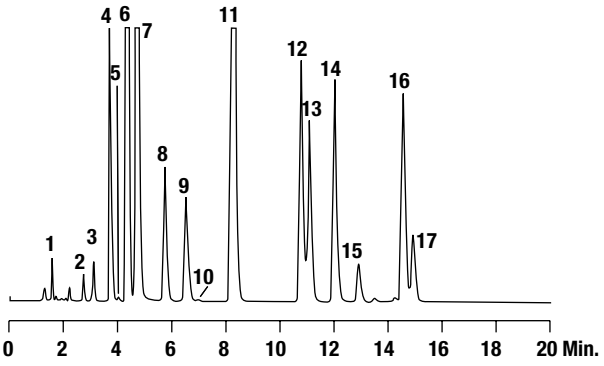
## PAHs

### Polyaromatic Hydrocarbons

CHROM 9400



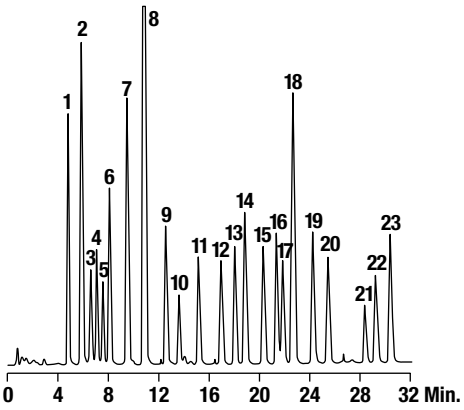

1. Benzene
2. Naphthalene
3. Acenaphthylene
4. Fluorene
5. Acenaphthene
6. Phenanthrene
7. Anthracene
8. Fluoranthene
9. Pyrene
10. Benz[a]anthracene
11. Chrysene
12. Benzo[b]fluoranthene
13. Benzo[k]fluoranthene
14. Benzo[a]pyrene
15. Dibenz[a,h]anthracene
16. Benzo[g,h,i]perylene
17. Indeno[1,2,3,c,d]pyrene

**Column:** Alltech® Prevail™ C18, 5µm, 150 x 4.6mm (Part No. **99208**)
**Mobile Phase:** **A:** Water **B:** Acetonitrile
**Gradient:**

| **Time:** | 0 | 4 | 15 |
|---|---|---|---|
| **%B:** | 72 | 72 | 100 |

**Flow Rate:** 1.5mL/min
**Detector:** UV at 254

### Beyond the EPA 16 Priority-Pollutant PAHs




1. Naphthalene
2. Acenaphthylene
3. 1-Methylnaphthalene
4. 2-Methylnaphthalene
5. Acenaphthene
6. Fluorene
7. Phenanthrene
8. Anthracene
9. Fluoranthene
10. Pyrene
11. Benzo[c]phenanthrene
12. Cyclopenta[c,d]pyrene
13. Benz[a]anthracene
14. Chrysene
15. Benzo[b]naptho[2,1-d]thiopen
16. 7,12-Dimethylbenz[a]anthracene
17. Benzo[e]pyrene
18. Benzo[b]fluoranthene
19. Benzo[k]fluoranthene
20. Benz[a]pyrene
21. Dibenz[a,h]anthracene
22. Benzo[g,h,i]perylene
23. Indeno[1,2,3,c,d]pyrene

**Column:** Vydac® C18, 5µm, 150 x 4.6mm (Part No. **201TP5415**)
**Mobile Phase:** **A:** Water **B:** Acetonitrile
**Gradient:**

| **Time:** | 0 | 30 |
|---|---|---|
| **%B:** | 50 | 100 |

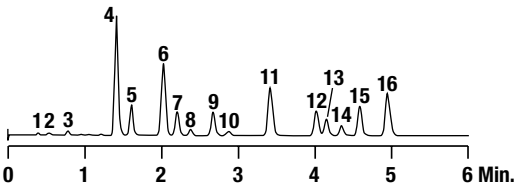
**Flow Rate:** 1.0mL/min

## Nitroaromatics

### Fast Polyaromatic Hydrocarbons

CHROM 10757

1. Naphthalene
2. Acenapthylene
3. Acenaphthene
4. Fluorene
5. Phenanthrene
6. Anthracene
7. Fluoranthene
8. Pyrene
9. Benzo[a]anthracene
10. Chrysene
11. Benzo[b]fluoranthene
12. Benzo[k]fluoranthene
13. Benzo[a]pyrene
14. Dibenzo[a,h]anthracene
15. Benzo[g,h,i]perylene
16. Indeno[1,2,3,c,d]pyrene



