



Agilent 7000C Triple Quadrupole GC/MS

# RESOLVE YOUR SEARCH FOR ACCURACY

The Measure of Confidence



**Agilent Technologies**

THE AGILENT 7000C TRIPLE QUADRUPOLE GC/MS

## RESOLVE YOUR SEARCH FOR PRECISION, RELIABILITY, AND THE LOWEST DETECTION LIMITS

The advanced Agilent 7000C Triple Quadrupole GC/MS provides everything you need to take your lab to a higher plane of productivity and confidence – including low detection limits, robustness, and software tools that simplify method optimization and lower your operating costs. It also integrates seamlessly with the Agilent 7890B GC.

What's more, every 7000C system conforms to strict quality standards, so you can be sure you're getting the most reliable data... both today and in the future.

Agilent's 7000C Triple Quadrupole GC/MS is the latest addition to the industry's broadest, most feature-rich portfolio of GC and GC/MS systems and software.

It has:

- Best MS sensitivity
- Efficient and flexible MRM optimization
- Eco-friendly resource management



Agilent 5977E GC/MSD



Agilent 5975T LTM  
GC/MSD



Agilent 5977A GC/MSD



Agilent 7200 Q-TOF GC/MS



Agilent 240 Ion Trap GC/MS

## The best GC, MS, and software features ensure successful day-to-day measurements

### MS/MS Selectivity

The 7000C Triple Quadrupole GC/MS system was designed to achieve confident trace detection in complex matrices. MS/MS continues to replace SIM based applications by reaching lower detection levels and reliable identification while reducing the need for re-analysis in challenging matrices.

### Stability and robustness: the keys to your productivity

From inert inlet to inert source, Agilent's commitment to quality throughout the design and manufacturing process means you can count on every GC/MS system we build.

### Integrated intelligence

Early maintenance feedback alerts you to problems *before* they happen, reducing costly downtime. Application calculators and optimization tools are also built into the system to simplify method setup and system operation.



#### Eco-friendly GC/MS

Integrated **Sleep/Wake modes** reduce gas and energy usage. You can also switch to lower-cost gases while in standby mode. **Page 5**



#### Smart technology aligns GC and MS operation

The Agilent 7890B GC – with its efficient protocols and fully synchronized MS operation – is a dynamic partner for the 7000C Triple Quadrupole GC/MS. **Page 4**



#### The most sensitive, accurate Triple Quadrupole GC/MS

Including the newly improved Extractor EI Source – plus the only quadrupole operating at up to 200 °C – the Agilent 7000C Triple Quadrupole GC/MS consistently delivers stable, superior performance. **Page 6**



#### Software that produces the best results in the shortest time

From instrument settings to data analysis and reporting, MassHunter puts *you* in control – and makes MS/MS analysis routine when combined with our Pesticides and Environmental Pollutants MRM Database. **Page 8**



#### Proven results

The exceptional performance of the 7000C is validated by data from common food safety, environmental, and toxicology methods. **Page 12**



#### Complete inert pathway

Maintain sample integrity – while reducing analyte loss and decomposition – from carrier gas introduction through detector. **Page 17**



#### Easy method development

Agilent Analyzers let you start generating quality data immediately after installation. **Page 19**

To resolve your search for accuracy, visit [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

