



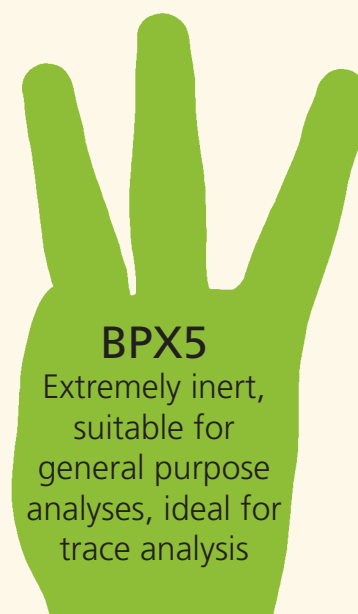
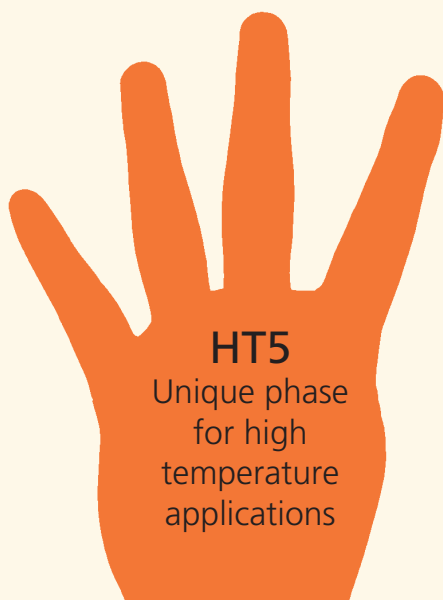
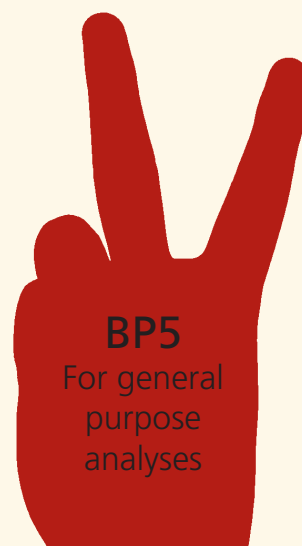
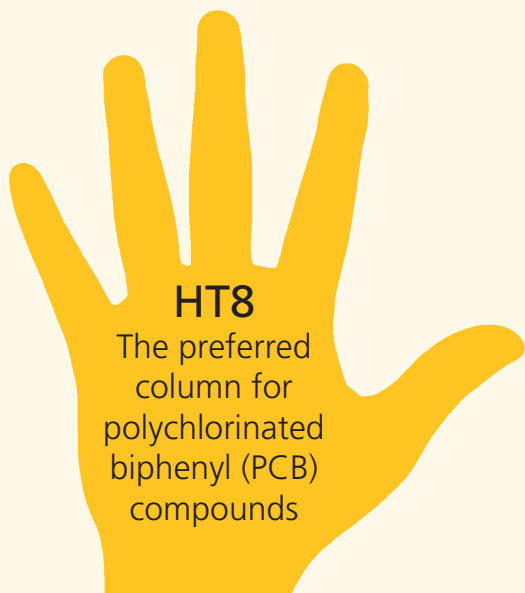
SGE's High Five - GC Column Range

- The complete polysilphenylene and polycarborane GC column range
- New BP5MS optimized silphenylene column
- 5 Selectivities to suit your analyses



Introducing the new BP5MS GC column completing the SGE High Five range of capillary columns.

