

RMX- 5SiIMS Training

Jan 2026



UNLEASH YOUR PERFORMANCE

ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower calibration ranges with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime.



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Confidential & Restricted

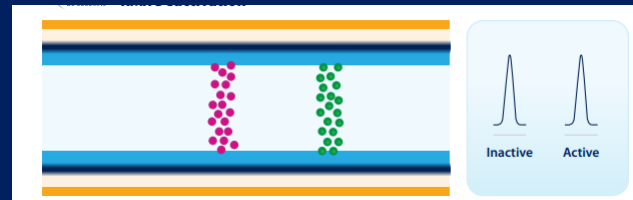
Overview



GC Challenges



Technology



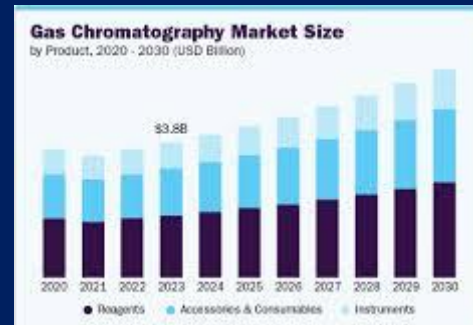
Applications



Solution: RMX Product Value



Market



Customer





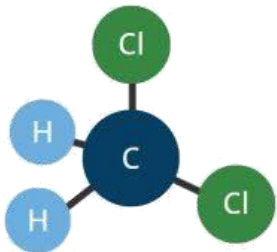
Common Challenges in GC & Restek's Solution



Common Challenges in GC Analysis



Methylene
Chloride Ban



Method
Consolidation



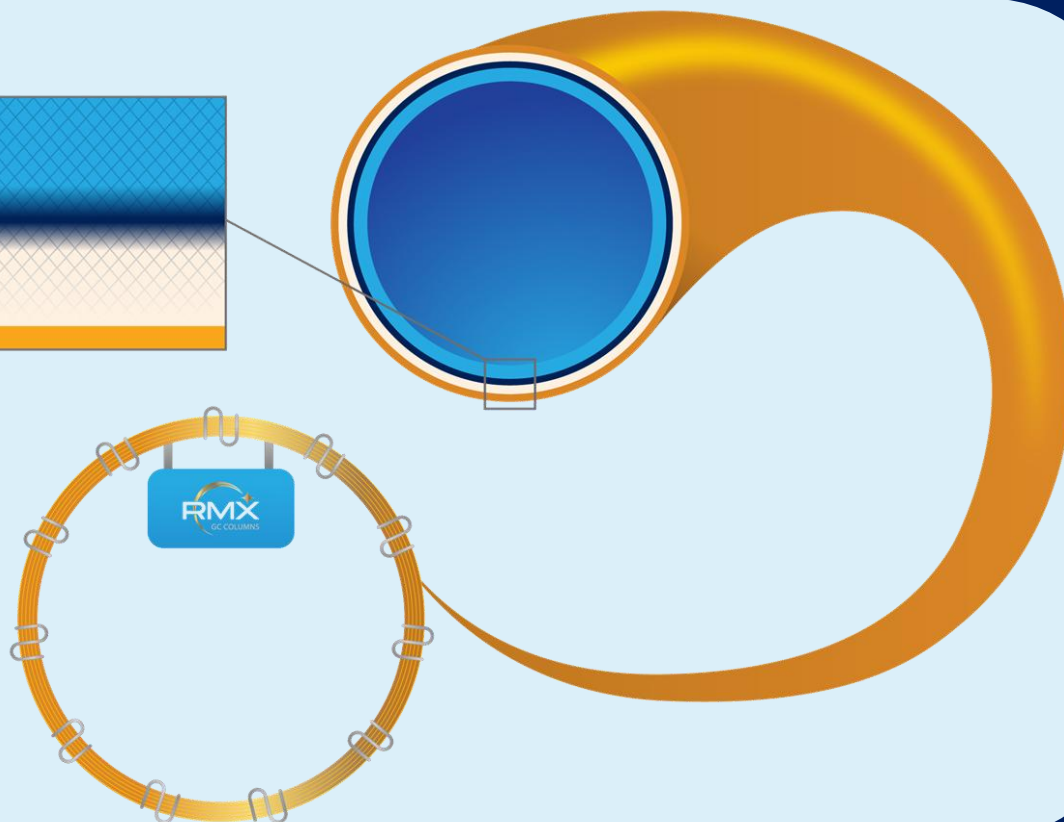
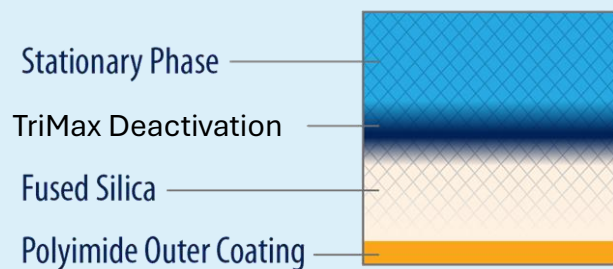
Lower
Detection



Lifetime
Expectation



Unleash your Performance with RMX GC Columns



ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower calibration ranges with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime

TriMax Technology - 3 Dimensional array of bonding, crosslinking and deactivation that maximizes trace level reliability and inertness

Restek's Solution- RMX GC Column

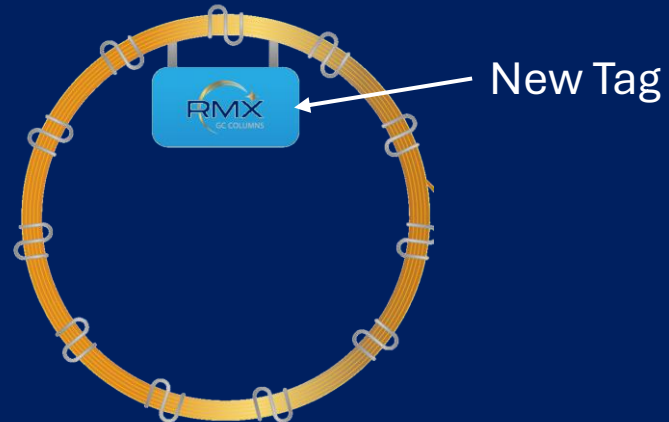


RMX

- Maximum Performance
- Maximum Sensitivity
- Maximum Inertness
- Maximize Reliability and Confidence
- Maximum Compliant Data

- TriMax Technology (Deactivation)
- Unique Formats
- New Packaging!
- Blue Tag!

RMX GC Columns
Powered by TriMAX technology



New Packaging



Evolution of GC Column Deactivation



Legacy Deactivations

Uses industrial chemicals not intended for GC

Limited coverage because of steric hinderance

Activity and variability from traditional organic reaction schemes

Results: Surface imperfections that impact overall inertness and reproducibility

Non TriMax Deactivation

Deposits reaction byproducts that are sites for adsorption

Residuals can catalyze phase breakdown

Multistep fabrication creates variation

Results: Column variability, analyte specific sensitivity/peak shape issues

TriMax Deactivation

Novel reagents intentionally designed for GC

Optimal reagents and process minimize residuals

Synergistic chemistries yield ordered, dense crosslinking

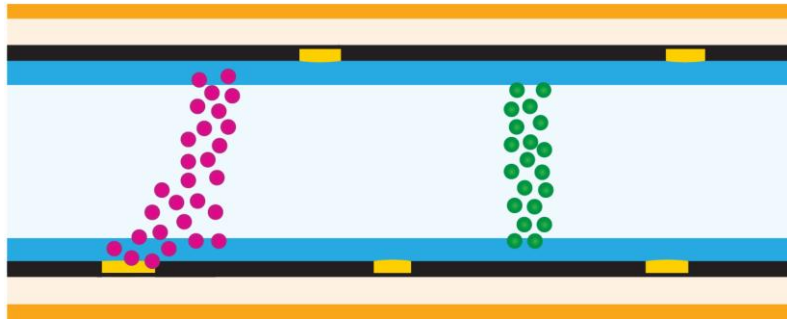
Results: Low-Level sensitivity, symmetrical peaks, enhanced column lifetime, and improved column variability

Feel The RMX Difference In Your Results

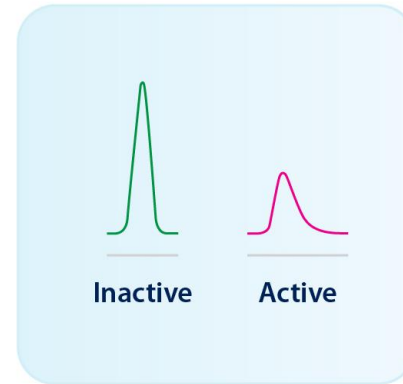


Analyte Interaction Process

Non-RMX Deactivation

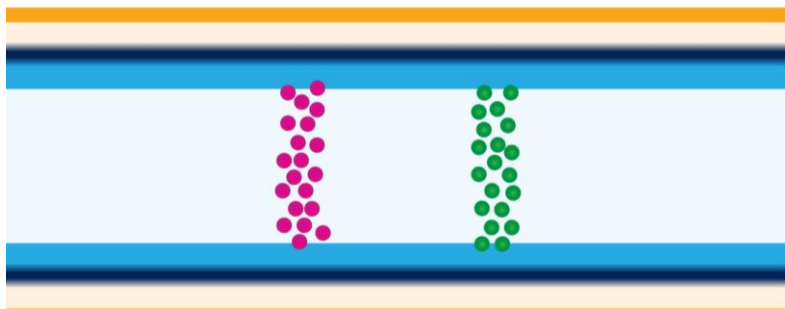


Chromatographic Results



- Inactive compounds: alkanes, alkenes, alkynes, etc.
- Active compounds: acids, bases, alcohols, esters, ethers, etc.
- Residual active site

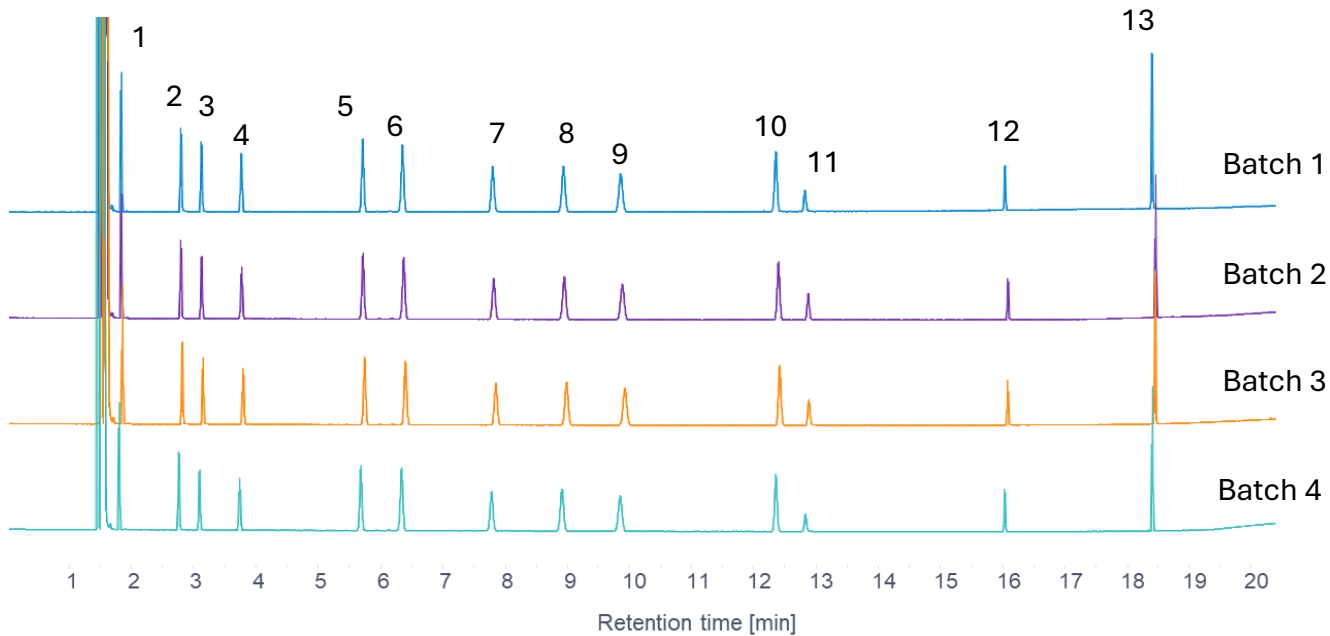
RMX Column with TriMax Technology



Maximize Reliability with Restek Quality



1 ng on Column Reproducibility RMX-5sil MS 30m x 0.25mm x 0.25 μ m

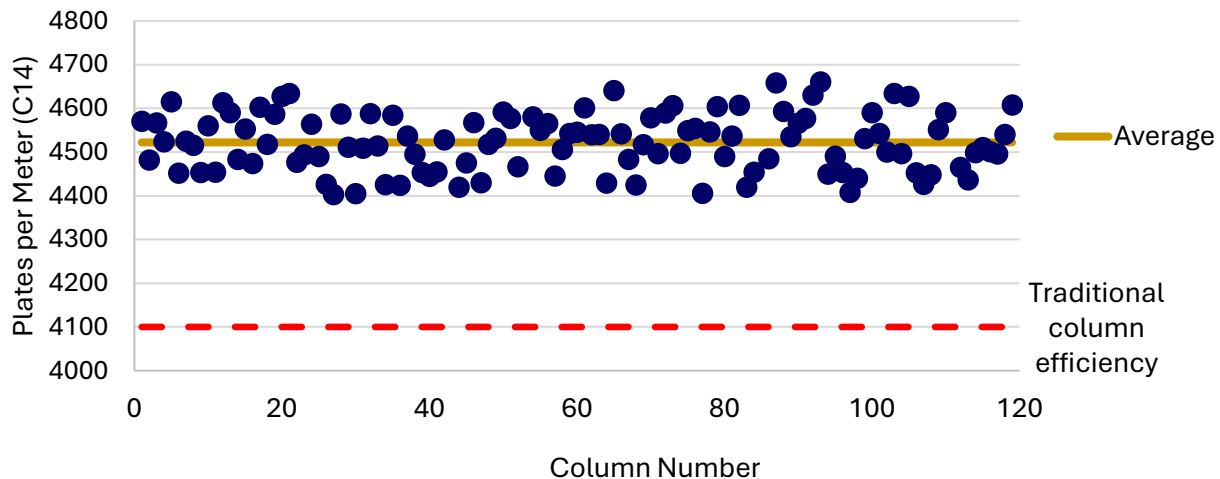


Peak	Analyte	t_R %RSD
1	4-picoline	1.05
2	2-ethylhexanoic acid	0.71
3	1,6-hexanediol	0.64
4	4-chlorophenol	0.53
5	n-tridecane	0.42
6	1-methylnaphthalene	0.38
7	1-undecanol	0.36
8	n-tetradecane	0.34
9	dicyclohexylamine	0.33
10	acenaphthene-d10	0.20
11	2,4-dinitrophenol	0.19
12	pentachlorophenol	0.14
13	benzidine	0.15

Maximize Reliability with Restek Quality



QC Column to Column Reproducibility
Across Batches
Plates per Meter (C14)



Quality Metrics	Batch to Batch %RSD
1,6-Hexanediol-C13 PAR	2.08
2-Ethylhexanoic Acid-C13 PAR	1.64
2,4-Dinitrophenol-Acenaphthene	3.78
4-Picoline-C13 PAR	2.42
Asymmetry 1, 6-Hexanediol	0.46
Asymmetry 2-Ethylhexanoic Acid	2.00
Asymmetry 2,4-Dinitrophenol	3.85
Asymmetry Benzidine	1.02
Asymmetry 4-Picoline	0.94
Asymmetry Dicyclohexylamine	0.85
Asymmetry Pentachlorophenol	0.89
Partition Ratio (K)-C14	1.18
Plates per Meter (C14)	0.80



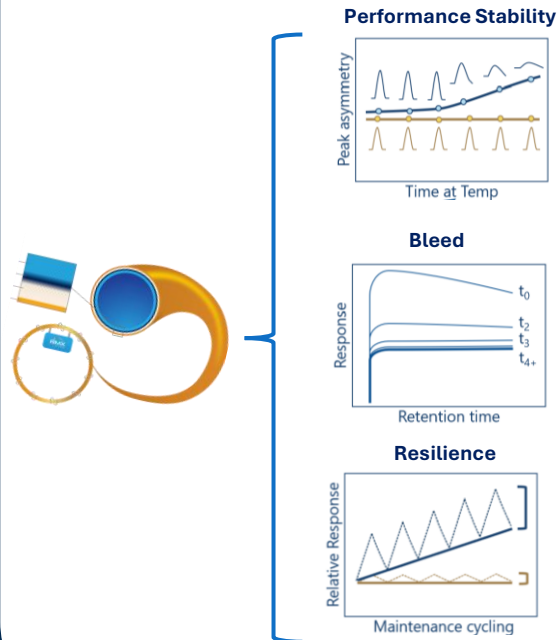
Maximize Benefits From RMX - TriMax Technology