# RESOLVE YOUR SEARCH FOR RELIABILITY WITH THE NEXT EVOLUTIONARY STEP IN GC

## Now, we have achieved a new level of productivity and GC/MS integration with the Agilent 7890B GC.

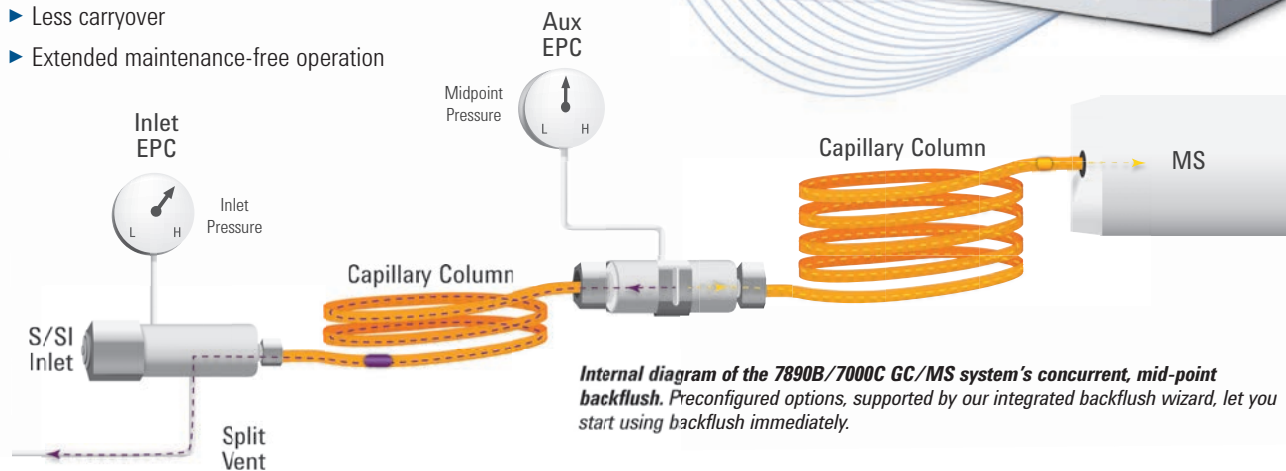
Building the world's most trusted GC system is an ongoing process. With every step, we improve performance, increase speed, and develop new analytical capabilities – all while never losing sight of *results*.

Agilent's flagship 7890B GC system has everything you need to generate data with confidence, while processing more samples in less time at the lowest possible cost. Its precise pneumatics and oven temperature control, combined with our versatile Multimode Inlet (MMI) and inert Split/Splitless inlets, deliver results you expect from the market-leading GC.

## Backflush, supported by Capillary Flow Technologies, enhances performance, productivity, and reliability

Advantages include:

- ▶ Shorter analysis times
- ▶ Longer column life
- ▶ Less carryover
- ▶ Extended maintenance-free operation



### Count on Agilent for regulatory compliance

With over 100,000 GC installations and qualifications – combined with decades of quality testing experience – Agilent is your trusted source for system qualification and proof of performance.

# INTEGRATED INTELLIGENCE BOOSTS PRODUCTIVITY

## Quickly find and order the Agilent parts you need

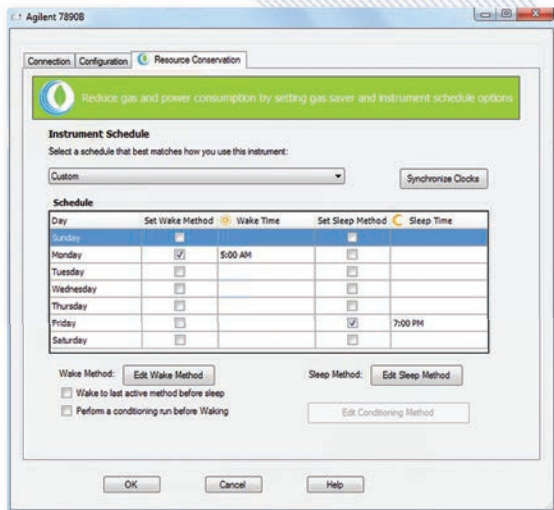
Our new **integrated Parts Finder** helps you locate key parts for your 7000C Triple Quadrupole GC/MS. You can even build shopping lists that let you order directly from the Agilent website.



## Conserve valuable resources

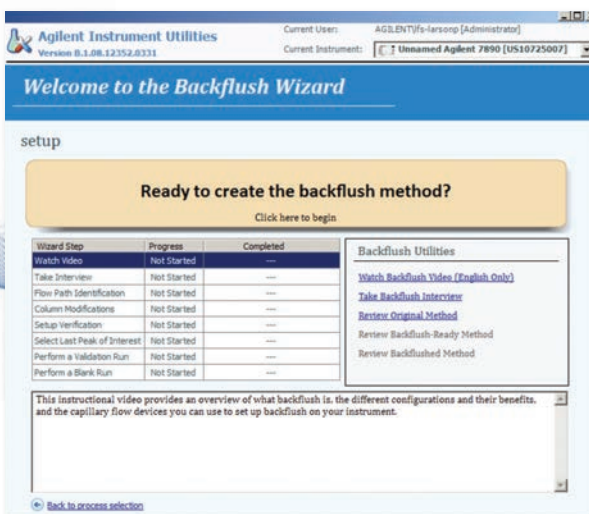
**Sleep mode** saves energy and gas – and protects your investment by cooling heated zones.

