

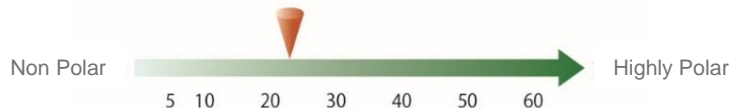
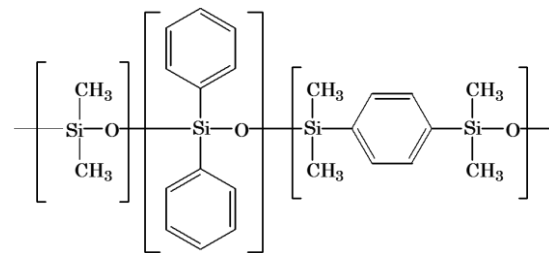
Ultra-low bleed!

GC Capillary Column **InertCap 17MS/Sil**

- Change elution pattern
- Analysis of polycyclic aromatic compounds
- Pesticide analysis
- Metabolomics



Due to the dimethylsilphenylene siloxane in its phase composition, InertCap 17MS/Sil shows very high thermal stability and low bleed. This column is the result of an improvement in the deactivation process which allows this column to reach high levels of deactivation and resistance to high temperatures. InertCap 17MS/Sil is desirable for analysis of pesticides and polycyclic aromatic compounds.



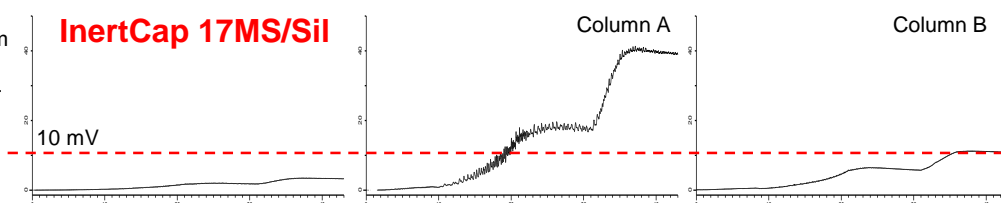
- 50 % Diphenyl(equiv.) - 50 % Dimethylsilphenylene Siloxane
- USP Phase G3
- Medium Polarity
- Cross-Linked
- Suitable for pesticides and PAHs analysis
- Equivalent: DB-17ms, VF-17ms, Rxi-17Sil MS



Low bleed with both FID and MS

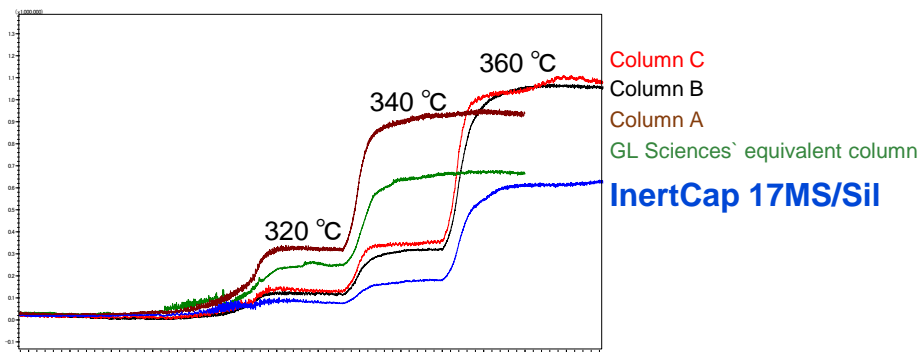
Bleed comparison with FID

System : GC-FID
 Col.Size : 0.25 mm I.D. x 30 m df = 0.25 μ m
 Col.Temp. : 120 $^{\circ}$ C (1 min hold) - 10 $^{\circ}$ C/min - 320 $^{\circ}$ C (10 min hold) - 10 $^{\circ}$ C/min - 340 $^{\circ}$ C (10 min hold)
 Carrier Gas : He 100 kPa
 Injection : 250 $^{\circ}$ C
 Detection : 320 $^{\circ}$ C FID Range 10⁴



