

## Organic Volatile Impurities (OVI) Analysis

### Rtx®-5 Columns (fused silica)

(low polarity phase; Crossbond® 5% diphenyl/95% 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.

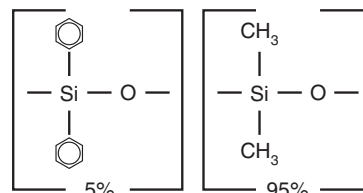
The 5% diphenyl/95% dimethyl polysiloxane stationary phase is the most popular GC stationary phase and is used in a wide variety of applications. All residual catalysts and low molecular weight fragments are removed from the Rtx®-5 polymer, providing a tight mono-modal distribution and extremely low bleed.

ID	df	temp. limits	30-Meter
0.53mm	5.00µm	-60 to 270/290°C	10279

For our complete listing of Rtx®-5 columns, see **page 50**.

### G27 phase

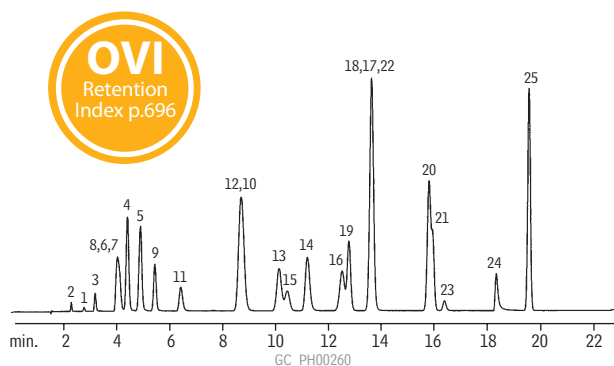
#### Rtx®-5 Structure



### similar phases

DB-5, HP-5, HP-5MS, Ultra-2, SPB-5, Equity-5, MDN-5

### Organic volatile impurities on an Rtx®-5 (Rtx®-G27) column.



Rtx®-5 (Rtx®-G27) with 5m phenylmethyl Integra-Guard® guard column, 30m, 0.53mm ID, 5.0µm (cat.# 10279-126)

Inj.: Headspace injection of common solvents for pharmaceutical processing. Prepared to equal about 500ppm in the bulk pharmaceutical. Samples shaken and heated at 90°C for 15 minutes, 1mL headspace injection.

Oven temp.: 35°C (hold 10 min.) to 100°C @ 5°C/min., to 240°C @ 25°C/min. (hold 5 min.)

Inj./det. temp.: 220°C/240°C

FID sensitivity: 1.05 x 10<sup>-11</sup> AFS

Carrier gas: helium, 35cm/sec. set @ 35°C

Split ratio: 2:1

1. ethylene oxide
2. methanol
3. ethanol
4. diethyl ether
5. 1,1-dichloroethene
6. acetone
7. isopropanol
8. acetonitrile
9. methylene chloride
10. n-hexane
11. n-propanol
12. methyl ethyl ketone
13. ethyl acetate
14. tetrahydrofuran
15. chloroform
16. 1,1,1-trichloroethane
17. carbon tetrachloride
18. benzene
19. 1,2-dichloroethane
20. heptane
21. trichloroethylene
22. n-butanol
23. 1,4-dioxane
24. pyridine
25. toluene

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