**Wake mode** prepares your system for use *before* the start of your next workday.



## Simplify method setup and system operation

Integrated **GC calculators** automatically update optimal parameters, simplifying method development and implementation.



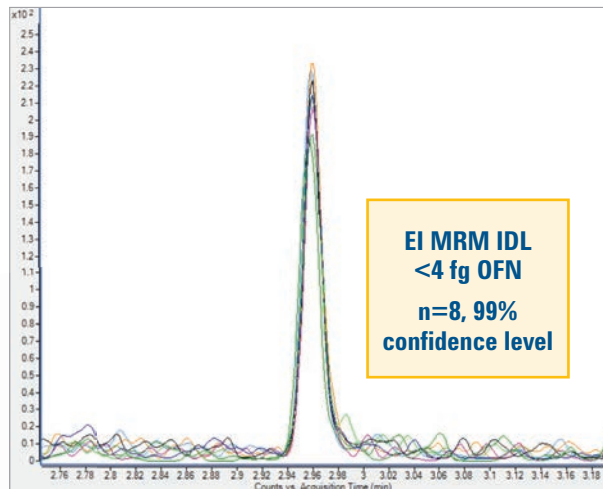
To learn more about the Agilent 7000C Triple Quadrupole GC/MS, visit [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

# RELIABLE QUANTITATIVE AND QUALITATIVE RESULTS – EVEN AT LOW FEMTOGRAM LEVELS

## The key to accuracy: Instrument Detection Limits (IDL)

You can be confident in your results from *day one*, because we demonstrate the Automatic Liquid Sampler (ALS), GC, and MS performance of every Agilent 7000C Triple Quadrupole GC/MS at installation in your laboratory. This ensures industry-leading precision, accuracy, and detection limits that satisfy your most demanding analytical requirements.

For more information about IDL, see publication 5990-9436EN.



**Detection limits of 4 fg octafluoronaphthalene (OFN) or less – proven at installation.** These results were statistically derived using MS/MS transition of  $m/z$  272→222.

## Positive MS/MS identification based on exact area counts

Reliable compound identification (like accurate quantitation) depends on the accuracy and precision of the qualifier ions' area count. The exceptional ion ratio stability of the 7000C Triple Quadrupole GC/MS allows you to positively identify compounds, *even at trace concentrations*, while eliminating false negatives.

Concentration	0.5 ppb	1 ppb	5 ppb	10 pb	25 ppb	50 pb	100 ppb
<b>Ion Ratios at Multiple Injections</b>	68	64	64	63	63	63	64
	59	61	65	63	63	64	64
	55	63	63	63	63	63	64
	53	59	64	64	63	64	63
	57	64	62	64	64	63	64
<b>% RSD Ion Ratios</b>	<b>10%</b>	<b>3.5%</b>	<b>1.8%</b>	<b>0.9%</b>	<b>0.7%</b>	<b>0.9%</b>	<b>0.7%</b>

**% RSDs of dichoblenil ion ratios in fruit extract.** Dichoblenil – as part of a 100+ compound pesticide screen – was injected 5 times at different concentrations, using transitions 173→100 and 171→136. We achieved less than 1% RSD at 10 ppb concentration and above. Even at 0.5 ppb level the RSD was 10% – well below the commonly accepted 20% limit.