Application-agnostic demonstrations of column performance

Applications Overview



Maximize Benefits from RMX & TriMax Technology



Maximize Utilization with RMX Applications



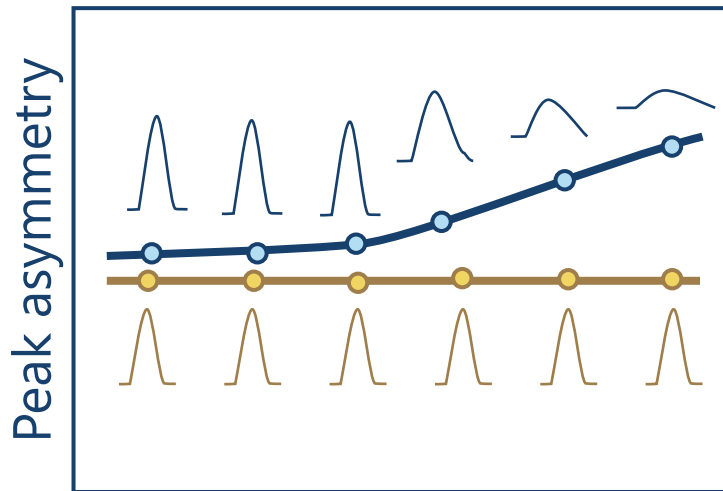
Essentials to Maximize Lab Productivity



Maximizing lifetime and performance

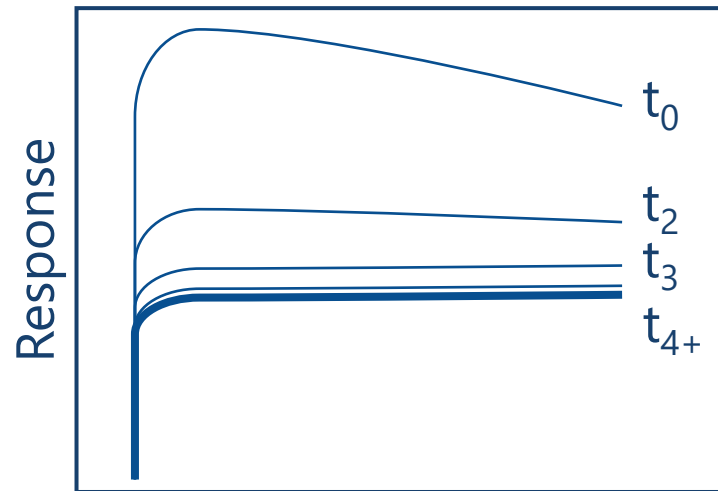


Performance Stability



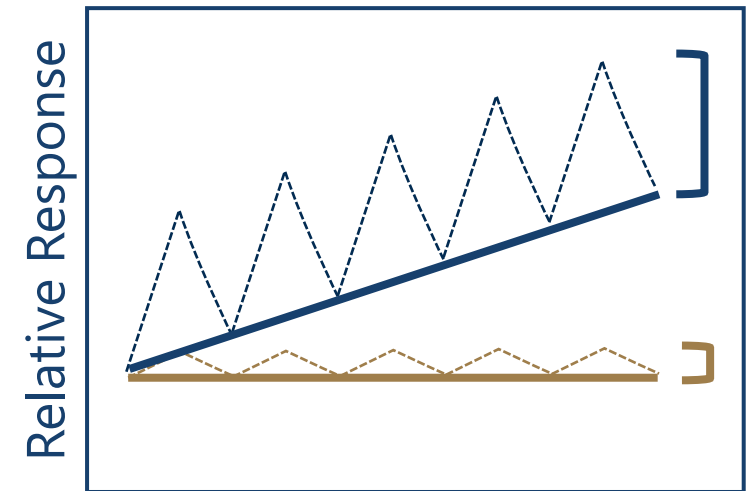
Time at Temp

Bleed



Retention time

Resilience

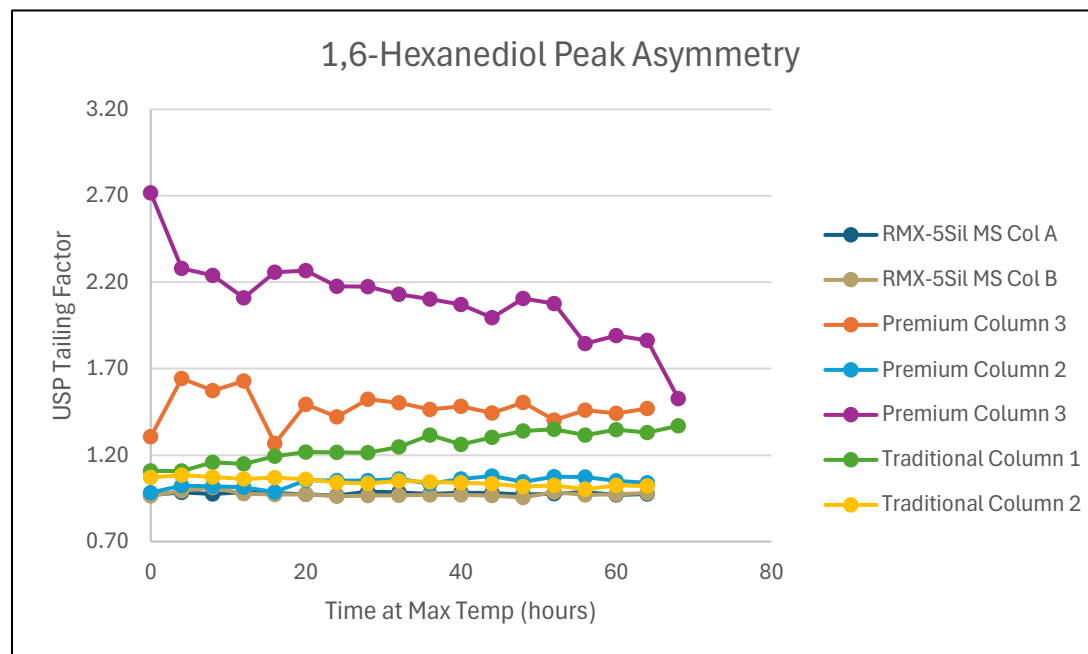
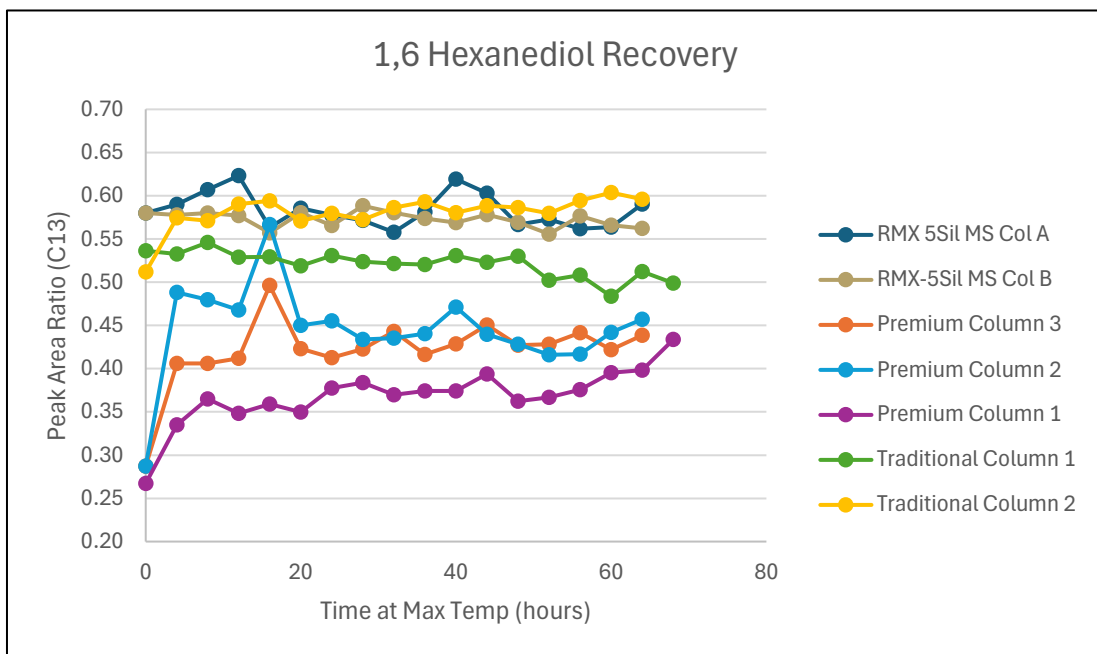


Maintenance cycling

Column held at max isothermal temp for 60+ hrs.
QC performance monitored every 4 hrs.

Column repeatedly exposed to dirty matrix
QC test performance monitored after fouling and maintenance

Performance Stability

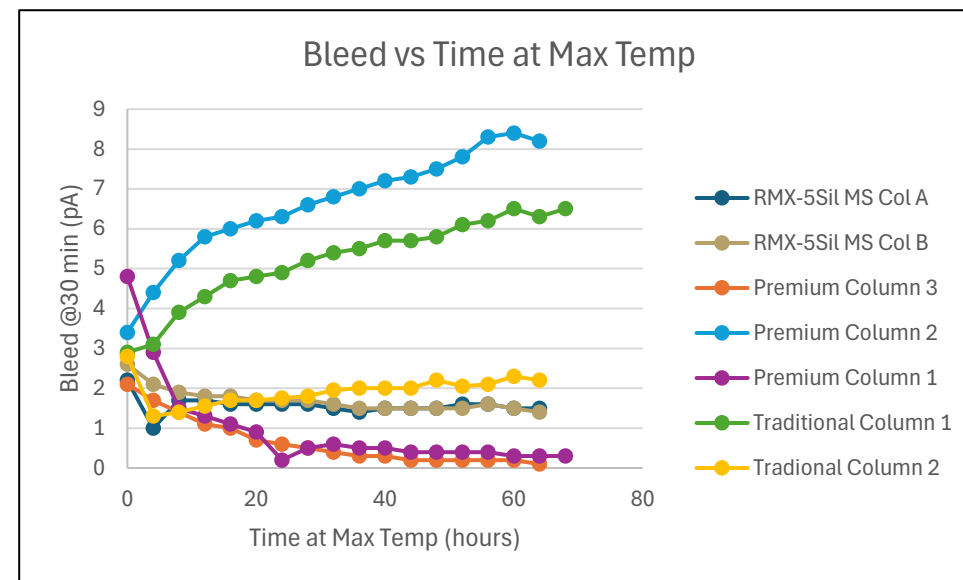
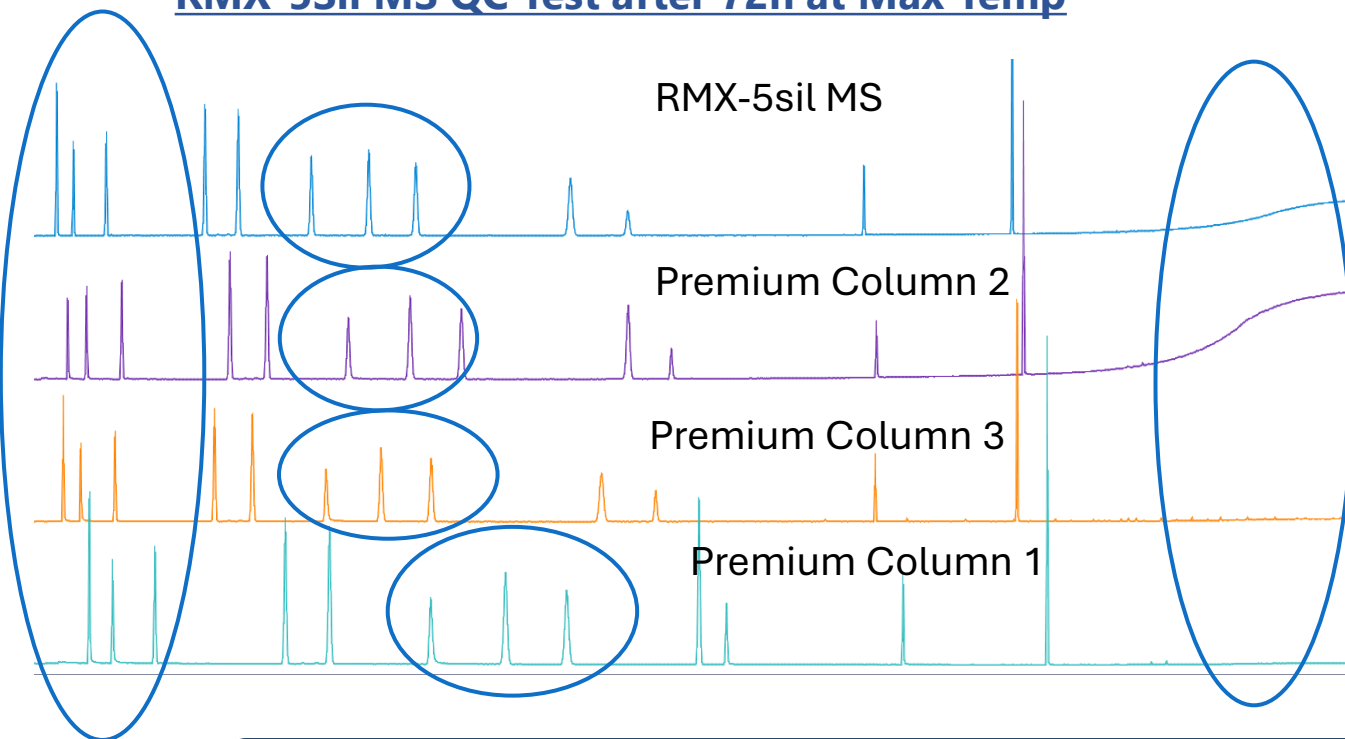


RMX delivers better out of the box inertness that improves sensitivity and peak shape

Stability

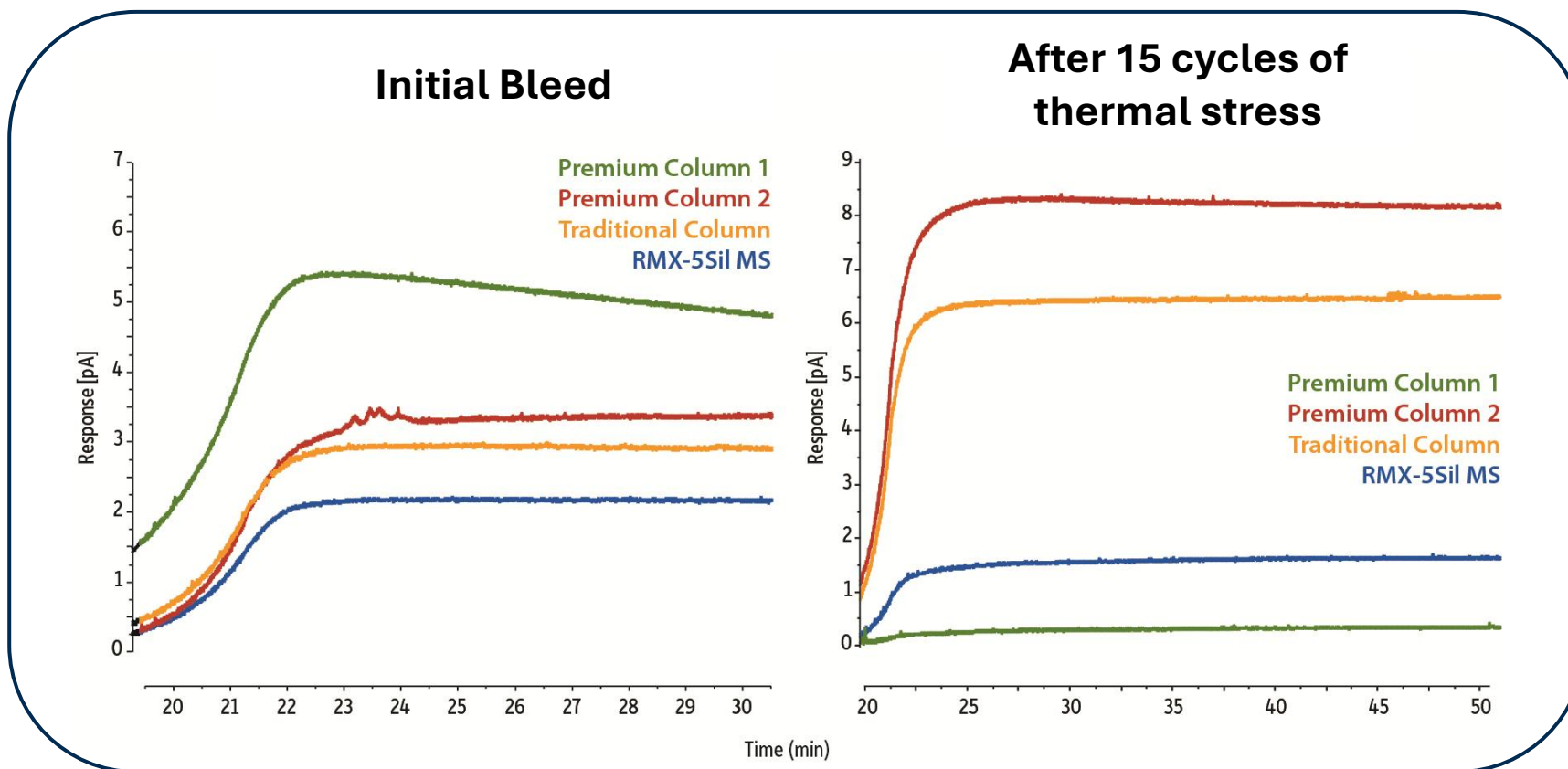


RMX-5Sil MS QC Test after 72h at Max Temp



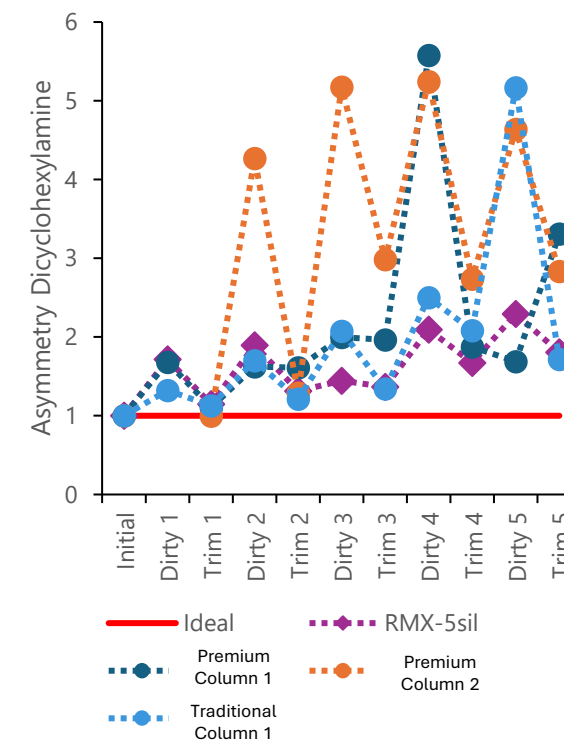
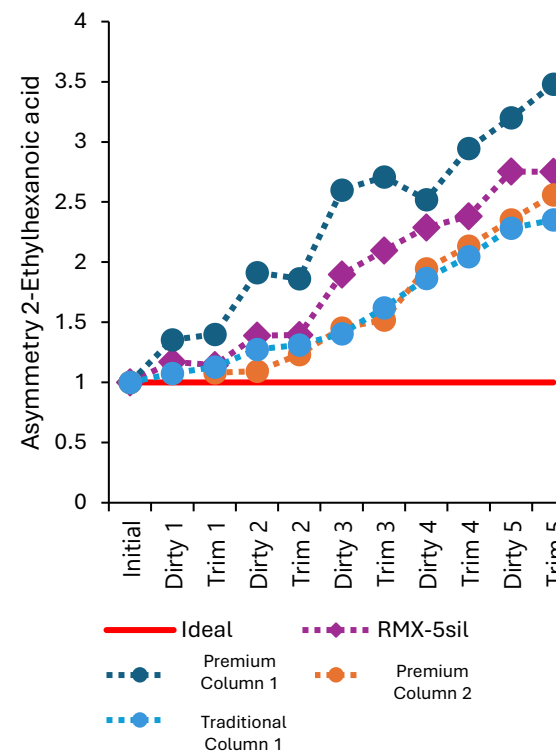
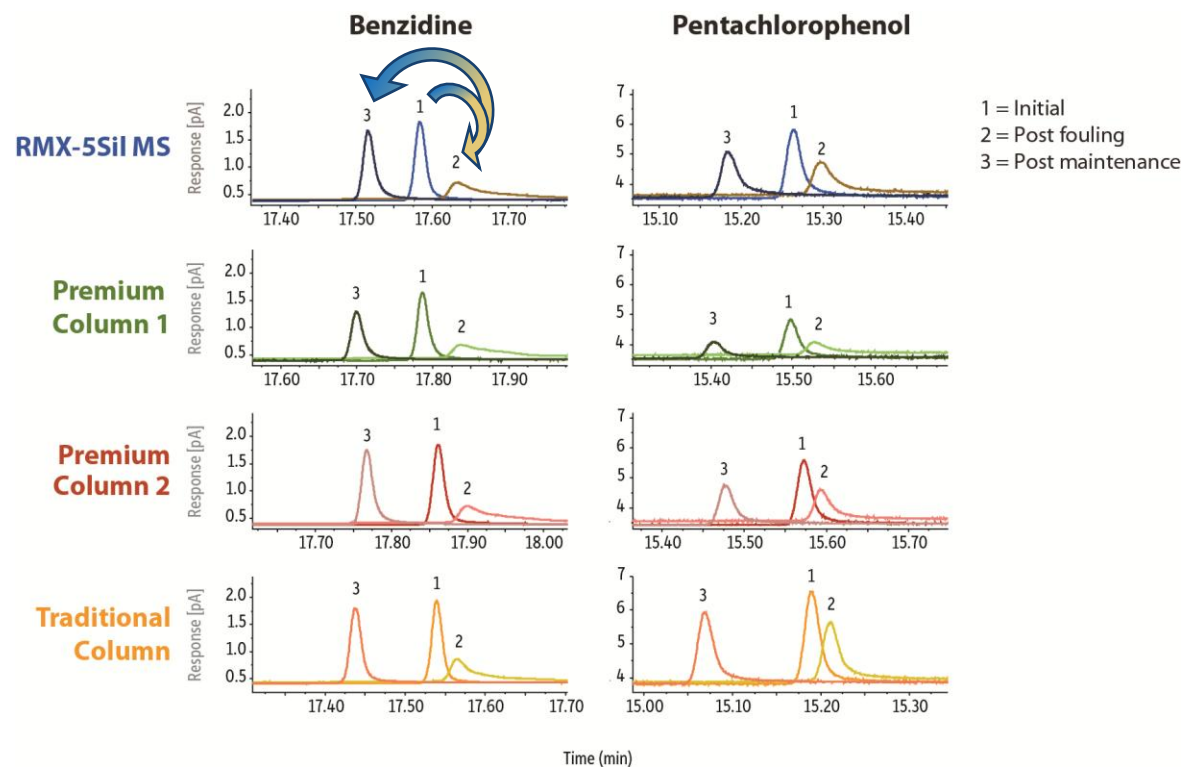
**RMX columns exhibit industry standard bleed with exceptional stability
The combination of inertness and stability yields a column with superior lifetime**

