

# Discover the Possibilities with Mass Spectrometry Intelligence

7000E triple quadrupole GC/MS



# A history of leadership in GC and GC/MS

Agilent has over 50 years of leadership in GC and GC/MS. The story of Agilent's leadership in mass spectrometry started with the founding of HP back in 1938. Every step of the way, your goals become our goals: improving user experience, laboratory operation, and business success.



1971

## 5930A Tabletop MS

The first GC/MS from HP with an oscilloscope and strip chart was introduced.



1982

## 5970 MS

This landmark Agilent product was the first of a long line of GC/MS instruments. With a mass range almost as good as the early floor standing models, the sensitivity was comparable to our earlier benchtops.



1994

## GCD

Gas chromatography/mass spectrometry as a technology gained so much popularity that we introduced an easier-to-use model, the GCD.



1996

## 5973 GC/MSD

The 5973 showcased extended mass range and sensitivity. MSD ChemStation and the Local Control Panel allowed two GC/MSDs to be controlled by one PC.



2005

## 5975 GC/MSD

The 5975 GC/MSD further extended the mass range up to 1050 m/z and delivered a sensitivity S/N of 100:1 with 1 pg OFN.



1976

## 5992A Benchtop GC/MS

Up until this time, all GC/MS systems were floor-standing units. The 5992 marked a milestone with the first benchtop instrument.



1988

## Unix and DOS ChemStation

The Unix ChemStation was the successor to the Pascal workstation. The Agilent DOS Chemstation included low-cost PCs and more sophisticated operating systems that made it possible to move to more common computing platforms.



1996

## Hyperbolic gold-coated quartz quadrupole

Hyperbolic, gold-coated, quartz quads enhanced sensitivity, performance, spectra, and isotope ratios.



2007

## MassHunter software

From instrument settings to data analysis and reporting, MassHunter software made GC/MS analysis both powerful and routine for all.



2009

### 7000A triple quadrupole GC/MS

The first GC/MS system from Agilent harnessed the selectivity and associated sensitivity gains of true GC/MS/MS capability.



2012

### 7200 GC/Q-TOF

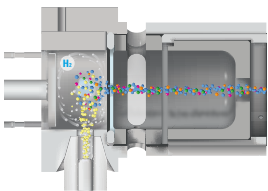
The ideal tool to solve complex problems, the 7200 GC/Q-TOF introduced high-resolution accurate mass to the Agilent GC/MS portfolio.



2015

### 5977B GC/MSD and high-efficiency ion source

Delivered unparalleled analytical sensitivity with extreme operational efficiencies for ultra trace-level applications.



2017

### JetClean self-cleaning ion source

Greatly reduced or eliminated the need for source cleaning, thereby enhancing productivity on the single and triple quadrupole GC/MS systems.



2019

### QuickProbe GC/MS

The Agilent QuickProbe GC/MS system was designed for forensic laboratories looking to do direct analysis in real time without sample preparation.



2022

### 7000E and 7010C

Agilent 7000E and 7010C GC/TQ expand instrument intelligence to enable new acquisition modes and more self-aware diagnostics. The 7000E is also compatible with the Agilent Hydrolnert source.



2012

### Removable ion source

The removable ion source (RIS) allowed ventless exchange of EI and CI source technologies on the Agilent 7200 GC/Q-TOF.



2013

### 5977A GC/MSD

The 5977A introduced the Extractor EI Ion Source for enhanced sensitivity and thermal profile improvement. It also featured direct communication between the 7890B GC and the MSD.



2016

### 7010B triple quadrupole GC/MS

The Agilent 7010B represented the evolution of proven performance, featuring compatibility with the high efficiency and JetClean sources, plus the introduction of dMRM Acquisition.



2017

### 7250 GC/Q-TOF

Featuring simultaneous high resolution and high dynamic range, the 7250 enhanced and expanded upon the high-resolution accurate mass workflows of its predecessor, the 7200 GC/Q-TOF.



2022

### 5977C

5977C offers improved analytical performance and technologies that maximize instrument uptime. The new Hydrolnert source improves performance with H<sub>2</sub> as a carrier gas.



2024

### 7010D

Novel HES 2.0 ion source technology maximizes uptime while delivering industry-leading limits of detection.

