

# Free Chromatographic Literature

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Our publications include:

- **Application Notes:** Analysis-specific technical information; 2-8 pages.
- **Fast Facts and Product Flyers:** Outlines describing uses and benefits of specific Restek chromatography columns, tools, accessories, or analytical reference mixes; 2-8 pages.
- **Technical Guides:** Detailed presentations that explain a technique or discuss a group of related analyses; 8+ pages.
- **Other Literature:** Our general catalog, specialty catalogs, wall charts, and more.

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### APPLICATION NOTES (Detailed analysis-specific information)

#### Air Monitoring

- 59189A TO-Can™ Canisters for Air Monitoring Methods TO-14 and TO-15  
 59347A Stability of Low-Level (1ppb-20ppb) Reactive Sulfurs in SilcoCan™ Canisters

#### Chemical/Petrochemical

- 59164B Sulfur™ Sample Cylinders Increase Holding Time for Sulfur Compounds  
 59165 Rt-XLSulfur™ Packed GC Column for Low-Level Sulfur Compounds in C1-C6 Hydrocarbon Streams  
 59367 Fast, High-Temperature Sim Dist Analyses, Using MXT®-1 HT Sim Dist Column and GC Racer Temperature Programmer  
 59479 High-Temperature Polydimethylsiloxane Column for ASTM D-6352-98 Simulated Distillation Analyses: MXT®-1HT Sim Dist  
 59538 High-Performance Molecular Sieve 5A and 13X Packed GC Columns  
 59540 Bonded PLOT Columns for Dual-Column GC of Gases and Volatiles  
 59549 OPN and n-Octane on Res-Sil™ C Packing, for Separating Hydrocarbons  
 59551 Petroleum Products by Simulated Distillation, Using MXT® Sim Dist GC Columns  
 59567A Capillary GC Column for Simulated Distillation of Petroleum Fractions  
 59568A Rtx®-1PONA GC Column for Petroleum Products  
 59570 Rtx®-1: A Bonded Packed Column for Simulated Distillation  
 59571 Rtx®-Wax Column  
 59573A Sulfur Compounds at ppb Levels, Using an Rt-XLSulfur™ Micropacked GC Column or an Rtx®-1 Thick Film Capillary GC Column  
 59587 Oxygenates in Gasoline

#### Clinical/Forensic

- 59118A Allure™ PFP Propyl and Ultra PFP HPLC Columns Improve Analyses of Basic Compounds  
 59124 Ultra C4 HPLC Column: High Stability at Low pH  
 59141 Analyze Nucleotides, Nucleosides, Purines, and Pyrimidines Simultaneously: Ultra IBD HPLC Column  
 59548 Commonly Abused Inhalants in Blood, Using Rtx®-BAC1 and Rtx®-BAC2 GC Columns  
 59574 Fire Debris Analysis  
 59575 Barbiturate Analysis  
 59576 Opiate Analysis  
 59598 Dual-Column Confirmational GC of Blood Alcohols, Using Rtx®-BAC1 and Rtx®-BAC2 Columns (Optimized for Perkin-Elmer HS 40 Headspace Autosampler)

#### Environmental

- 59101 US EPA Method 619 Triazine Herbicides, Using Rtx®-CLPesticides and Rtx®-CLPesticides2 GC Columns  
 59110 CarboPrep™ SPE Cleanup of Method 8081A Chlorinated Pesticides  
 59111 Minimizing Breakdown of Chlorinated Pesticides, Using Siltek™-Deactivated GC Accessories  
 59113 Siltek™ Deactivation Delivers Inertness to Analyte Breakdown and Reactivity, and Durability to Physical and Chemical Challenges  
 59120 Rtx®-CLPesticides and Rtx®-CLPesticides2 Columns: Ideal Confirmation Pair for Polychlorinated Biphenyls  
 59125 Improving Throughput of Semivolatile GC/MS analysis, Using a Performance-Based Measurement System, Rtx®-5Sil MS Column, and Uniliner® Inlet Liner  
 59131 Rtx®-5Sil MS Column: Best Resolution for Gasoline Range Organic GRO Compounds in Alaska Method AK101AA