Bleed Profile- Pre and Post Thermal Cycle



RMX delivers low bleed from beginning to end of its lifetime

Resilience



Performance of the RMX-5SiI MS column "bounces back" better than competitors for key analytes

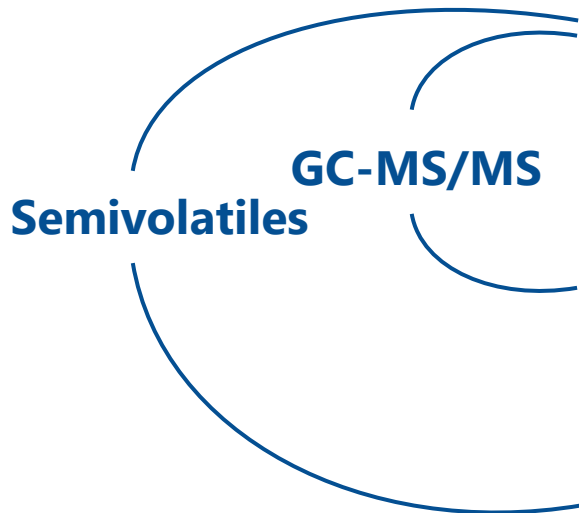
Quality probe symmetries are restored with continued fouling and maintenance



Demonstrating Maximum performance with RMX-5Si1 MS – TriMax Technology

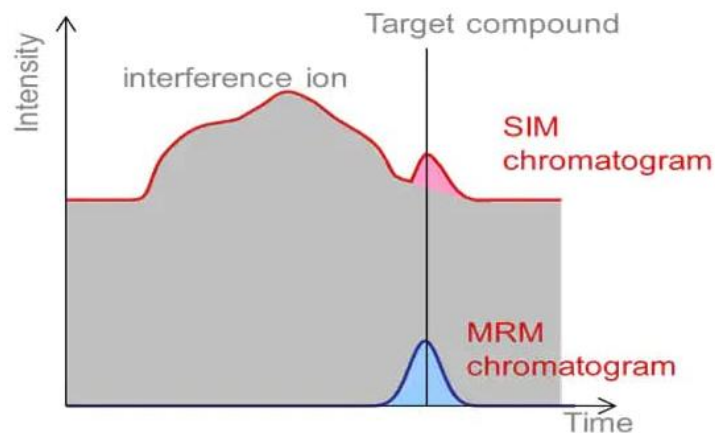
Applications

Overview of RMX-5Sil MS Applications



Application
Comprehensive Trace-Level Semivolatiles Analysis by GC-MS/MS (Method 8270E)
Achieving Lower Detection Limits for Semivolatiles
Featured Application: 150 Semivolatiles on RMX-5Sil MS by GC-MS/MS
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Boost Productivity with Simultaneous PAH and PCB GC-MS Analysis
Featured Application: Drugs of Abuse on RMX-5Sil MS
Pro EZGC
<i>...the future</i>

Solutions needed for EPA 8270E



Reduce dichloromethane

- Environmental regulation
- Moving away from sep funnel
- Micro-LLE & SPE options

GC-MS to MS/MS

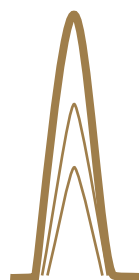
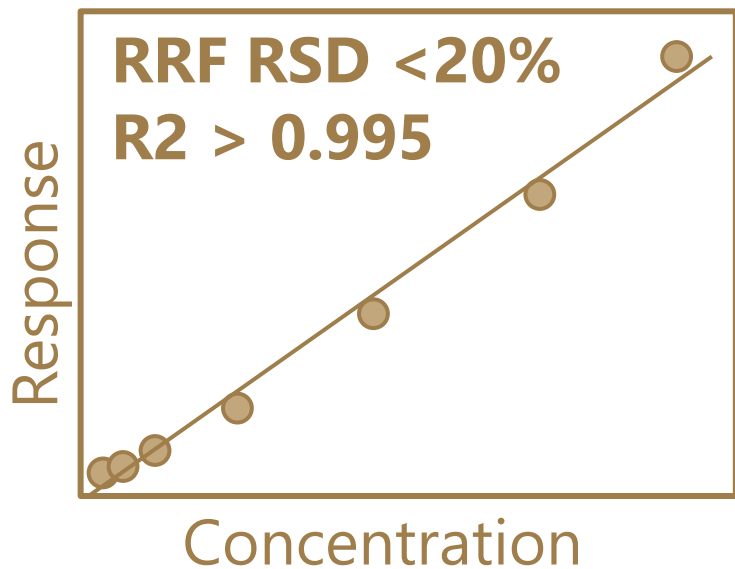
- Greater selectivity
- Less matrix interference
- Lower detection limits

High-throughput & compliance

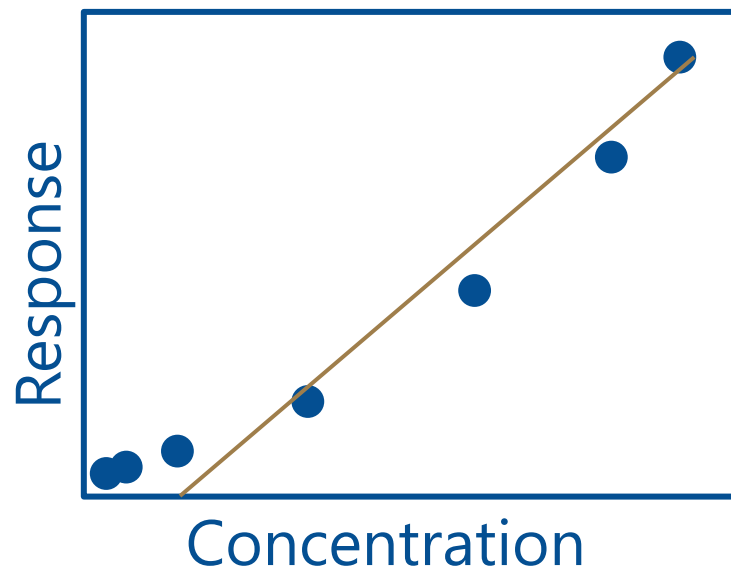
- Adopting new technology
- Reducing downtime
- Maintaining high quality

Connecting deactivation and calibration

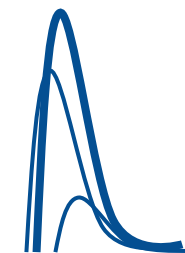
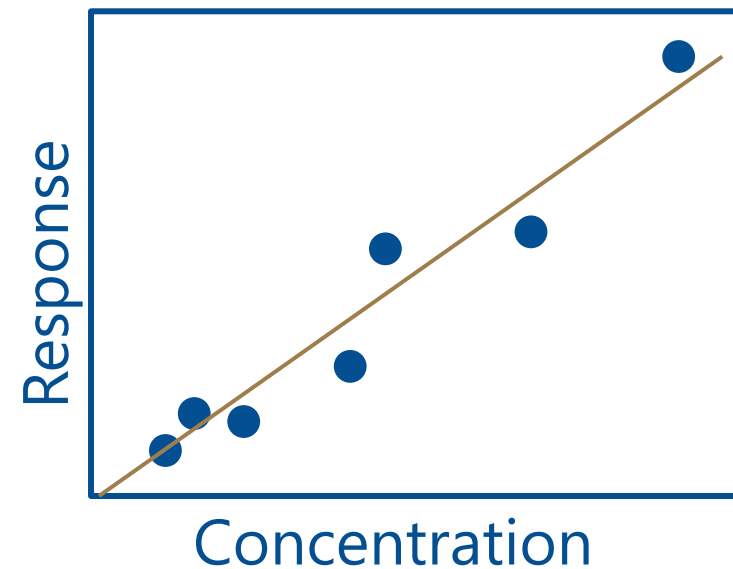
**Simulated data*



Ideal



Tailing



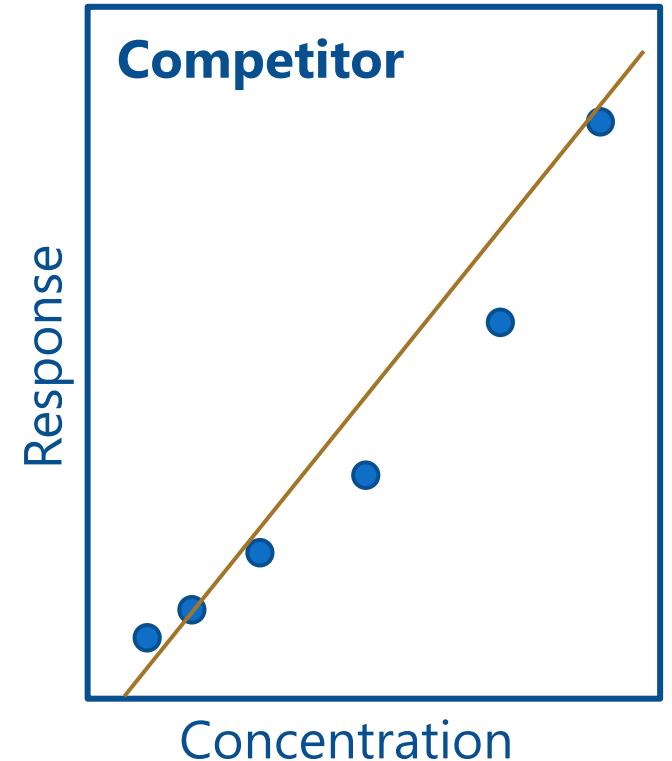
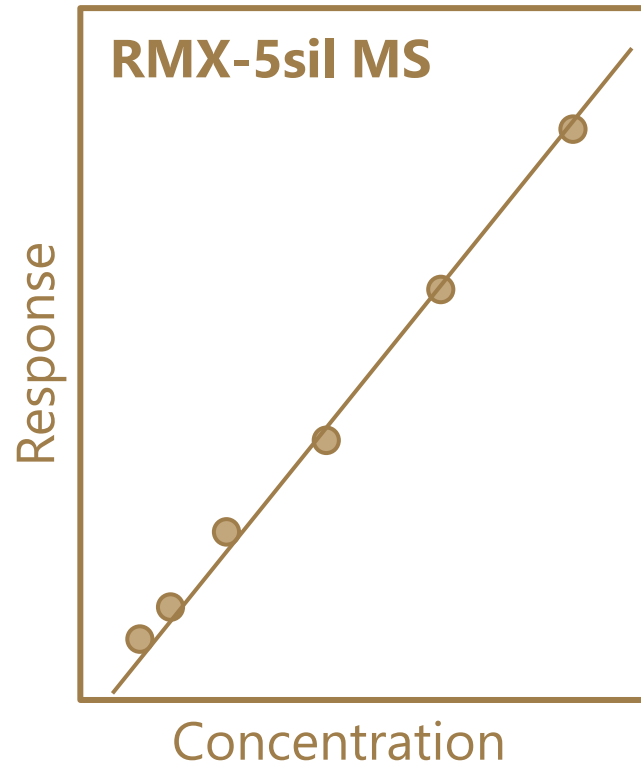
Adsorption

Comprehensive Trace-Level Semivolatiles Analysis by GC-MS/MS (Method 8270E)

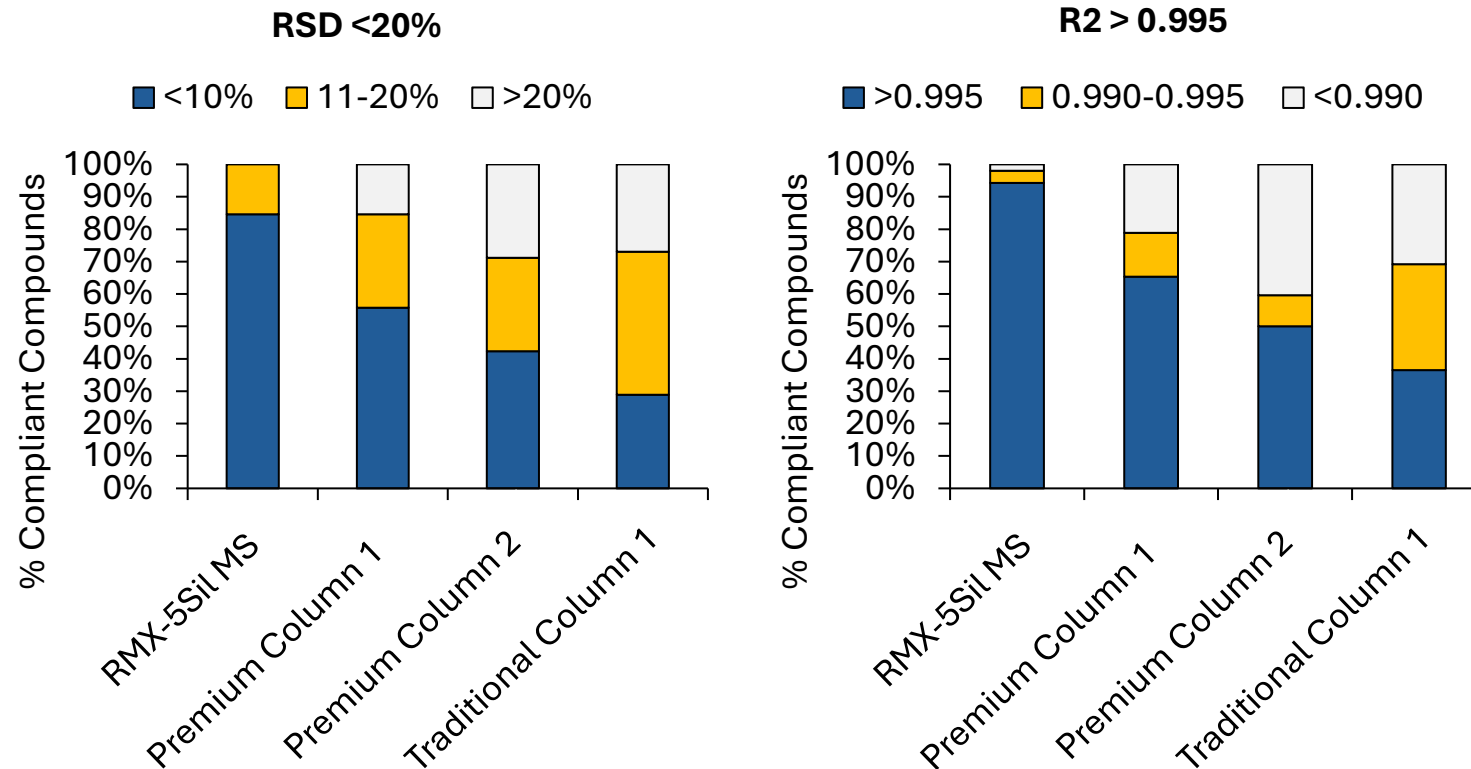


**Simulated data*

- System suitability testing (8270E)
- Customer-driven calibration settings (0.5-5000ppb)
 - Groups of acid, base, and neutral analytes
- Experimental controls:
 - Linear fit, calibration range for each compound, integration settings
- **Experiment designed to test competitors and see if they can meet the quality of RMX-5Sil MS**



Comprehensive Trace-Level Semivolatiles Analysis by GC-MS/MS (Method 8270E)

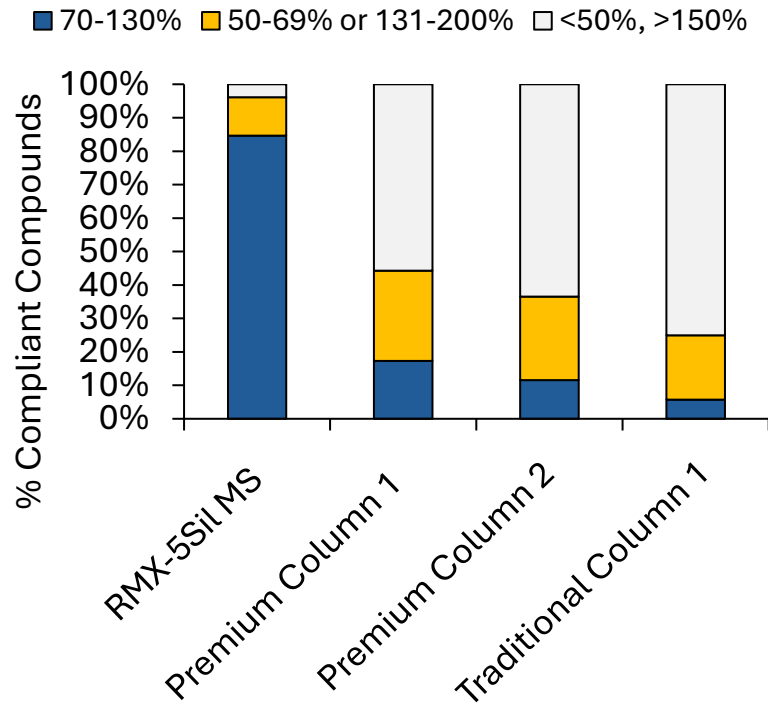


RMX-5Sil MS gives maximum compounds with compliant linearity metrics

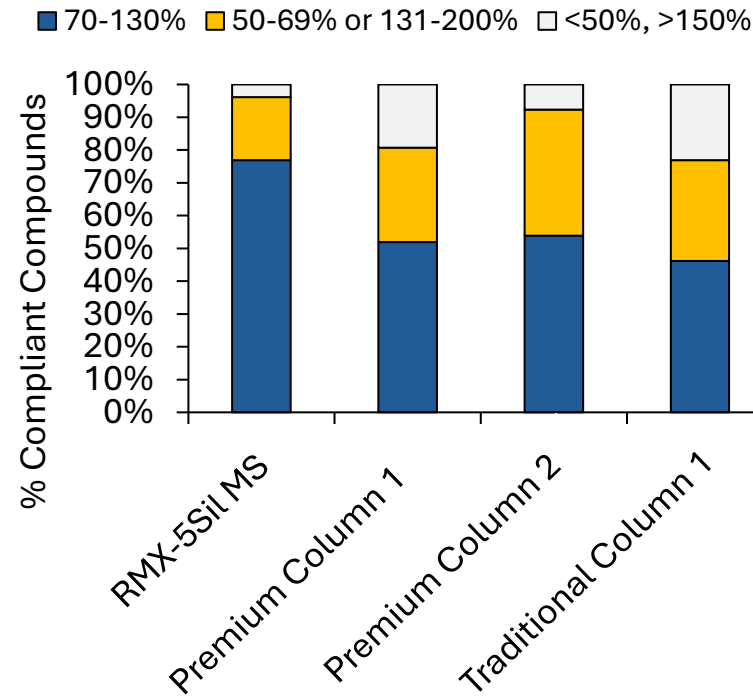
Comprehensive Trace-Level Semivolatiles Analysis by GC-MS/MS (Method 8270E)