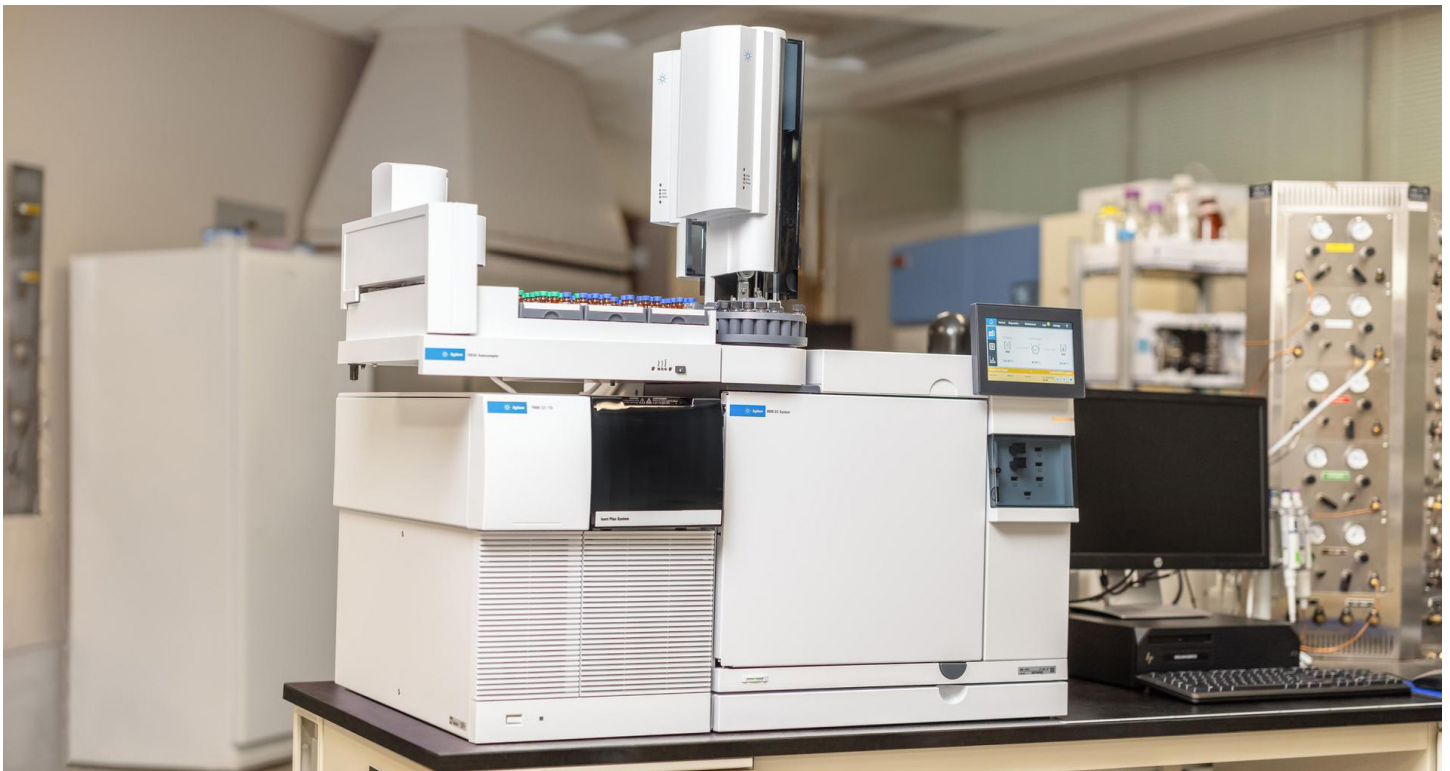


The Agilent 7000E GC/TQ

## Designed to Meet Your Business Goals

Turnaround times are critical to your lab's reputation. Yet, every day brings new productivity challenges—including instrument downtime, sample reruns, and data reviews. Meet the Agilent 7000E triple quadrupole GC/MS (GC/TQ) system. The 7000E GC/TQ delivers reliable, consistent performance every day, offering exceptional sensitivity and dynamic range to support a broad spectrum of targeted and untargeted workflows. It is powered by new technologies that drive maximum lab productivity, so you can focus on moving your lab forward.





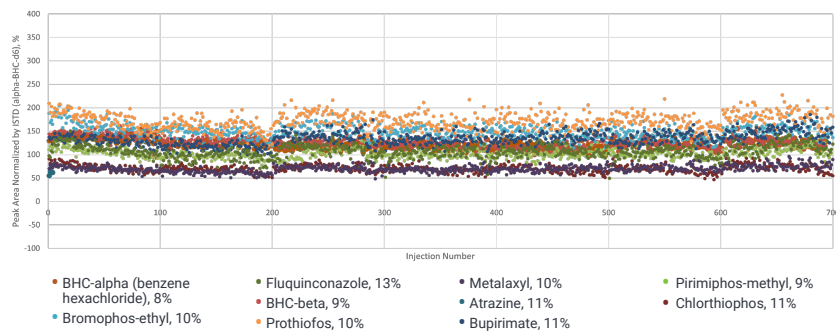
## Mass spec performance that keeps you competitive



### 7000E: Robustness and reproducibility

The Inert Plus Extractor EI source enables high analytical sensitivity for active compounds that are most likely to interact with noninert surfaces. Designed for routine labs across various industry applications for optimum operational efficiency.

Peak area normalized by the ISTD over 700 injections



Peak area response for pesticides spiked into a spinach extract prepared by QuEChERS extraction followed with Captiva EMR-HCF cleanup at 20 ppb was shown to be stable over 700 injections when analyzed with the 7000E GC/TQ. The run time of the analysis was 10 minutes. The only performed maintenance included GC liner and septum replacement every 100 injections. 7000E GC/TQ demonstrated excellent response stability and reproducibility over time.



## Intelligence that powers ultimate productivity

The new Agilent 7000E triple quadrupole GC/MS instruments incorporate intelligent technology that reduces instrument downtime and improves run times for maximum productivity in analytical labs.

### End-to-end intelligent diagnostics

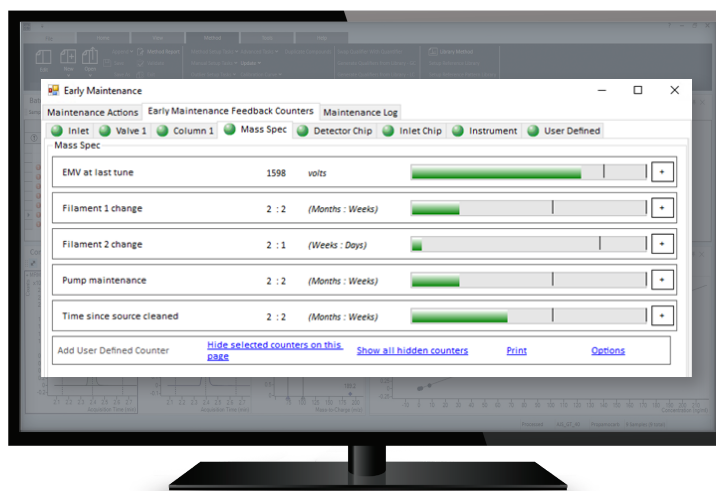
Before each tune, the GC/TQ performs a 360° system readiness check to ensure your instrument is ready when you are. In addition to the detailed system screening and system evaluation processes, self-aware GC features provide convenient diagnostic and maintenance tools including self-guided maintenance procedures with step-by-step instructions for common tasks that can be viewed from mobile devices anywhere.

### Peak performance, no guesswork

Tweaking and fine-tuning your GC/TQ to optimize performance is challenging and time-consuming. The innovative, fully automated, rapid SWARM autotune algorithm in the 7000E GC/TQ takes the guesswork out of achieving peak instrument performance.

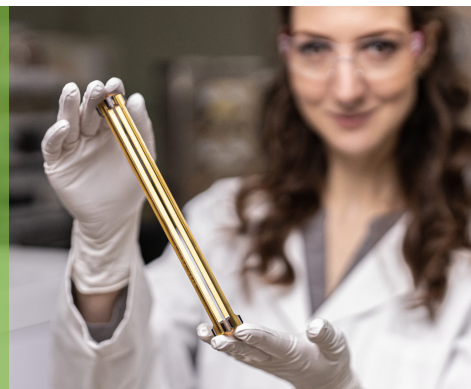
### Maximize uptime, anticipate downtime

Unexpected instrument issues and the resulting downtime is extremely disruptive to lab operations, especially if you don't know the source of the problem. The 7000E GC/TQ monitors its own vitals, giving you a real-time view of the system's overall health with Early Maintenance Feedback.

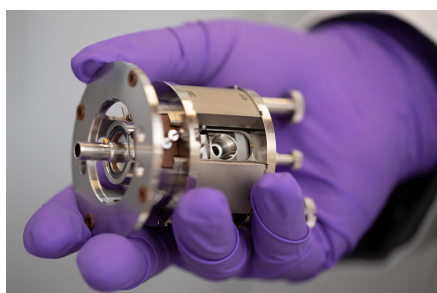


# Innovations That Drive Profitability

Throughput. Uptime. Efficiency. Operating costs.



No matter what business you're in, these are fundamental factors that impact profitability. You face constant pressure to analyze more and more samples, even as resources shrink and analytical challenges grow. In your lab, every task has the potential to increase or decrease your profit. Every instrument has to contribute. Every sample counts.



## Agilent JetClean self-cleaning ion source

During routine analysis, matrix deposits inevitably build up. In the past, you would have to remove the ion source, scrub the lens, then put it all back together. The Agilent JetClean self-cleaning ion source maximizes instrument uptime and sample throughput by greatly reducing or even eliminating the need for manual ion source cleaning, resulting in an additional one to two days per month to perform analyses. JetClean is available as an option on Agilent single quadrupole and triple quadrupole GC/MS systems.

[Learn more](#) about the JetClean self-cleaning ion source



## Hyperbolic gold-coated quartz quadrupole

The quartz monolith guarantees perfect alignment for hyperbolic surfaces throughout the life of the mass spectrometer. Gold surfaces stay clean and are maintenance free at high temperatures—up to 200° C.



