

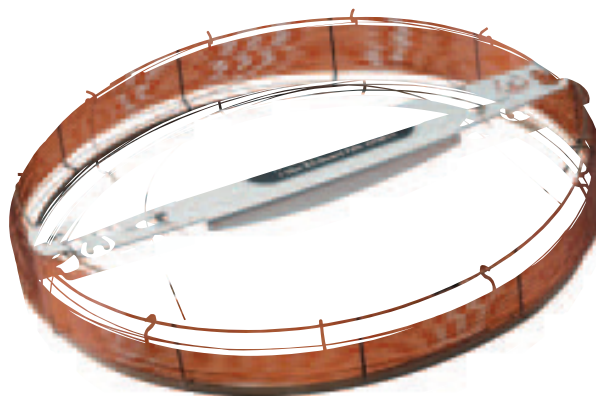
Agilent 2257 J&W Select PAH Column

Polycyclic Aromatic Hydrocarbon Analysis

Data Sheet

Introduction

Agilent introduces a novel, high selectivity, stationary phase for accurate analysis of polycyclic aromatic hydrocarbons (PAH). The Select PAH is the first capillary column that provides a single solution for PAH analysis by separating all the isomers, thereby avoiding false positives and inaccurate results. Select PAH is the only product that provides easy, fast and accurate quantification of PAHs in environmental and food samples.



Key Benefits

- **One-shot solution.** Single column saves money on capital investment and cost-per-analysis.
- **Simple and easy-to-use.** Uncomplicated method provides straightforward data interpretation.
- **High resolution.** Accurate quantification of all EU and EPA regulated PAHs supplies reliable results with enhanced sensitivity.
- **High speed.** Fast analysis of 54 PAHs in less than 30 minutes delivers high productivity (Figure 1).
- **High temperature stability.** Excellent longevity reduces replacement costs, even when analyzing high boiling PAHs such as dibenzo-pyrenes.
- **Low column bleed.** Lowered baseline improves sensitivity and lowers detection limits.
- **Less need for MS maintenance.** Less downtime enhances operating economics.