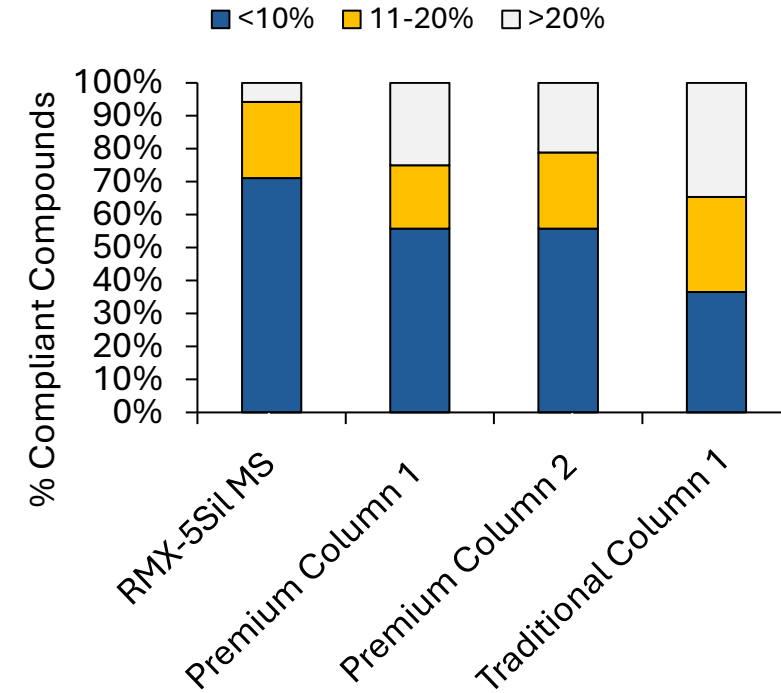
LCP Recovery 70-130%



50ppb %Recovery



50ppb Recovery RSD <20%



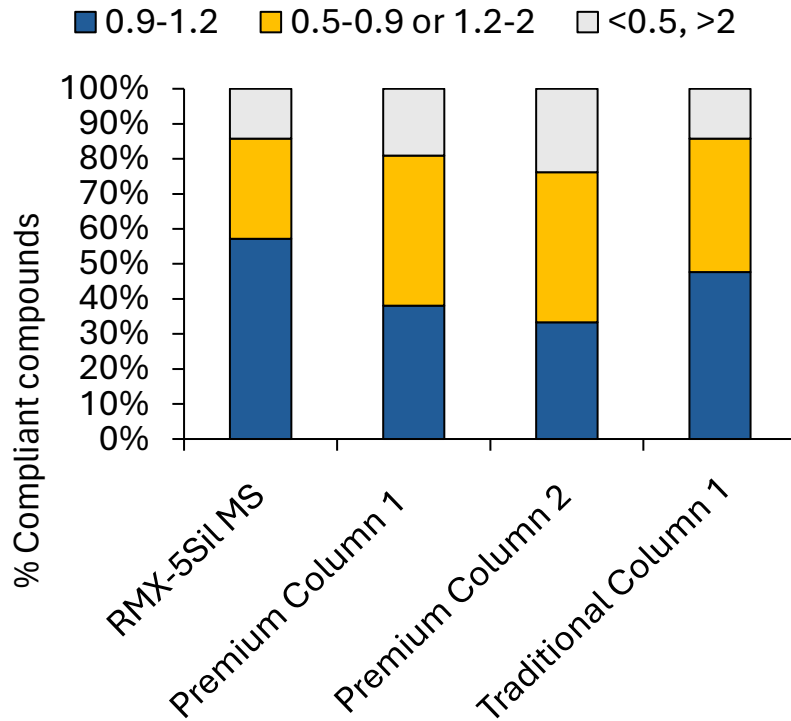
*LCP = lowest cal. Pt
(0.5-50 ppb)

RMX-5Sil MS gives maximum compounds with quantitative metrics

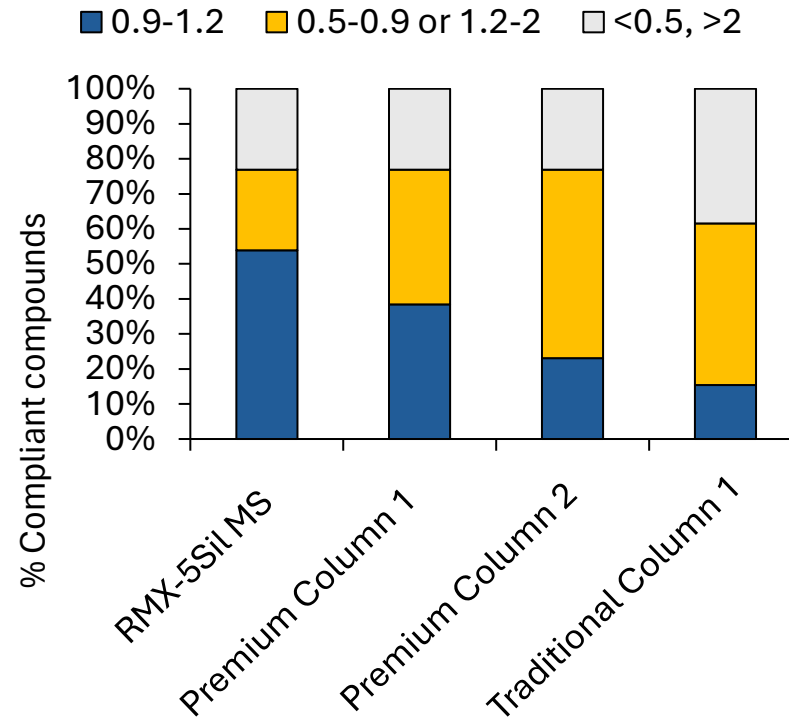
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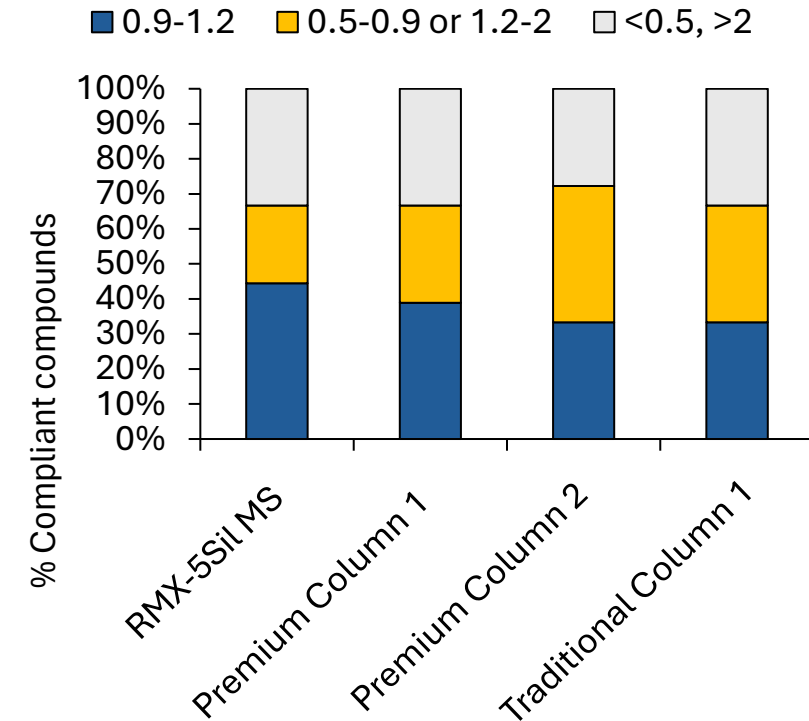
21 Acids



13 Bases



18 Neutrals

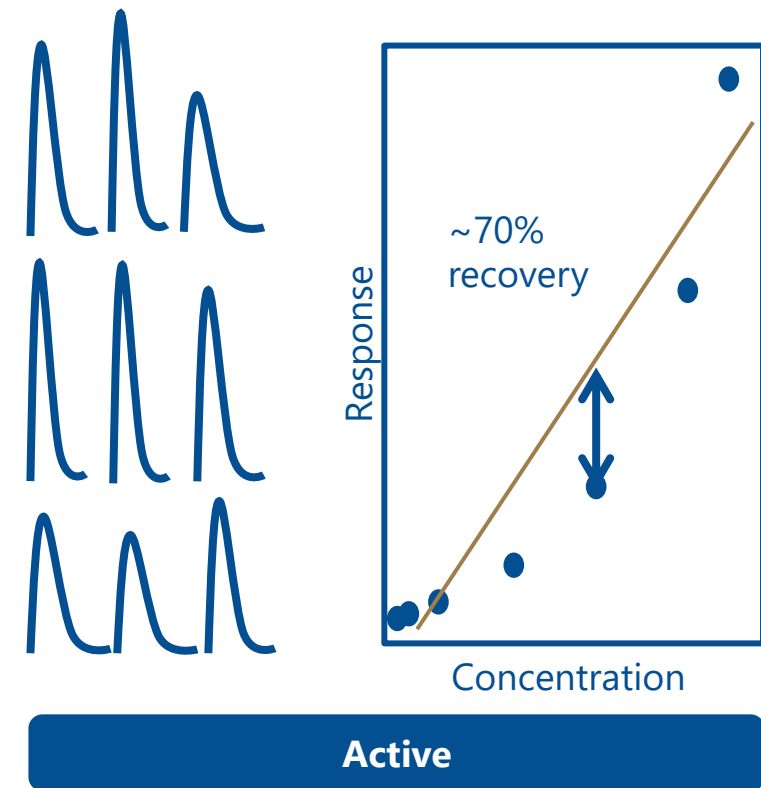
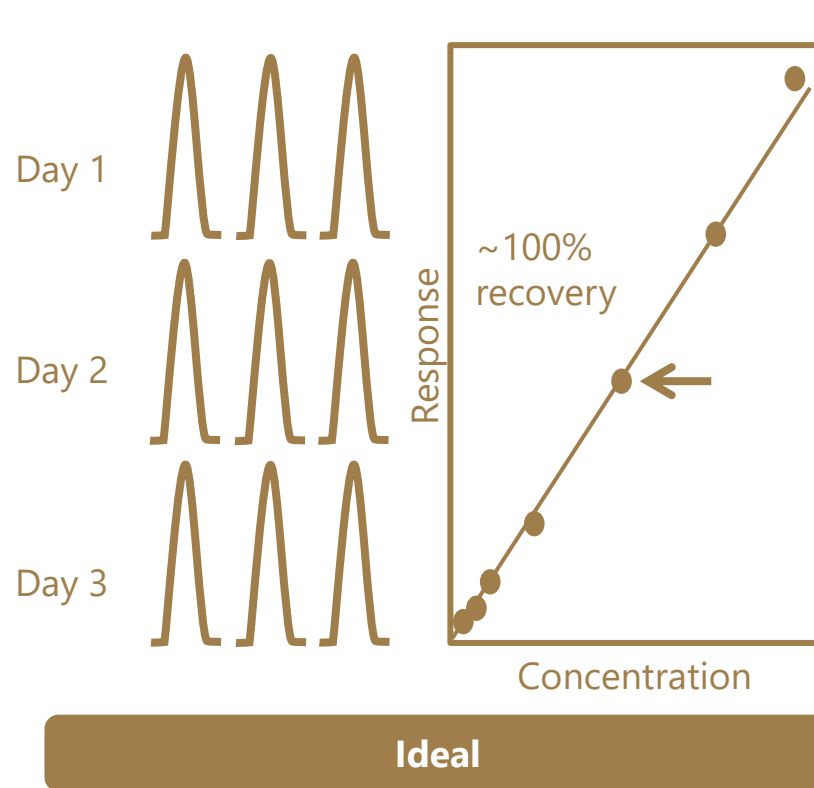


Improved compliance is possible because of improved peak symmetries

Method detection limit (MDL) and lower limit of quantitation (LLOQ)



- System suitability testing (8270E)
- Customer-driven calibration settings (0.5-5000ppb)
- Experimental controls:
 - Instrumentation, linear fit
 - $MDL = SD_{n=9} * t$
 - $LLOQ = \%Rec.$
- **Experiment designed to evaluate how the competitor compares to RMX-5Sil MS sensitivity**



Achieving Lower Detection Limits for Semivolatiles



Column	MDL (ppb)				LLOQ (ppb)			
	Avg.	Min	Max	RMX-5SiI Outperforms Premium Column 1	Avg.	Min	Max	RMX-5SiI Outperforms Premium Column 1
RMX-5SiI MS	1.08	0.06	14.47	31/52	14.13	1	100	33/52
Premium Column 1	2.10	0.05	50.54		19.38	1	100	

Average RMX MDL is lower

Range of MDL's is larger on Premium Column 1

Average RMX LLOQ is lower

Range is similar

Achieving Lower Detection Limits for Semivolatiles



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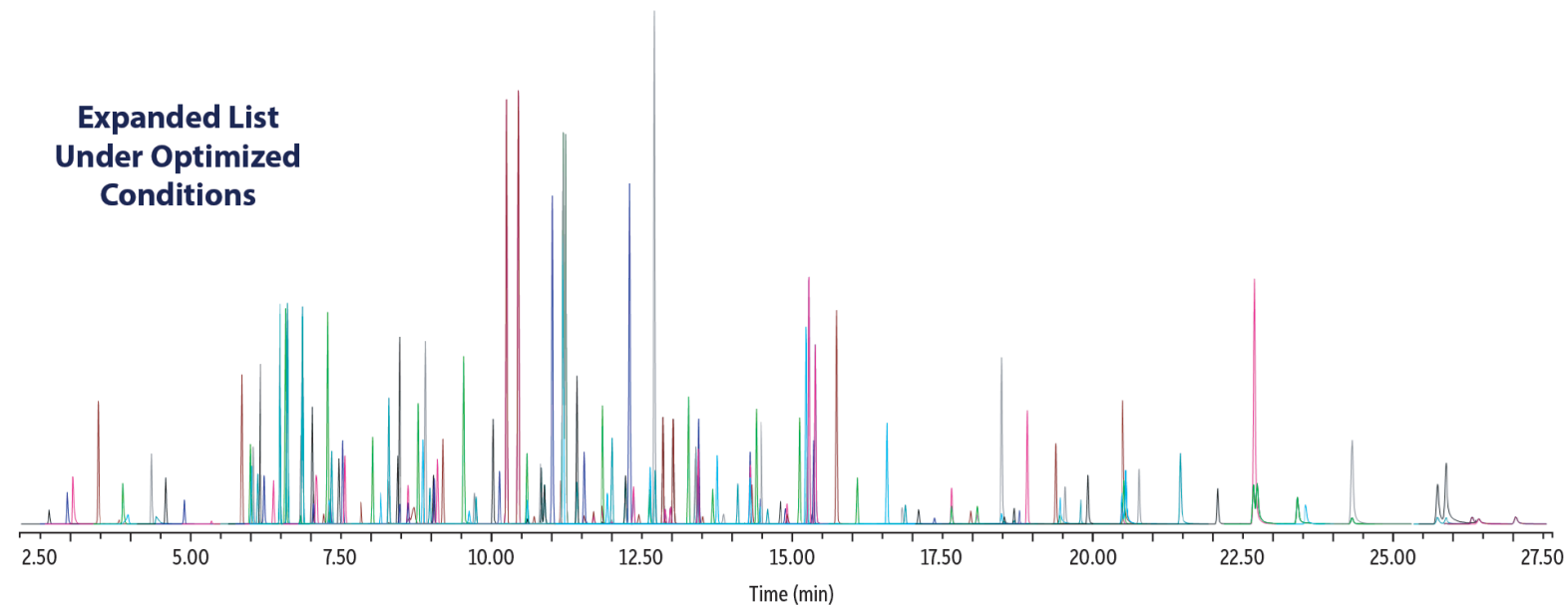
When competitor outperforms RMX, the difference is small

When RMX outperforms competitor, the difference is more dramatic

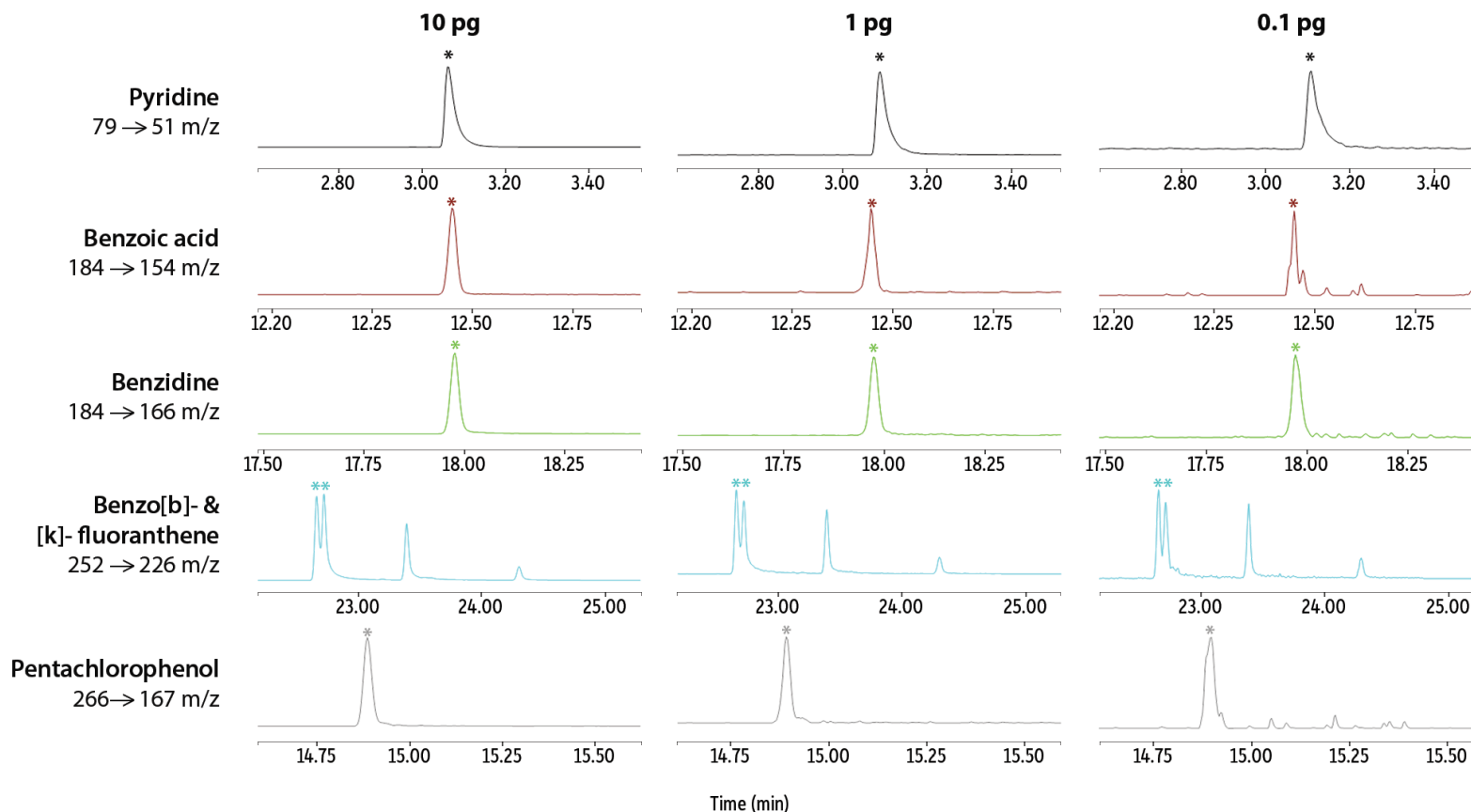
Featured Application: 150 Semivolatiles on RMX-5Sil MS by GC-MS/MS



- System suitability testing (8270E)
- Customer-driven concentration targets (0.1-10 pg on column)
- **Application designed to demonstrate the excellence of RMX-5Sil MS with an expanded compound list**

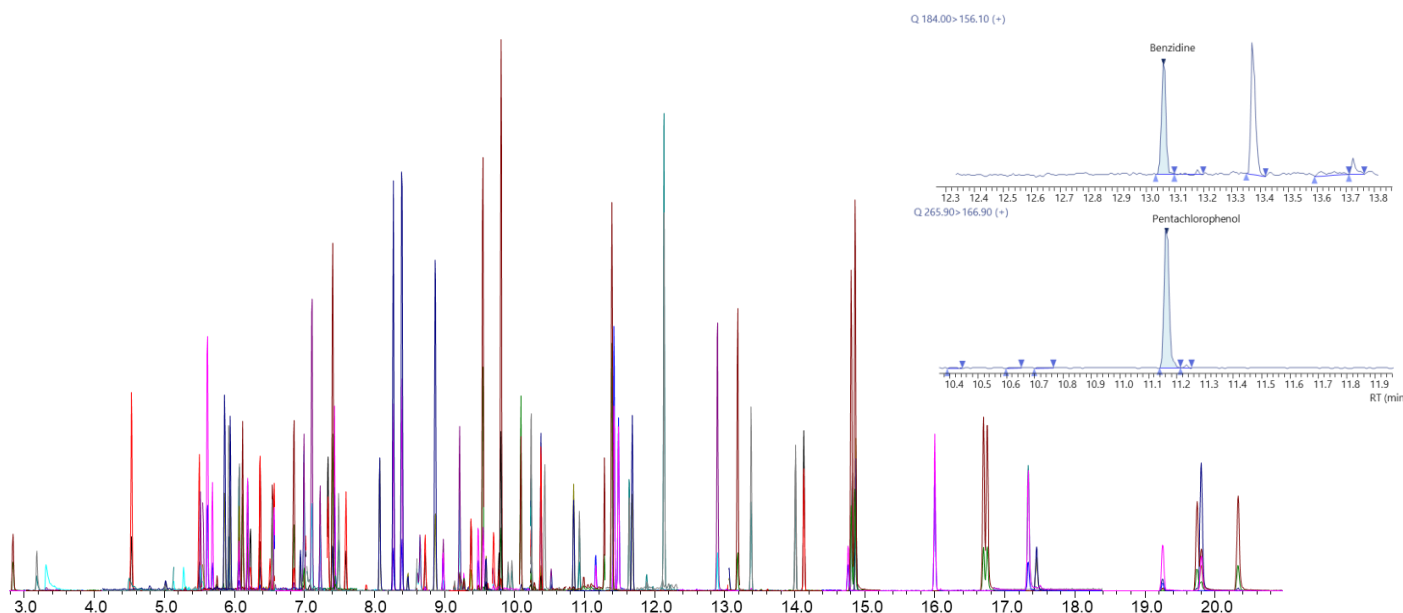


Featured Application: 150 Semivolatiles on RMX-5SiI MS by GC-MS/MS



The RMX-5SiI MS provides excellent peak shape at low levels for difficult compounds

Trace-Level Semivolatiles Analysis: An Evaluation of the RMX-5SiI MS Column



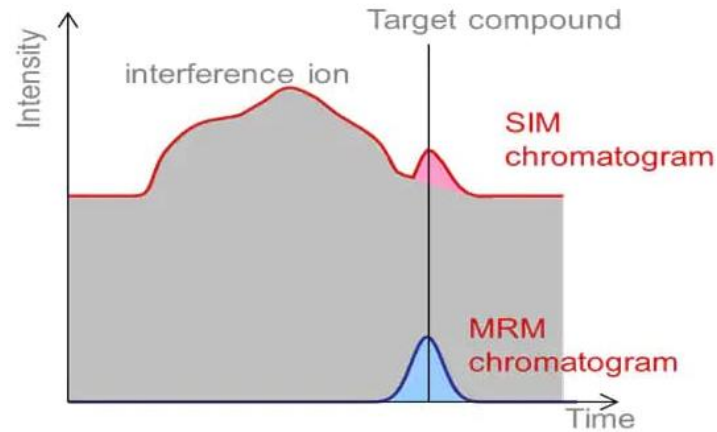
Data Courtesy : Shimadzu

Restek sincerely thanks Shimadzu , Yoshiro Hiramatsu and Alan Owens for providing the data that made this work possible.