## Capillary Flow Technology

Many GC and GC/MS analyses are performed on complex samples that contain high-boiling compounds. Agilent Capillary Flow Technology lets you backflush the column once all peaks of interest have eluted, thus forcing out any remaining components. The benefits include reduced cycle times, less column maintenance, better data, and enhanced productivity.

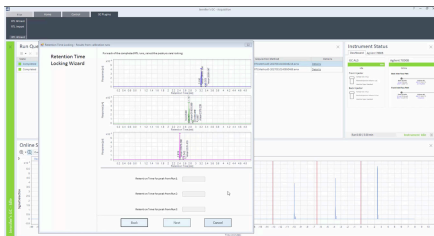
[Learn more](#) about Agilent Capillary Flow Technology



## Agilent IDP-10 dry scroll pump

The Agilent IDP-10 dry scroll pump is an oil-free, compact, quiet, isolated vacuum pump with remote speed control. It uses an inverter-driven motor, providing uniform vacuum performance at all global frequencies and input voltages. IDP pumps use a single-sided scroll design that offers a 15-minute maintenance procedure with simple tools. Compatible with 7000 series and 7010 series GC/TQ systems, instruments that use hydrogen as a carrier gas, and JetClean.

[Learn more](#) about the Agilent IDP-10 dry scroll pump



## Retention Time Locking (RTL)

RTL provides an easy and flexible tool that can be used to reduce the time and complexity often associated with updating expected retention times after routine chromatographic maintenance. It also allows different GC systems in the same lab or across a laboratory network to have the same retention times when running the same GC method. This allows easy data comparison and can simplify quality control checks.

# HydroInert source: Maximizing efficiencies with H<sub>2</sub> carrier gas

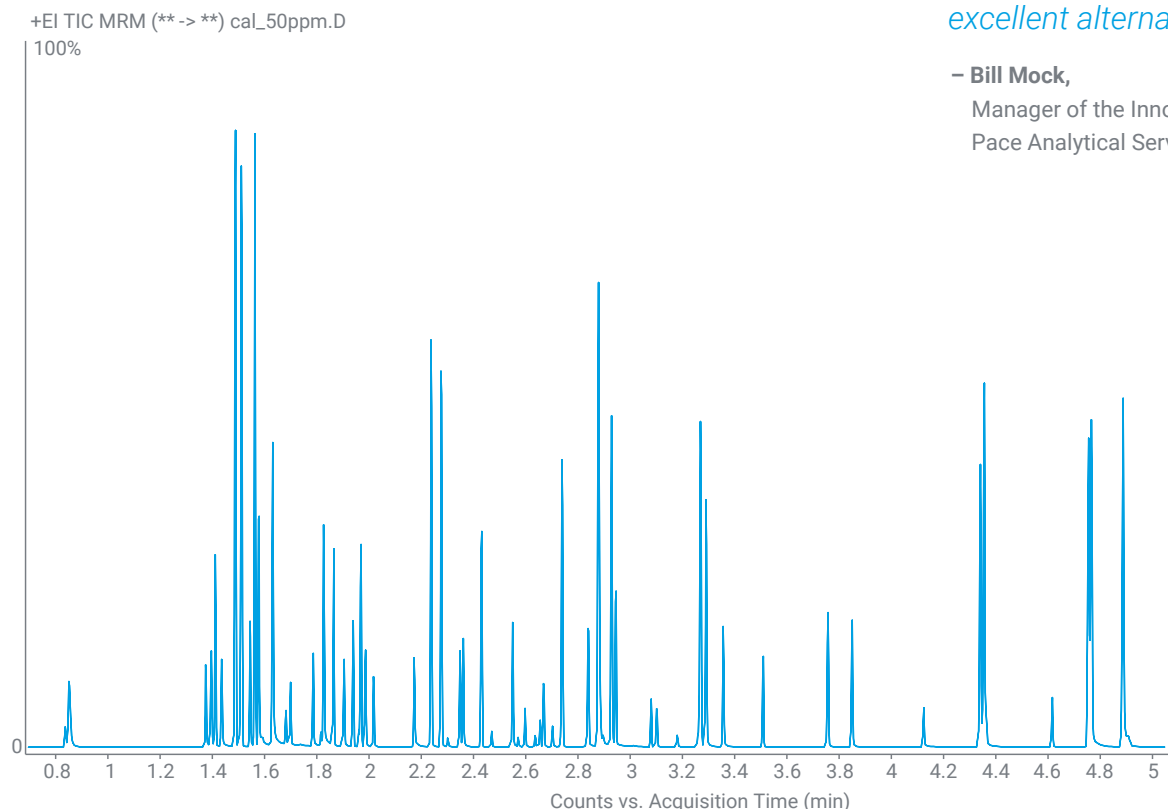
## Overcome the challenges of using hydrogen as a carrier gas

Helium being a finite resource with an inefficient production, makes it expensive. Hydrogen is a low cost, renewable gas that is the best alternative to helium. The new HydroInert source minimizes loss in sensitivity and spectral anomalies associated with H<sub>2</sub> gas. These are some of the unique advantages of HydroInert:

- Spectral fidelity, even for compounds highly susceptible to hydrogenation
- Superior high-boiler peak shape, especially for PAHs
- Unchanged source parts and familiar assembly procedure



## EPA Method 8270 SVOCs analysis: 50 ppm standard in MRM mode with H<sub>2</sub> carrier



U.S. EPA 8270 SVOCs full mixture was analyzed with the 7000E equipped with HydroInert source running H<sub>2</sub> as a carrier gas. The analysis benefitted from improved peak shapes compared to helium as a carrier gas as well as a faster run time at 5.8 minutes.

*"Helium shortages are becoming commonplace, so this will be an excellent alternative to He."*

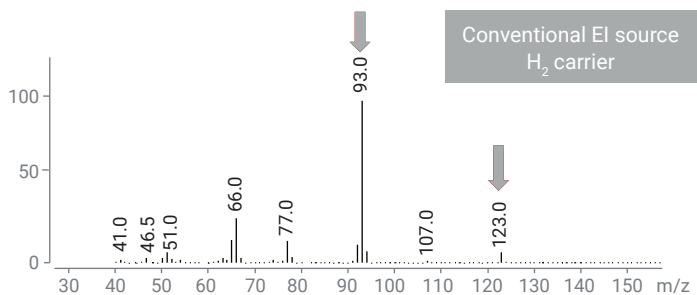
- **Bill Mock**,  
Manager of the Innovation Laboratory  
Pace Analytical Services

## Safety considerations when converting to hydrogen carrier gas

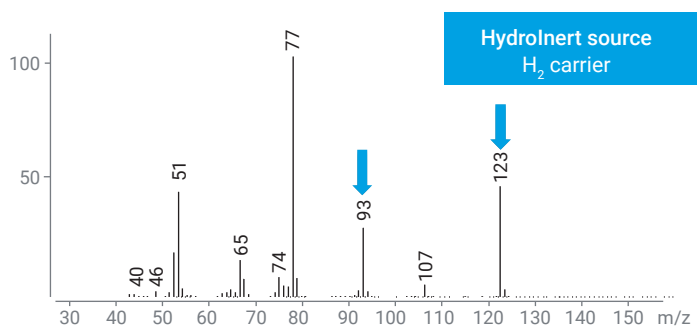
Safety is the most important consideration when handling hydrogen due to the concern of flammability. For detailed safety information, see the Agilent Hydrogen Safety Manual for GC/MS (part number G7003-90053). The entire safety manual must be read and understood before connecting and using hydrogen as the carrier gas.