Agilent Technologies

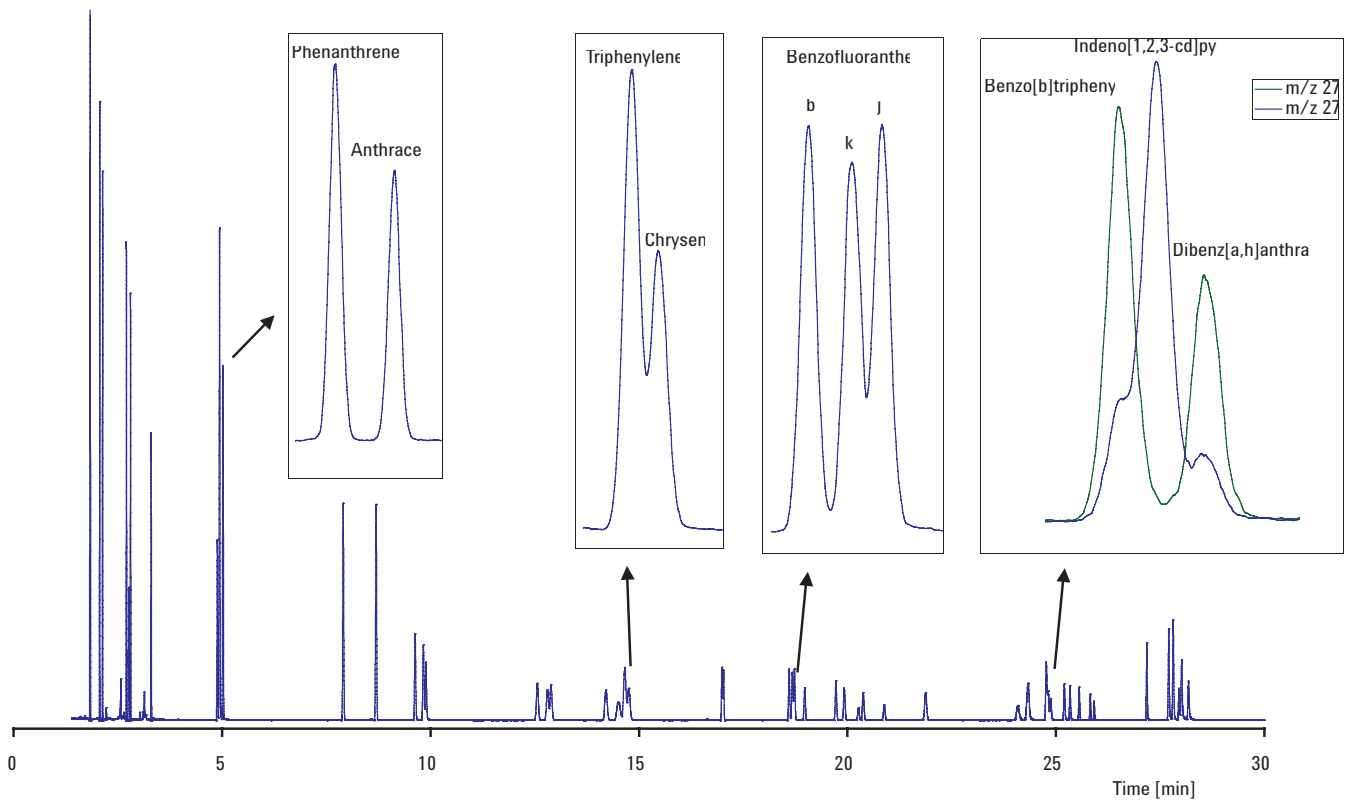


Figure 1. Fast, high resolution, analysis of 54 PAHs with close up of 4 key separations, using the 15 m x 0.15 mm ID, $df=0.10$ Select PAH

Resolving PAH Isomers

There are a number of PAHs that have similar chemical structure and mass. These compounds cannot be separated using MS if the components co-elute. Using Select PAH, the analysis of these compounds is now accurate and easy. All regulated PAH isomers are separated by the GC column, avoiding the co-elution experienced when using other liquid phases.

Some examples of the high resolution provided by Select PAH are highlighted below in Figure 1.

Unique Selectivity

The key functionality of the Select PAH comes from the innovative stationary phase. Organic chemists at Agilent succeeded in using dedicated PAH selector building blocks when synthesizing the siloxane stationary phase for the Select PAH.

- Based on well-known siloxane stationary phases, for confidence in quality
- Crosslinked, making the column rinseable for extended column lifetime
- Low bleed, for MS compatibility

High Speed

Another benefit of Select PAH is its speed. The column delivers full separation of PAHs in a single injection.

- 16 EPA PAHs within 7 minutes (Figure 2)
- All EPA and EU PAHs and their interferences (54 components) within 30 minutes (Figure 1)

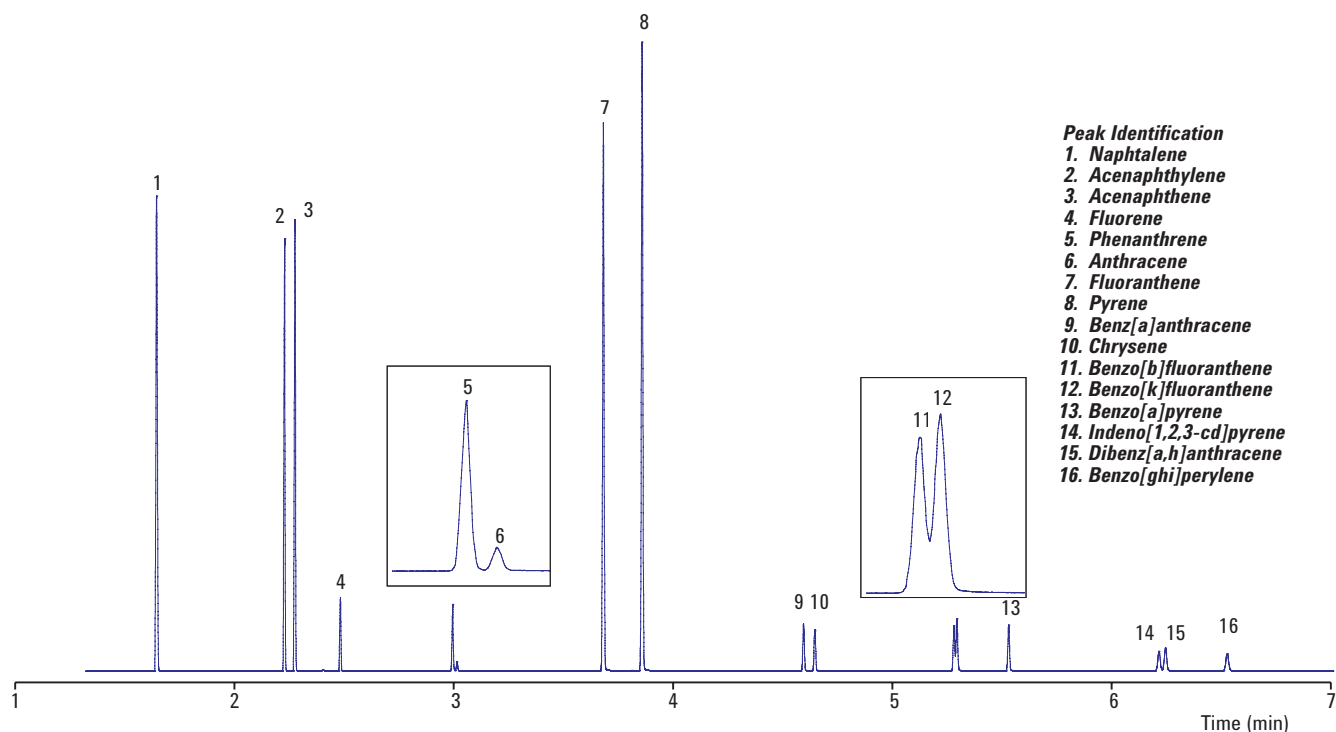


Figure 2. Fast separation of 16 EPA PAHs within 7 minutes using the 15 m x 0.15 mm ID df=0.10 Select PAH

High Temperature Stability

PAHs with higher molecular mass, such as the dibenzopyrenes, need higher temperatures to elute. The Select PAH has a maximum programmable temperature of 350 °C, which is high enough to elute the high boiling PAHs.

