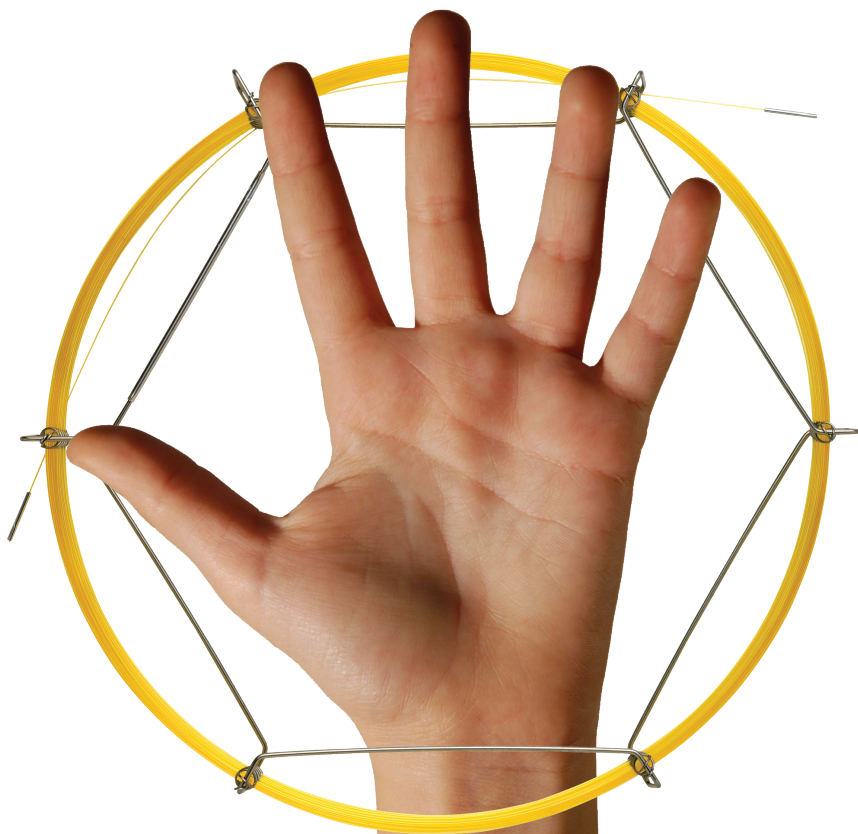


A High Five from SGE



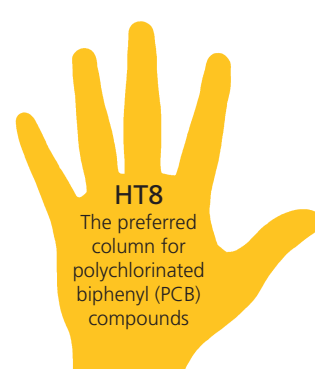
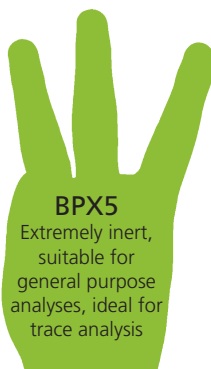
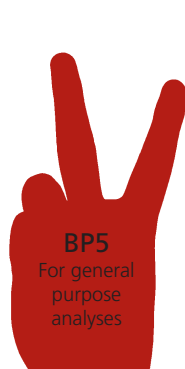
GC Column Range

- Five selectivities to suit your analyses
- BP5MS optimized silphenylene column for MS
- The complete range of polysilphenylene and polycarborane GC columns