## Analysis of nitrobenzene—a compound vulnerable to in-source reactions and hydrogenation

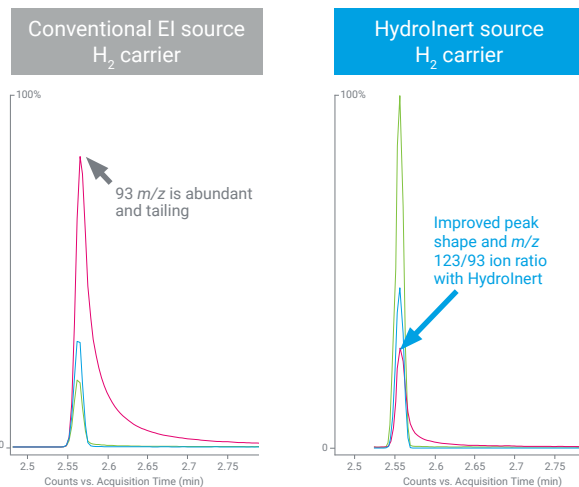
Spectral fidelity, resolution, and peak shape is greatly improved with Hydrolnert while running on H<sub>2</sub> carrier gas



The Extractor source (3 mm extraction lens) showed hydrogenation to aniline with the abundant  $m/z$  93 ion.

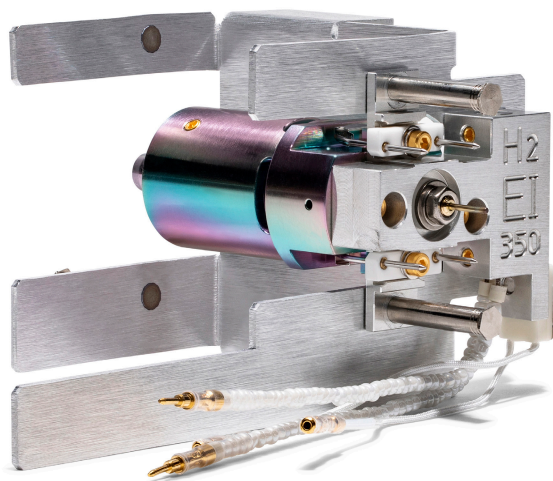


Improved spectral fidelity, showing excellent ratio of  $m/z$  123



Typical performance showing hydrogenation to aniline with the abundant  $m/z$  93 ion.

The Hydrolnert source showed an improved mass spectrum that correlates to nitrobenzene.



The new Agilent Hydrolnert source

### Resources to help conserve or convert your GC/MS carrier gas

Use these links to help with your GC/MS conversion to hydrogen

#### [Handle the Hassles of the Helium Shortage](#)

Explore ways to manage price fluctuations and potential delivery interruptions with helium carrier gas for GC analyses.

#### [Helium Conservation Cost Savings Calculator](#)

See how much you could save by using Agilent Gas Saver with and without nitrogen standby.

#### [Helium Conservation Module](#)

Prevent disruptions by managing your helium usage.

#### [Agilent EI GC/MS Instrument Helium to Hydrogen Carrier Gas Conversion User Guide](#)

Get detailed instructions on converting your Agilent EI GC/MS system from helium to hydrogen carrier gas.



## MassHunter Acquisition 13.0: Modern, intelligent, and familiar

Introducing MassHunter Acquisition 13.0 for all GC/MS applications—including single quadrupole, triple quadrupole, and Q-TOF.

- New streamlined retention time locking interface improves usability.
- Easy sample prep technology simplifies the automation of extraction, addition, heating, and mixing to perform derivatizations, internal standard additions, serial dilutions, and similar tasks.
- What's more, MassHunter software unifies operators of all levels to drive confident results.
- It also supports multiple applications with easy-to-use method templates.



## Make data management smarter, simpler, and safer

Traditional data management systems are error prone and burdensome, because each instrument's data must be managed individually and manually. Partner with Agilent to accelerate your transition to a networked model, and bring these advantages to your lab:

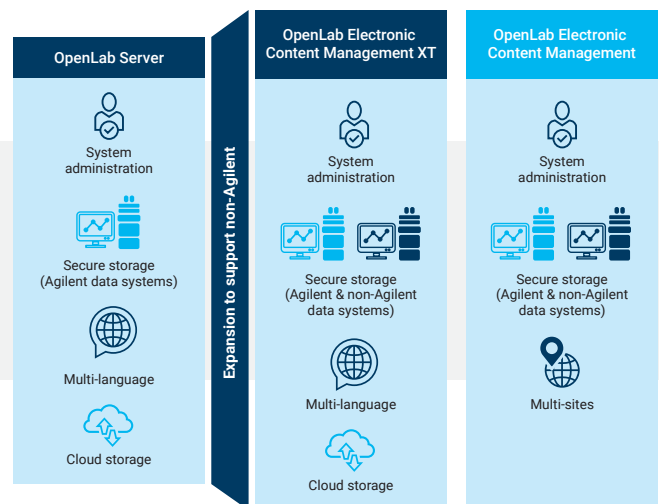
- **Connectivity:** Instrument integration makes it easy to collect, organize, and secure data.
- **Efficiency:** Collaborate and find the right information to answer questions quickly, and save both time and money when updating instruments and software.
- **Security:** Employ and enforce data integrity strategies while minimizing the risk of data breach or loss.
- **Compliance:** Ensure data security, control access, and comply with national and EU electronic record regulations.

The Agilent approach to data management provides a single point of access to data generated from instruments, data systems, and lab software. What's more, all of this integration happens behind the scenes. Your lab staff do not have to change the way they work or how they interact with their software.

With access to data from a single source, analysts can collaborate without compromising data integrity, and create consistent processes for workflows such as method rollouts. Information quality, information sharing, and efficiency can improve dramatically as well.

### Flexible solutions for all data management

Overcome the limitations of ad hoc data management with a range of integrated, centralized options that can support instrument data in all formats.