## APPLICATION NOTES (Detailed analysis-specific information)

### Environmental (cont'd)

59142	CarboPrep™ SPE Cleanup of Method 8141A Organophosphorus Pesticides and Herbicides
59150	Optimizing Massachusetts Volatile Petroleum Hydrocarbon GC Analysis
59162	Fewer Coelutions and Faster GC Analysis of EPA Method 8095 Explosives, Using Rtx®-TNT and Rtx®-TNT2 Column Pair
59175	GC/ECD Analysis of Haloacetic Acids in Water, Using Rtx®-CLPesticides and Rtx®-CLPesticides2 Columns
59187	Optimizing GC Analysis of Ethylene Glycol in Water
59190	Separating m- and p-Xylene Isomers by US EPA Method 8260, Using an Rtx®-200 GC Column
59191	Volatiles by GC/MS Using an Rtx®-VMS Column
59196A	Analysis of Polycyclic Aromatic Hydrocarbons Using Rtx®-5Sil MS and Rtx®-CLPesticides2 Columns
59343	Fast Analysis of Dioxin and Related Compounds, Using an Rtx®-5MS Column
59345	Resolving Oxygenates from Gasoline Additives, Using an Rtx®-VGC GC Column
59351B	Stx™-CLPesticides and Stx™-CLPesticides2 Columns: Improved Inertness for Chlorinated Pesticides
59359	Improved Analysis of Organophosphorus Pesticides, Using Rtx®-OPPesticides and Rtx®-OPPesticides2 Columns
59361	HPLC of Trace-Level Explosives, Using Pinnacle II™ C18 and Cyano Columns
59457	Fast Analyses of Aroclor® PCBs, Using the Zip Scientific GC Racer Temperature Programming System
59487	Higher Responses for Chlorinated Pesticides, Using a Drilled Uniliner® GC Inlet Liner and Rtx®-CLPesticides Column
59539	US EPA Method 504.1 Organochlorine Pesticides, Using Rtx®-CLPesticides and Rtx®-CLPesticides2 GC Columns
59544	Extraction of Oil and Grease from Wastewater, Using US EPA Method 1664 and Resprep™ Oil and Grease SPE Disks and Flow Filters
59547	US EPA Method 8081A Chlorinated Pesticides, Using Rtx®-CLPesticides & Rtx®-CLPesticides2 GC Columns
59550	Sample Preparation and Analysis of Organo Tin Compounds
59552	GC/MS Analysis of Azo Dye Compounds
59557	SPE Extraction for EPA Method 525.1
59558	PCB Screening in Less Than 10 Minutes
59559A	Chlorophenoxy Herbicides Using Rtx®-CLPesticides and Rtx®-CLPesticides2 GC Columns
59562A	Florisil® SPE Cleanup for Organochlorine Pesticides and Polychlorinated Biphenyls
59563	Extraction of Paraquat & Diquat from Water, Using Resprep™-C8-47 Extraction Disks
59564	Extraction of PCBs, using Resprep™-C18-47 SPE Disks and Resprep™-6D Extraction System
59565A	Extraction of Polynuclear Aromatic Hydrocarbons, Using Resprep™-18-47 SPE Disks and Resprep™-6D Extraction System
59571	Rtx®-Wax Column
59856	Trace Oxygenates in Petroleum-Contaminated Wastewater, Using Purge-and-Trap/GC/MS US EPA Methods 5030B & 8260

### Foods, Flavors, Fragrances

59128	Omega-3 (n-3) and Omega-6 (n-6) Fatty Acid Composition in Evening Primrose Oil, Flax Seed Oil, Black Currant Oil, and Borage Oil
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### Foods, Flavors, Fragrances (cont'd)

59136	Institute for Nutraceutical Advancement (INA) Validates GC Methods for Saw Palmetto, Using Rtx®-5 and Stabilwax® Columns
59155B	Volatile Free Fatty Acids on the Stabilwax®-DA GC Column
59177	Polar Compounds by Reversed Phase HPLC, Using Ultra Aqueous C18 Columns
59181	Vitamins by HPLC
59186	Vanillin and Ethyl Vanillin in Vanilla Flavors
59199	Heat Level of Spicy Foods, Using an Ultra C18 HPLC Column
59335	Glucosinolates in Vegetable Extracts, without Ion Pairing, Using an Ultra Aqueous C18 HPLC Column
59348	Volatile Compounds in Food Contact Packaging, Using Purge and Trap GC/MS and an Rtx®-5MS Column
59358	Sulfur Impurities in Beverage-Grade Carbon Dioxide, Using the Rt-XLSulfur™ Micropacked Column
59364	Nutraceuticals by HPLC and GC
59398	Analysis of Preservatives, Using HPLC
59485	Acrylamide Analysis by GC
59530	Single-Column HPLC Method for Organic Acids in Fruit Juices, Using an Allure™ Organic Acids Column
59546	Chiral Flavor Compounds in Apple Juices, Using Rt-βDEXsm™ and Rt-βDEXse™ GC Columns
59553	Grape Flavor, Using an Rt-γDEXsa™ GC Column
59581	Cholesterol and Other Dietary Sterols
59580A	Fast, Selective Triglyceride Analysis
59584A	High-Resolution Analyses of Fatty Acid Methyl Esters by GC
59585A	Using Computer Modeling to Optimize FAME Analysis

