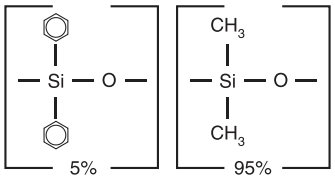
### Rtx®-5 Structure




Similar to: (5%-phenyl)-methylpolysiloxane

## similar phases

HP-5, DB-5, CP-Sil 8 CB, ZB-5

## also available

Metal MXT® Columns

Rugged, flexible, Siltek®-treated stainless steel tubing; inertness comparable to fused silica tubing.

MXT®-5 columns .....page 108

## also available

Rtx®-5 Amine columns.....page 100

## Rtx®-5 (G27) Columns (fused silica)

(low-polarity phase; Crossbond® diphenyl dimethyl polysiloxane)

- General-purpose columns for drugs, solvent impurities, pesticides, hydrocarbons, PCB congeners (e.g., Aroclor mixes), essential oils, semivolatiles.
- Temperature range: -60 °C to 350 °C.
- Equivalent to USP G27 and G36 phases.

The diphenyl dimethyl polysiloxane stationary phase is the most popular GC stationary phase and is used in a wide variety of applications. All residual catalysts and low molecular weight fragments are removed from the Rtx®-5 polymer, providing a tight monomodal distribution and extremely low bleed.

| ID | df | temp. limits* | 15-Meter cat.# | 30-Meter cat.# | 60-Meter cat.# | 105-Meter cat.# |
|---|---|---|---|---|---|---|
| 0.25 mm | 0.10 µm | -60 to 330/350 °C | 10205 | 10208 | 10211 | |
| | 0.25 µm | -60 to 330/350 °C | 10220 | 10223 | 10226 | 10229 |
| | 0.50 µm | -60 to 330/350 °C | 10235 | 10238 | 10241 | 10244 |
| | 1.00 µm | -60 to 325/340 °C | 10250 | 10253 | 10256 | 10259 |
| 0.32 mm | 0.10 µm | -60 to 330/350 °C | 10206 | 10209 | | |
| | 0.25 µm | -60 to 330/350 °C | 10221 | 10224 | 10227 | |
| | 0.50 µm | -60 to 330/350 °C | 10236 | 10239 | 10242 | |
| | 1.00 µm | -60 to 325/340 °C | 10251 | 10254 | 10257 | 10260 |
| | 1.50 µm | -60 to 310/330 °C | 10266 | 10269 | 10272 | 10275 |
| | 3.00 µm | -60 to 280/300 °C | 10281 | 10284 | 10287 | 10290 |
| 0.53 mm | 0.10 µm | -60 to 320/340 °C | 10207 | 10210 | | |
| | 0.25 µm | -60 to 320/340 °C | 10222 | 10225 | 10228 | |
| | 0.50 µm | -60 to 320/330 °C | 10237 | 10240 | 10243 | |
| | 1.00 µm | -60 to 320/330 °C | 10252 | 10255 | 10258 | |
| | 1.50 µm | -60 to 310/330 °C | 10267 | 10270 | 10273 | |
| | 3.00 µm | -60 to 270/290 °C | 10282 | 10285 | 10288 | |
| | 5.00 µm | -60 to 270/290 °C | 10277 | 10279 | 10283 | |

| ID | df | temp. limits | 10-Meter cat.# | 20-Meter cat.# | 40-Meter cat.# |
|---|---|---|---|---|---|
| 0.18 mm | 0.20 µm | -60 to 325/340 °C | 40201 | 40202 | 40203 |
| | 0.40 µm | -60 to 315/330 °C | 40210 | 40211 | 40212 |

