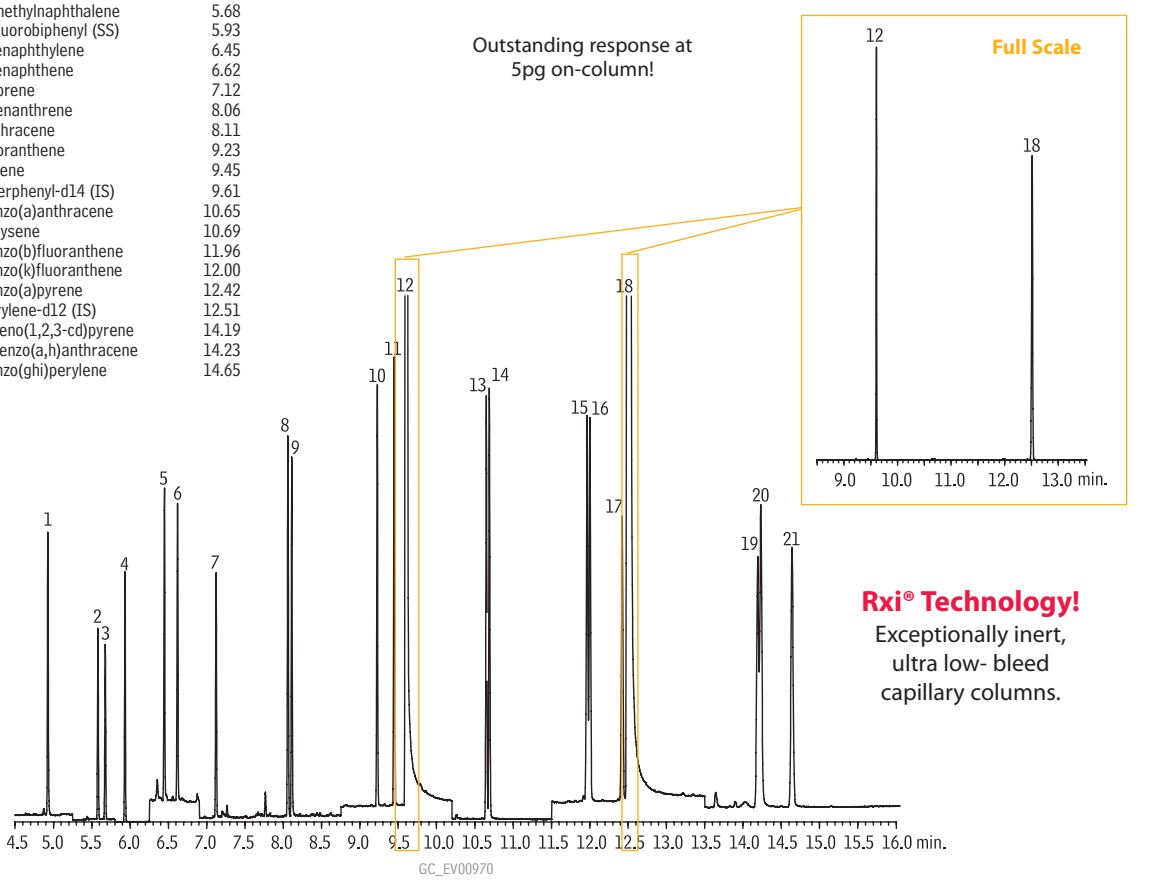
## Polycyclic Aromatic Hydrocarbons
## Rxi®-5Sil MS

| Peak List | Retention Time |
|---|---|
| 1. naphthalene | 4.93 |
| 2. 2-methylnaphthalene | 5.58 |
| 3. 1-methylnaphthalene | 5.68 |
| 4. 2-fluorobiphenyl (SS) | 5.93 |
| 5. acenaphthylene | 6.45 |
| 6. acenaphthene | 6.62 |
| 7. fluorene | 7.12 |
| 8. phenanthrene | 8.06 |
| 9. anthracene | 8.11 |
| 10. fluoranthene | 9.23 |
| 11. pyrene | 9.45 |
| 12. *p*-terphenyl-d14 (IS) | 9.61 |
| 13. benzo(a)anthracene | 10.65 |
| 14. chrysene | 10.69 |
| 15. benzo(b)fluoranthene | 11.96 |
| 16. benzo(k)fluoranthene | 12.00 |
| 17. benzo(a)pyrene | 12.42 |
| 18. perylene-d12 (IS) | 12.51 |
| 19. indeno(1,2,3-cd)pyrene | 14.19 |
| 20. dibenzo(a,h)anthracene | 14.23 |
| 21. benzo(ghi)perylene | 14.65 |




**Rxi® Technology!**
Exceptionally inert, ultra low- bleed capillary columns.

| | |
|---|---|
| Column: | Rxi®-5Sil MS, 30m, 0.25mm ID, 0.25µm (cat.# 13623) |
| Sample: | PAH mix, 1µL of 0.005µg/mL (IS 2µg/mL)<br>SV Calibration Mix #5 (cat.# 31011)<br>1-methylnaphthalene (cat.# 31283)<br>2-methylnaphthalene (cat.# 31285)<br>2-fluorobiphenyl (cat.# 31091) |
| Inj.: | 1.0µL (5pg on-column concentration),<br>4mm Drilled Uniliner® (hole near top) inlet liner w/wool (cat.# 21055-200.5),<br>pulsed splitless: pulse 20psi @ 0.2 min., 60mL/min. @ 0.15 min. |
| Inj. temp.: | 300°C |
| Carrier gas: | helium, constant flow |
| Flow rate: | 1.4mL/min. |
| Oven temp.: | 50°C (hold 0.5 min.) to 290°C @ 25°C/min. to 320°C @ 5°C/min. |
| Det.: | MS |
| Transfer line temp: | 290°C |
| Ionization: | EI |
| Mode: | SIM |

**Single Ion Monitoring Program**

| Group | Time | Ion(s) | Dwell (ms) |
|---|---|---|---|
| 1 | 4.00 | 128 | 100 |
| 2 | 5.25 | 142 | 100 |
| 3 | 5.80 | 172 | 100 |
| 4 | 6.25 | 152 | 100 |
| 5 | 6.90 | 166 | 100 |
| 6 | 7.60 | 178 | 100 |
| 7 | 8.75 | 202, 244 | 100 |
| 8 | 10.2 | 228 | 100 |
| 9 | 11.5 | 252, 264 | 100 |
| 10 | 13.5 | 276, 278 | 100 |


## free literature

**Accurately Quantify PAHs Down to 5 pg On-Column: GC/MS Sim Analysis with the New Rxi®-5Sil MS Column**
Polycyclic aromatic hydrocarbons (PAHs) are common environmental pollutants, affecting air, water, and soil quality. Although naturally occurring, human impact has created a steady increase in environmental levels of PAHs and their byproducts. PAHs are typically formed through the incomplete combustion of organic materials, such as wood, coal, and oil, but are also used in manufacturing of some medicines, plastics, and pesticides. Many PAHs are known or suspected carcinogens. The United States Environmental Protection Agency currently lists and mandates testing of the 16 PAHs they deem most hazardous.

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Applications Note
**lit. cat.# EVAN1284**