

# Rt<sup>®</sup>-XLSulfur Packed Column

## Specialized packed and micropacked columns for eXtra-Low Sulfur analysis

Restek's Rt<sup>®</sup>-XLSulfur column is the second generation of packing material for the analysis of sulfur compounds. The first packing material, in the Rt<sup>®</sup>-Sulfur column, had inertness characteristics for low ppmv levels of sulfur compounds. Now, with the second generation, our innovative Rt<sup>®</sup>-XLSulfur column, it is possible to achieve low ppbv detection of sulfur compounds.



### What is the Rt<sup>®</sup>-XLSulfur column?

Rt<sup>®</sup>-XLSulfur packed and micropacked columns are designed for ppb-level sulfur analysis. Every component of the sample pathway is treated to provide the highest degree of inertness for reactive, low-level sulfur compounds. The porous polymer phase features a unique surface modification, which results in excellent peak symmetry and thermal stability to 300 °C.

### What are the benefits to using Restek's Rt<sup>®</sup>-XLSulfur column?

The Rt<sup>®</sup>-XLSulfur column combines a packing material surface deactivation with Sulfinert<sup>®</sup> tubing and end-fittings to yield unsurpassed inertness and high thermal stability for highly reactive sulfur compounds. The Rt<sup>®</sup>-XLSulfur column offers the most reliable, reproducible analyses for low ppb-level sulfur samples.

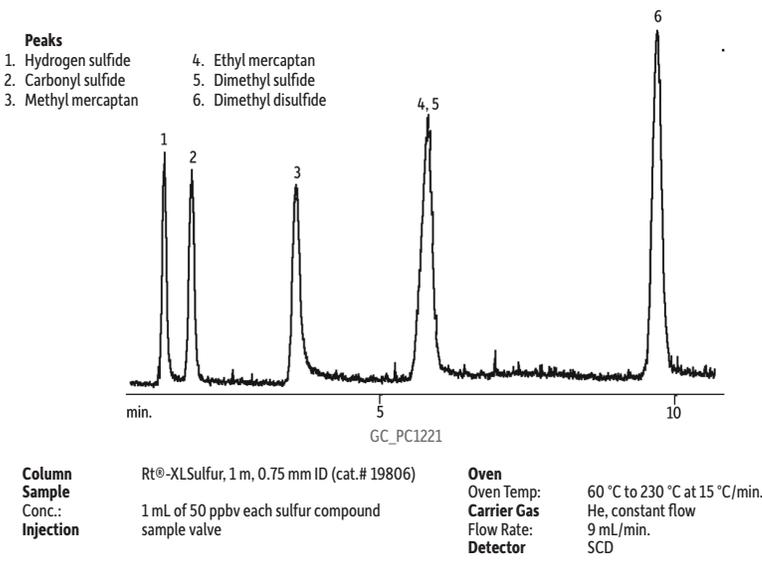
### For which applications should I use an Rt<sup>®</sup>-XLSulfur column?

The high performance and reproducibility of the Rt<sup>®</sup>-XLSulfur column enables resolution and quantitation of COS, H<sub>2</sub>S, SO<sub>2</sub>, CH<sub>3</sub>SH, (CH<sub>3</sub>)<sub>2</sub>S<sub>2</sub> at low ppb concentrations. These sulfur compounds typically are found in pulp mill byproducts, natural gas, and petroleum products.

### Features & Benefits

Feature	Benefit
Sulfinert <sup>®</sup> tubing	Unsurpassed inertness towards sulfur compounds. Lowest level of detection for sulfur compounds. Rugged metal column.
Improved packing	Minimal adsorption of sulfur compounds. Excellent response for sulfur compounds.
300 °C thermal stability	50 °C higher thermal stability than the Rt <sup>®</sup> -Sulfur column. Minimal column bleed, short conditioning times. Improved detector sensitivity with SCDs and FPDs.
Guaranteed	Column-to-column reproducibility.

**Figure 1** The Rt<sup>®</sup>-XLSulfur column analyzes 50 ppb levels of sulfur compounds, providing low bleed and good symmetry.



Visit [www.restek.com](http://www.restek.com) for a complete product listing

# Commonly Asked Questions

## • What is Sulfinert® treatment?

Sulfinert® treatment is a metals passivation coating for low-level sulfur storage and transfer. The Sulfinert® coating is rugged, durable, and thermally stable to 360 °C. Like Silcosteel® treatment, Sulfinert® coating is incorporated into the framework of atoms on the surface of stainless steel. Holding studies have proven Sulfinert® coating to be non-adsorptive and unreactive to low ppb-levels of sulfur compounds.

## • What is the Rt®-XLSulfur column made of?

The Rt®-XLSulfur column is made with Sulfinert® tubing and end-fittings, and is packed with a porous polymer having a unique surface modification that results in excellent inertness to ppb levels and thermal stability to 300 °C.

## • What other areas should be addressed to improve the response of sulfur compounds?

To achieve the highest degree of inertness for ppb-level sulfur analysis, each part of the sample pathway must be optimized. In addition to the Rt®-XLSulfur analytical column, we also recommend deactivation of the inlet system. The use of Sulfinert® sample cylinders, sample loops, and transfer line tubing will provide ultra-high sensitivity and reproducibility for low-level sulfur analysis.

## Rt®-XLSulfur Packed/Micropacked Columns

- Optimized columns for low ppbv sulfur analyses.
- Eliminate the need for PTFE tubing.
- Column and end-fittings are Sulfinert® treated for maximum inertness.

### Rt®-XLSulfur Columns (packed)\*

OD	ID	1-Meter	2-Meter
1/8"	2.0mm	80484-	80485-
3/16"	3.2mm	80482-	80483-

\*Please add column instrument configuration suffix number to cat.# when ordering. See chart on this page.

### Rt®-XLSulfur Columns (micropacked)\*\*

OD	ID	1-Meter	2-Meter
1/16"	1.0mm	19804	19805
0.95mm	0.75mm	19806	19807

\*\*Does not include column nuts and ferrules. Optional installation kits can be ordered separately.

## For More Information on Sulfur Analysis:

Visit [www.restek.com](http://www.restek.com) and download these free application notes.

Rt®-XLSulfur Packed GC Column for Analysis of Low-Level Sulfur Compounds in C1-C6 Hydrocarbon Streams (lit. cat.# PCAN1498-UNV)

Analyze Sulfur Compounds at ppb Levels, Using an Rt®-XLSulfur Micropacked GC Column or an Rtx®-1 Thick Film Capillary GC Column (lit. cat.# PCAN1499-UNV)

## Column Instrument Configurations



General Configuration:  
Suffix -800



Agilent 5880, 5890, 5987, 6890, 7890:  
Suffix -810\*



Varian 3700, Vista Series, FID:  
Suffix -820



PE 900-3920, Sigma 1,2,3:  
Suffix -830



PE Auto System 8300, 8400, 8700:  
Suffix -840

See [www.restek.com](http://www.restek.com) for additional configurations.

Note: Initial 2" of column will be empty, to accommodate a needle. For a completely filled column (not on-column) add suffix -901. \* -810 suffix also includes 1 1/2" void on detector side.