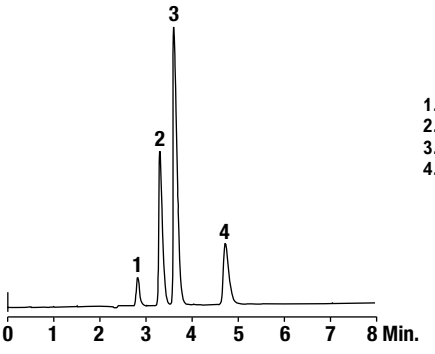

**Column:** Alltech® Alltima™ HP C18 HiLoad, 3µm, 53 x 7mm (Part No. **87690**)
**Mobile Phase:** **A:** Water **B:** Acetonitrile
**Gradient:**

| **Time:** | 0 | 0.1 | 5 |
|---|---|---|---|
| **%B:** | 40 | 40 | 100 |

**Flow Rate:** 5mL/min
**Detector:** UV at 230nm

### Nitroaromatics (Normal-Phase)

CHROM 10358

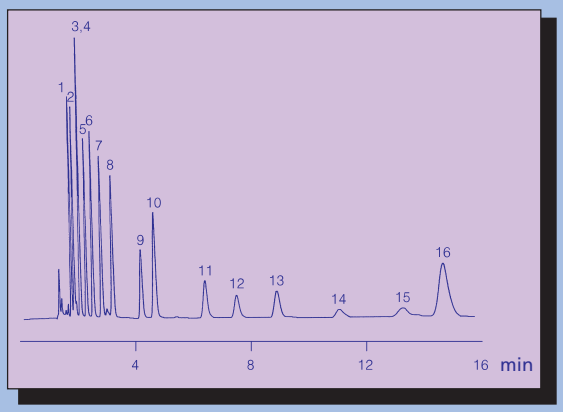



1. Nitrobenzene
2. 2,6-Dinitrotoluene
3. 1,3-Dinitrobenzene
4. 4-Nitrophenol

**Column:** Alltech® Alltima™ HP CN, 5µm, 150 x 4.6mm (Part No. **87769**)
**Mobile Phase:** Hexane:Isopropanol (85:15)
**Flow Rate:** 1.0mL/min
**Detector:** UV at 254nm

# Polycyclic aromatic hydrocarbons (PAH's)

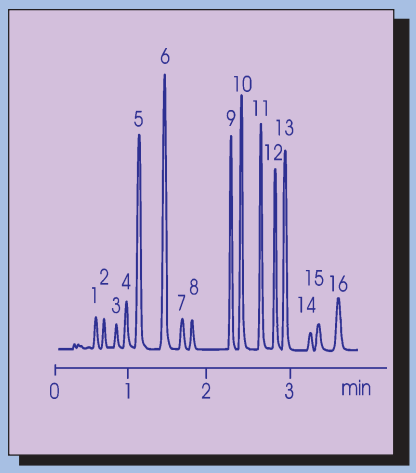
## 10 036 Isocratic Separation of Polycyclic Aromatic Hydrocarbons (PAH's)




**Column phase:** GROM-SIL PAH -1 (tailor-made)
**Column size:** 250 x 4mm
**Eluent:** water / ACN = 15 / 85
**Flow rate:** 1.5 ml/min
**Pressure:** 13 MPa
**Temperature:** 25°C
**Detection (UV):** 254 nm
**Injection:** 5 µl (5 µg/ml each)

**1)** Naphthalene
**2)** Acenaphthylene
**3)** Acenaphthene
**4)** Fluorene
**5)** Phenanthrene
**6)** Anthracene
**7)** Fluoranthene
**8)** Pyrene
**9)** Benz(a)anthracene
**10)** Chrysene
**11)** Benzo(b)fluoranthene
**12)** Benzo(k)fluoranthene
**13)** Benzo(a)pyrene
**14)** Dibenzo(a,h)anthracne
**15)** Benzo(g,h)perylene
**16)** Ideno(1,2,3,c,d)pyrene