### General Interest

59124	Ultra C4 HPLC Column: High Stability at Low pH
59742	Pinnacle™ DB HPLC Columns as Replacements for Hypersil® BDS

### Pharmaceutical

59107	European Pharmacopoeia Tests - Newly Revised for Residual Solvents
59108	Improved GC Analysis of Basic Organic Compounds, Using Base-Deactivated Columns and Inlet Liners
59118A	Allure™ PFP Propyl and Ultra PFP HPLC Columns Improve Analyses of Basic Compounds
59133	Excellent LC/MS Separation of Penicillins and Cephalosporins, Using Ultra IBD Columns
59141	Analyze Nucleotides, Nucleosides, Purines, and Pyrimidines Simultaneously with the Ultra IBD HPLC Column
59151	Cardiac Medications by HPLC
59177	Polar Compounds by Reversed Phase HPLC, Using Ultra Aqueous C18 Columns
59339	Phenylpropanolamine in Cold Medications, Using an Rtx®-5Amine GC Column
59453	Analysis of Narcotics and Narcotic / Acetaminophen Admixtures: What to do When Compendium Methods Don't Work (HPLC)
59510	HPLC Stationary Phase Selection for the Analysis of Steroids
59511A	Improved HPLC Analysis of Analgesics
59512	Ultra IBD Column Allows HPLC Separation of Polar and Non-Polar Analytes from the Same Sample
59545	Basic Pharmaceutical Compounds on an Ultra Cyano Phase (HPLC)
59577C	GC Analysis of Organic Volatile Impurities According to USP <467> Supplement Two of USP 25-NF 20 / January, 2002

## TECHNICAL GUIDES (In-depth "how to" information)

59411A	Semivolatile Organic Compounds	59889	Chiral Compounds by GC
59462	Alcoholic Beverages by GC	59890	Selection Guide for Polar WAX GC Column Phases
59738	Cleaning and Personal Care Products by GC and HPLC	59892	Preparing and Analyzing Chlorinated Pesticides
59880A	Hints for Using Split/Splitless Injectors	59895A	Static Headspace Analysis, Using GC
59882A	Direct and On-column Flash Vaporization Injection	59977B	Passive Air Sampling, Using Canisters
59887A	Volatile Organic Compounds		

## FAST FACTS and PRODUCT FLYERS (Overviews of product features and benefits)

### Air Monitoring

59026A	Sampling Supplies for TO-13
59290B	Passive Air Sampling Kits
59315	Ultra-Clean Resin
59491	Miniature Air Sampling Canisters
59661A	Air Monitoring Products Minicatalog

### Analytical Reference Materials

59214	Analytical Reference Materials
59215	Weathered Petroleum Materials
59276B	Environmental Gas Standards
59305	CLP OLM 04.1 04.2 Semivolatiles
59326A	Semivolatile Organics: US EPA Method 8270D/Appendix IX Compounds
59332B	Volatile Organics: US EPA Method 8260B
59381A	Explosives
59382B	Ethanol Standards for Blood Alcohol Testing
59383A	Calibration Standards for ASTM Method D2887-01, Boiling Range Distribution of Petroleum Products
59384B	Certified PAHs in Composite Diesel Fuel #2 / Certified Aromatics in Unleaded Gasoline
59391	UST Monitoring: Massachusetts
59392	UST Monitoring: Wisconsin
59394	UST Monitoring: Texas
59395	UST Monitoring: Florida
59396	UST Monitoring: Northwest Regional
59397	EPA Office of Underground Storage Tanks OUST: Recommended Methods
59433	UST Monitoring: California
59446	Partners in Pesticides Analysis
59503	UST Monitoring: Alaska
59504	UST Monitoring: Iowa
59521A	Aldehyde/Ketone DNPH Standards for US EPA Methods TO-11A and 8315

### GC Columns

59016	Rtx®-1701/MXT®-1701 Columns
59053	Restek GC Columns
59204	Rtx®-5Sil MS Columns
59209A	Rtx®-VMS Columns
59217	Rtx®-VGC Columns
59218	Rtx®-TNT/TNT2 Columns