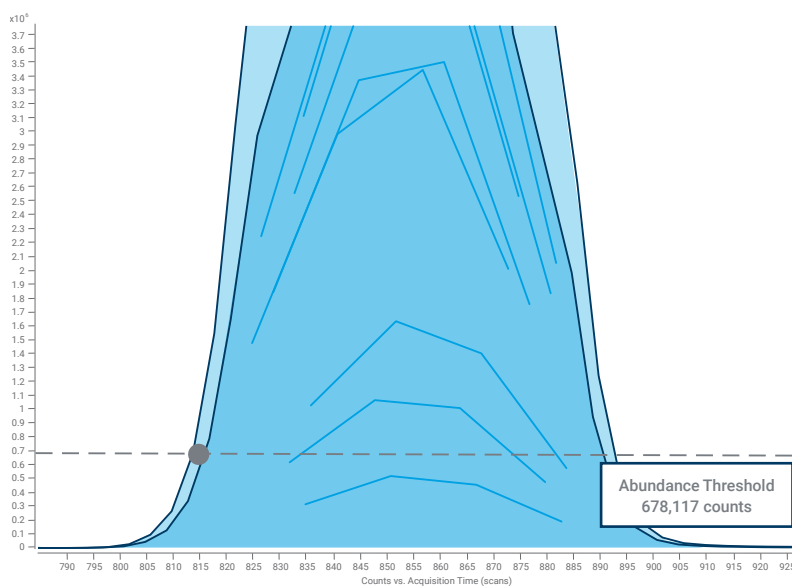
## New acquisition modes on Agilent GC/TQ

### Triggered MRM (tMRM)

tMRM is a data-dependent scan function that increases throughput, provides both quantitative and qualitative information, and minimizes the cost of analysis.

#### Target Analyte

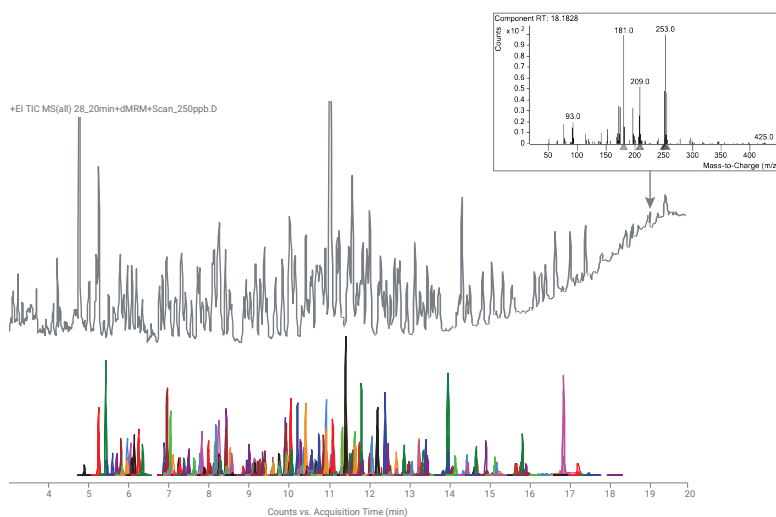
Precursor	Product	CE	Primary	Trigger	Threshold
287.9	272.7	15			
287.9	92.9	20	X		
285.9	270.9	15			
285.9	93	25	X	X	678,117
285.9	63	45			
196.9	168.9	15			
125	79	5			
124.9	47	15			
108.9	78.9	5			
78.9	47	10			



A tMRM experiment with two primary transitions for each analyte. Secondary MRM transitions are triggered when the primary MRM signals cross a user-defined threshold.

### Simultaneous Dynamic MRM and scan (dMRM/scan)

MassHunter Acquisition software allows the user to perform dynamic MRM with a simultaneous scan. In addition to the dwell time savings brought on by dMRM, the simultaneous scan grants the ability to perform retrospective analysis without the need for reinjection. More details on the dynamic MRM acquisition mode can be found in the technical overview, [New Dynamic MRM Mode Improves Data Quality and Triple Quad Quantification in Complex Analyses \(5990-3595EN\)](#).



dMRM/scan acquisition data from a QuEChERS spinach extract demonstrates comparable sensitivity and great linearity. Additionally, the acquired full scan data enables reliable retrospective analysis even in complex matrices.

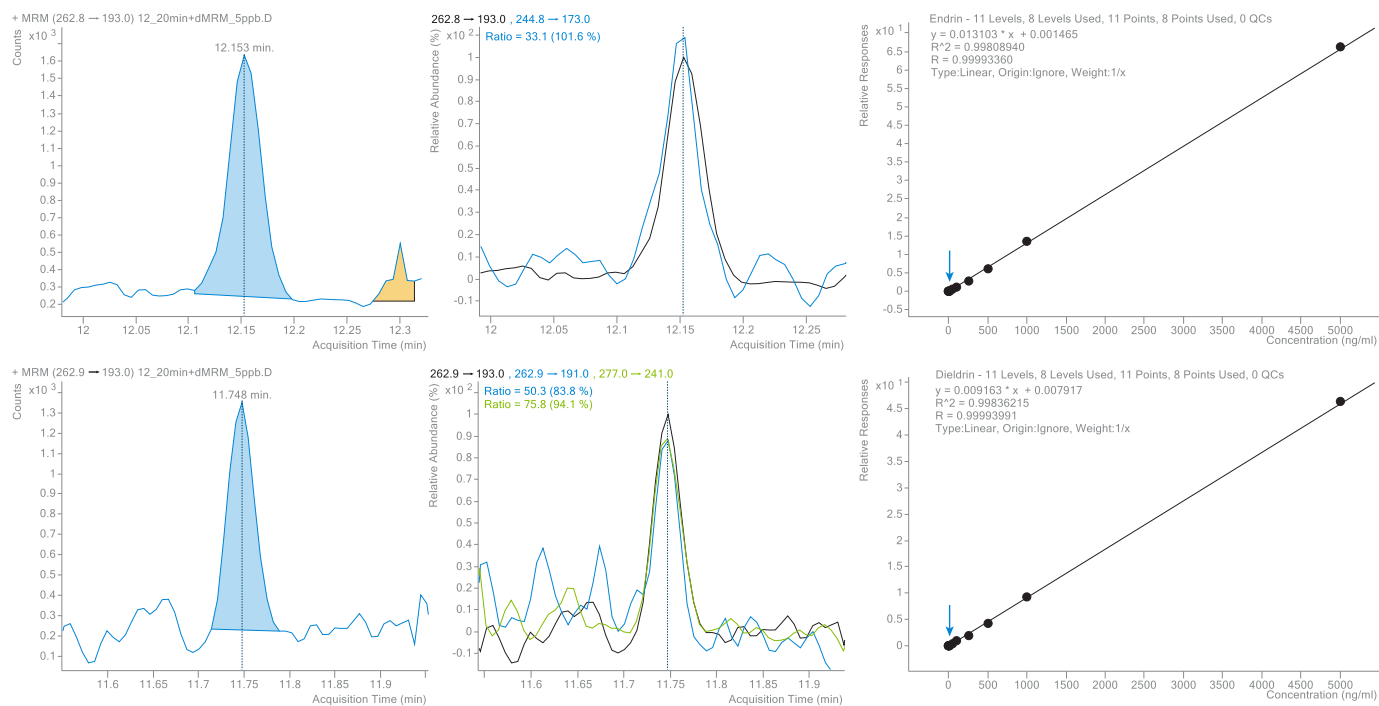


## Solutions that elevate productivity

The Agilent Pesticides and Environmental Pollutants Database has over 1,100 compounds with multiple transitions per compound and over 7,500 matrix-optimized MRM transitions to help you build acquisition methods that reduce matrix interferences and get the most out of your triple quadrupole GC/MS.

## Set up your lab faster with ready-to-run eMethods.

Agilent eMethods accelerate your startup time by condensing large amounts of technical information and optimized analytical methods into a ready-to-run, downloadable, digital information package.

