

Unleash the Power of Fast GC PAH Analysis

Zebron™
GC Columns

ZB-PAH-EU

- Up to 70% Faster PAH Analysis
- Elevated Temperature Stability (340/360 °C)

ZB-PAH-SeleCT

- Enhanced Resolution for Chrysene and Triphenylene (PAH Interferences)
- Increased Benzo[b,k]fluoranthene Separation



30% OFF

Any ZB-PAH-EU or
ZB-PAH SeleCT Column

Expires:

26 June 2020

Limit 5 Columns per Company

Offer Code: **ZPAH0620**

phenomenex®
...breaking with tradition™

www.phenomenex.com/GCPAH



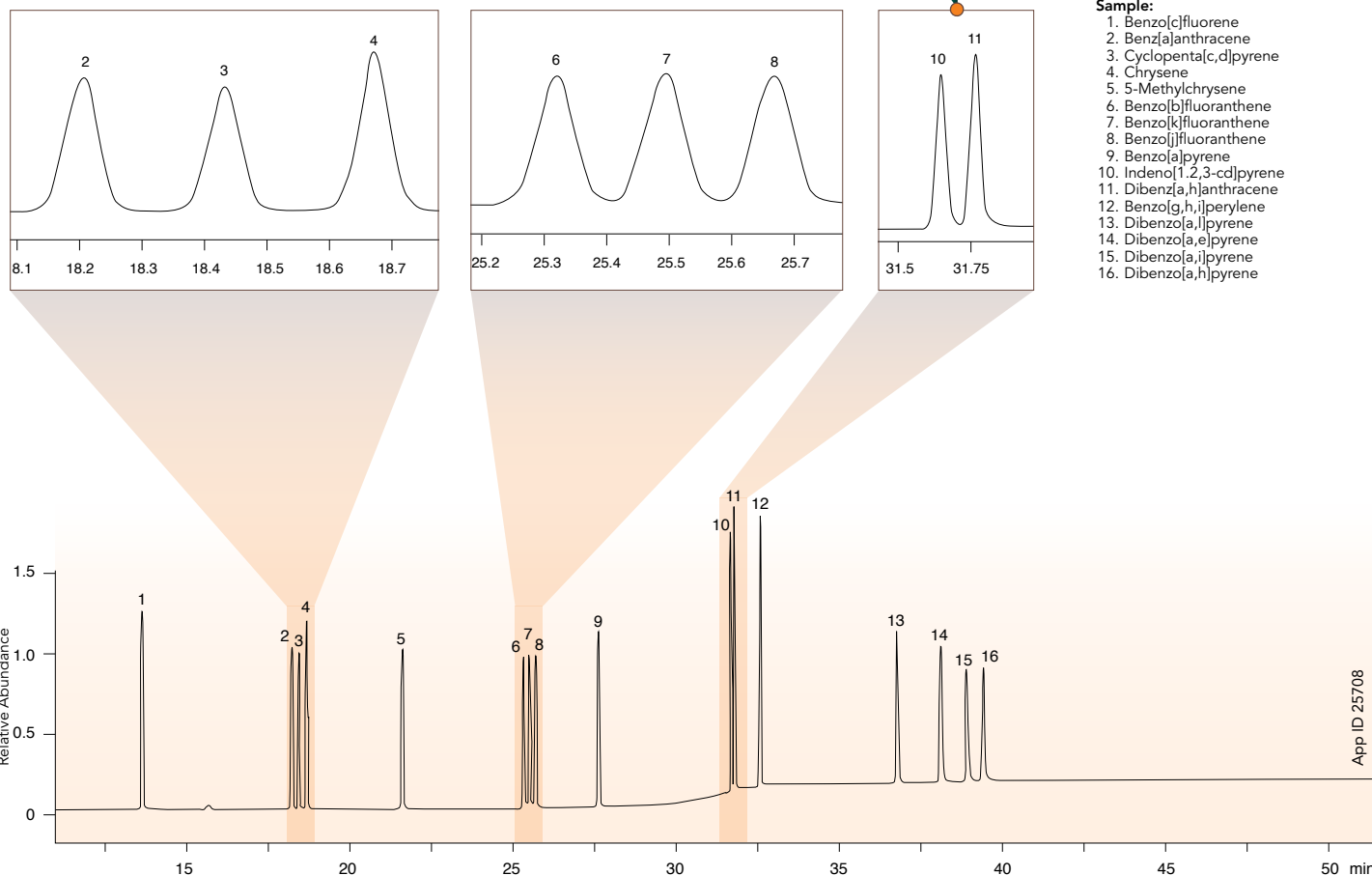
Complete Resolution of EU 15+1 and EPA 610 PAHs



Zebron ZB-EU-PAH GC column demonstrates excellent resolution and accurate quantitation of European regulated EU 15+1 and EPA 610 PAHs.