### GC Columns (cont'd)

59242	Chiral Columns & Kits
59247	Rtx®-VRX Columns
59275	Rtx®-OPPesticides2 Columns
59308	Rtx®-1/MXT®-1 Columns
59310	Rtx®-5/MXT®-5 Columns
59316	Stabilwax®/MXT®-WAX Columns
59317	Rtx®-1301/MXT®-1301 Columns
59319	Guard Columns
59320A	Rtx®-CLPesticides Columns
59322	Rtx®/MXT®-200 Columns
59327	Rt-XLSulfur™ Packed (and Micropacked) Columns
59328	Rtx®-TNT and Rtx®-TNT2 GC Columns
59329	Rtx®-VMS Columns
59330	Rtx®-5 Amine Columns
59380	Rtx®-35 Amine Columns
59439	Rtx®-200 Columns
59441	Integra-Guard™ Columns
59519A	ShinCarbon ST Micropacked Columns: Above-Ambient Analyses of Permanent Gases and Light Hydrocarbons
59737	Bulk Packing Materials
59957	Rtx®-XLB Low Bleed Columns

### GC Accessories

59009A	Dual Vespel® Ring Inlet Seals
59061	Alumaseal™ Ferrules
59280	Super-Clean™ Gas Filters
59297	GC Racer Fast Oven Programming
59309	Photoionization Detector Lamps
59324	6890 Uniliner® Liner
59498A	EZ No-Vent™ GC-MS Connector for Agilent & Varian
59505	Vu2 Union™: Maintain Seal Integrity
59578	Inlet Sleeve Deactivation
59721	Thermolite® Septa
59877	Drilled Uniliner® GC Inlet Liner: Minimize Adsorption of Active Analytes
59878A	Vu2 Union™ & SeCure™ "Y" Connectors



**FAST FACTS and PRODUCT FLYERS** (Overviews of product features and benefits)

**HPLC Columns**

- 59281 Pinnacle II™ Columns
- 59314 Trident™ Direct Guard Column System
- 59371 Ultra Aqueous C18 Columns
- 59385A Pinnacle II™ Amino Columns
- 59499 Pinnacle™ DB Columns
- 59602 Allure™ Basix Columns
- 59613B Allure™ C18 Columns
- 59614B Ultra IBD Columns
- 59896 Trident™ Integral Guard Column System
- 59901 High Performance Silica Products

**HPLC Accessories**

- 59012 Genuine Restek Replacement Parts for HPLC Systems
- 59362 HPLC Accessories
- 59728A Mobile Phase Accessories

**Surface Passivation**

- 59203 Sulfinert™ Coatings
- 59318A Sulfinert™ Coatings
- 59321 Silcosteel® Coating
- 59532 Silcosteel®-UHV: Dramatically Reduce Outgassing in UHV Systems
- 59803A Siltek™ Deactivation
- 59956 Silcosteel®-CR: Achieve specialty Alloy Performance Using Austenitic Stainless Steels

**OTHER LITERATURE** (Catalogs, charts, In-Review literature summaries, etc.)

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|--|--|
| <ul style="list-style-type: none"> <li>59065 Chromatography Supplies General Catalog - 2005</li> <li>59085 Analytical Reference Materials New in 2005</li> <li>59208D GC Essentials</li> <li>59216D Gas Purification Essentials</li> <li>59225C Vial, Syringe &amp; Liner Essentials</li> <li>59241B HPLC Columns and Accessories (catalog)</li> <li>59253 USP Column Cross-Reference Chart</li> <li>59260A Foods, Flavors, &amp; Fragrances (guide/catalog)</li> <li>59278A Instrument Innovations</li> <li>59282D Restek On-The-Road 2005 Seminars</li> <li>59298 Petrochemical In-Review</li> <li>59450 Pharmaceutical In-Review</li> <li>59454B HPLC Column Selection Guide (chart)</li> </ul> | <ul style="list-style-type: none"> <li>59489 Foods Flavors &amp; Fragrances In-Review</li> <li>59493 Restek Performance Coatings Services Brochure</li> <li>59522A STAR™ Service Rewards</li> <li>59600 CarboPrep™ SPE Cartridges</li> <li>59612 Tube Fitting Installation Manual</li> <li>59627E Genuine Restek Replacement Parts for Agilent GCs (mini-catalog)</li> <li>59668A GC Column Installation (chart)</li> <li>59741 Environmental HPLC: Applications-Columns-Reference Materials</li> <li>59744 Massachusetts EPH/VPH/APH Methods</li> <li>59876 Instrument / Autosampler Parts for Agilent GCs</li> <li>59879 Cool Tools! for GC and HPLC</li> <li>59894A HPLC Technical Tips Wall Chart</li> </ul> |
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**Analytical techniques and concerns** *(please check all that apply)*

- GC     HPLC     both     sample preparation  
 analytical reference materials (chemical standards)

**Surface passivation needs:**

- metal surfaces     glass surfaces     other surfaces  
 storage/transport of active compounds (e.g., sulfur or NO<sub>x</sub> gases)  
 anti-coking     corrosion resistance     ultra-high vacuum

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