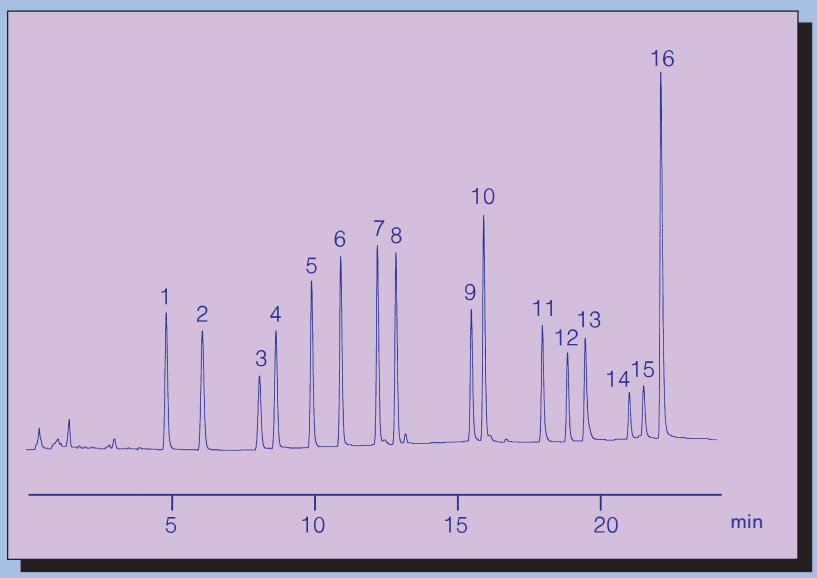
## 10 163 Analysis of Polycyclic Aromatic Hydrocarbons (EPA Standard)




**1)** Naphthalene
**2)** Acenaphthylene
**3)** Acenaphthene
**4)** Fluorene
**5)** Phenanthrene
**6)** Anthracene
**7)** Fluoranthene
**8)** Pyrene
**9)** Benz(a)anthracene
**10)** Chrysene
**11)** Benzo(b)fluoranthene
**12)** Benzo(k)fluoranthene
**13)** Benzo(a)pyrene
**14)** Dibenzo(a,h) anthracene
**15)** Benzo(g,h)perylene
**16)** Ideno(1,2,3,c,d)pyrene

**Column phase:** GROM-PAH, 3 µm
**Column size:** 50 x 4 mm
**Eluent A:** $H_2O$ / MeOH = 20 / 80
**B:** ACN
**Gradient:** 10% B (0-0.5 min), 100% B (0-1.0 min), 100 % B (1.0-4.0 min)
**Flow rate:** 2.0 ml/min
**Pressure:** 16.4 MPa
**Temperature:** RT
**Detection (UV):** 254 nm (1.3 µl flow cell)
**Injection:** 2 µl (10 mg/ml of each)

## 10 037 Separation of PAH´s by Gradient Elution




**Column phase:** GROM-SIL PAH -1 (taylor-made)
**Column size:** 250 x 4mm
**Eluent A:** water
**B:** ACN
**Gradient:** 50% B (0-5 min), 50-85% B (5-15 min), 85-100% B (15-20 min), 100% B (20-25 min)
**Flow rate:** 1.5 ml/min
**Pressure:** 24 MPa
**Temperature:** 25°C
**Detection (UV):** 254 nm
**Injection:** 5 µl (5 µg/ml, each)

**1)** Naphthalene
**2)** Acenaphthylene
**3)** Acenaphthene
**4)** Fluorene
**5)** Phenanthrene
**6)** Anthracene
**7)** Fluoranthene
**8)** Pyrene
**9)** Benzo(a)anthracene
**10)** Chrysene
**11)** Benzo(b)fluoranthene
**12)** Benzo(k)fluoranthene
**13)** Benzo(a)pyrene
**14)** Dibenzo(a,h)anthracne
**15)** Benzo(g,h)perylene
**16)** Ideno(1,2,3,c,d)pyrene

| Columns | Dimensions | Field of application | Order number |
|---|---|---|---|
| PAH-column for EPA-standard - (separation of the 16 PAH´s) | 250 x 2 mm cartridge<br>250 x 4 mm cartridge<br>50 x 4.6 mm cartridge | environmental analysis: soil, pollution (air / water), etc. | GS PA 1 0530 K 2502<br>GS PA 1 0530 K 2504<br>GS PA 1 0330 K 0505 |

**Note!** All products are also available as columns (complete with end-fittings). Please enquire for other dimensions. Reduced prices for Refill-columns.