## The gold standard of performance

### Second-generation extractor EI or PCI/NCI ion source with improved thermal profile

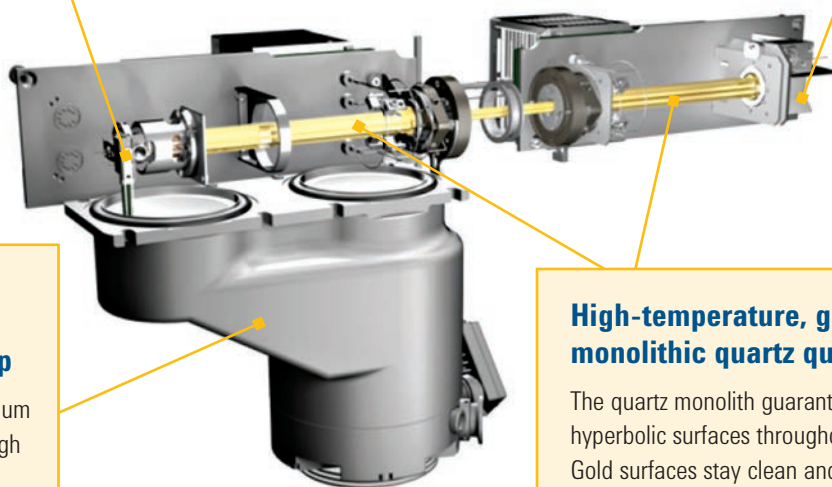
Maximizes the number of ions that are successfully transferred out of the ion source body and into the quad analyzer.

### Triple-Axis Detector

Drastically reduces neutral noise, ensuring a cleaner signal and lower detection limits.

### High-capacity split flow turbo molecular pump

Ensures optimal vacuum conditions even at high flow rates.

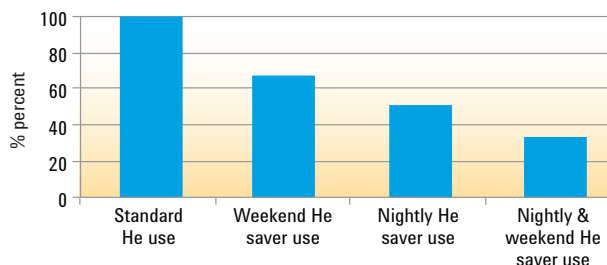


### High-temperature, gold-plated monolithic quartz quadrupole

The quartz monolith guarantees perfect alignment for hyperbolic surfaces throughout the life of the MS. Gold surfaces stay clean and maintenance free in high temperatures – up to 200 °C.

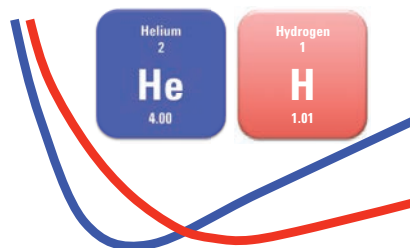
## Two ways to minimize the high costs and productivity pitfalls of the helium shortage

### Automatically conserve helium during standby



Reduce He usage by as much as 65% while maintaining an inert helium environment in the MS.

### Switch to hydrogen carrier gas



The 7890B/7000C is hydrogen ready. And Agilent can help you make a successful transition.

To learn more about the Agilent 7000C Triple Quadrupole GC/MS, visit [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

# BUILD LARGE, OPTIMIZED MULTIPLE REACTION MONITORING (MRM) METHODS QUICKLY AND CONFIDENTLY

**The Pesticides and Environmental Pollutants MRM Database** delivers the information you need for MS/MS analysis, so you can build your method in minutes, without the tedious task of identifying the compound specific transitions and CID voltages.

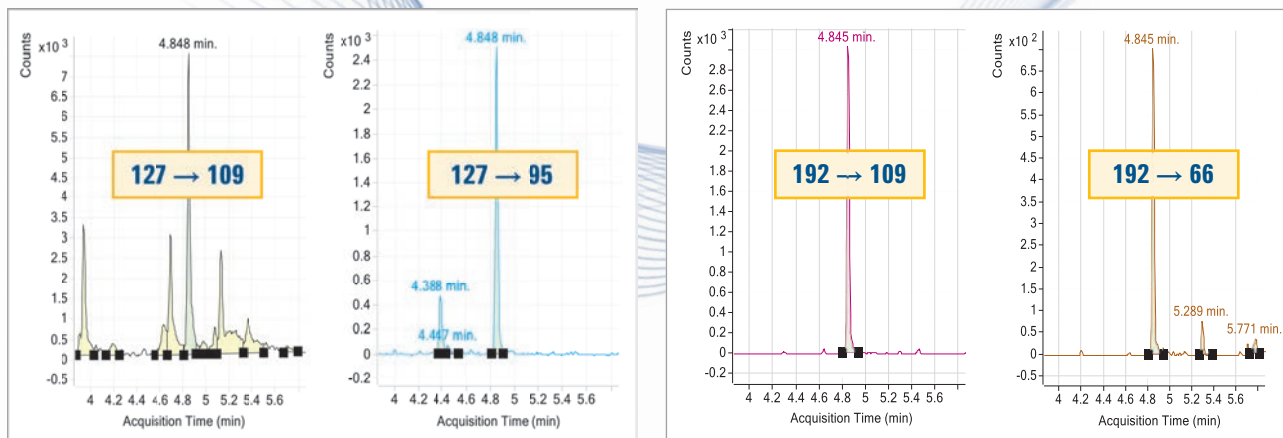
This productivity-boosting tool includes optimized MS/MS parameters for over 1000 analytes with more than 8,000 transitions, allowing you to choose the most suitable transitions in different matrices. [5990-9453EN *The GC/MS/MS Analyzer and the Pesticides and Environmental Pollutants MRM Database*]

