

Rxi[®]-5Sil MS Columns

Exceptionally Inert
Columns for GC/MS and
Trace-Level Analyses

- **Low bleed** at higher temperatures for better sensitivity and lower detection limits.
- **Excellent inertness** for highest acidic, basic, and polar compound response.
- Engineered to assure predictable performance and **column-to-column reproducibility**.

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Rxi®-5Sil MS Fused Silica Columns

Exceptionally Inert Columns for GC/MS and Trace-Level Analyses

The Rxi®-5Sil MS column is ultra-low bleed, highly inert, and unsurpassed in performance compared to other columns of similar phase. The technology used to produce these columns results in exceptional column-to-column reproducibility, ensuring every column you receive performs consistently, lot-to-lot and year-to-year. Compare the performance of the Rxi®-5Sil MS column to competitors, and see why the Rxi®-5Sil MS column is the best choice, particularly for GC/MS and trace-level analyses.

Lowest Bleed Column in the Industry

The Rxi®-5Sil MS column was developed using new polymer chemistry and a specialized cross-linking and stabilization process, creating a column with an exceptionally low bleed profile, even at high temperatures. Compared to other silarylene columns that are marketed as equivalent, the Rxi®-5Sil MS column shows substantially lower bleed levels, even at 350°C (Figure 1), and generates nearly symmetrical peaks for polar analytes and other challenging compounds.

The low bleed characteristic of the Rxi®-5Sil MS column allows for higher signal-to-noise ratios, thus allowing lower detection limits. This increased sensitivity, in combination with the column's high inertness and reliable performance, is especially beneficial to GC/MS and trace-level analyses.

Proven Inertness for Both Acidic and Basic Compounds

In addition to high temperature robustness, all Rxi® columns are designed to be exceptionally inert for acidic, basic, and polar compounds. To demonstrate this comprehensive inertness, Rxi®-5Sil MS columns are tested using both acidic and basic compounds at low concentrations. Two probes are used: pyridine, which exhibits tailing if the column contains active sites for basic compounds, and 2,4-dinitrophenol, which shows a lower response if the column contains active sites affecting acidic compounds.

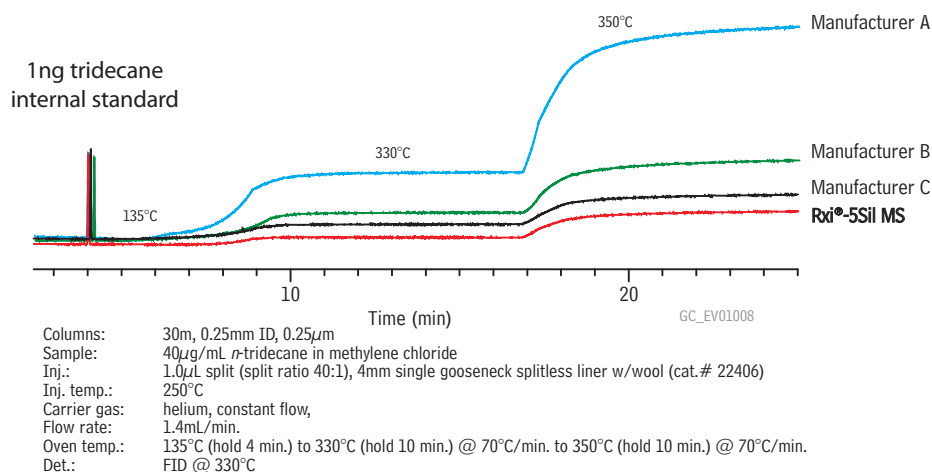
As shown in Figure 2, Rxi®-5Sil MS columns are significantly more inert to pyridine at 2 ng on-column than competitor columns A and B, as measured by tailing and peak height. Manufacturer C column inertness is similar, but the Rxi®-5Sil MS column exhibits less tailing and a higher response, as shown in Table I.

Table I Rxi®-5Sil MS columns produce high response factors for both basic and acidic compounds.

	2,4-dinitrophenol (average RF)	pyridine (average RF)
Rxi®-5Sil MS	0.24	0.74
Manufacturer A	0.20	0.63
Manufacturer B	0.22	0.64
Manufacturer C	0.24	0.65

Response factors are based on phenanthrene. (n=7)

Figure 1 Rxi®-5Sil MS columns outperform competitors, producing lower bleed at 350°C than any other column on the market.



Exceptional Reproducibility

In addition to extremely low bleed and high inertness, Rxi®-5Sil MS columns offer remarkably consistent performance. Chromatographers can be confident that each new Rxi®-5Sil MS column will perform exactly the same as the one it replaces. Precision manufacturing and tight quality controls guarantee excellent batch-to-batch reproducibility (Figure 3). In addition, all Rxi®-5Sil MS columns are individually tested using stringent specifications, to ensure consistent performance.