Analysis of EU 15+1 PAHs

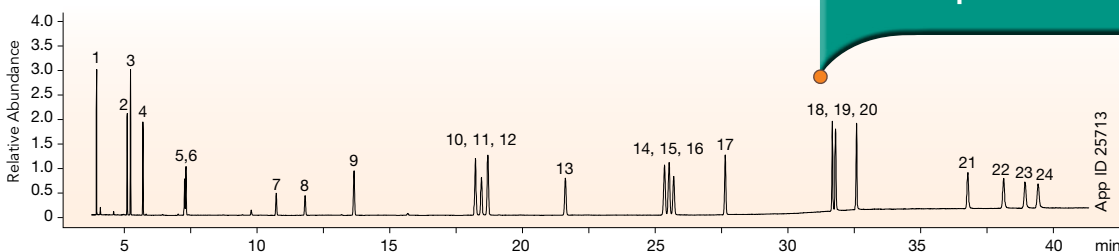
Excellent Resolution of EU PAH Critical Pairs



- Sample:**
1. Benzo[c]fluorene
 2. Benz[a]anthracene
 3. Cyclopenta[c,d]pyrene
 4. Chrysene
 5. 5-Methylchrysene
 6. Benzo[b]fluoranthene
 7. Benzo[k]fluoranthene
 8. Benzo[j]fluoranthene
 9. Benzo[a]pyrene
 10. Indeno[1,2,3-cd]pyrene
 11. Dibenzo[a,h]anthracene
 12. Benzo[g,h,i]perylene
 13. Dibenzo[a,i]pyrene
 14. Dibenzo[a,e]pyrene
 15. Dibenzo[a,j]pyrene
 16. Dibenzo[a,h]pyrene

Analysis of EU 15+1 and EPA 610 PAHs

Great Separation of All Key PAH Isomers



GC-MS conditions for both applications:

- Column:** Zebron ZB-PAH-EU
- Dimensions:** 30 meter x 0.25 mm x 0.20 μm
- Part No.:** 7HG-G043-10
- Injection:** Split 5:1 @ 330 °C, 1 μL
- Recommended Liner:** Zebron PLUS Single Taper Z- Liner™
- Liner Part No.:** AG2-4B13-05 (for Shimadzu® 2010 GC)
- Carrier Gas:** Helium @ 24 psi (constant pressure)
- Oven Program:** 45 °C for 0.8 min to 200 °C @ 45 °C/min to 226 °C @ 3 °C/min for 0 min to 320 °C @ 10 °C/min for 20 min
- Detector:** MSD, 50-500 m/z
- Transfer line Temperature:** 300 °C
- Source Temperature:** 300 °C

Sample:

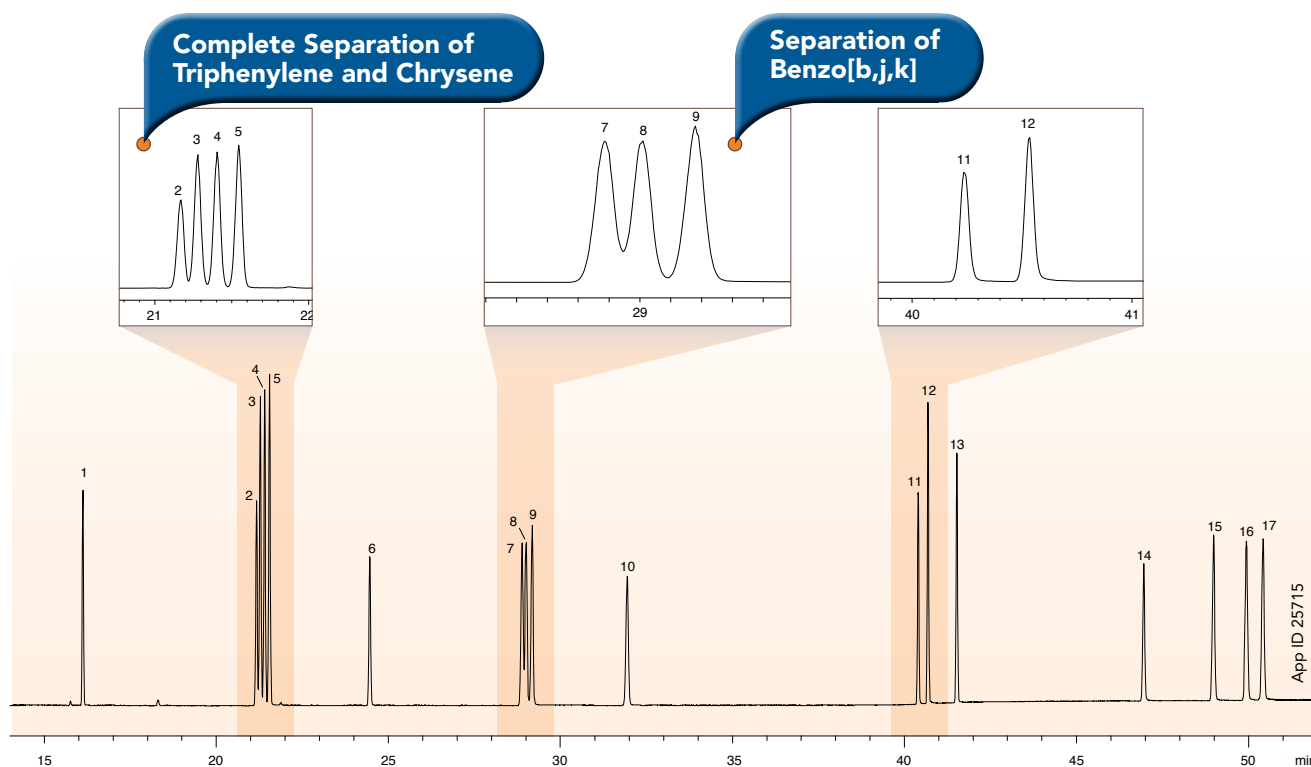
- | | | |
|---------------------|----------------------------|----------------------------|
| 1. Naphthalene | 10. Benz[a]anthracene | 19. Dibenzo[a,h]anthracene |
| 2. Acenaphthylene | 11. Cyclopenta[c,d]pyrene | 20. Benzo[g,h,i]perylene |
| 3. Acenaphthene | 12. Chrysene | 21. Dibenzo[a,i]pyrene |
| 4. Fluorene | 13. 5-Methylchrysene | 22. Dibenzo[a,e]pyrene |
| 5. Phenanthrene | 14. Benzo[b]fluoranthene | 23. Dibenzo[a,i]pyrene |
| 6. Anthracene | 15. Benzo[k]fluoranthene | 24. Dibenzo[a,h]pyrene |
| 7. Fluoranthene | 16. Benzo[j]fluoranthene | |
| 8. Pyrene | 17. Benzo[a]pyrene | |
| 9. Benzo[c]fluorene | 18. Indeno[1,2,3-cd]pyrene | |