## The most extensive, comprehensive database

Common Name	CAS #	Molecular Formula	Average MW	Mono-isotopic MW	RI-CF screening	Method RT	Precursor Ion	Product Ion	CE (V)	Relative Intensity (Database)	Relative Intensity (compound)	Chinese Name
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	192.0	108.9	25	50	100%	速灭磷
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	164.0	92.9	15	50	100%	速灭磷
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	109.0	79.0	5	100	200%	速灭磷
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	127.0	79.0	20	80	160%	速灭磷
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	192.0	65.9	20	50	100%	速灭磷
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	127.0	109.0	10	700	1400%	速灭磷
Mevinphos	7786-34-7	C7H13O6P	224.2	224.044975	1437.242708	9.07	127.0	95.0	15	270	540%	速灭磷

The Pesticides and Environmental Pollutants MRM Database offers multiple transitions for each analyte (For example, 7 transitions for Mevinphos, above.)

## Choosing your optimal MS/MS parameters is easy



**Analysis of Mevinphos in tangerine extract using 4 different transitions.** The Pesticides and Environmental Pollutants MRM Database includes a wide variety of transitions – allowing you to lower detection limits by choosing the most selective transition for a given matrix.



# MASSHUNTER SOFTWARE: SEAMLESS AUTOMATION WITH DETAILS YOU CUSTOMIZE

MassHunter MRM optimization software automatically generates the most favorable sequence of transitions to impart optimal detection conditions. If called upon, it even allows for automatic adjustment of the dwell time to compensate for specific response differences or detection level requirements.

Time segments							
Time	Scan type	Electron energy	Delta EMV	Calculated EMV	Gain	Data stored	
11	9.46	MRM		1594.0	10	<input checked="" type="checkbox"/>	
12	9.73	MRM		1594.0	10	<input checked="" type="checkbox"/>	
13	10.17	MRM		1594.0	10	<input checked="" type="checkbox"/>	
14	10.52	MRM		1594.0	10	<input checked="" type="checkbox"/>	
15	10.76	MRM		1594.0	10	<input checked="" type="checkbox"/>	
16							

