

FAST GC Columns

With the ever-increasing pressure on our time and resources, it is exciting when a product comes along which will save you both time and money. SGE has a new range of columns which makes best use of state of the art technology available in modern GC's. These are FAST GC columns.

The SGE fast GC capillary columns are all 10 meters long. This shorter length would normally reduce the column's resolution capabilities, but by having an ID of 0.1mm, the resolution is actually increased against larger ID columns. The Fast GC columns are available in a wide range of low bleed phases.

Some examples: **Figure 1** shows a chromatogram of the 16 priority PAH compounds using a FAST BPX5 column. The most attractive feature of this chromatogram is the reduction in the run time from 25 minutes to 12 minutes. An extra bonus is the increase in peak height of the later eluting compounds due to a reduction in peak broadening in the short, thin film column.

Total Recoverable Petroleum Hydrocarbons is a common screening method in water and soil used in environmental laboratories around the world. **Figure 2** shows the value of using a FAST GC column for this screening.

The world's standard phase for polychlorinated biphenyl (PCB) analysis is SGE's phenyl carborane phase HT8. This phase shows specificity for PCBs not seen by any other phase. A comparison of the FAST GC column with a conventional HT8 column shows the run time has been reduced by a factor of 2 – a substantial time saving in the lab (**Figure 3**). The Fast column still shows excellent separation of the IUPAC PCB congeners 28 and 31.

The BPX70 column is the ideal column for FAME analysis widely used in the food industry and as **Figure 4** shows, the FAST column can considerably reduce analysis time.

For more information and details of experimental conditions of the following chromatograms please request Publication: PD-0175-C

Figure 1. Chromatographic comparison separating Polynuclear Aromatic hydrocarbons (PAHs)

Figure 1a: Chromatogram showing polynuclear aromatic hydrocarbons (PAHs) using a conventional 30m x 0.25mm ID BPX5 column with a 0.1 micron film.

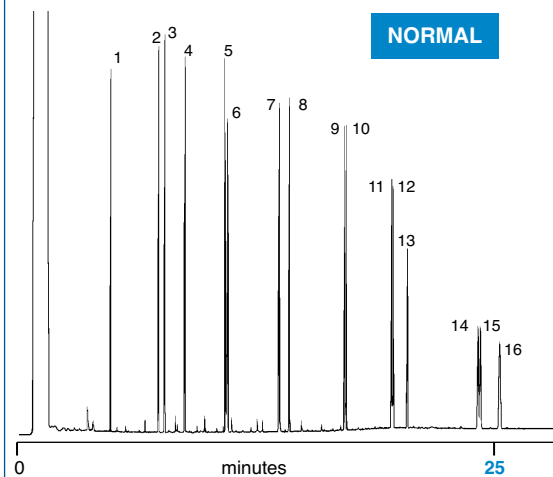
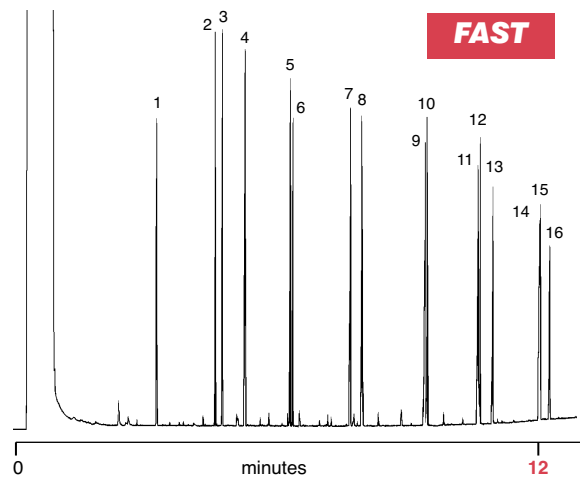


Figure 1b: Chromatogram showing separation of polynuclear aromatic hydrocarbons (PAHs) using a FAST BPX5 column.



ORDERING INFORMATION FAST GC COLUMNS

Phase	ID mm	film micron	Length (metre)	Part No.
BP1	0.1	0.1	10	054022
BPX5	0.1	0.1	10	054099
BPX50	0.1	0.1	10	054740
BPX70	0.1	0.1	10	054600
Fast PCB (HT8)	0.1	0.1	10	054690
BP20	0.1	0.1	10	054405

Figure 2. Chromatographic comparison showing separation of Total Recoverable Petroleum Hydrocarbons

Figure2a: Chromatogram showing separation of Total Recoverable Petroleum Hydrocarbons using a conventional 30m x 0.25mm ID BPX5 column with a 0.25 micron film.

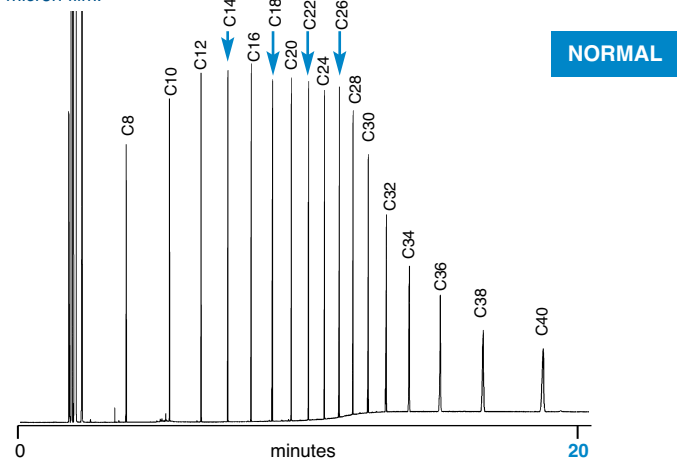


Figure2b: Chromatogram showing separation of Total Recoverable Petroleum Hydrocarbons using a FAST BPX5 column.

