An Internal Communication
of Applications and Techniques

Waters
Lab Highlights

PAH
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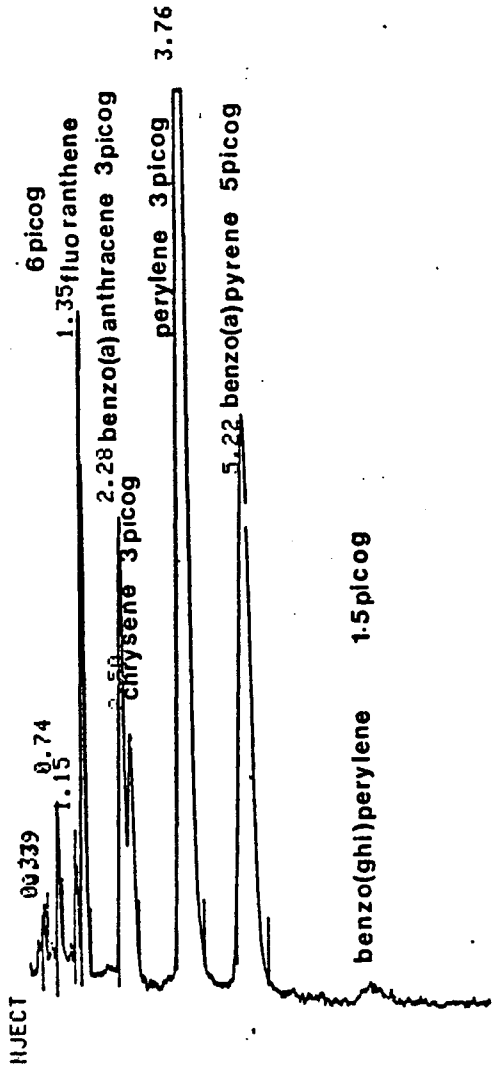
POLYNUCLEAR AROMATIC HYDROCARBON ANALYSIS (PAH) USING THE RCSS

The continuing interest in the polynuclear aromatic hydrocarbons (PAH's) because of their carcinogenic and mutagenic properties has initiated research into novel separations techniques. Their trace level analysis from air, water and marine sediments has necessitated utilization of several chromatographic techniques, as well as optimized combinations of column, detectors and extraction methods.

A tailored cartridge and Waters Radial Compression (RCSS) technology, combined with a highly sensitive flourescence detector (M420), allows an isocratic separation of six major carcinogenic pollutants in about eight minutes. Chromatographic conditions are shown below:



Column:	Radial-PAK PAH (8mm x 10cm)
Solvent:	H_2O/CH_3CN (28/72)
Flow Rate:	4.0 ml/min.
Detector:	Waters M420 (254nm excitation, 375nm emission) 128X
Sample Volume:	10µl

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