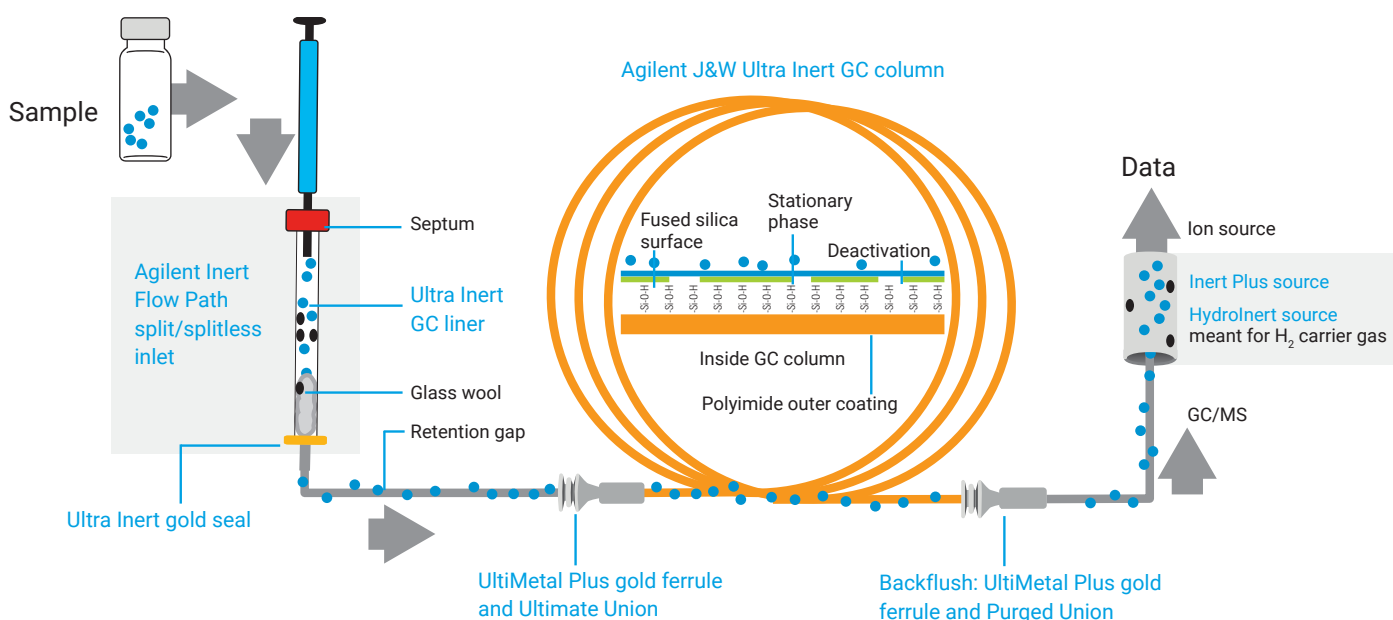


Endrin and dieldrin are organochlorine pesticides commonly monitored in food safety and environmental assays. These compounds can present a challenge for GC/MS analysis at low concentrations. High sensitivity coupled with extended dynamic range with the 7000E is demonstrated with chromatograms of endrin (top) and dieldrin (bottom) at 5 ppb in QUEChERS cayenne pepper extract. For these challenging analytes, the 7000E demonstrated excellent linearity ( $R^2 > 0.995$ ) from 5 ppb to 5,000 ppb.

**Learn more** about what Agilent MassHunter software can do for your lab.

# Ensuring an inert flow path has never been more critical

As samples become smaller, increasingly active, and more complex, you cannot afford losses caused by flow path activity. Having to repeat or verify suspect analyses wastes valuable resources, hinders productivity, and hurts your bottom line. With trace amounts of active analytes, you might not even get a second chance, because there may be no more sample left to analyze.



## Don't miss a thing in your GC/MS analysis

From analyzing active environmental samples to screening for drugs of abuse, Agilent Inert Flow Path solutions help ensure higher analytical sensitivity, accuracy, linearity, and reproducibility. [Learn more](#)



## Reliable and Unparalleled GC Separation

Building the world's most trusted gas chromatography system is an ongoing process. With every step we increase speed, improve functionality, and incorporate new analytical capabilities, while never losing sight of the most important objective—business results.



### Meet your analytical needs today—and tomorrow

The [Agilent 8890 GC system](#) offers outstanding flexibility. As the next evolution of the trusted Agilent GCs, the 8890 drives productivity, delivers high-quality data, and provides unparalleled confidence to all users.

- Configure with any GC/MS system and combine with a wide range of GC detector options
- [Helium conservation module](#) provides cost-saving carrier gas options
- Analyzers provide preconfigured and tested systems for a wide range of specific applications



### Unlock your lab's revenue potential

The [Agilent Intuvo 9000 GC](#) stands in a class by itself. Its innovative compact design offers fast, direct heating, ferrule-free fittings, Guard Chip technology, and no-trim columns to provide faster sample runs as well as fewer and faster column changes. Intuvo continues the Agilent legacy of reliability and gold-standard performance in a compact and powerful complete package.

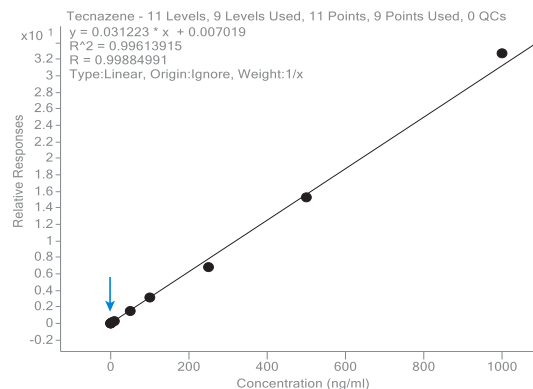
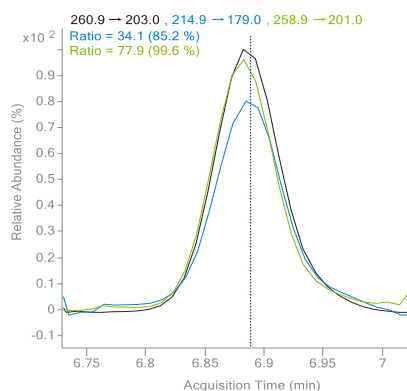
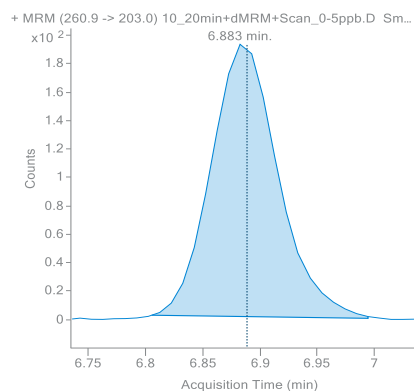
# Reimagine What's Possible for Your Applications



## Detect potentially harmful pesticides at trace levels

Concern about trace-level food and environmental pollutants is driving the demand for more rapid and reliable methods for the identification and quantitation of pesticides and pesticide residues. Recently developed techniques include:

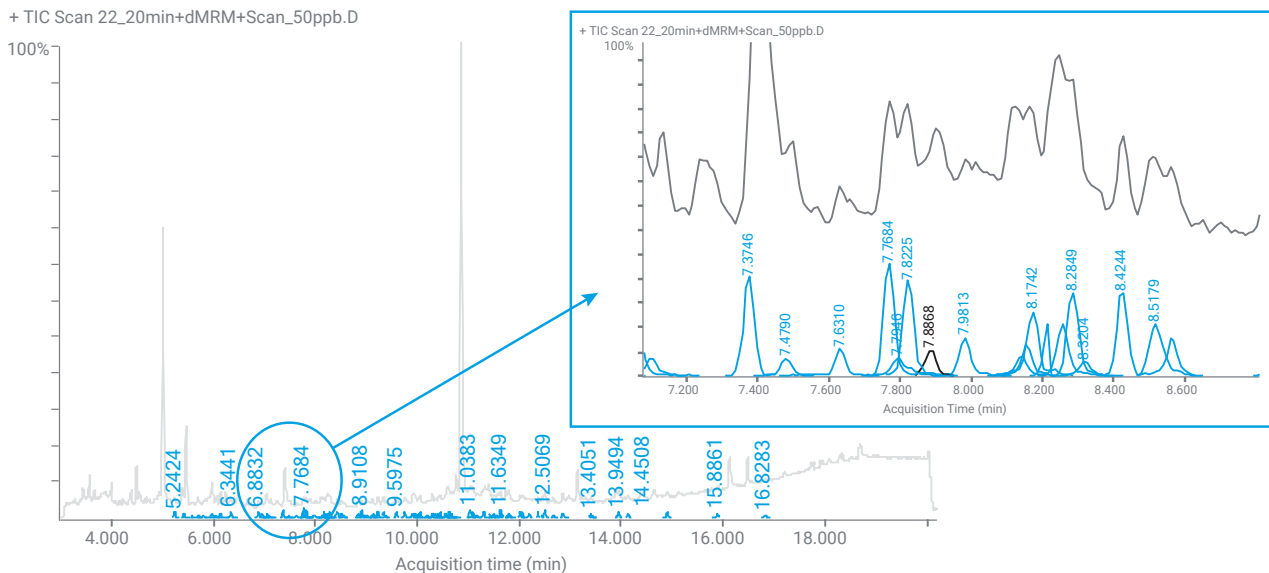
- **Midcolumn backflushing**—reverses the carrier gas flow after the last analyte has exited the column, eliminating sample carryover.
- **Pulsed splitless injection**—maximizes the transfer of analytes from the inlet onto the GC column, minimizing the residence time and breakdown in the inlet.
- **Retention time locking**—allows a new column or instrument to have retention times that precisely match the MRM database, greatly simplifying method maintenance.
- **The Agilent MassHunter Pesticide and Environmental Pollutant MRM Database (P&EP 4)**—provides up to eight MRM transitions per analyte, allowing users to build acquisition methods without having to develop MRMs. The database includes retention times for constant flow 20 and 40-minute GC oven programs.



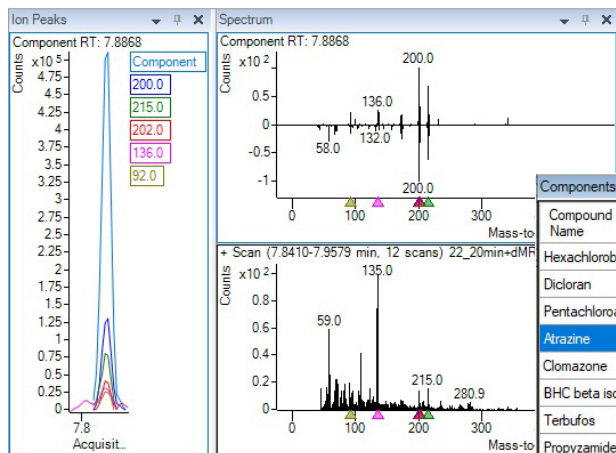
High sensitivity was maintained with the 7000E when operating in the Simultaneous dMRM/scan mode as demonstrated with the chromatogram for tecnazene at LOQ level of 0.5 ppb in QuEChERS spinach extract. In this dMRM/Scan acquisition mode, excellent linearity was maintained for the 7000E over 0.5 – 1,000 ppb

## Sensitive analysis of targets and unknowns

Using simultaneous dMRM/scan acquisition mode, a comparable sensitivity and linearity is maintained. This mode also enables users to identify compounds that they might not be targeting with dMRM and MassHunter Unknowns Analysis. Additionally, it helps to ensure that the source is not overloaded and allows for retrospective analysis.



Identification of Atrazine at 50 ppb in spinach QuEChERS extract using simultaneous dMRM/scan mode with MassHunter Unknowns Analysis based on spectral deconvolution.



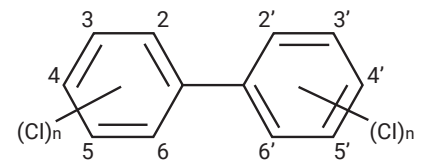
The deconvoluted spectrum of the component found at the RT of fludioxonil compared to the inverted library reference spectrum. The deconvolution process has removed the interfering ions, producing a high-quality library match score.

Compound Name	Component RT	Library RT	Delta RT	Match Factor	Best Hit	Formula	CAS#	Component Area
Hexachlorobenzene	7.7684	7.7840	0.0156	84.7	<input checked="" type="checkbox"/>	C6Cl6	<a href="#">118-74-1</a>	5177510.3
Dicloran	7.7946	7.8010	0.0064	56.8	<input checked="" type="checkbox"/>	C6H4Cl2N2O2	<a href="#">99-30-9</a>	1328222.9
Pentachloroanisole	7.8225	7.8410	0.0185	63.2	<input checked="" type="checkbox"/>	C7H3Cl5O	<a href="#">1825-21-4</a>	4416232.7
<b>Atrazine</b>	<b>7.8868</b>	<b>7.8870</b>	<b>0.0002</b>	<b>56.3</b>	<input checked="" type="checkbox"/>	<b>C8H14ClN5</b>	<a href="#">1912-24-9</a>	<b>1189030.6</b>
Clomazone	7.9813	7.9850	0.0037	87.2	<input checked="" type="checkbox"/>	C12H14ClNO2	<a href="#">81777-89-1</a>	1891239.2
BHC beta isomer	8.1412	8.0300	-0.1112	64.7	<input checked="" type="checkbox"/>	C6H6Cl6	<a href="#">319-85-7</a>	1016865.3
Terbufos	8.1558	8.1640	0.0082	56.4	<input checked="" type="checkbox"/>	C9H21O2PS3	<a href="#">13071-79-9</a>	1545178.9
Propylamide	8.1742	8.1730	-0.0012	62.1	<input checked="" type="checkbox"/>	C12H11Cl2NO	<a href="#">23950-58-5</a>	3581712.3
Pentachloronitroben...	8.2134	8.2260	0.0126	62.7	<input checked="" type="checkbox"/>	C6Cl5NO2	<a href="#">82-68-8</a>	1180843.6
Pentachlorobenzonit...	8.2564	8.2620	0.0056	72.3	<input checked="" type="checkbox"/>	C7Cl5N	<a href="#">20925-85-3</a>	2699208.9



## Perform complex PCB analysis at high dynamic range

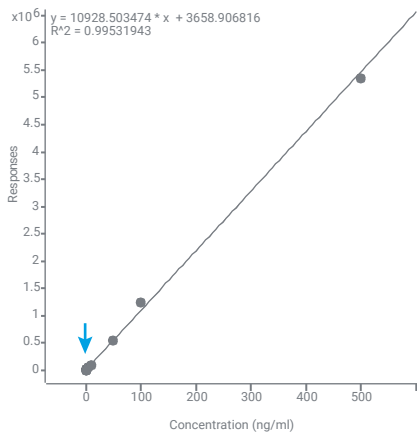
For years, PCBs were widely used as dielectrics and in electrical apparatus coolant fluid. When they were identified as environmentally toxic, however, PCBs became classified as persistent organic pollutants. As a result of broad use and environmental persistence, PCBs still exist in the environment, especially in water sources and soils. GC/TQ analyses are useful for identifying quantities of PCB compounds in especially complex matrices.