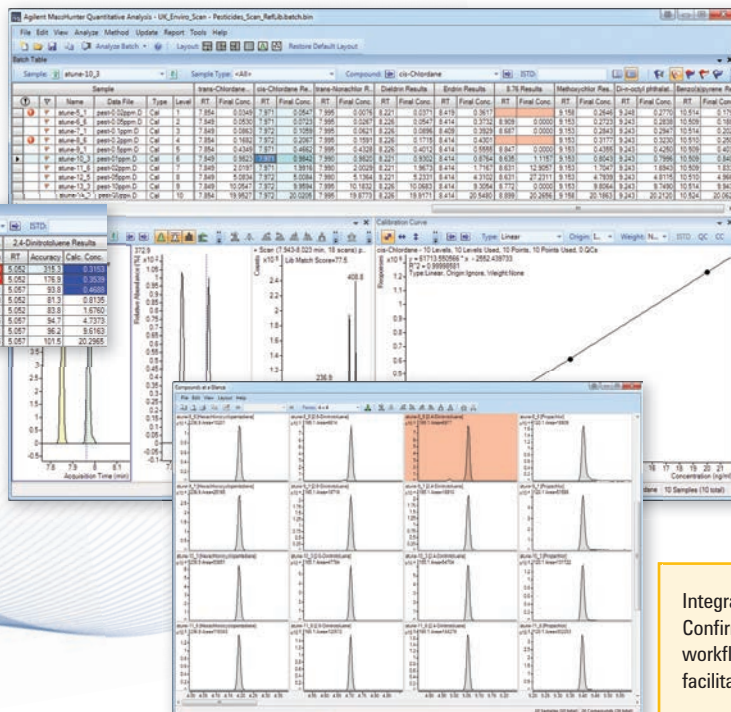
Scan segments								
Compound name	ISTD?	Precursor ion	MS1 resolution	Product ion	MS2 resolution	Dwell	Collision energy	
Chlordane, trans-	<input type="checkbox"/>	372.8	Wide	265.8	Wide	27.2	25	
Chlordane, trans-	<input type="checkbox"/>	372.8	Wide	263.8	Wide	27.2	25	
Fipronil	<input type="checkbox"/>	366.9	Wide	254.9	Wide	27.2	15	
Fipronil	<input type="checkbox"/>	366.9	Wide	212.9	Wide	27.2	20	
Captan	<input type="checkbox"/>	151	Wide	80	Wide	81.7	3	
Captan	<input type="checkbox"/>	149	Wide	79	Wide	81.7	10	
Allethrin	<input type="checkbox"/>	123	Wide	81	Wide	27.2	10	
Allethrin	<input type="checkbox"/>	123	Wide	43	Wide	27.2	15	

To enhance the response of captan, a difficult analyte, longer dwell times were assigned automatically based on the operator's input.

MassHunter Data Analysis and reporting provides a unified platform for all Agilent MS products – and puts the latest MS tools to work in your laboratory.

Batch Table											
Sample	Data File	Type	Level	RT	Accuracy	Calc. Conc.	Ratio	RT	Accuracy	Calc. Conc.	Ratio
1	pest010ppm.D	Cal	3	4.198	144.0	0.1440	18.8	4.764	269.3	0.2693	3.582
2	pest010ppm.D	Cal	4	4.198	176.3	0.1763	18.4	4.764	158.8	0.1588	3.582
3	pest010ppm.D	Cal	5	4.198	32.3	0.0323	18.4	4.764	34.3	0.0343	3.582
4	pest010ppm.D	Cal	6	4.198	86.4	0.0864	18.9	4.764	83.6	0.0836	21.0
5	pest010ppm.D	Cal	7	4.198	36.0	0.0360	18.9	4.764	37.6	0.0376	18.1
6	pest010ppm.D	Cal	8	4.198	89.3	0.0893	18.6	4.764	96.4	0.0964	18.1
7	pest010ppm.D	Cal	9	4.198	100.8	0.1008	18.1	4.764	97.5	0.0975	18.1
8	pest010ppm.D	Cal	10	4.198	88.9	0.0889	18.1	4.764	101.1	0.1011	17.6

Easy visualization of quantitative results: customize how you use and view quality outliers, integration data, calibration curves, and results.



Improve the quality and speed of your data review with automated metrics and Unified Data Analysis for Agilent MS systems.

Integrated Drug Confirmation Analysis workflow (DrugQuant) facilitates compliance.

To learn more about the Agilent 7000C Triple Quadrupole GC/MS, visit [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

# WORK SMARTER WITH INTEGRATED GC, MS, AND SOFTWARE TECHNOLOGIES

## Integrated GC↔MS communication and safety controls

- ▶ Direct communication between GC and MS helps detect faults – protecting *both* instruments
- ▶ Designed for hydrogen carrier gas, so you can switch from helium to less expensive carrier gases for faster analysis and greater chromatographic resolution

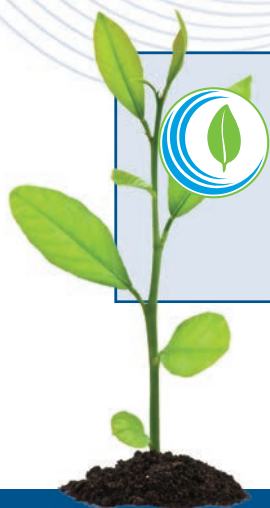
## Automated Self-Cleaning Ion Source\*

- ▶ Reduces contamination build-up and keeps the source operational
- ▶ Maintains performance, saves time, and increases productivity