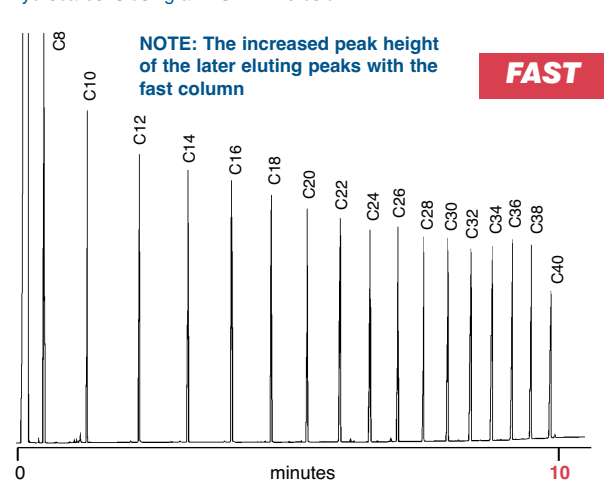


Figure 3. Chromatographic comparison separating Polychlorinated Biphenyls (PCBs)

Figure 3a: Chromatogram showing separation of PolyChlorinated Biphenyls (PCBs) using a conventional 30m x 0.25mm ID HT8 column with a 0.25 micron film.

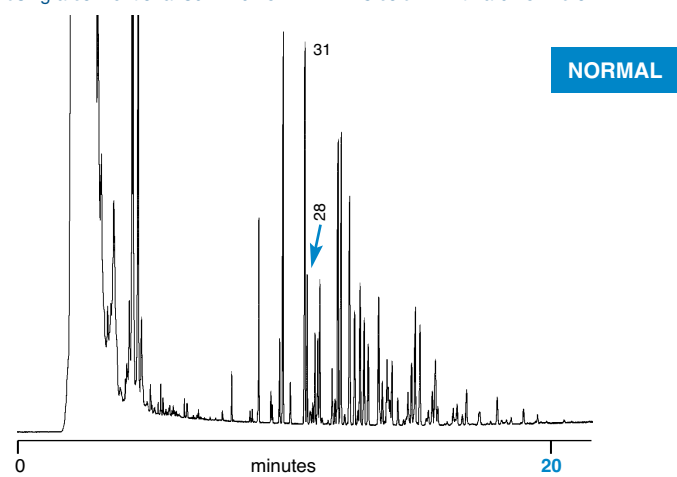


Figure 3b: Chromatogram showing separation of PolyChlorinated Biphenyls (PCBs) using a FAST PCB column.

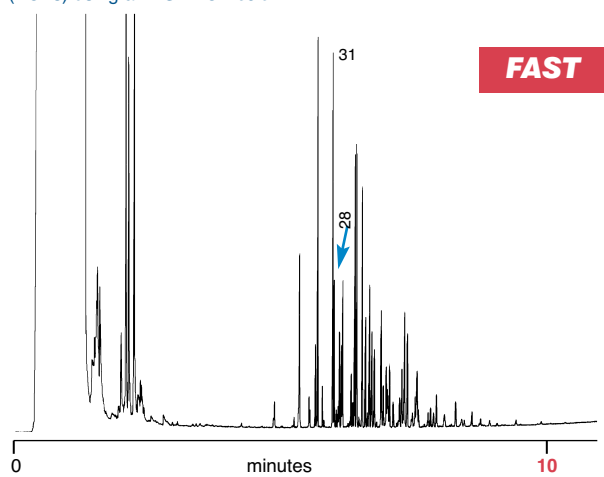


Figure 4. Chromatographic comparison showing separation of Fatty Acid Methyl Esters (FAMES)

Figure 4a: Chromatogram showing separation of Fatty Acid Methyl Esters (FAMES) using a conventional 30m x 0.25mm ID BPX70 column with a 0.25 micron film.

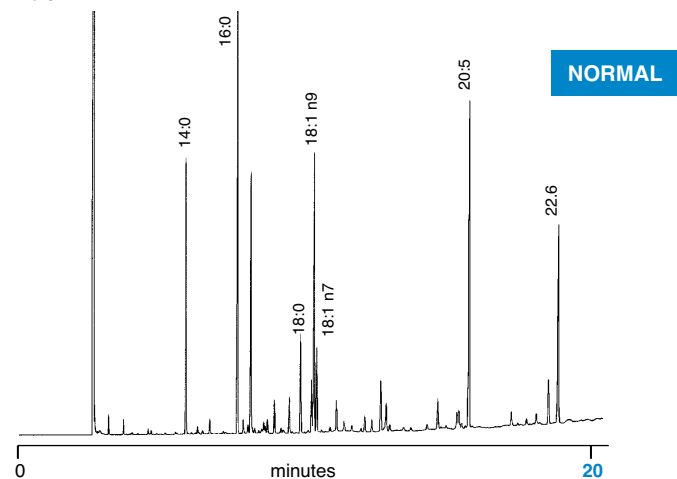


Figure 4b: Chromatogram showing separation of Fatty Acid Methyl Esters (FAMES) using a FAST BPX70 column.

