (2) 2-Bromonaphthalene

Part # 51089 \$20/1 mL

Petroleum Reference Standard

#2 Fuel Oil Diesel (EPH)

1mL in Hexane.

Part # 51092 \$20/ 1 mg/mL

Part # 51037 \$25/ 20 mg/mL

Surrogate Spike (EPH)

2000 ug/mL in Acetone.

- (1) o-Terphenyl
- (2) 1-Chlorooctadecane

Part # 51075 \$20/1 mL

Matrix Spike (EPH)

Rev. 1.0/1.1

2000 ug/mL in Methylene chloride.

- (1) n-Nonane
- (2) n-Tetradecane
- (3) n-Nonadecane
- (4) n-Eicosane
- (5) n-Octacosane
- (6) Acenaphthene
- (7) Anthracene
- (8) Chrysene
- (9) Naphthalene
- (10) Pyrene

Part # 91489 \$40/1 mL

Performance Testing Samples (EPH)

EPH in Water

in Hexane/MeCl. 2 mL

- (1) Total C9-C18 Aliphatics
- (2) Total C19-C36 Aliphatics
- (3) Total C11-C22 Aromatics
- (4) TPH

Blind PT Part # 38174-EX \$125

Practice PT Part # 38174-IN \$125

Calibration Mix* Part # 51073 \$50

Calibration Mix** Part # 91488 \$40

*2000 ug/mL in Methylene Chloride. 1mL

**2000 ug/mL in hexane. 1mL

EPH in Soil

in Soil.

- (1) Total C9-C18 Aliphatics
- (2) Total C19-C36 Aliphatics
- (3) Total C11-C22 Aromatics
- (4) TPH

Blind PT Part # 38175-EX \$175

Practice PT Part # 38175-IN \$175

Calibration Mix* Part # 51073 \$50

Calibration Mix** Part # 91488 \$40

*2000 ug/mL in Methylene Chloride. 1mL

**2000 ug/mL in hexane. 1mL