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

BP5MS GC Column

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



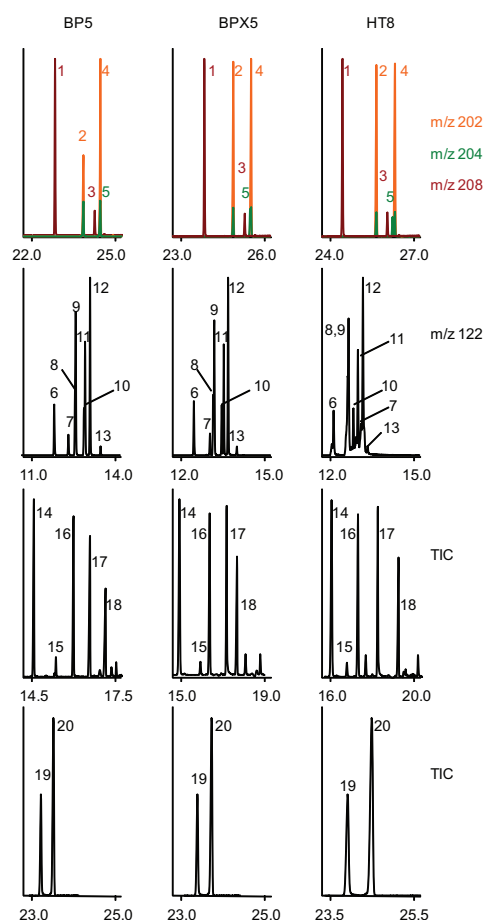
SGE High Five Column Selectivities

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-MS 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.

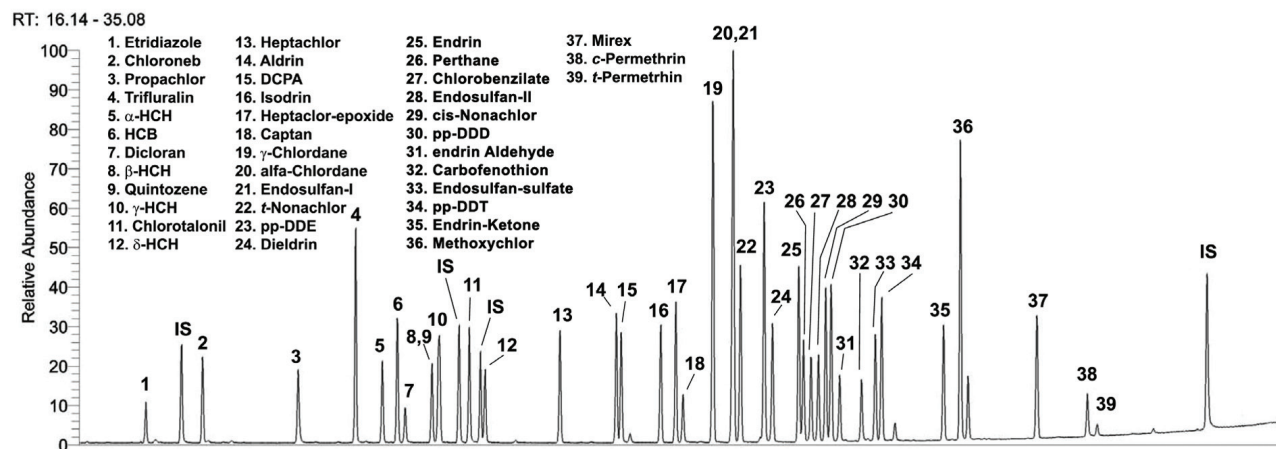
- | | | |
|--------------------------|-----------------------|-----------------------|
| 1 anthracendione (M=208) | 8 2,6-dimethylphenol | 15 safrole isomer 2 |
| 2 fluoranthene (M=202) | 9 2,4-dimethylphenol | 16 safrole isomer 3 |
| 3 unknown (M=204) | 10 4-ethylphenol | 17 1,4-naphtalendione |
| 4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



Evaluating Organo Chlorine Pesticides (OCP) on BP5MS

Instrument: TRACE – GC/POLARIS-Q
 Carrier gas: He (1.5 mL/min)
 Injector: Split/Splitless mode
 Injector Temp: 275 °C
 Split Mode: Splitless (1 min split valve closed)
 Split Flow: 30 mL/min
 Column: 30 m x 0.25 mm x 0.25 µm
 BP5MS (P/N 054310)