Conclusion

Rxi®-5Sil MS columns consistently outperform competitor columns in terms of bleed, inertness, and reproducibility. These columns are designed for lower detection limits and are ideal for GC/MS and trace-level analyses. For your next application, choose an Rxi®-5Sil MS column, the only column that reliably delivers low bleed, high inertness, and column-to-column/lot-to-lot reproducibility.

Figure 2 Rxi®-5Sil MS columns are more inert than competitor columns, allowing both acidic and basic compounds to be accurately analyzed at low levels.

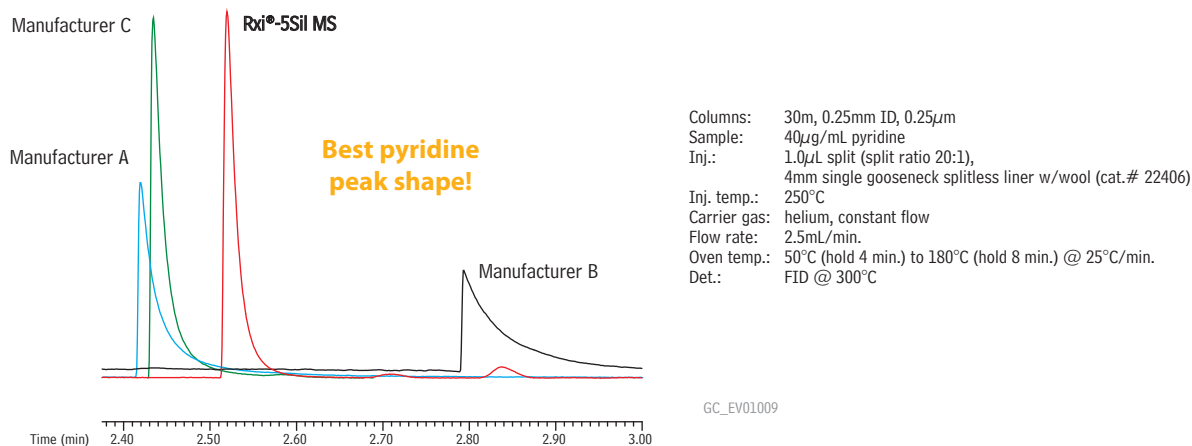
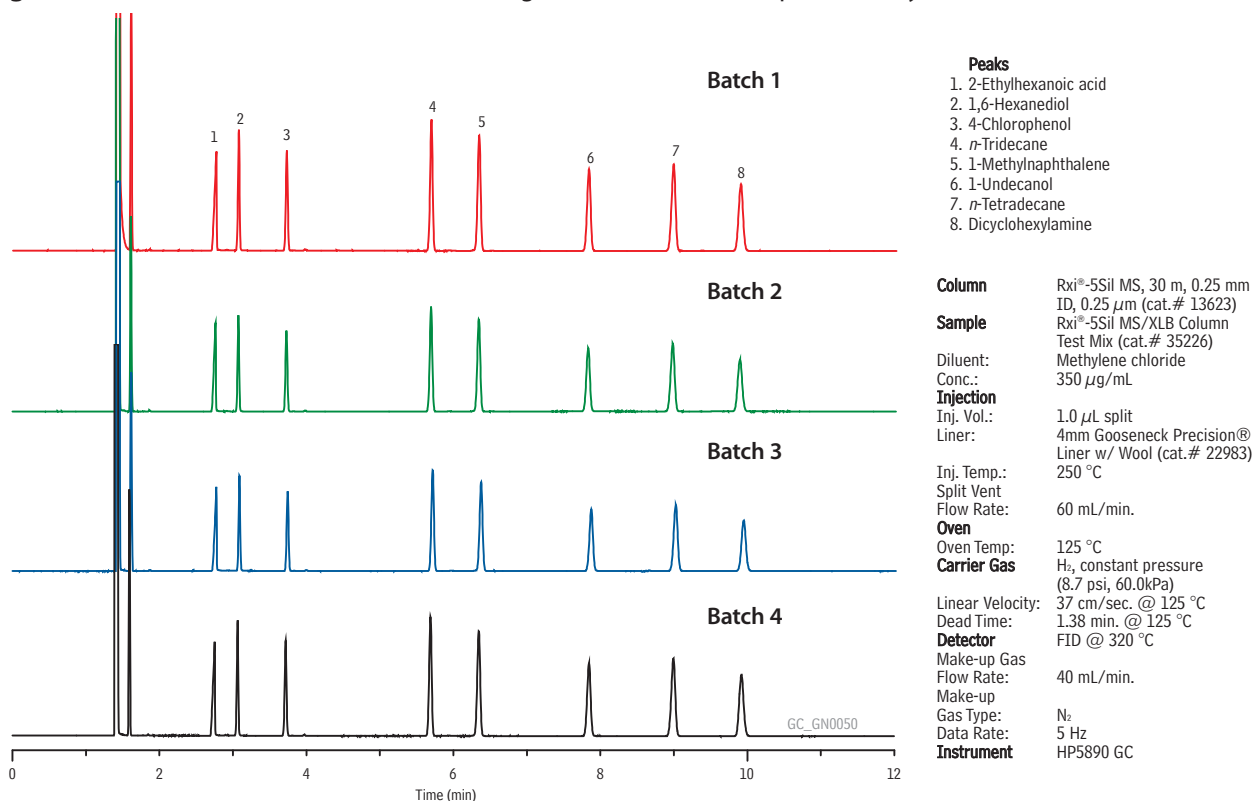
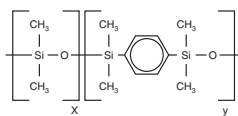