Excellent Resolution of Chrysene and Triphenylene

We designed the Zebron ZB-PAH-SeleCT GC column to achieve complete resolution of Chrysene from Triphenylene along with other EU 15+1 PAH compounds. Its unique selectivity helps eliminate false positives while resolving PAH isomers, providing easy, fast, and accurate quantification of PAHs in environmental and food samples.



EU 15+1 PAH Analysis Using Zebron ZB-PAH-SeleCT GC column



Column: Zebron ZB-PAH-SeleCT
Dimensions: 40 meter x 0.18 mm x 0.14 µm
Part No.: 7PD-G044-47
Injection: Split 30:1 @ 320°C, 1 µL
Liner Part No.: AG2-4B13-05 (for Shimadzu® 2010 GC)
Recommended Liner: Zebron PLUS Single Taper Z-Liner™
Carrier Gas: Helium @ 78 psi (constant pressure)
Oven Program: 45°C for 0.8 min to 200°C @ 45°C/min to 265°C @ 3°C/min for 5 min to 270°C @ 1°C/min to 320°C @ 10°C/min for 15 min
Detector: MSD (Shimadzu® GC-MS-QP2010 Ultra)
Mode: SIM
SIM Ions: 216, 226, 228, 242, 252, 276, 278, 302 m/z
Transfer line Temperature: 300°C
Source Temperature: 300°C

- Sample:**
1. Benzo[c]fluorene
 2. Cyclopenta[c,d]pyrene
 3. Benz[a]anthracene
 4. Triphenylene
 5. Chrysene
 6. 5-Methylchrysene
 7. Benzo[b]fluoranthene
 8. Benzo[j]fluoranthene
 9. Benzo[k]fluoranthene
 10. Benzo[a]pyrene
 11. Indeno[1,2,3-c,d]pyrene
 12. Dibenzo[a,h]anthracene
 13. Benzo[g,h,i]perylene
 14. Dibenzo[a,i]pyrene
 15. Dibenzo[a,e]pyrene
 16. Dibenzo[a,l]pyrene
 17. Dibenzo[a,h]pyrene

Zebron ZB-PAH-EU GC Column

| Length (meter) | ID (mm) | df (µm) | Temp. Limits (°C) | Part No. |
|----------------|---------|---------|-------------------|-------------|
| 10 | 0.10 | 0.08 | 40 to 340/360 | 7CB-G043-59 |
| 20 | 0.18 | 0.14 | 40 to 340/360 | 7FD-G043-47 |
| 30 | 0.25 | 0.20 | 40 to 340/360 | 7HG-G043-10 |
| 60 | 0.25 | 0.20 | 40 to 340/360 | 7KG-G043-10 |

Zebron ZB-PAH-SeleCT GC Column

| Length (meter) | ID (mm) | df (µm) | Temp. Limits (°C) | Part No. |
|----------------|---------|---------|-------------------|-------------|
| 20 | 0.18 | 0.14 | 40 to 320/340 | 7FD-G044-47 |
| 30 | 0.25 | 0.20 | 40 to 320/340 | 7HG-G044-10 |
| 40 | 0.18 | 0.14 | 40 to 320/340 | 7PD-G044-47 |



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PAH

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Unleash the Power of Fast GC PAH Analysis with Zebron ZB-PAH-EU & ZB-PAH-SeleCT!



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