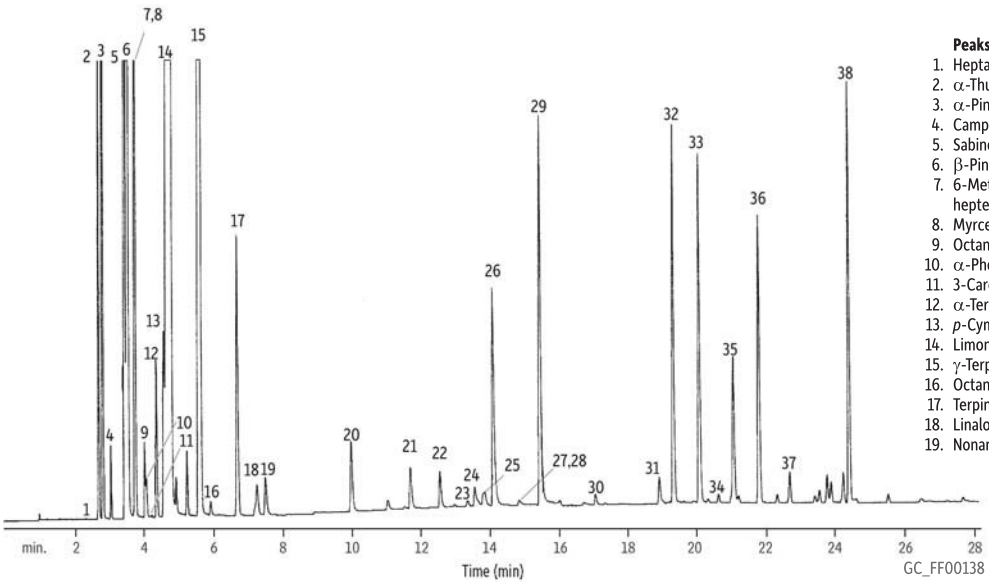
*Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.

### Six columns for the price of five!

Other phases and configurations available on request.

| 30-meter | 6-pack cat.# |
|---|---|
| 0.25 mm ID, 0.25 µm | 10223-600 |
| 0.25 mm ID, 0.50 µm | 10238-600 |
| 0.32 mm ID, 1.00 µm | 10254-600 |
| 0.53 mm ID, 1.50 µm | 10270-600 |

## Lemon Oil on Rtx®-5




**Peaks**
1. Heptanol
2. α-Thujene
3. α-Pinene
4. Camphene
5. Sabinene
6. β-Pinene
7. 6-Methyl-5-hepten-2-one
8. Myrcene
9. Octanal
10. α-Phellandrene
11. 3-Carene
12. α-Terpinene
13. *p*-Cymene
14. Limonene
15. γ-Terpinene
16. Octanol
17. Terpinolene
18. Linalool
19. Nonanal
20. Citronellal
21. Terpinene-4-ol
22. α-Terpineol
23. Decanol
24. Octyl acetate
25. Nerol
26. Neral
27. Carvone
28. Geraniol
29. Geranial
30. Nonyl acetate
31. Citronellyl acetate
32. Neryl acetate
33. Geranyl acetate
34. Dodecanal
35. β-Caryophyllene
36. *trans*-α-Bergamotene
37. α-Humulene
38. β-Bisabolene

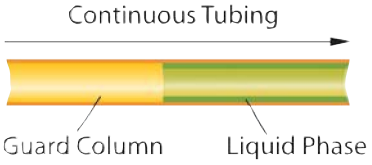
| | | | |
|---|---|---|---|
| **Column** | Rtx®-5, 30 m, 0.32 mm ID, 0.25 µm (cat.# 10224) | **Carrier Gas** | $H_2$, constant flow |
| **Sample** | Wet needle split injection of a neat lemon oil | Flow Rate: | 3.2 mL/min |
| **Injection** | Split (split ratio 100:1) | Linear Velocity: | 40 cm/sec |
| Inj. Temp.: | 250 °C | **Detector** | FID @ 250 °C |
| **Oven** | | **Notes** | FID sensitivity: 2 x $10^{-11}$ AFS |
| Oven Temp.: | 75 °C (hold 8 min) to 250 °C at 4 °C/min | | |

## Rtx®-5 with Integra-Guard® Columns

- No leaks for a more robust method.
- No column connections for easier, faster maintenance.
- No peak distortions due to connector dead volume and thermal capacity.

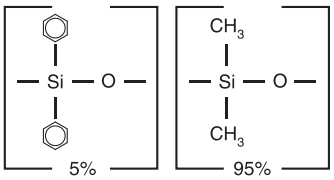
| Description | qty. | cat.# |
|---|---|---|
| 30 m, 0.25 mm ID, 0.25 µm Rtx-5 w/5 m Integra-Guard Column | ea. | 10223-124 |
| 30 m, 0.25 mm ID, 0.25 µm Rtx-5 w/10 m Integra-Guard Column | ea. | 10223-127 |
| 30 m, 0.25 mm ID, 1.00 µm Rtx-5 w/5 m Integra-Guard Column | ea. | 10253-124 |
| 30 m, 0.32 mm ID, 0.25 µm Rtx-5 w/5 m Integra-Guard Column | ea. | 10224-125 |
| 30 m, 0.32 mm ID, 1.00 µm Rtx-5 w/5 m Integra-Guard Column | ea. | 10254-125 |
| 30 m, 0.53 mm ID, 5.00 µm Rtx-5/Rtx-G27 w/5 m Integra-Guard Column | ea. | 10279-126 |
| 60 m, 0.32 mm ID, 0.25 µm Rtx-5 w/5 m Integra-Guard Column | ea. | 10227-125 |