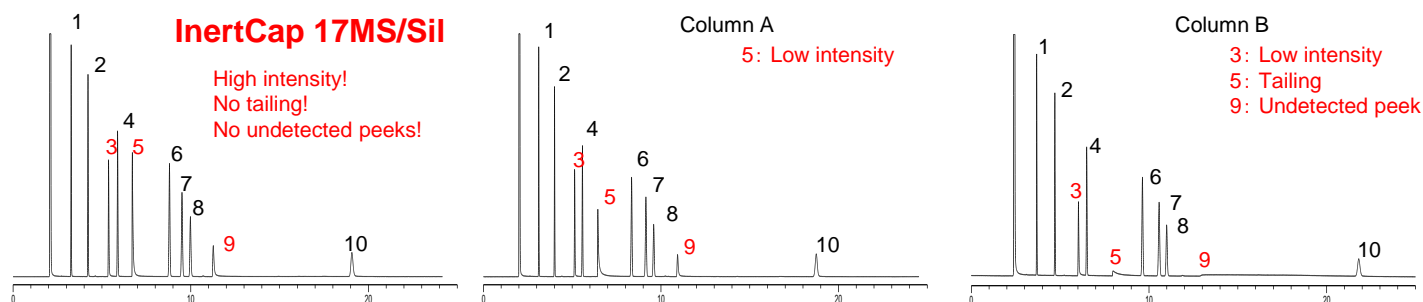
Bleed comparison with MS

System : GC-MS
 Col.Size : 0.25 mm I.D. x 30 m df = 0.25 μ m
 Col.Temp. : 40 $^{\circ}$ C (5 min hold) - 10 $^{\circ}$ C/min - 320 $^{\circ}$ C (10 min hold) - 10 $^{\circ}$ C/min - 340 $^{\circ}$ C (10 min hold) - 10 $^{\circ}$ C/min - 360 $^{\circ}$ C (20 min hold)
 Carrier Gas : He, 1.0 mL/min constant
 Injection : Splitless 250 $^{\circ}$ C
 Detection : MS TIC (m/z 50 - 500)
 MSD I.F.Temp.: 330 $^{\circ}$ C
 I.S. Temp. : 230 $^{\circ}$ C



Improved Deactivation

17-type phase is normally difficult to coat and deactivation is also difficult to maintain. However, due to the improved deactivation process and the adjusted stationary phase, InertCap 17MS/Sil has achieved outstanding levels of deactivation.



System : GC-FID
 Col.Size : 0.25 mm I.D. x 30 m df = 0.25 μ m
 Col.Temp. : 120 $^{\circ}$ C
 Carrier Gas : He 100 kPa
 Injection : 250 $^{\circ}$ C Split 50:1
 Detection : 300 $^{\circ}$ C FID Range 10⁴
 Sample Size : 0.2 μ L

Sample:
 1. *n*-Undecane
 2. *n*-Dodecane
 3. *n*-Nonanol
 4. *n*-Tridecane
 5. *n*-Decylamine
 6. *n*-Tetradecane
 7. Naphthalene
 8. Methyl-*n*-Decanoate
 9. 1,7-Heptanediol
 10. 2,4,5-Trichlorophenol

Designed for elution pattern change

Analysis of organic compounds

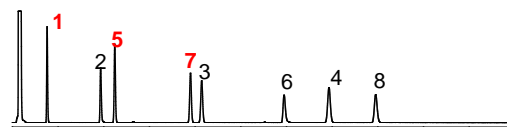
System : GC-FID
 Col.Size : 0.25 mm I.D. x 30 m df = 0.25 µm
 Col.Temp. : 120 °C
 Carrier Gas : He 100 kPa
 Injection : 250 °C Split 50:1
 Detection : 300 °C FID Range 10[^]
 Sample Size : 0.2 µL

Sample :

1. *n*-Decane
 2. *n*-Octanol
 3. 2,6-Dimethylphenol
 4. 2,6-Dimethylaniline
 5. *n*-Dodecane
 6. 1-Decanol
 7. *n*-Tridecane
 8. Methyl-*n*-Decanoate