Excellent GC-MS/MS performance at low levels

Compound Name	Retention Time	R ²	Low point (ppb)	High point (ppb)	IDL(pg)
Pyridine	3.276	0.994	10	1000	3.23
Aniline	5.554	0.993	10	1000	1.43
N-Nitrosodi-N-propylamine	6.374	0.997	10	1000	3.10
Nitrobenzene	6.563	0.996	5	1000	0.81
2-Nitrophenol	6.941	0.996	10	1000	1.26
Benzoic Acid	7.019	0.998	50	1000	14.70
4-Chloroaniline	7.484	0.998	5	1000	1.34
Hexachlorocyclopentadiene	8.474	0.998	5	1000	2.72
2-Nitroaniline	8.979	0.996	10	1000	1.33
1,4-Dinitrobenzene	9.143	0.996	10	1000	8.63
1,3-Dinitrobenzene	9.14	0.991	10	1000	6.97
2,6-Dinitrotoluene	9.281	0.997	5	1000	2.06
3-Nitroaniline	9.484	0.995	10	1000	2.89
Acenaphthene	9.592	0.991	1	1000	2.61
2,4-Dinitrophenol	9.617	0.995	10	1000	11.53
4-Nitrophenol	9.689	0.998	10	1000	4.39
2,4-Dinitrotoluene	9.778	0.999	10	1000	4.30
2,3,4,6-Tetrachlorophenol	9.958	0.997	5	1000	1.74
4-Nitroaniline	10.234	0.993	10	1000	2.33
4,6-Dinitro-2-methylphenol	10.283	0.996	10	1000	7.99
2,4,6-Tribromophenol	10.524	0.997	5	1000	4.15
Pentachlorophenol	11.159	0.997	5	1000	1.14
Benzidine	13.062	0.998	10	1000	1.43
Bis(2-ethylhexyl)adipate	14.129	0.994	10	1000	1.15
3'3-Dichlorobenzidine	14.769	0.996	10	1000	1.76
Di-n-octylphthalate	16	0.998	5	1000	0.49

Summary



✓ Reduce dichloromethane

Easier adoption of more-dilute sample prep

✓ GC-MS to MS/MS

Easier adoption of sensitive instrumentation

✓ High-throughput & compliance

Dependable high-quality data

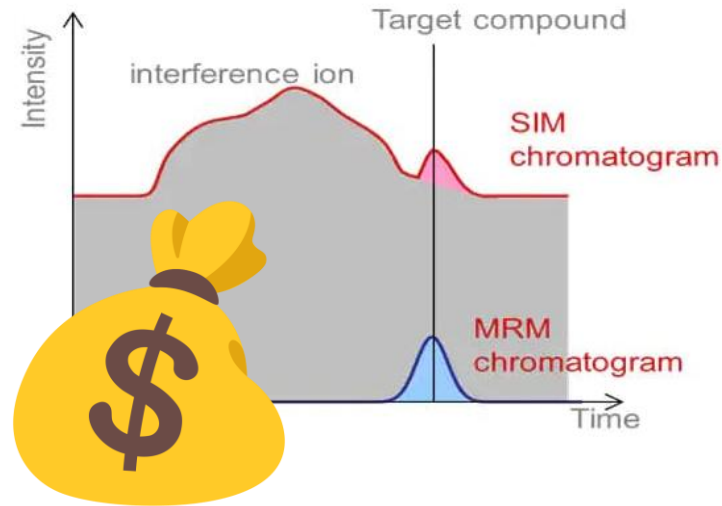
Overview of RMX-5Sil Applications



Semivolatiles
GC-MS/MS

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<i>...the future</i>

Solutions needed for Semivolatiles



Reduce dichloromethane

- Environmental regulation
- Moving away from sep funnel
- Micro-LLE & SPE options

GC-MS to MS/MS

- Greater selectivity
- Less matrix interference
- Lower detection limits

High-throughput & compliance

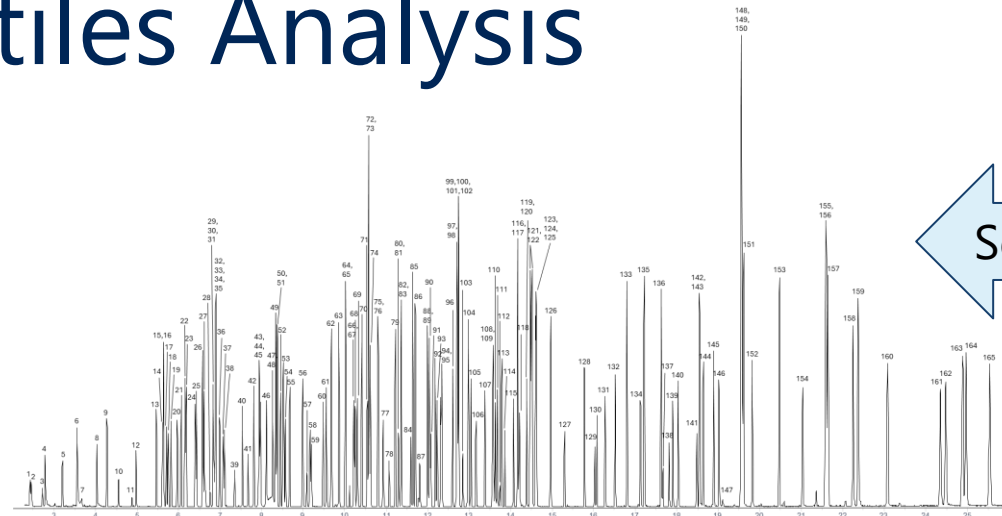
- Adopting new technology
- Reducing downtime
- Maintaining high quality

Pushing the Boundaries of Low-Level GC-MS Semivolatiles Analysis

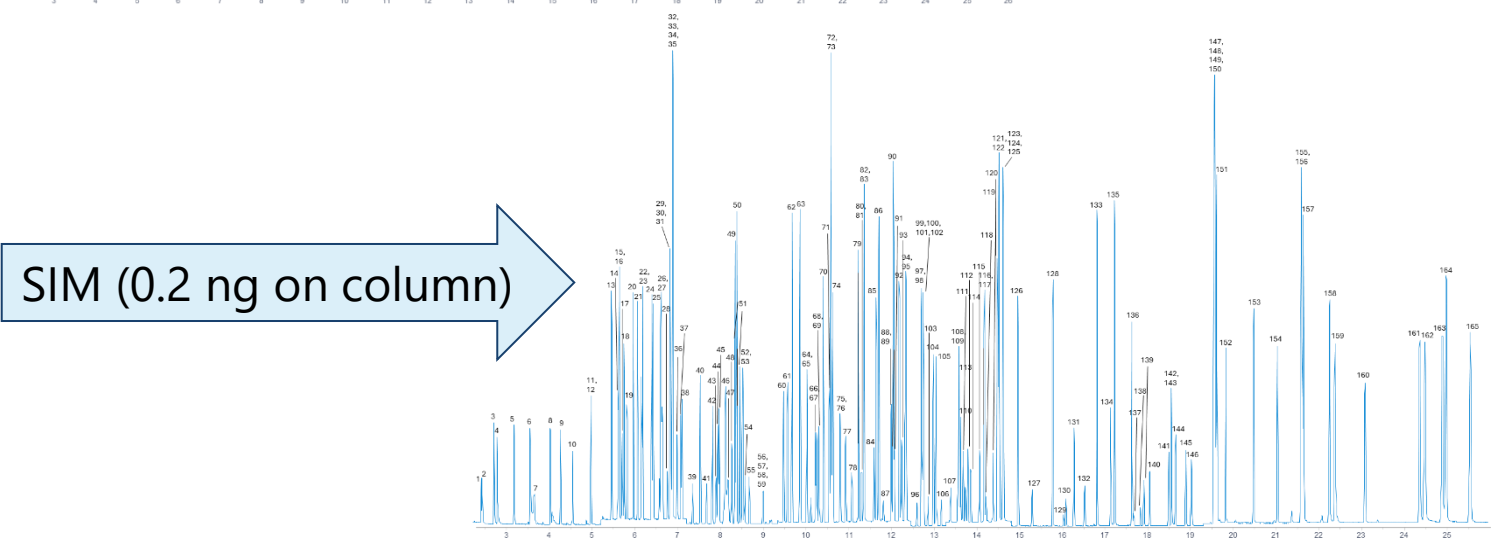


- 8270D system suitability testing
- Scan = current status quo
SIM = more sensitive
- “low level” is much higher than GC-MS/MS
- SVOC 150 mix to show complexity

Application designed to demonstrate RMX as the right solution for any semivolatiles approach



Scan (1 ng on column)



SIM (0.2 ng on column)

Optimizing Method Standard HJ 834-2017 for GC-MS Semivolatiles Analysis



- HJ 834 Compliant conditions

- 64 compounds + IS & Surr.

- Differences from 8270:

- R vs R2
- Specific LOD/LOQ to be met
- 30% RSD vs 20%
- No benzidine/PCP symmetry spec.

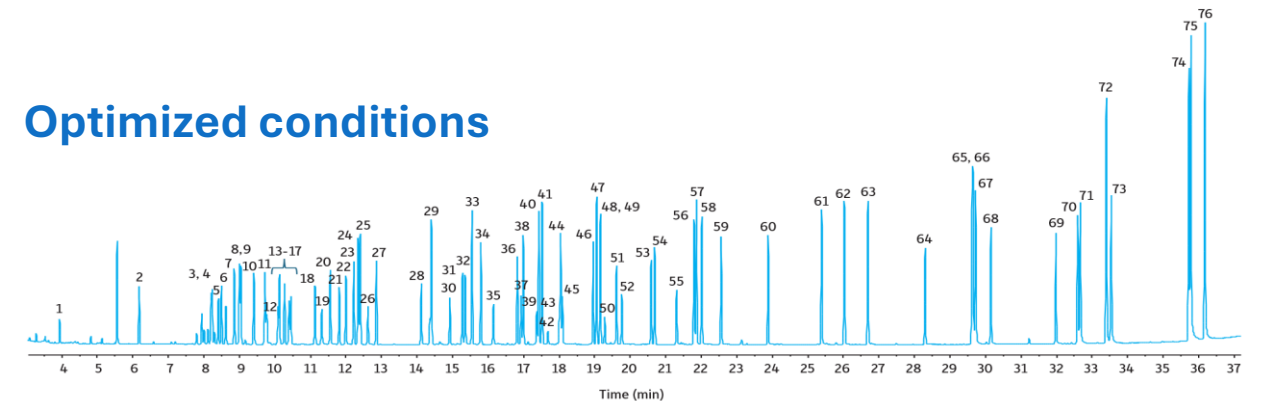
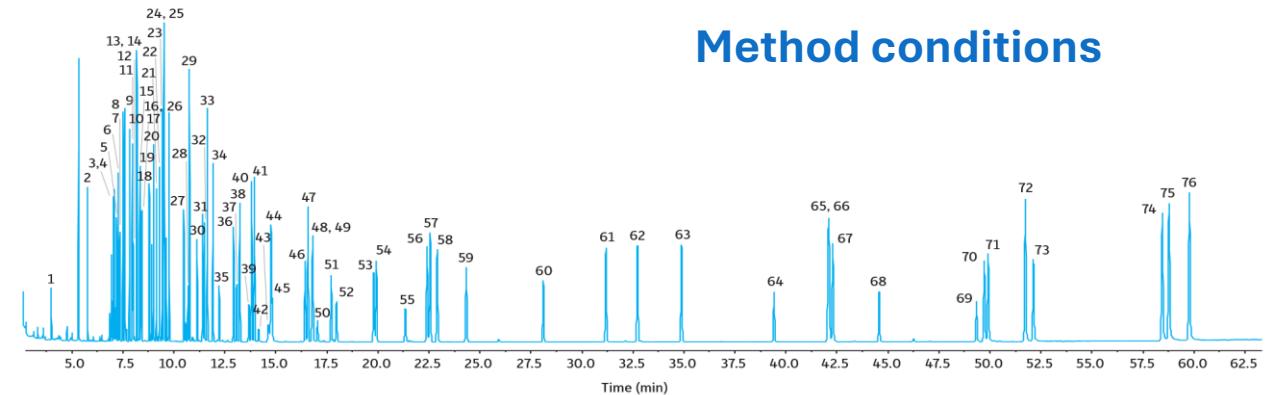
	RSD (<30%)	R (<0.990)	LOD (<Method)	LOQ (<Method)	% Recovery (70-130%)
Acceptable	64	64	64	64	64
Unacceptable	0	0	0	0	0
Max	23%	1.000	0.89	2.98	109%
Min	2%	0.999	0.02	0.05	75%



Optimizing Method Standard HJ 834-2017 for GC-MS Semivolatiles Analysis



- Faster oven program developed with ProEZGC
- Separation of key analytes maintained
- Improved separation of early eluters



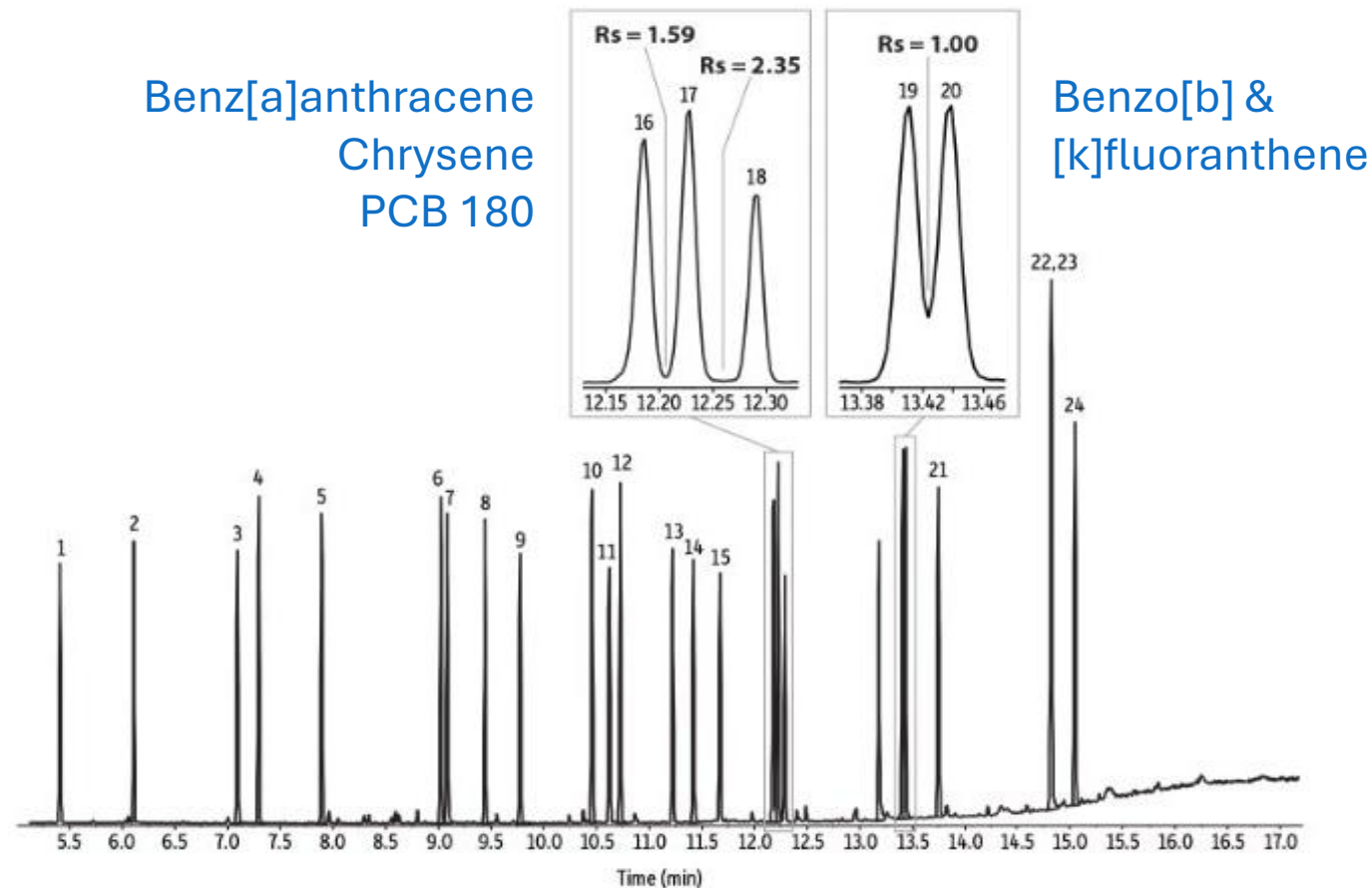
RMX-5Sil MS produced HJ 834 compliant data with improved run conditions

Boost Productivity with Simultaneous PAH and PCB GC-MS Analysis



- GC-MS scan, 1ng, splitless
- Low level is not a concern for these product classes
- Alternative selectivity for PAH/PCB analysis
- 100 injections to monitor repeatability

Application designed to demonstrate RMX as a solution for method consolidation



Summary



✓ Reduce dichloromethane

Compliance SIM and Scan GC-MS methods offer customers flexibility when choosing their sample prep

✓ High-throughput & compliance

Compliance with a variety of methods gives labs assurance that their chosen methods will work on the RMX-5Sil MS