The general chemical structure of polychlorinated biphenyl (PCB).

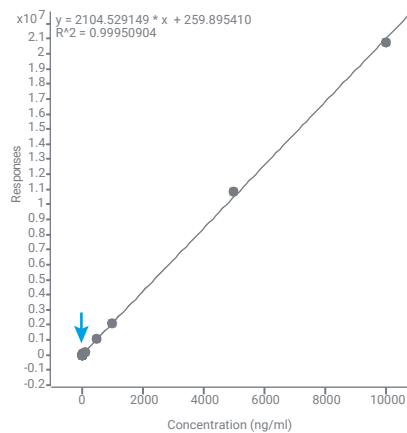
**7000E (3mm extraction lens): 0.01-500 ppb**

2,2',4,4'-Tetrachlorobiphenyl (BZ #47) - 13 Levels, 10 Levels Used, 13 Points, 10



**7000E (9mm extraction lens): 0.5-10,000 ppb**

2,2',4,4'-Tetrachlorobiphenyl (BZ #47) - 15 Levels, 10 Levels Used, 16 Points,

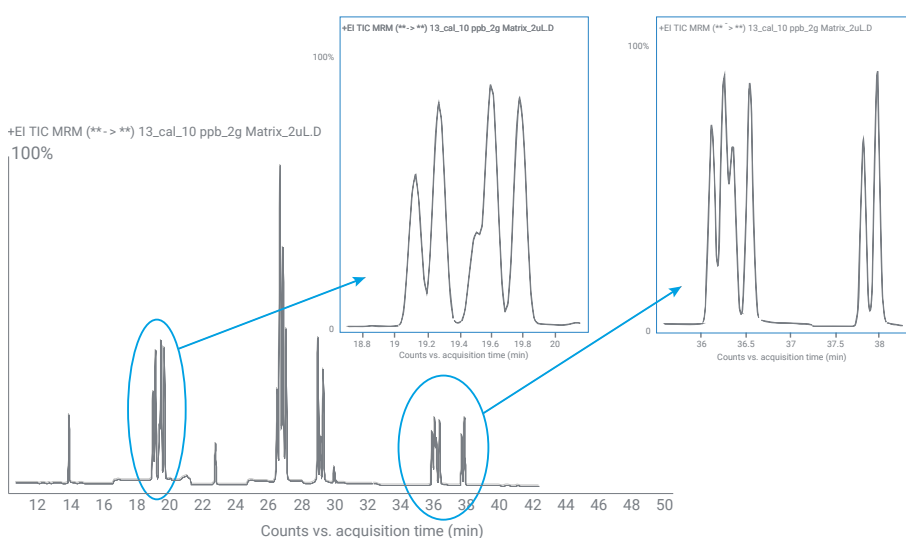


The linear calibration curves with the 7000E (3mm & 9mm extraction lenses) for 2,2',4,4'-tetrachlorobiphenyl feature great linearity ( $R^2 > 0.995$ ) over a wide dynamic range providing the flexibility to meet the needs of your PCB analysis based on the target concentration range.

## Expand your use of hydrogen for analyzing trace contaminants

Given their ubiquitous nature, PAHs are monitored as trace contaminants in many food products, ranging from seafood to edible oils to smoked meats. They are also monitored in air, water, and soil.

Most commonly, helium is used as a carrier gas for GC/TQ. However, hydrogen can be substituted in this application, so the user can reap the benefits of faster analysis times and improved resolution. The Agilent 7000E GC/TQ paired with the Agilent HydroInert source offers excellent sensitivity, resolution, and throughput compared to helium. It also drastically reduces ion source interactions without the increasingly high costs of helium.



The 7000E with the new HydroInert source enables the use of hydrogen as a carrier gas for this PAH analysis. In this EU PAH analysis, 10 ppb of PAH analytes of interest to the EU were spiked in an infant formula matrix extract and injected into the 7000E with HydroInert. All isomers of interest were chromatographically resolved and demonstrated excellent peak shape.

Name	Transition	RT	CF Limit Low	CF Limit High	CF R2
7H-Benzo[c]fluorene	216.0 -> 215.0	14.089	0.01	100	0.9990
Benzo[a]anthracene	228.0 -> 228.0	19.333	0.01	100	0.9991
Cyclopenta[cd]pyrene	226.0 -> 224.0	19.520	0.1	100	0.9990
Chrysene	228.0 -> 226.0	19.812	0.01	100	0.9974
5-Methylchrysene	242.0 -> 239.0	22.909	0.05	100	0.9974
Benzo[b]fluoranthene	252.0 -> 252.0	26.834	0.01	100	0.9987
Benzo[k]fluoranthene	252.0 -> 252.0	27.016	0.01	100	0.9985
Benzo[j]fluoranthene	252.0 -> 252.0	27.199	0.01	100	0.9984
Benzo[e]pyrene	252.0 -> 252.0	29.140	0.01	100	0.9984
Benzo[a]pyrene	252.0 -> 252.0	29.464	0.01	100	0.9989
Indeno[1,2,3-cd]pyrene	276.0 -> 274.0	36.222	0.05	100	0.9987
Dibenz[a,h]anthracene	278.0 -> 275.7	36.524	0.01	100	0.9977
Benzo[ghi]perylene	276.0 -> 276.0	38.023	0.01	100	0.9988
1,2,9,10-Dibenzopyrene	302.0 -> 299.9	44.387	0.01	100	0.9992
1,2:4,5-Dibenzopyrene	302.0 -> 302.0	45.970	0.05	100	0.9988
Dibenzo[a,i]pyrene	302.0 -> 302.0	46.854	0.05	100	0.9994
▶ 3,4:8,9-Dibenzopyrene	302.0 -> 299.9	47.367	0.05	100	0.9992

For all EU PAH analytes, the 7000E and HydroInert source demonstrates excellent linearity over a wide dynamic range.



## Partnering for sustainability and business success

Sustainable thinking is transforming the way researchers, scientists, and manufacturers approach their products, processes, and supply chains. However, it can be a challenge for labs to lower their environmental impact while continuing to optimize workflows and lower costs.

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[Learn more about My Green Lab.](#)

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