Figure 3 Rxi®-5Sil MS columns show outstanding column-to-column reproducibility.





Rxi®-5Sil MS Columns (fused silica)

(low polarity Crossbond® silarylene phase; selectivity similar to 5% phenyl/95% dimethyl polysiloxane)

- Engineered to be a low bleed GC/MS column.
- Excellent inertness for active compounds.
- General purpose columns—ideal for GC/MS analysis of polycyclic aromatic compounds, chlorinated hydrocarbons, phthalates, phenols, amines, organochlorine pesticides, organophosphorus pesticides, drugs, solvent impurities, and hydrocarbons.
- Temperature range: -60 °C to 350 °C.

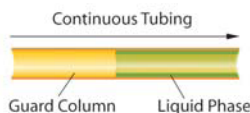
The Rxi®-5Sil MS stationary phase incorporates phenyl groups (called silarylene) in the polymer backbone. This improves thermal stability, reduces bleed, and makes the phase less prone to oxidation. Rxi®-5Sil MS columns are ideal for GC/MS applications requiring high sensitivity, including use in ion trap systems.

similar phases

DB-5ms, VF-5ms, CP-Sil 8
Low-Bleed/MS, DB-5ms UI,
Rtx-5Sil MS, ZB-5ms,
Optima 5ms, AT-5ms,
SLB-5ms, BPX-5



Integra-Guard® built-in guard column



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ID	df	temp. limits	15-Meter	30-Meter	60-Meter
0.25mm	0.10µm	-60 to 330/350°C	13605	13608	
	0.25µm	-60 to 330/350°C	13620	13623	13626
	0.50µm	-60 to 330/350°C	13635	13638	
	1.00µm	-60 to 325/350°C	13650	13653	13697
0.32mm	0.25µm	-60 to 330/350°C	13621	13624	
	0.50µm	-60 to 330/350°C		13639	
	1.00µm	-60 to 325/350°C		13654	
0.53mm	1.50µm	-60 to 310/330°C		13670	

ID	df	temp. limits	10-Meter	20-Meter
0.10mm	0.10µm	-60 to 330/350°C	43601	
0.15mm	0.15µm	-60 to 330/350°C	43815	43816
	2.0µm	-60 to 330/350°C		43817
	0.36µm	-60 to 330/350°C		43604

Rxi®-5Sil MS with Integra-Guard®

Description	qty.	cat.#
15m, 0.25mm ID, 0.25µm Rxi-5Sil MS w/10m Integra-Guard Column	ea.	13620-127
30m, 0.25mm ID, 0.25µm Rxi-5Sil MS w/5m Integra-Guard Column	ea.	13623-124
30m, 0.25mm ID, 0.25µm Rxi-5Sil MS w/10m Integra-Guard Column	ea.	13623-127
15m, 0.25mm ID, 0.50µm Rxi-5Sil MS w/5m Integra-Guard Column	ea.	13635-124
30m, 0.25mm ID, 0.50µm Rxi-5Sil MS w/5m Integra-Guard Column	ea.	13638-124
30m, 0.25mm ID, 0.50µm Rxi-5Sil MS w/10m Integra-Guard Column	ea.	13638-127
30m, 0.32mm ID, 0.50µm Rxi-5Sil MS w/5m Integra-Guard Column	ea.	13639-125
30m, 0.32mm ID, 1.00µm Rxi-5Sil MS w/5m Integra-Guard Column	ea.	13654-125

Rxi®-5Sil MS/XLB Column Test Mix (8 components)

4-chlorophenol	2-ethylhexanoic acid	1-methylnaphthalene	<i>n</i> -tridecane (C13)
dicyclohexylamine	1,6-hexanediol	<i>n</i> -tetradecane (C14)	1-undecanol
350µg/mL each in methylene chloride, 1mL/ampul			cat. # 35226

Visit us at www.restek.com/rxi

RESTEK

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