Overview of RMX-5Sil Applications



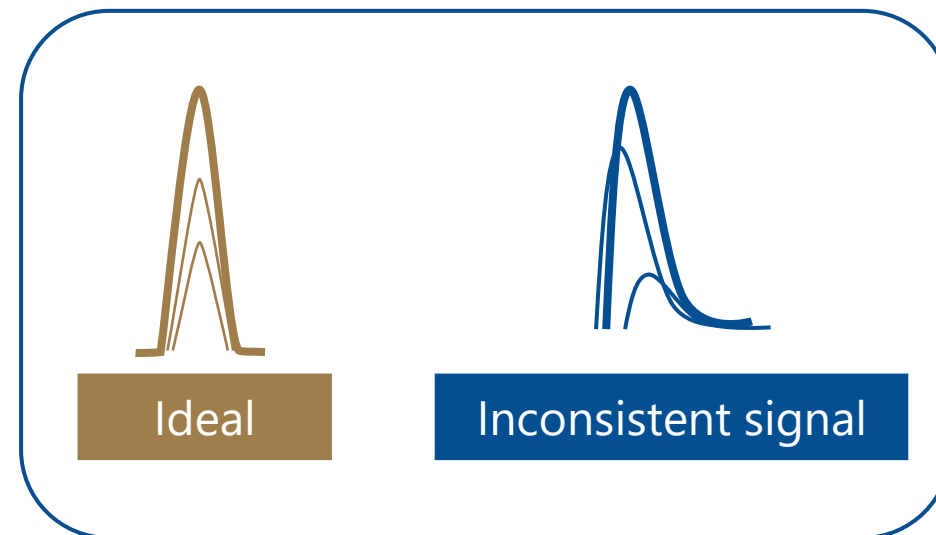
Semivolatiles
GC-MS/MS

Application
Comprehensive Trace-Level Semivolatiles Analysis by GC-MS/MS (Method 8270E)
Achieving Lower Detection Limits for Semivolatiles
Featured Application: 150 Semivolatiles on RMX-5Sil MS by GC-MS/MS
Trace-Level Semivolatiles Analysis: An Evaluation of the RMX-5Sil MS Column
Pushing the Boundaries of Low-Level GC-MS Semivolatiles Analysis
Optimizing Method Standard HJ 834-2017 for GC-MS Semivolatiles Analysis
Boost Productivity with Simultaneous PAH and PCB GC-MS Analysis
Featured Application: Drugs of Abuse on RMX-5Sil MS
Pro EZGC
<i>...the future</i>

Solutions for seized drug analysis



Amphetamine-type stimulants	<chem>CC(N)Cc1ccc(O)cc1</chem> MDMA	<chem>CC(N)Cc1ccc(O)cc1</chem> PMMA	<chem>CC(N)Cc1ccc(O)cc1</chem> Methamphetamine
Cathinones	<chem>CC(=O)Nc1ccc(O)cc1</chem> Mephedrone	<chem>CC(=O)Nc1ccc(O)cc1</chem> MDPV	<chem>CC(=O)Nc1ccc(O)cc1</chem> α-PVP
Hallucinogenic phenethylamines	<chem>CC(=O)Nc1ccc(O)cc1</chem> 2C-B	<chem>CC(=O)Nc1ccc(O)cc1</chem> 25B-NBOMe	
Piperazines	<chem>C1CCNCC1</chem> BZP	<chem>C1CCNCC1</chem> TRIPP	
Other	<chem>C1=CC=C2C(=C1)C(=O)N2</chem> Cocaine		



Identification

- Infinite drug chemistries encountered
- Mixtures
- High concentrations (dilute and shoot)

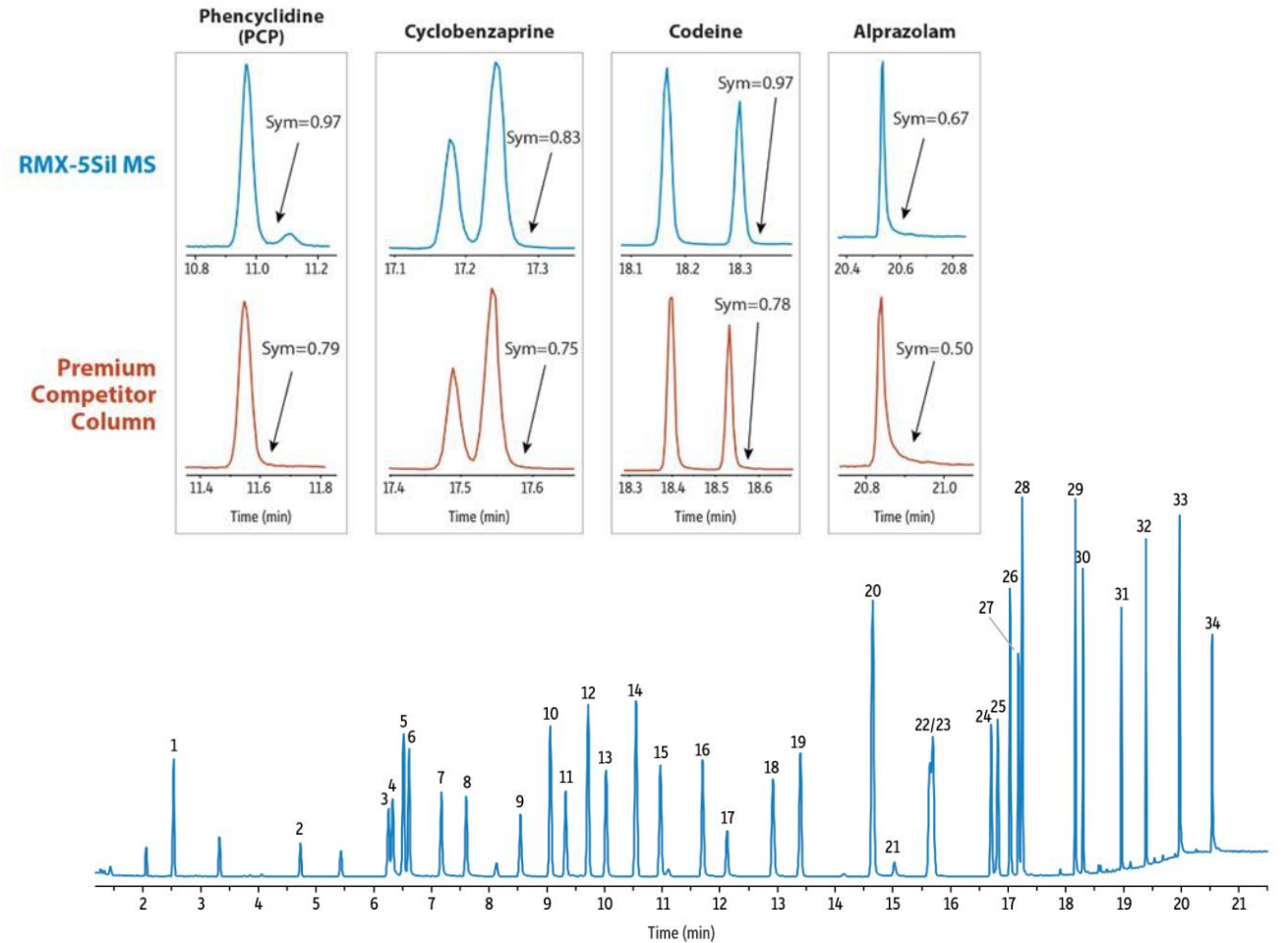
Data interpretation

- MS-library match
- Retention time stability
- Expanding compound lists

Featured Application: Drugs of Abuse on RMX-5SiI MS



- GC-MS, scan, 25 ppm split
- Sensitivity is not a concern
- 34 *problematic* seized drugs
- RMX vs Premium Column

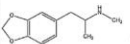
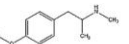
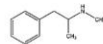
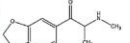
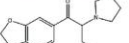
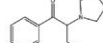
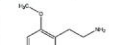
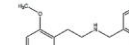
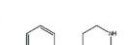
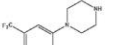
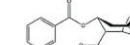


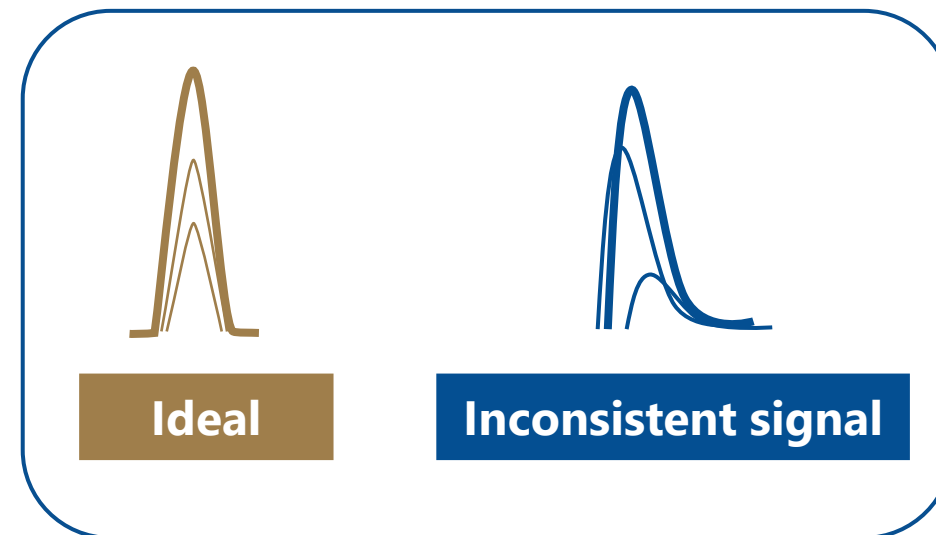
Application designed to test if a competitor could meet the versatility of RMX

RMX-5sil MS improved analysis of basic drugs without compromising acids

Summary



Amphetamine-type stimulants	 MDMA	 PMMA	 Methamphetamine
Cathinones	 Mephedrone	 MDPV	 α -PVP
Hallucinogenic phenethylamines	 2C-B	 25B-NBOMe	
Piperazines	 BZP	 TFMP	
Other	 Cocaine		



✓ Identification

Excellent peak shape for identification of difficult drug chemistries

✓ Data interpretation

Improved peak shape relative to competitors for smoother interpretation of data

Engaging RMX customers with Pro EZGC



Pro EZGC Chromatogram Modeler

Send Feedback Help Print Save Save a Copy Language

Compounds Conditions My EZGC

Search by Name or CAS Search by Phase >>

- Dibenz[a,h]anthracene (53-70-3)
- Dibenzofuran (132-64-9)
- 1,2-Dichlorobenzene (95-50-1)
- 1,3-Dichlorobenzene (541-73-1)
- 1,4-Dichlorobenzene (106-46-7)
- 2,4-Dichlorophenol (120-83-2)
- Diethylphthalate (84-66-2)
- 2,4-Dimethylphenol (105-

Detector: GC GC-MS Clear Solve

Also work with LC? Try out the new [ProEZLC Chromatogram Modeler!](#)

Welcome to the Restek Pro EZGC Chromatogram Modeler. To get started, enter the compounds you wish to separate using the field to the left or click "Search by Phase" to browse our compound libraries.

Watch on YouTube

This new and improved version of our popular EZGC chromatogram modeler is just as simple to use, but now offers advanced options for selecting phases, changing carrier gases, optimizing your results, and much more!

Engaging RMX customers with Pro EZGC



- 183 Semivolatiles
 - 233 Pesticides
 - 98 Drugs of Abuse
 - 14 PFAS (FTOHs)
(future application)
- ...and more on the way

Pro EZGC Chromatogram Modeler

Send Feedback | Help | Print | Save | Save a Copy | Language

Compounds | Conditions | **RMX-5SII MS**

Column

Length: 30.00 m
 Inner Diameter: 0.25 mm
 Film Thickness: 0.25 µm
 Available Columns: 30, 0.25, 0.25

Gas Flow Parameters

Carrier Gas: Helium
 Control Method: Constant Flow
 Column Flow: 2.00 mL/min
 Average Velocity: 51.08 cm/sec
 Holdup Time: 0.98 min
 Inlet Pressure: 16.52 psi
 Efficiency Speed Custom
 Outlet Pressure (abs): 0.00 psi
 Atm Vacuum

Oven Program

Isothermal Ramps

Number of Ramps (1-5)	Ramp Rate (°C/min)	Temp (°C)	Hold Time (min)
1	30	330	3

Target Resolution: 1.50
 Refine Oven Program
 cat.# 13623 recommended max temperature: 350 °C

Results

Run Time/Oven Time: 12.0/13.7 min
 Isobaric Compounds Separated: 14

Interested in evaluating your modeled solution with the recommended column?
[Contact us.](#)

Untitled. Click here to edit.

Available Isobars: m/z 252 Critical Pair 27,28 Rs 0.96 Reset

Column: Rxi-5SII MS, 30 m, 0.25 mm ID, 0.25 µm (cat.# 13623)
 Carrier Gas: Helium, Constant Flow @ 2.00 mL/min
 Average Velocity: 51.08 cm/sec
 Outlet Pressure (abs): 0.00 psi
 Oven Temp.: 40 °C (hold 1 min) to 330 °C @ 30 °C/min (hold 3 min)

Peaks	t _r (min)	R _s	Peak Width (min)	T _{peak} (°C)	Quantifier Ion	Secondary Ion
1. Aniline	3.79	2.8	0.015	123.7	93.0	66.0
2. bis-(2-chloroethyl)ether	3.83	2.8	0.015	124.9	93.0	63.0

RMX Future Applications



Customer-driven and produced applications

Ex: Now Foods (Pesticides), etc



Diversifying within and beyond the environmental market

Ex: FTOH's, pesticides in food, cannabis, etc



Cross-product applications

Ex: Liner performance, dual-bed pesticide cartridge, QuEChERS, etc



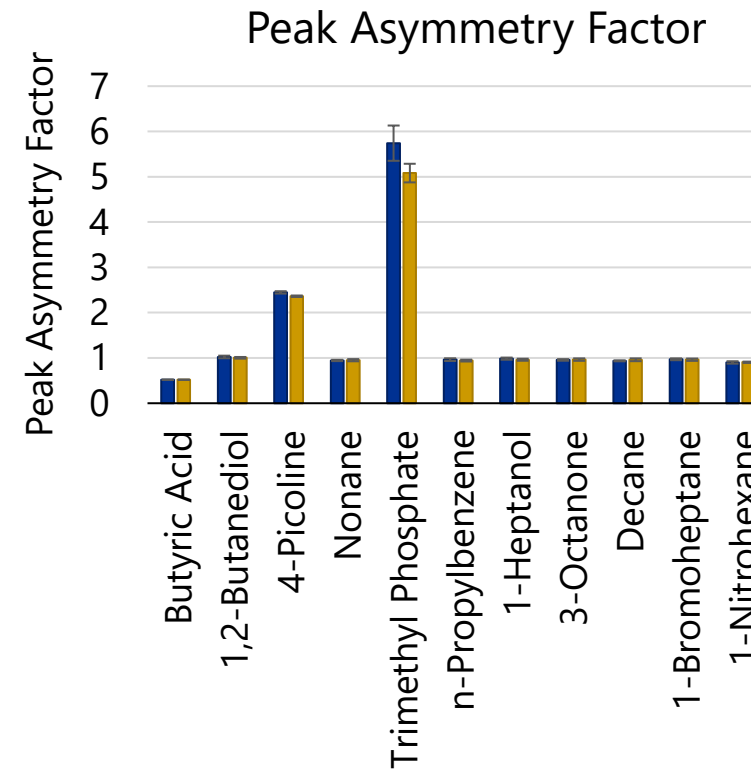
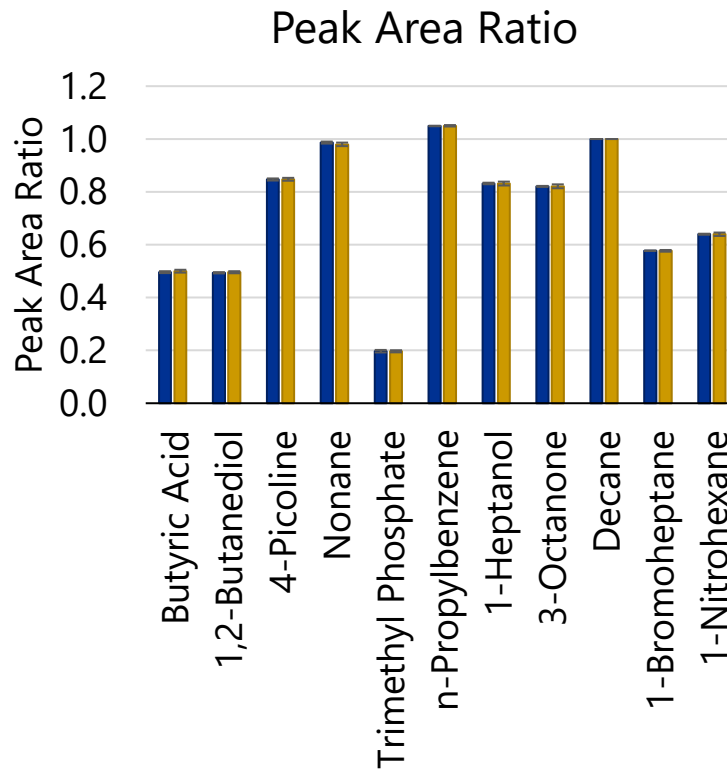
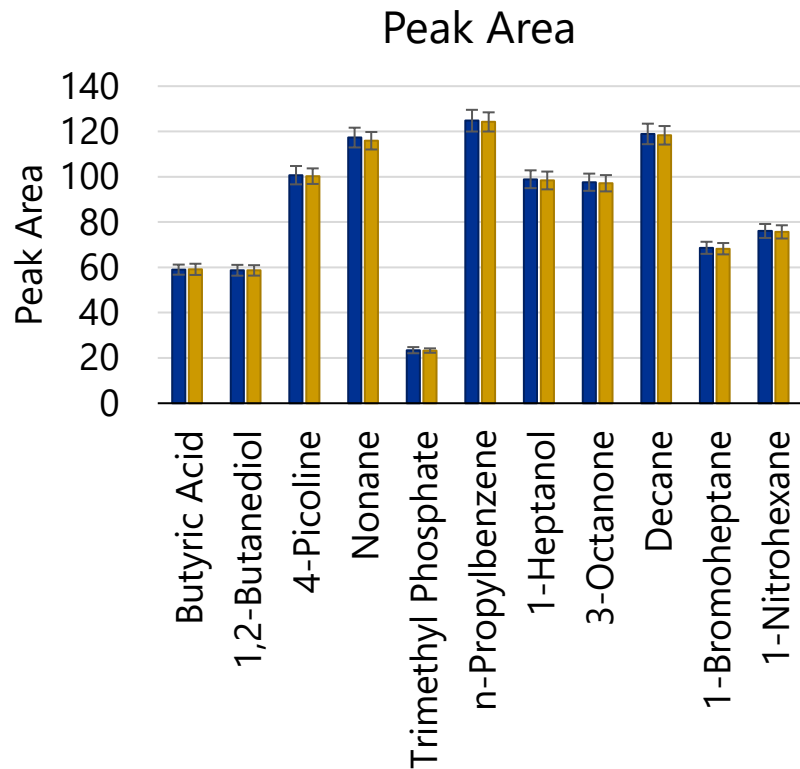
Integra-Guard

