

APPLICATION

Analysis of EPA 610 Polynuclear Aromatic Hydrocarbons Using a Kinetex[®] 3.5 μm PAH Column

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Overview/

Polynuclear aromatic hydrocarbons (PAHs) are a hazardous class of compounds which are readily found from drilling and burning of fossil fuels. To test for the presence of PAHs in ground and waste water, the US Environmental Protection Agency (EPA) has developed a variety of methods which can be done on LC/UV, such as EPA 610. To build upon these existing methodologies and analyses, Phenomenex designed and developed a special polymerically bonded C18 stationary phase fused to a Kinetex core-shell silica particle. This particle and phase combination greatly improves selectivity for hard to resolve PAHs, while providing dramatically increased sensitivity (limit of detection) and better overall LC performance

Column: Kinetex 3.5 μm PAH
Dimensions: 100 x 4.6 mm
Part No.: 00D-4764-E0
Mobile Phase: A: Water
 B: Acetonitrile
Gradient:

| Time (min) | % B |
|------------|-----|
| 0 | 50 |
| 7 | 100 |
| 8 | 100 |
| 9 | 50 |
| 22 | 50 |

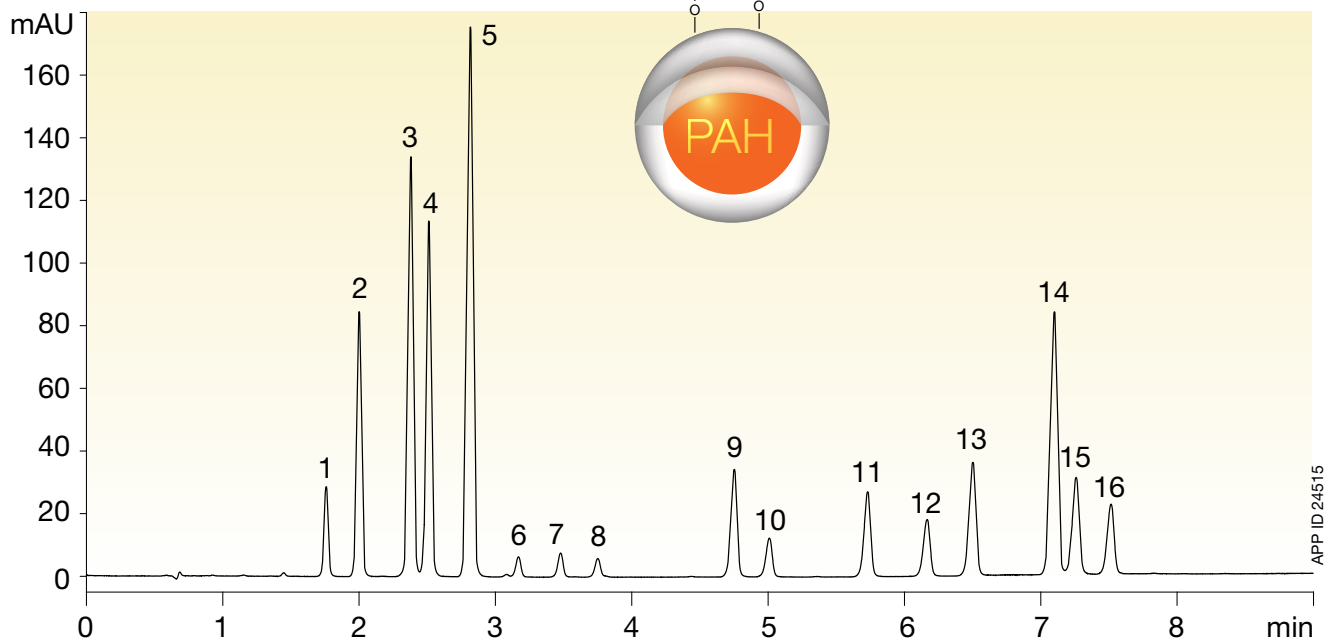
Flow Rate: 1.2 mL/min
Backpressure: 136 Bar
Temperature: 35 °C

Detection: UV @ 292 nm

Sample:

| | |
|-------------------|----------------------------|
| 1. Naphthalene | 9. Benzo[a]anthracene |
| 2. Acenaphthylene | 10. Chrysene |
| 3. Acenaphthene | 11. Benzo[b]fluoranthene |
| 4. Fluorene | 12. Benzo[k]fluoranthene |
| 5. Phenanthrene | 13. Benzo[a]pyrene |
| 6. Anthracene | 14. Dibenzo[a,h]anthracene |
| 7. Fluoranthene | 15. Benzo[ghi]perylene |
| 8. Pyrene | 16. Indeno[1,2,3-cd]pyrene |

EPA 610 – PAH Analysis



APP ID 24515



APPLICATION

Kinetex[®] Ordering Information

| 3.5 µm Minibore Columns (mm) | | | SecurityGuard [™] ULTRA Cartridges (mm) | |
|------------------------------|-------------|-------------|--------------------------------------------------|---------------------------|
| Phase | 50 x 2.1 | 100 x 2.1 | 150 x 2.1 | 3/pk |
| PAH | 00B-4764-AN | 00D-4764-AN | 00F-4764-AN | AJO-9535 for 2.1 mm ID |

| 3.5 µm MidBore [™] (mm) | | SecurityGuard ULTRA Cartridges (mm) |
|----------------------------------|-------------|-------------------------------------|
| Phase | 100 x 3.0 | 3/pk |
| PAH | 00D-4764-YO | AJO-9534 for 3.0 mm ID |

| 3.5 µm Analytical Columns (mm) | | | | SecurityGuard ULTRA Cartridges (mm) |
|--------------------------------|-------------|-------------|-------------|-------------------------------------|
| Phase | 100 x 4.6 | 150 x 4.6 | 250 x 4.6 | 3/pk |
| PAH | 00D-4764-E0 | 00F-4764-E0 | 00G-4764-E0 | AJO-9533 for 4.6 mm ID |

*SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

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If Phenomenex products in this technical note do not provide at least an equivalent separation as compared to a competing product of the same particle size, similar phase and dimensions, return the product with comparative data within 45 days for a FULL REFUND.

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