

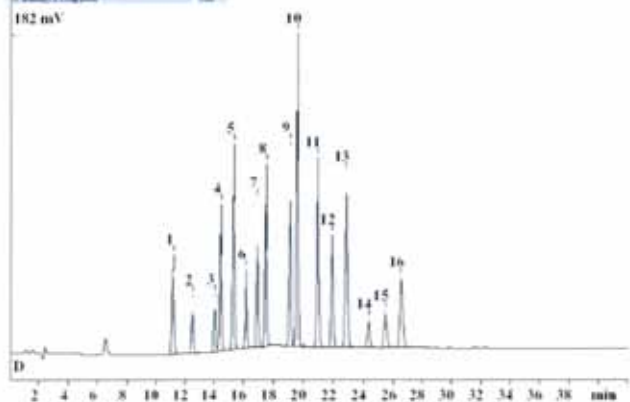
BAKERBOND™ PAH-16 PLUS HPLC Column

- Specially designed for the separation of the sixteen PAH's as defined by the U.S. Environmental Protection Agency (EPA)
- Each sorbent batch is tested with the selectivity test mixture SRM 869 to guarantee column-to-column and batch-to-batch reproducibility
- Each column is individually tested with SRM 1647d
- the certificate of analysis and testchromatogram are provided with each column
- the use of narrow column diameter (3 mm) results in better sensitivity

The separation of PAHs is greatly influenced by the type of synthesis that is used for the preparation of C₁₈. In reversed phase chromatography two types of silane modification can be distinguished that resulted in either monomeric or polymeric bond linkages. The polymeric phases provided significant enhanced selectivity characteristics, particularly for isomeric PAHs. BAKERBOND™ PAH-16 Plus column contains a wide pore C₁₈ bonded phase synthesised under polymer-forming conditions. All wide pore C₁₈ batches are subjected (internal quality control) to a characterization test ($\alpha_{\text{TBN/BaP}}$ -test) developed by Sander and Wise. The test is intended primarily for predicting the potential selectivity for complex PAH mixtures and to discriminate between monomeric and polymeric type of C₁₈ stationary phases.

The $\alpha_{\text{TBN/BaP}}$ -test is used by J.T. Baker to verify column reproducibility and assist in the adjustment of the bonding process. Complete separation of the 16 PAHs, identified by the U.S. EPA as priority pollutants or even more, can only be achieved using bonded phases with $\alpha_{\text{TBN/BaP}}$ values in a well defined range.

PAH	Retention Time (min)
1. Naphthalene	4.00
2. Acenaphthene	6.00
3. Acenaphthylene	6.30
4. Fluorene	6.60
5. Phenanthrene	8.00
6. Anthracene	9.00
7. Fluoranthene	9.30
8. Pyrene	10.00
9. Benz[a]anthracene	10.50
10. Chrysene	11.00
11. Benz[b]fluoranthene	11.50
12. Benz[k]fluoranthene	12.00
13. Benzo[a]pyrene	12.50
14. Indeno[1,2,3-cd]perylene	13.00
15. Benzo[e]pyrene	13.50
16. Benzo[a]perylene	14.00



BAKERBOND™ PAH 16 Plus, 5µm,
250 x 3.0 mm + guard
Part No. 7504-00

Mobile Phase: A=Water
B=Acetonitrile

Gradient: 50% B for 5 min
50 – 100% Bin 15 min
100% B for 25 min

Flow Rate: 0.5 mL/min
Temperature: 25 °C
Detection: UV at 254nm

Ref:
W. Hesselink, R.H.N.A. Schiffer, P. Kootstra, *J. Chromatogr. A*,
697 (1995) 165 - 174

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PRODUCT LIST

BAKERBOND™ PAH 16 plus	micron	column size (mm)	A	Product number
BAKERBOND™ PAH 16 plus including guard column, manufit connection system and certificate of analysis	5	3 x 250	120	7504-00
Replacement guard cartridges for BAKERBOND™ PAH 16 plus (3)	5	3 x 20	120	7505-00
Replacement column for BAKERBOND™ PAH 16 plus including certificate of analysis	5	3 x 250	120	7506-00



BAKERBOND™ PAH 16/ 251004/SepTec

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