Figure 3 shows the resolution of chrysene, triphenylene and benzofluoranthenes over more than 2000 injections, equal to 166 hours at 350 °C, demonstrating the column's excellent longevity. In addition, the column bleed is lower than 2 pA (at 325 °C), providing low baseline, high sensitivity and low maintenance intervals.

Stringent Quality Testing for Guaranteed Performance

Before shipping, every Select PAH column is tested on its performance. This QC test warrants the resolution of chrysene (CHR) and triphenylene (TP), and the response for cyclopenta[c,d]pyrene. You can be sure you'll receive the best column available.

Specifications

TMax-Iso 325 °C, TMax-Prog 350 °C, TMin 40 °C						
Part Number	Length (m)	ID (mm)	Df (µm)	N/m	Resolution CHR/TP	Bleed (pA)
CP7461	15	0.15	0.10	5333	0.75	0.6
CP7462	30	0.25	0.15	3333	0.80	2.0

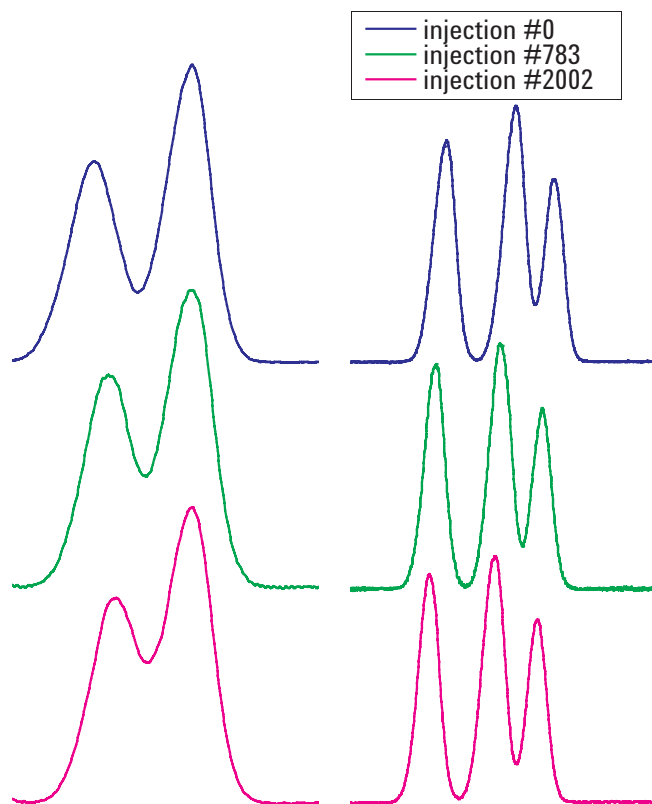


Figure 3. Resolution of triphenylene and chrysene (left), and benzofluoranthenes (right) over more than 2000 injections

 **Agilent Email Updates**

www.agilent.com/find/emailupdates

Get the latest information on the products and applications you select.



www.lxistandard.org

LXI is the LAN-based successor to GPIB, providing faster, more efficient connectivity. Agilent is a founding member of the LXI consortium.

Agilent Channel Partners

www.agilent.com/find/channelpartners

Get the best of both worlds: Agilent's measurement expertise and product breadth, combined with channel partner convenience.



Agilent Advantage Services is committed to your success throughout your equipment's lifetime. We share measurement and service expertise to help you create the products that change our world. To keep you competitive, we continually invest in tools and processes that speed up calibration and repair, reduce your cost of ownership, and move us ahead of your development curve.

www.agilent.com/find/advantageservices



www.agilent.com/quality

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus

Americas

Canada	(877) 894 4414
Latin America	305 269 7500
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Thailand	1 800 226 008

Europe & Middle East

Austria	43 (0) 1 360 277 1571
Belgium	32 (0) 2 404 93 40
Denmark	45 70 13 15 15
Finland	358 (0) 10 855 2100
France	0825 010 700*
	*0.125 €/minute
Germany	49 (0) 7031 464 6333
Ireland	1890 924 204
Israel	972-3-9288-504/544
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200-88 22 55
Switzerland	0800 80 53 53
United Kingdom	44 (0) 118 9276201

Other European Countries: www.agilent.com/find/contactus

Revised: October 1, 2009

This information is subject to change without notice.

© Agilent Technologies, Inc. 2010

Published in UK, October 14, 2010

SI-02257



Agilent Technologies