Unique column formats for seamless connection

RMX Integra-Guard with TriMax Technology



■ RMX-5Sil IG ■ RMX-5Sil IG Removed



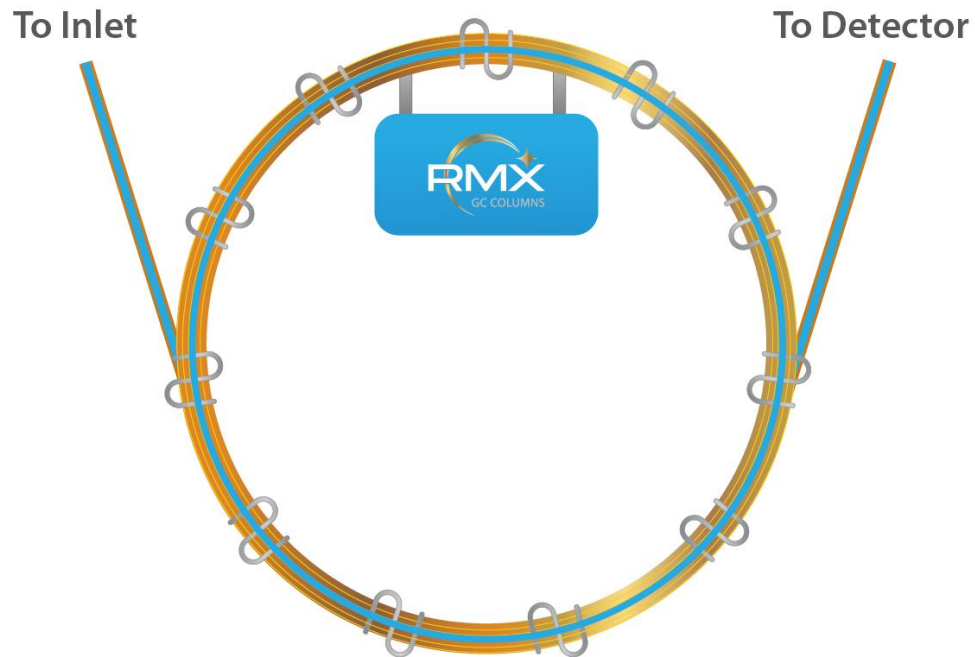
- RMX-5Sil IG column tested with and without IG component
- Stringent probe molecules and test conditions



- Negligible differences in peak areas and peak area ratios
- Comparable peak shapes for most probe molecules

Maximize Impact with All New RMX Formats



Analytical



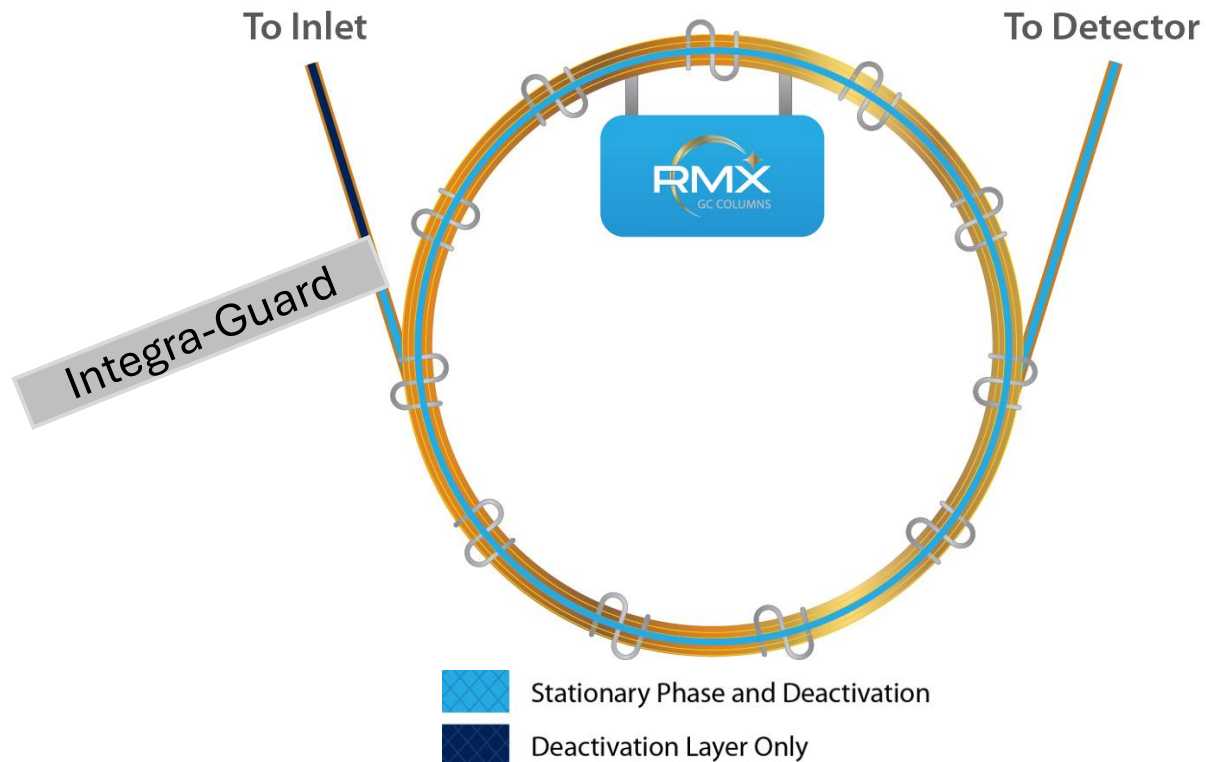
-  Stationary Phase and Deactivation
-  Deactivation Layer Only

- Maximum sensitivity necessary for low level detection on sensitive instruments like GC-MS/MS
- Maximizes passing calibration and method compliant data over extended period of time for GC-MS methods

Maximize Impact with All New RMX Formats



Integra-Guard



Maximum Durability for dirty sample matrices

Maximum uptime and robust retention even after multiple trimming

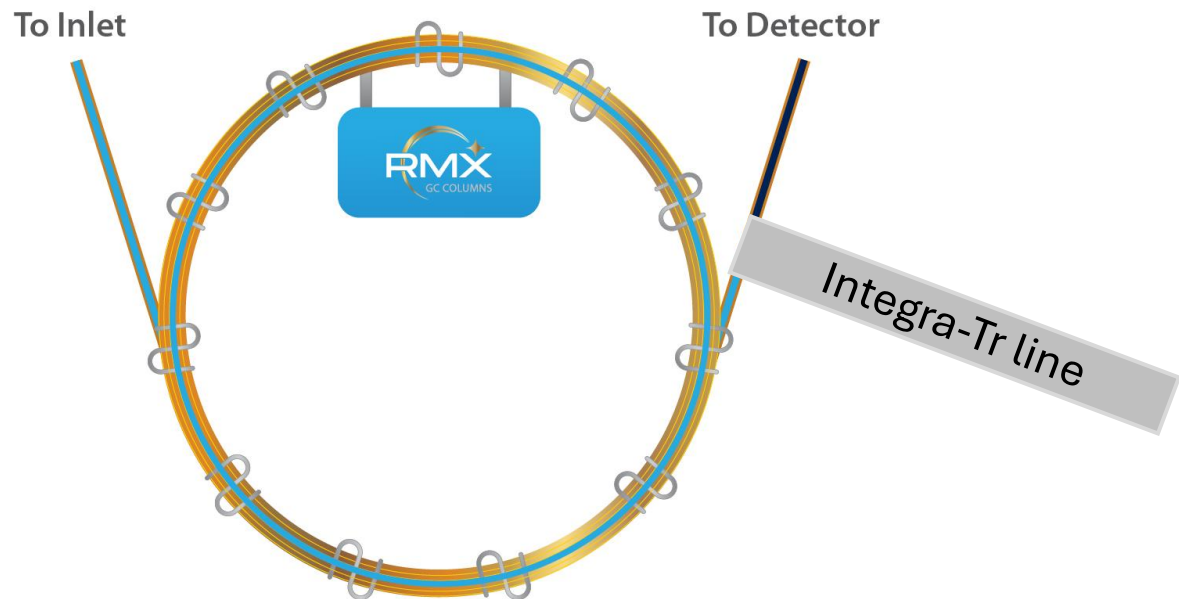
Seamless Integra-Guard designed, leak free connection for MS setup

Maximizes focusing for larger volume injections



Maximize Impact with All New RMX Formats



Integra-Transfer Line



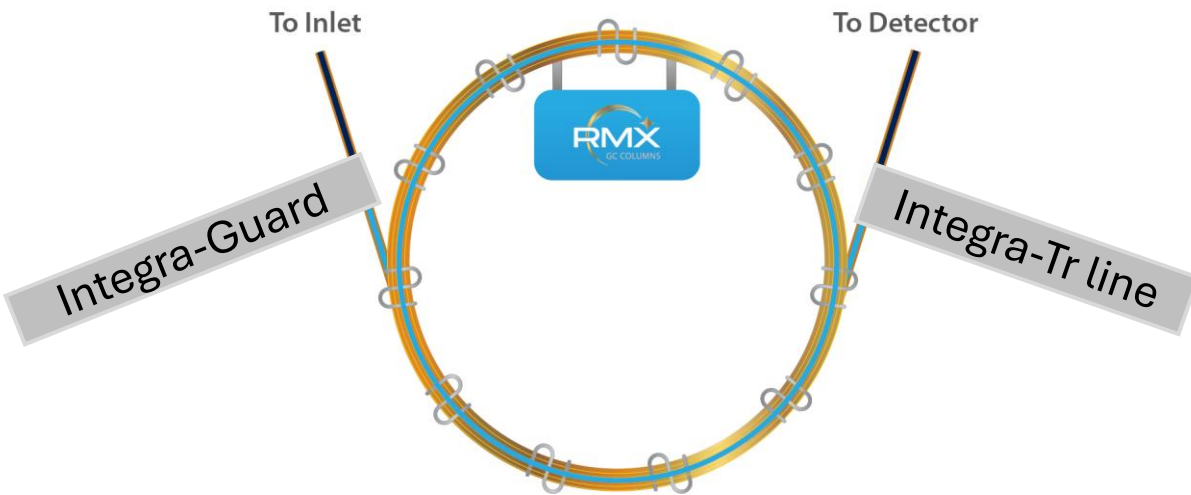
Maximizes sensitivity by minimizing transferline bleed on MS



-  Stationary Phase and Deactivation
-  Deactivation Layer Only

Maximize Impact with All New RMX Formats



Dual (Integra-Guard and Integra-Transfer Line)



-  Stationary Phase and Deactivation
-  Deactivation Layer Only

Integra-Guard

Maximum Durability for dirty sample matrices

Maximum uptime and robust retention even after multiple trimming

Seamless Integra-Guard designed, leak free connection for MS setup

Maximizes focusing for larger volume injection

Integra-Transferline

Maximizes sensitivity by minimizing transferline bleed on MS

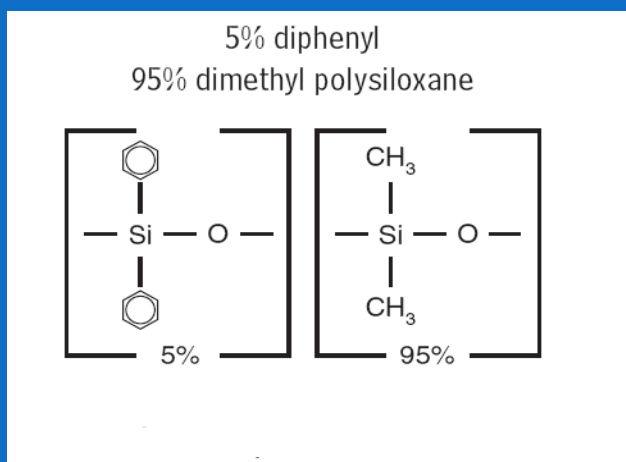
Combines the benefit of Integra-guard & Integra-Transferline



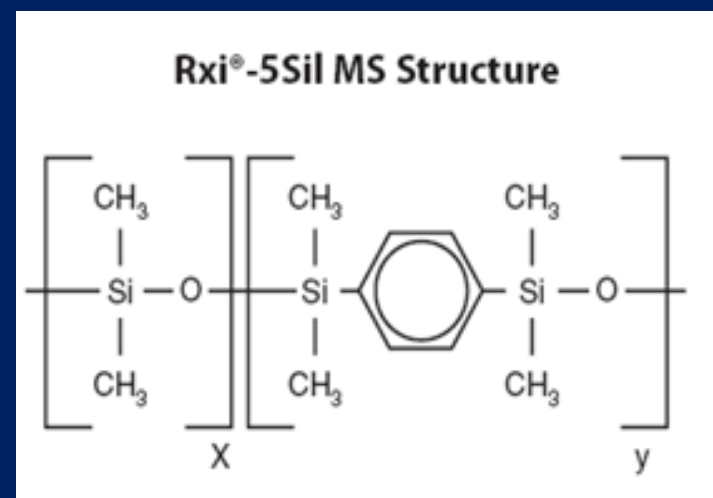
RMX Market, Positioning & Product Value

5MS vs 5Si MS

- Same Polarity, Different Structure, Restrictions & Selectivity

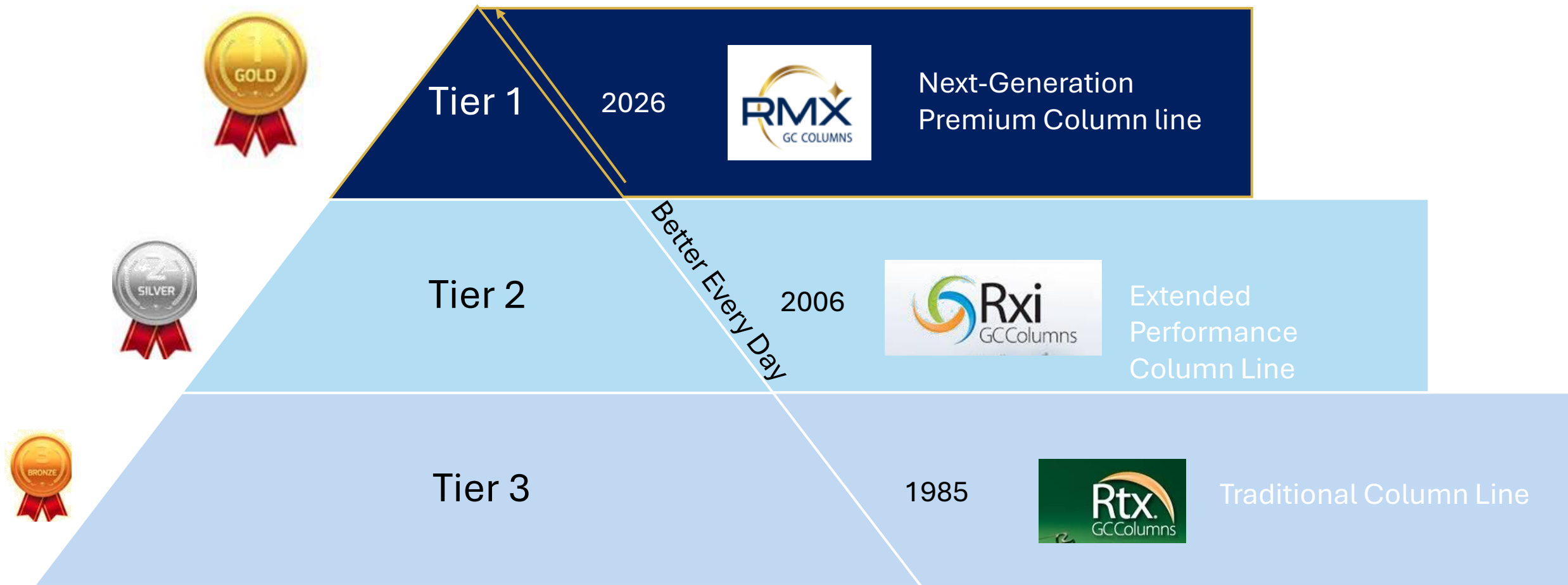


Rtx-5, Rtx-5MS, Rxi-5MS

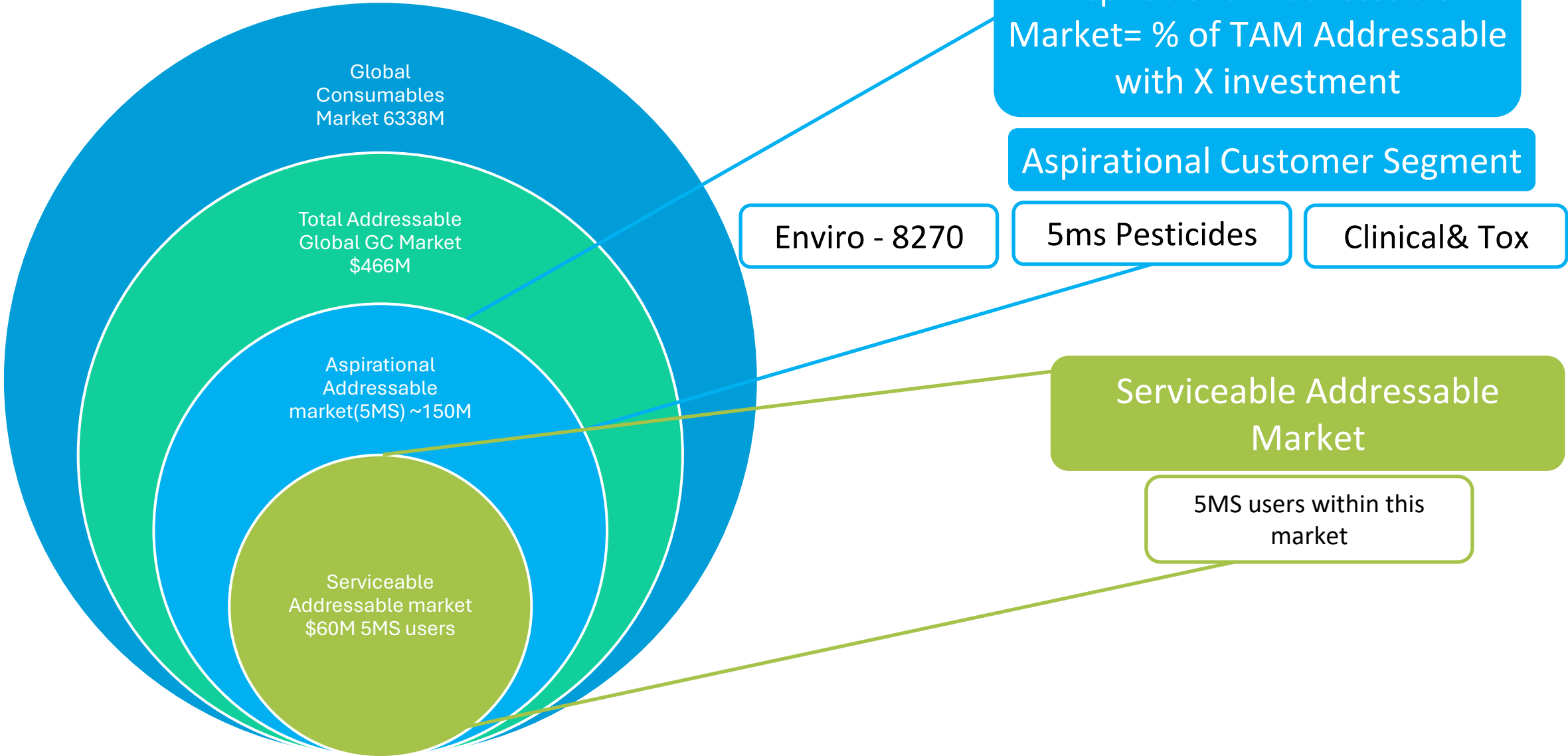


RMX-5Si MS, Rxi-5Si MS, Rxi-SVOC MS

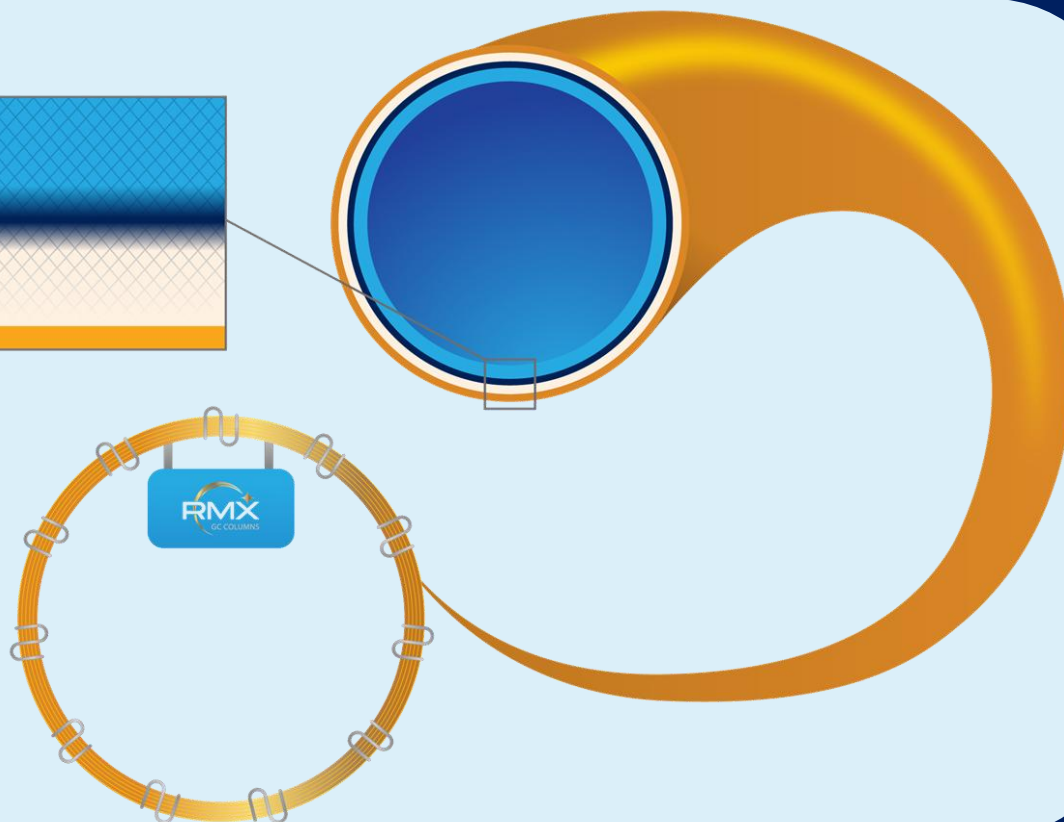
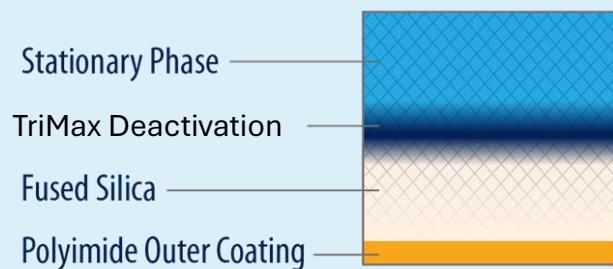
Brand Positioning



GC Market Analysis



Unleash your Performance with RMX GC Columns



ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower calibration ranges with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime

RMX Value



1- Target Audience

For laboratory managers and analytical chemists using sensitive GC instruments (GC, GC-MS or GC-MS/MS)

2- Customer Problem

who need highly inert columns to reliably detect trace-level (pg on column or ppb) of analytes

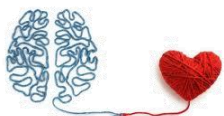


3- Product Promise (Outcome)

Restek's next generation RMX GC column family with TriMax technology offers improved peak shape, accurate recoveries, and consistent performance to extend column lifetime"

4, 5- Proof, Differentiation

Unlike traditional GC columns, our proprietary deactivation provides neutral inert surface, unique transfer line dimensions, and the Pro EZGC method optimization tool speed up analysis, reduce instrument downtime and boost confidence in every single run.