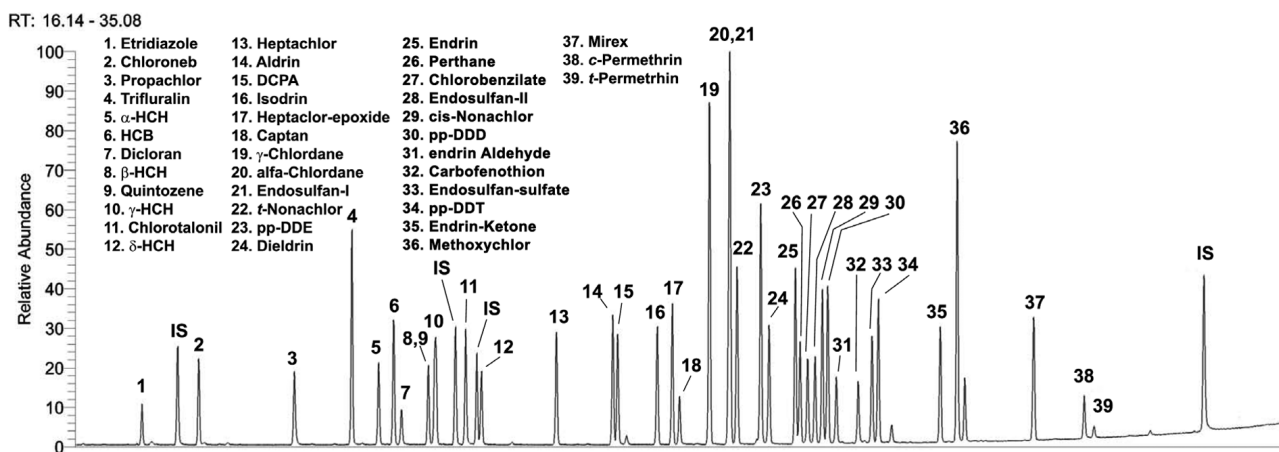
The High Five GC Column range from SGE provides a variety of selectivities to suit your analyses:



New BP5MS - Optimized Silphenylene Content for General Purpose MS Analyses.

Evaluating Organo Chlorine Pesticides (OCP) on BP5MS.

Instrument:	TRACE – GC/POLARIS-Q	Oven Temperature:	60 °C (5 min) – 8 °C/min – 300 °C (10 min)
Carrier gas:	He (1.5 mL/min)	MS Transfer Line Temperature:	300 °C
Injector:	Split/Splitless mode	MS Type:	ITD
Injector Temp:	275 °C	MS Source Temperature:	225 °C
Split Mode:	Splitless (1 min split valve closed)	MS Acquisition Mode:	Segmented Scan 45 – 450 amu
Split Flow:	30 mL/min		
Column:	30 m x 0.25 mm x 0.25 µm BP5MS (P/N 054310)		

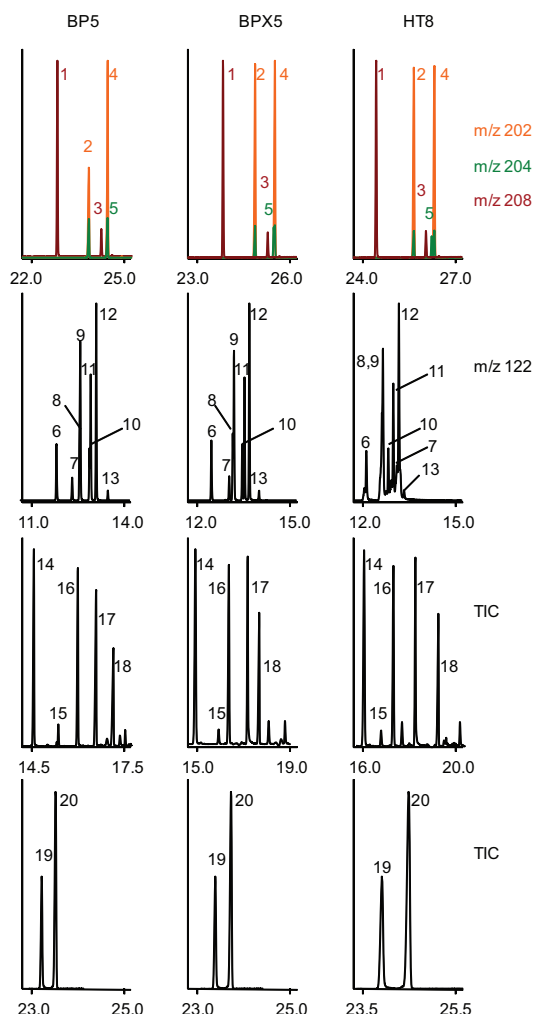


SGE High Five Column Selectivities

Each of the SGE High Five columns has subtly different selectivity giving you the ability to modify your method without significant changes to established conditions, elution order or run times, to achieve resolution of co-eluting peaks.