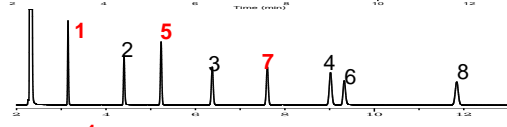
InertCap 17MS/Sil

Phase: Diphenyl(equiv.) 50 %



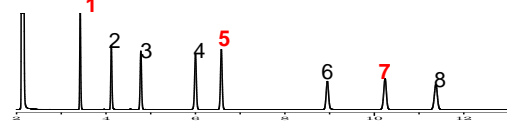
InertCap 35MS

Phase: Diphenyl(equiv.) 35 %



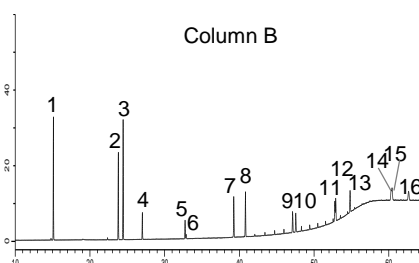
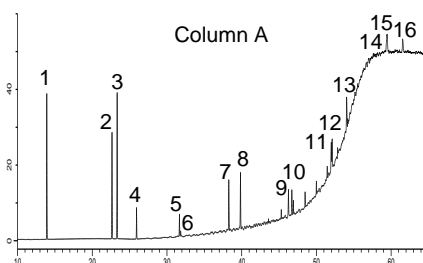
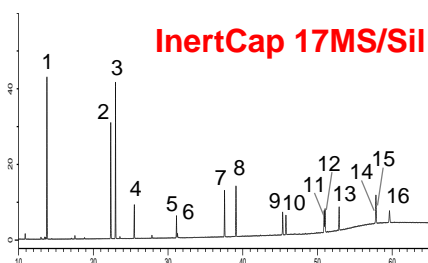
InertCap 5MS/Sil

Phase: Diphenyl(equiv.) 5 %



Designed for PAHs analysis

Analysis of polycyclic aromatic compounds



System : GC-FID
 Col.Size : 0.25 mm I.D. x 30 m df = 0.25 µm
 Col.Temp. : 80 °C (3 min hold) - 5 °C/min - 340 °C
 Carrier Gas : He 100 kPa
 Injection : 250 °C Split flow 5 mL/min
 Detection : 340 °C FID Range 10[^]
 Sample Size : 1.0 µL

Sample :

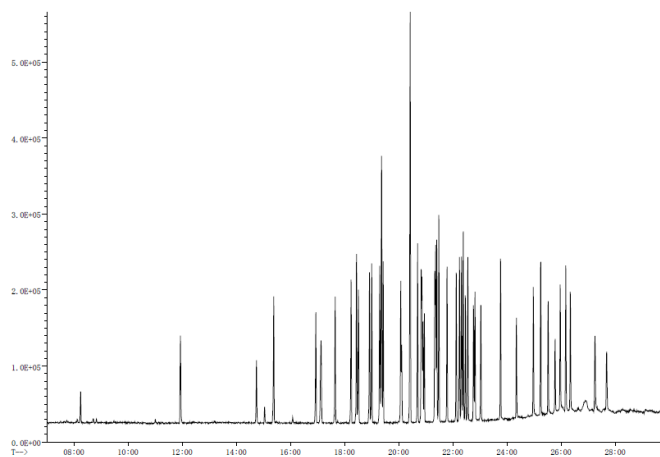
1. Naphthalene
 2. Acenaphthylene
 3. Acenaphthene
 4. Fluorene
 5. Phenanthrene
 6. Anthracene
 7. Fluoranthene
 8. Pyrene
 9. Benz[a]anthracene
 10. Chrysene
 11. Benzo[b]fluoranthene
 12. Benzo[k]fluoranthene
 13. Benzo[a]pyrene
 14. Indeno (1,2,3-C,D)pyrene
 15. Dibenz[a,h]anthracene
 16. Benzo[ghi]perylene

Analysis of pesticides

System : GC-MS
 Column : InertCap 17MS/Sil
 Col.Size : 0.25 mm I.D. x 30 m df = 0.25 µm
 Col.Temp. : 50 °C (1 min hold) - 10 °C/min - 300 °C (4 min hold)
 Carrier Gas : 1.0 mL/min
 Injection : 250 °C
 MSD I.F. Temp.: 300 °C
 I.S. Temp. : 200 °C
 Sample Size : 1 µL