**Integra-Guard® Built-In Guard Column**




**Get the protection without the connection!**

### Rtx®-5MS Structure




## similar phases

DB-5, HP-5, HP-5MS, Ultra-2, SPB-5, CP-Sil 8 CB, ZB-5

## Rtx®-5MS—Low-Bleed GC-MS Columns (fused silica)

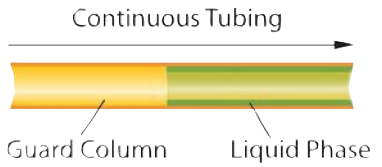
(low-polarity phase; Crossbond® diphenyl dimethyl polysiloxane)

- General purpose columns for drugs, solvent impurities, pesticides, hydrocarbons, PCB congeners (e.g., Aroclor mixes), essential oils, semivolatiles.
- Column specifically tested for low-bleed performance.
- Temperature range: -60 °C to 350 °C.
- Equivalent to USP G27 and G36 phases.

| ID | df | temp. limits | 15-Meter cat.# | 30-Meter cat.# | 60-Meter cat.# |
|---|---|---|---|---|---|
| 0.25 mm | 0.10 µm | -60 to 330/350 °C | 12605 | 12608 | 12611 |
| | 0.25 µm | -60 to 330/350 °C | 12620 | 12623 | 12626 |
| | 0.50 µm | -60 to 330/350 °C | 12635 | 12638 | 12641 |
| | 1.00 µm | -60 to 325/350 °C | 12650 | 12653 | |
| 0.32 mm | 0.10 µm | -60 to 330/350 °C | 12606 | 12609 | |
| | 0.25 µm | -60 to 330/350 °C | 12621 | 12624 | 12627 |
| | 0.50 µm | -60 to 330/350 °C | | 12639 | 12642 |
| | 1.00 µm | -60 to 325/350 °C | | 12654 | |
| 0.53 mm | 0.50 µm | -60 to 320/340 °C | 12637 | 12640 | |
| | 1.00 µm | -60 to 320/340 °C | 12652 | 12655 | |
| | 1.50 µm | -60 to 310/330 °C | 12667 | 12670 | |

Note: The DB-5MS is a silarylene-based polymer equivalent to the Rxi-5Sil MS.
*Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.

### Integra-Guard® Built-In Guard Column




**Get the protection without the connection!**

## Rtx®-5MS with Integra-Guard® Columns

| Description | qty. | cat.# |
|---|---|---|
| 15 m, 0.25 mm ID, 0.25 µm Rtx-5MS w/5 m Integra-Guard Column | ea. | 12620-124 |
| 15 m, 0.25 mm ID, 0.50 µm Rtx-5MS w/10 m Integra-Guard Column | ea. | 12635-127 |
| 30 m, 0.25 mm ID, 0.10 µm Rtx-5MS w/5 m Integra-Guard Column | ea. | 12608-124 |
| 30 m, 0.25 mm ID, 0.25 µm Rtx-5MS w/5 m Integra-Guard Column | ea. | 12623-124 |
| 30 m, 0.25 mm ID, 0.25 µm Rtx-5MS w/10 m Integra-Guard Column | ea. | 12623-127 |
| 30 m, 0.25 mm ID, 0.50 µm Rtx-5MS w/5 m Integra-Guard Column | ea. | 12638-124 |
| 30 m, 0.25 mm ID, 0.50 µm Rtx-5MS w/10 m Integra-Guard Column | ea. | 12638-127 |
| 30 m, 0.32 mm ID, 0.25 µm Rtx-5MS w/5 m Integra-Guard Column | ea. | 12624-125 |
| 30 m, 0.32 mm ID, 1.00 µm Rtx-5MS w/5 m Integra-Guard Column | ea. | 12654-125 |

We carefully manage inventory so we have what you need when you need it.

### Food Packaging Volatiles by Purge & Trap GC-MS on Rtx®-5MS