6- Emotion / Aspiration

The result: Compliant data over longer period of time, faster method optimization and reduced overall cost per analysis.

Your RMX Elevator Pitch

Target Audience

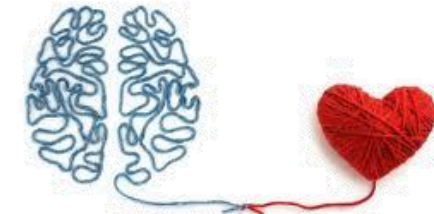
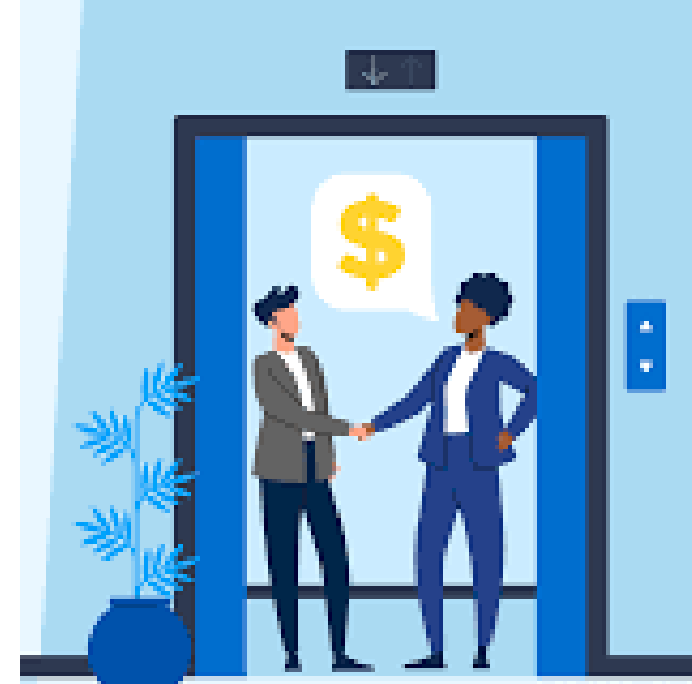


For analytical chemists running trace GC-MS/MS
(or MS) in complex matrices,

RMX Promise



Restek next generation RMX GC Columns powered by Trimax technology offers
high sensitivity over a **broad range of analytes** and **matrices** resulting in **high confidence data over extended period of time**



Emotional Connect that resonates with customer

Value By Persona



SVOC Manager
Eurofins SVOC
Testing

Goal: Running SVOC across matrix using **Single quad GC MS**

Success Measured: Cost per analysis

RMX Value: Passing calibration over extended time



Technical Director
Eurofins
Environmental
Testing

Goal: SVOC **Triple quad GC MS/MS** method consolidation, Novel extraction,

Success Measured: Sensitivity, low level detection

RMX Value: Sensitivity, Compliant data



Pesticide lab
Supervisor
Now Foods

Goal: Triple Quad - release nutraceuticals after pesticide testing

Success Measured: Cost per Analysis

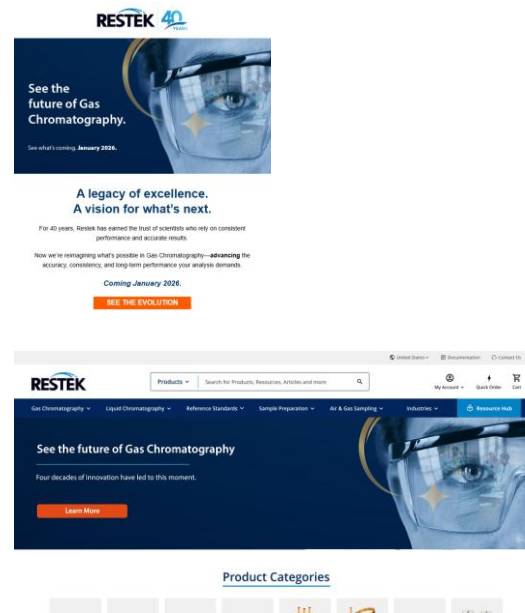
RMX Value: Passing System Suitability over extended time

Commercialization Activities

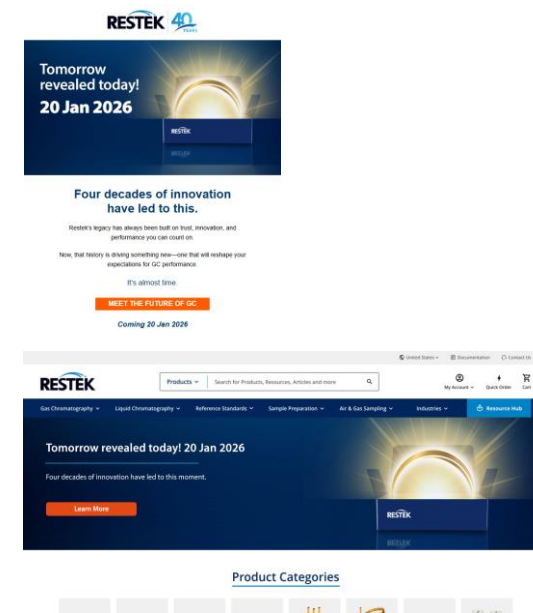
Marketing-Teaser Campaign

Teaser Campaign-Completed (413 forms)!

Goals: Generate excitement; reinforce who Restek is and our leadership in GC technology; encourage customer engagement



Teaser 1 (December 16, 2025)-



Teaser 2 (January 14, 2026)

RMX Launch Campaign – Jan 20

We are ready!

Main Launch Message & Visual Theme

The high-level message and design applied cohesively to all launch collateral. Written in a way that focuses on value proposition; can evolve and be adapted throughout 2026 (e.g., Unleash your XXXX). Designed to be highly engaging and capture attention (e.g., direct eye contact).

The screenshot shows the Restek website homepage. At the top left is the Restek logo. A search bar contains the text "Products" and "Search for Products, Resources, Articles and more". Navigation links include "Gas Chromatography", "Liquid Chromatography", "Reference Standards", "Sample Preparation", "Air & Gas Sampling", "Industries", and "Resource Hub". The main banner features the headline "Unleash Your Performance with RMX Columns" and the sub-headline "Enhanced Detection. Less Downtime. More Discovery." Below this is an orange "Learn More" button. The RMX GC COLUMNS logo and a 3D molecular model are also visible. The background is a close-up of a person's eyes wearing safety glasses, overlaid with a blue-tinted chemical structure.

The graphic features a close-up of a person's eyes wearing safety glasses, overlaid with a blue-tinted chemical structure. The headline reads "UNLEASH YOUR PERFORMANCE" in white and gold. Below this is the sub-headline "ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY." and a list of three bullet points: "Analyze a wide range of problematic compounds with confidence.", "Achieve lower calibration ranges with picogram-level sensitivity.", and "Maximize profitability by extending method performance and column lifetime." The RMX GC COLUMNS logo and a 3D molecular model are also present. The Restek logo and website URL "www.restek.com" are at the bottom.

RMX 2026 Campaign-Launch Material

External Communications:

- Eblasts
- Social Media
- Box Stuffer
- Third-Party Emails (advertising)
- PDPs
- Applications Collateral*
- Brochure
- Webinar
- "Splash"
- Video/Animation
- Customer Testimonials & Apps

Events

- Pittcon
- Analytica
- Event support material

Advertising:

- Employee Email
- Signature Ads
- Press Releases
- Third-Party Print & Web Ads
- Promoted Social Posts & SEM
- Restek.com
- Homepage Ad

Employee / Sales Enablement:

- Giveaway / Leave-Behind
- Email Nurture Campaign
- Dedicated Lead-Scoring Models (MQL)*
- Brochure
- Employee & Distributor Kits

RESTEK 40th ANNIVERSARY

UNLEASH YOUR PERFORMANCE
ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

RMX GC COLUMNS

Maximize Data Quality and Method Performance with Next-Generation RMX Columns

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower detection limits with program-level sensitivity.
- Maximize profitability by extending method performance and column lifetime.

What Makes RMX Columns Better?
Highly Effective Trilayer Deactivation Protects Analytes From Surface Interactions, Improving Peak Shape and Sensitivity for a Wide Range of Compound Chemistries

Trilayer Deactivation

Non-Trilayer Deactivation

Surface Pass
Trilayer Deactivation
Fast Flow
Prepacked-Shell-Layer

Inert (non-polar) phases: Agilent, Agilent, etc.
Active compounds: Agilent, Waters, etc.
Repacked active sites

GET DETAILS

RMX GC COLUMNS

UNLEASH YOUR PERFORMANCE
ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

discover.restek.com/RMX

RESTEK

RMX GC COLUMNS

UNLEASH YOUR PERFORMANCE
GET DETAILS

RESTEK Pure Chromatography

UNLEASH YOUR PERFORMANCE
ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

RESTEK

RMX 2026 Campaign

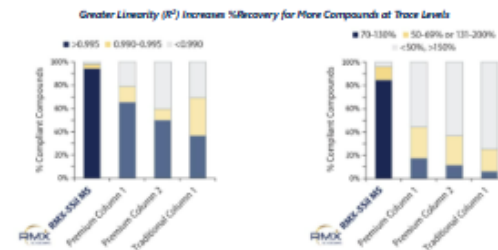
Public Brand "Hub" Page:

- discover.restek.com/RMX
- **Customers can**
 - Learn about RMX columns
 - Watch customer testimonials
 - Contact Sales or Tech Service (via lead-gen forms)
 - Access content, products, cgrams, and so much more!

Better Data Quality Maximizes Method Performance

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower detection limits with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime.

RMX GC columns with TriMax deactivation technology maximize trace-level performance, so you can increase productivity and profitability. Exceptional inerts delivers superior peak symmetry across a wide range of challenging active compounds, resulting in more linear calibrations and higher recoveries.



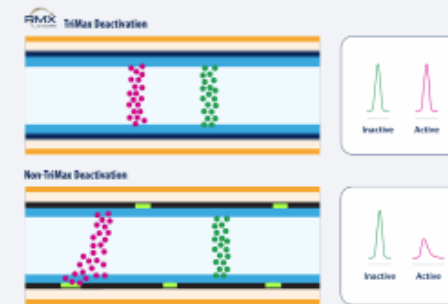
Recovery for 57 semivolatiles, including alcohols, acids, and bases, was calculated at the lowest calibration point (57%) for each compound. Q^2 values ranged from 0.8 to 1.00. © 2024 Restek Corporation

By maximizing data quality, RMX GC columns generate more compliant results—even for the most challenging semivolatiles—so accurate results are reported, and samples keep moving through the lab.



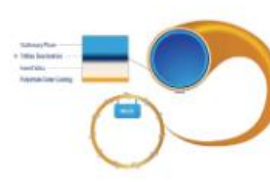
What Makes RMX GC Columns Better?

Highly Effective TriMax Deactivation Protects Analytes From Surface Interactions, Improving Peak Shape and Sensitivity for a Wide Range of Compound Chemistries



TriMax Deactivation: Foundation of the RMX Advantage

RMX GC columns are made with TriMax technology, a groundbreaking deactivation that produces an exceptionally inert surface free of the residual active sites left behind by traditional deactivations. TriMax deactivation creates a rugged, contamination-free surface that ensures outstanding peak shape and sensitivity, even for active compounds, such as acids, bases, alcohols, and more.



Overall, the RMX SS1 MS GC column represents a significant improvement to our routine pesticide analysis, giving our team greater confidence in the data we generate and enhancing the efficiency of our laboratory.



RMX GC Columns

RMX GC columns are available in a wide range of formats and dimensions. Find the right one for your application here.

[View Products](#)



Need support with applications or product selection?

[Contact Technical Service](#)



Want help with quoting, purchasing, and more?

[Contact Us](#)

RMX Resource Library

Explore our growing library of RMX technical resources, videos, and more!

By page

[Browse Resources](#)

RMX Applications/Chromatograms

Browse through RMX chromatograms to find optimized method conditions. We'll share the work for you!

[Browse Chromatograms](#)



Unleash Your Performance with RMX GC Columns

[Download Brochure](#)

What's New

Stay up to date on new RMX applications, webinars, and more!

By page

RMX 2026 Campaign

Marketing Kit Coming Soon!

Like with our 40th anniversary campaign, we will provide files with everything you need to promote RMX columns and pull in customers!

- Eblast
- Social Media w/animation
- Brochure
- 10 Applications
- Web Ads
- Logo & Product Graphics
- Signage



Optimizing Method Standard HJ 834-201 for GC-MS Semivolatiles Analysis
Increase Speed and Certainty with Highly Inert RMX-558 MS Column

Key Highlights

- The new inert RMX GC column deactivates surface active sites and improves peak shape and resolution.
- The new inert RMX GC column deactivates surface active sites and improves peak shape and resolution.
- Improved GC-MS method speed by sample throughput while still meeting method criteria.



UNLEASH YOUR PERFORMANCE
ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower calibration ranges with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime.

RMX GC COLUMNS

RESTEK www.restek.com

UNLEASH YOUR PERFORMANCE
ENHANCED DETECTION. LESS DOWNTIME. MORE DISCOVERY.

RESTEK 40 YEARS

RMX GC COLUMNS

Maximize Data Quality and Method Performance with Next-Generation RMX Columns

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower detection limits with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime.

What Makes RMX Columns Better?
Highly Effective TriMax Deactivation Protects Analyses From Surface Interactions, Improving Peak Shape and Sensitivity for a Wide Range of Compound Chemistries

TriMax Deactivation: Shows a clean surface with active sites (red) and inactive sites (green). Inactive compounds (blue) are adsorbed on inactive sites, while active compounds (red) are not. This results in a sharp peak for the active compound.

Non-TriMax Deactivation: Shows a surface with active sites (red) and inactive sites (green). Inactive compounds (blue) are adsorbed on active sites, which blocks the active sites. This results in a broad peak for the active compound.

Legend:
Stationary Phase: TriMax Deactivation, Non-TriMax Deactivation
Food Sites: Polyimide Surface Coating
Inactive compounds: alcohols, ethers, aldehydes, etc.
Active compounds: acids, amines, alkenes, etc.
Reactivated active site

GET DETAILS

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RMX GC COLUMNS

Discover RMX

Part Number, Dimensions & Formats

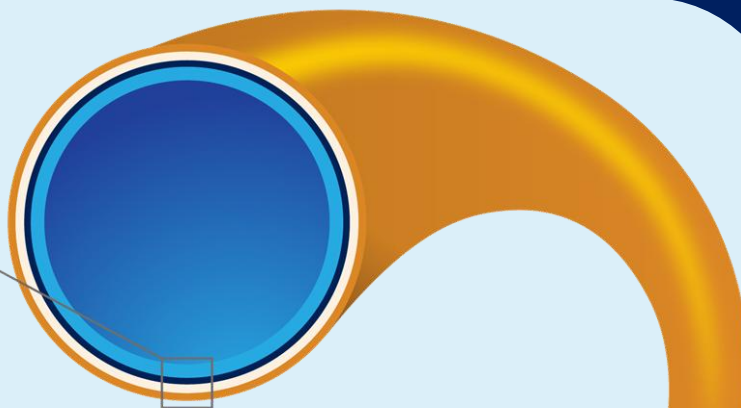


47302	RMX-5Sil MS Cap Column 20m 0.18mm ID 0.18um
47302-135	RMX-5Sil MS Cap Column 20m 0.18mm ID 0.18um, with 5m Integra-Guard
47311	RMX-5Sil MS Cap Column 20m 0.18mm ID 0.36um
17320	RMX-5Sil MS Cap Column 15m 0.25mm ID 0.25um
17320-124	RMX-5Sil MS Cap Column 15m 0.25mm ID 0.25um, with 5m Integra-Guard
17323	RMX-5Sil MS Cap Column 30m 0.25mm ID 0.25um
17323-124	RMX-5Sil MS Cap Column 30m 0.25mm ID 0.25um, with 5m Integra-Guard
17323-177	RMX-5Sil MS Cap Column 30m 0.25mm ID 0.25um, with Integra-Transfer Line
17323-124177	RMX-5Sil MS Cap Column 30m 0.25mm ID 0.25um, with 5m Integra-Guard & Integra-Transfer Line
17326	RMX-5Sil MS Cap Column 60m 0.25mm ID 0.25um
17335	RMX-5Sil MS Cap Column 15m 0.25mm ID 0.50um
17338	RMX-5Sil MS Cap Column 30m 0.25mm ID 0.50um
17338-124	RMX-5Sil MS Cap Column 30m 0.25mm ID 0.50um, with 5m Integra-Guard
17353	RMX-5Sil MS Cap Column 30m 0.25mm ID 1.00um
17324	RMX-5Sil MS Cap Column 30m 0.32mm ID 0.25um
17339	RMX-5Sil MS Cap Column 30m 0.32mm ID 0.50um
17354	RMX-5Sil MS Cap Column 30m 0.32mm ID 1.00um

Summary



Stationary Phase
TriMax Deactivation
Fused Silica
Polyimide Outer Coating



ENHANCED DETECTION, LESS DOWNTIME, MORE DISCOVERY with RMX GC Columns

- Analyze a wide range of problematic compounds with confidence.
- Achieve lower calibration ranges with picogram-level sensitivity.
- Maximize profitability by extending method performance and column lifetime



Thank you!