In the chromatograms to the right, the separation of a mixture of pesticides is shown using three of the columns within the range. The results highlight the selectivity differences of the BP5, BPX5 and HT8 enabling selection of a column that delivers the optimal resolution solution for your application.

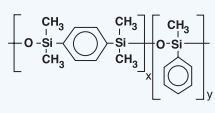
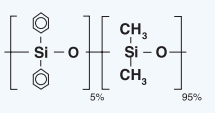
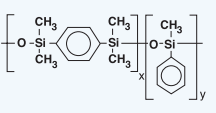
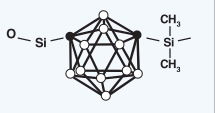
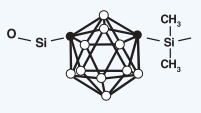







GC Column Selectivity



GCMS used a 6890-5973N MSD (Agilent Technologies, CA, USA) with either a BP5, BPX5 or HT8 column (30 m x 0.25 mm i.d., 0.25 µm film thickness). Injections of 1 µL were splitless at a temperature of 260 °C and a pressure of 93 kPa. The oven was 40 °C (hold for 4 min) to 300 °C (hold for 10 min) at 10 °C/min. Transfer line was 260 °C and helium flow was 1.2 mL/min. Detection was by EI-MS between 40-500 Da at 2 scan/sec and the source was 230 °C.

1 anthracendione (M=208)	11 3,5-dimethylphenol
2 fluoranthene (M=202)	12 2,3-dimethylphenol
3 unknown (M=204)	13 isopropylphenol
4 pyrene (M=202)	14 safrole isomer 1
5 unknown (M=208)	15 safrole isomer 2
6 2,5-dimethylphenol	16 safrole isomer 3
7 2-nitrophenol	17 1,4-naphtalendione
8 2,6-dimethylphenol	18 1,4-dinitrobenzene
9 2,4-dimethylphenol	19 methapyrilene
10 4-ethylphenol	20 isodrin

GC Column Comparison Table

	BP5MS	BP5	BPX5	HT5	HT8
Overview	Perfect for your 5% MS analysis. Non polar, 5% equivalence. Low bleed, great inertness	A general purpose phase with excellent high temperature characteristics. Popular column range used for a wide variety of applications	A highly inert phase, suitable for MS use. It has been designed for robustness and is suitable for over 80% of all routine analyses performed by chromatographers	Unique high temperature phase suited for simulated distillation and other petroleum applications	High temperature and low bleed column for polychlorinated biphenyl (PCB) compounds Separates PCB's on ortho-ring substitution as well as boiling point
Minimum Temperature (°C)	-40	-60	-40	10	-20
Maximum Continuous Temperature (°C)	330	320	360	380	360
Maximum Cycling Temperature (°C)	350	340	370	400	370
Phase Structure					
Industry Suited	Trace Analysis General Purpose  All Industries	General Purpose  All Industries	General Purpose  All Industries	Fuels, Environment, Food    Fuels Environment Food	Environment  Environment
Optimized for MS analysis	Yes	-	Yes	-	-
Polarity	Non-polar	Non-polar	Non-polar	Low polarity	Low polarity
Solvent Rinsable	-	-	-	Yes	-

SGE's High Five – Polysilphenylene and Polycarborane GC Column Range

GC Column Dimensions

	BP5MS	BP5	BPX5	HT5	HT8
Column ID (mm)	0.18, 0.25	0.22, 0.25, 0.32, 0.53	0.1, 0.15, 0.18, 0.22, 0.25, 0.32, 0.53	0.22, 0.25, 0.32, 0.53	0.1, 0.22, 0.25, 0.32, 0.53
Film Thickness (µm)	0.18, 0.25	0.25, 0.5, 1, 1.5, 5	0.1, 0.15, 0.18, 0.25, 0.4, 0.5, 1, 1.5, 3	0.1, 0.15, 0.5	0.1, 0.25, 0.5
Length (m)	20, 30	12, 15, 25, 30, 50, 60	6, 7, 10, 12, 15, 25, 30, 40, 50, 60	10, 12, 15, 25, 30	10, 12, 25, 30, 50, 60

For full part number listing visit www.sge.com/gc

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