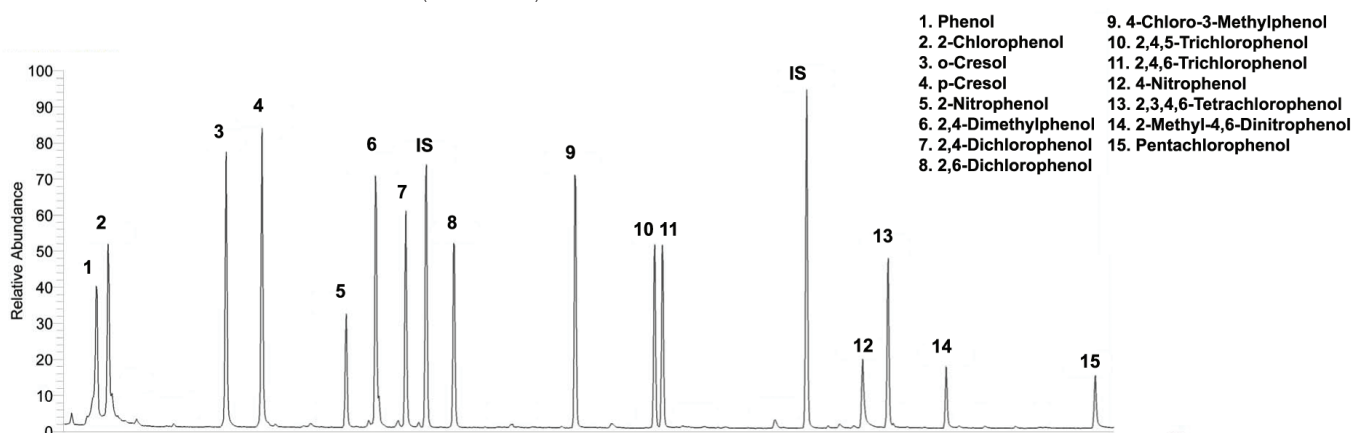
Oven Temperature: 60 °C (5 min) – 8 °C/min – 300 °C (10 min)
 MS Transfer Line Temperature: 300 °C
 MS Type: ITD
 MS Source Temperature: 225 °C
 MS Acquisition Mode: Segmented Scan 45 – 450 amu



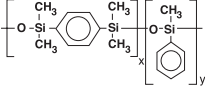
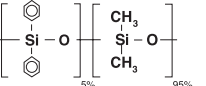
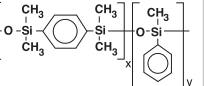
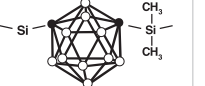
Evaluating Phenols on BP5MS

Instrument: TRACE – GC/POLARIS-Q
 Carrier gas: He (1.5 mL/min)
 Injector: Split/Splitless mode
 Injector Temp: 275 °C
 Split Mode: Splitless (1 min split valve closed)
 Split Flow: 30 mL/min
 Column: 30 m x 0.25 mm x 0.25 µm
 BP5MS (P/N 054310)

Oven Temperature: 60 °C (5 min) – 8 °C/min – 300 °C (10 min)
 MS Transfer Line Temperature: 300 °C
 MS Type: ITD
 MS Source Temperature: 225 °C
 MS Acquisition Mode: Segmented Scan 45 – 450 amu



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	-

Polysilphenylene and Polycarborane GC Column Range

GC Column Dimensions

	BP5MS	BP5	BPX5	HT5	HT8
Column ID (mm)	0.18, 0.25, 0.32	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, 0.5	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, 60	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

AUSTRALIA & PACIFIC REGION

SGE Analytical Science Pty Ltd
7 Argent Place, Ringwood
Victoria 3134 Australia
Toll Free: 1800 800 167
Tel: +61 (0) 3 9837 4200
Fax: +61 (0) 3 9874 5672
Email: support@sge.com

JAPAN

SGE Japan Inc
RK CUBE 3F 6-85, Ohta-machi
Naka-Ku, Yokohama-shi
Kanagawa 231-0011 Japan
Tel: +81 45 222 2885
Fax: +81 45 222 2887
Email: japan@sge.com

EUROPE

SGE Europe Ltd
European Head Office
1 Potters Lane
Kiln Farm Milton Keynes
MK11 3LA United Kingdom
Toll Free: 00800 2790 8999
Toll Free Fax: 00800 2626 2609
Tel: +44 1908 568 844
Fax: +44 1908 566 790
Tel France: +33 1 69 29 80 90
Fax France: +33 1 69 29 09 25
Tel Germany: +49 (0) 6155 / 60746 0
Fax Germany: +49 (0) 6155 / 60746 50
Email: europe@sge.com

UNITED STATES OF AMERICA

SGE Incorporated
2007 Kramer Lane
Austin Texas 78758 USA
Toll Free: (800) 945 6154
Tel: +1 512 837 7190
Fax: +1 512 836 9159
Email: usa@sge.com