Sample :

Elution time	Elution time
1 0:11:56 Dichlorvos	15 0:20:05 Chlorpyrifos methyl
2 0:14:45 Mevinphos	16 0:20:07 Phosphamidon
3 0:15:23 Methacrifos	17 0:20:25 Parathion methyl + Pirimiphos methyl + Tolclofos methyl
4 0:16:56 Ethoprophos	18 0:20:42 Chlorpyrifos
5 0:17:08 Cadusafos	19 0:20:50 Malathion
6 0:17:39 Phorate	20 0:20:51 Dimethylvinphos (E or Z)
7 0:18:14 Terbufos	21 0:20:54 Fenitrothion
8 0:18:27 Diazinon	22 0:20:57 Parathion
9 0:18:31 Salithion	23 0:21:20 Dimethylvinphos (E or Z)
10 0:18:55 Fonofos	24 0:21:22 Chlorfenvinphos (E or Z)
11 0:19:00 Etrimfos	25 0:21:24 Fenthion
12 0:19:18 Cyanophos	26 0:21:29 Isofenphos
13 0:19:22 Dichlofenthion + Dimethoate	27 0:21:47 Chlorfenvinphos (E or Z)
14 0:19:26 Isazophos	



Elution time	Elution time
28 0:22:07 Quinalphos	38 0:24:21 Fensulfothion
29 0:22:15 Propaphos + Fosthiazate	39 0:24:59 Triazophos
30 0:22:19 Phenthoate	40 0:25:15 Edifenphos
31 0:22:23 Prothiofos	41 0:25:31 Piperophos
32 0:22:28 Butamifos	42 0:25:47 EPN
33 0:22:33 Tetrachlorvinphos	43 0:25:58 Pyridaphenthion
34 0:22:46 Fenamifos	44 0:26:10 Anilofos
35 0:22:49 Profenophos	45 0:26:20 Phosalone
36 0:23:02 Methidathion	46 0:27:15 Pyraclofos
37 0:23:46 Ethion	47 0:27:41 Azinphos methyl

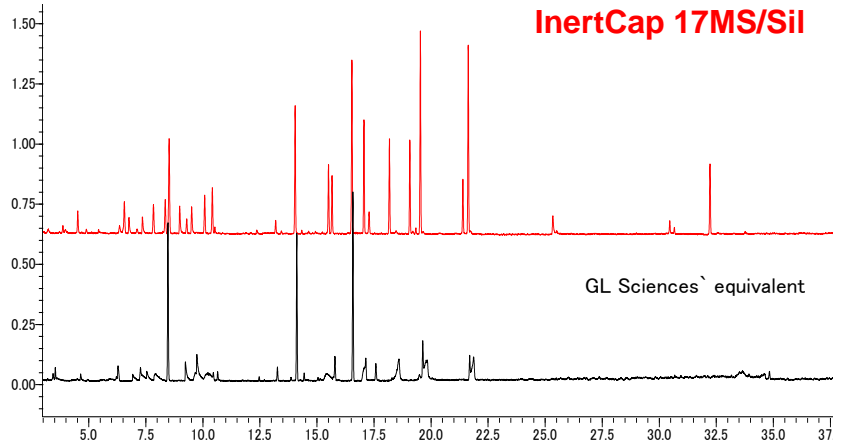
No qualitative analysis was done on the standard samples.

Suitable for Metabolomic Analysis

Analysis of amino acid derivatives

Due to the improved deactivation of InertCap 17MS/Sil, it is now possible to detect more compounds than before.

System : GC-MS
Col.Size : 0.25 mm I.D. x 30 m df = 0.25 μ m
Col.Temp. : 80 °C (2 min hold) - 5 °C/min - 330 °C
Carrier Gas : He, 39 cm/sec
Injection : 250 °C Split 25:1
Detection : MS TIC (m/z 85 - 500)
MSD I.F.Temp.: 250 °C
I.S. Temp. : 200 °C
Sample Size : 1 μ L



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