*\*Available on select PAH applications.*

## Eco-friendly operation

- ▶ Sleep/Wake modes can easily be set to suit your schedule
- ▶ Conserves energy and carrier gas



## Early Maintenance Feedback

### Long-term reliability and performance

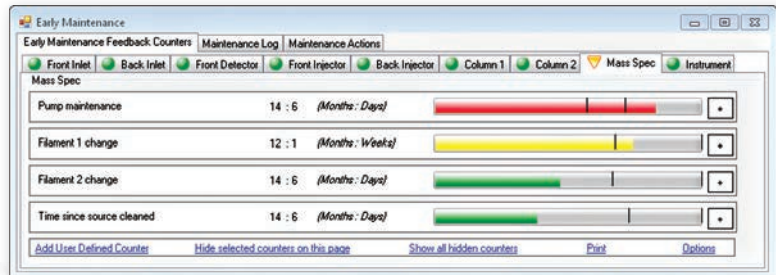
- ▶ Modular analyzer design simplifies routine maintenance
- ▶ Early Maintenance Feedback (EMF) alerts you to minor problems before they lead to a major breakdown

### The industry's best software platform

- ▶ MassHunter lets you optimize your workflow to generate answers quickly and confidently
- ▶ Built-in GC calculators and translators reduce method development time
- ▶ New Parts Finder tool quickly identifies parts and part numbers for easy re-ordering

### Higher productivity and lower cost of operation

- ▶ New Quick Vent lets you spend less time on maintenance, and more time running samples
- ▶ Backflush Wizard makes backflush optimization fast and easy



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## PESTICIDES IN FOOD

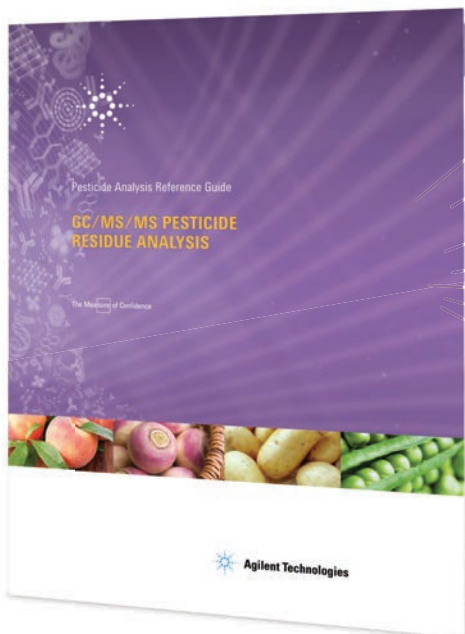
# PROTECT THE QUALITY AND SAFETY OF OUR FOOD SUPPLY

Worldwide food demands have increased the use of pesticides, therefore the global food supply chain needs to be carefully monitored to ensure pesticide residues do not pose a risk to human health – particularly to children. This puts you under pressure to lower detection limits, decrease analysis time, and support timely distribution of fruits and vegetables.

The 7000C Triple Quadrupole GC/MS, together with Agilent sample preparation supplies, enables sensitive, selective, and robust techniques for measuring pesticide residues in foods. In addition, our Pesticides and Environmental Pollutants MRM Database offers extensive resources to minimize matrix interferences and facilitate your accurate identification and quantification of targets.



From sample preparation... to GC optimization... to MS/MS transition selection... Agilent can help you optimize every step of your analysis.



**Lower Detection Limits**

**More Analytes Identified**

**Simpler Sample Preparation**

**Greater Matrix Variation**

**Reduced Analysis Time**

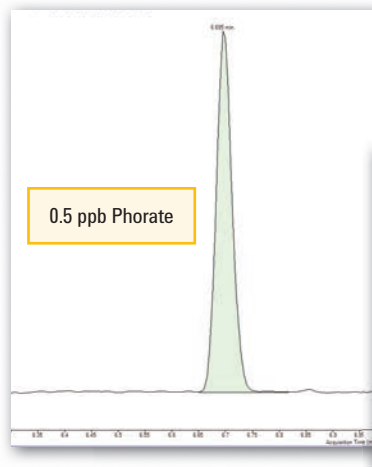
**Tighter QC Criteria**

**Higher Throughput**

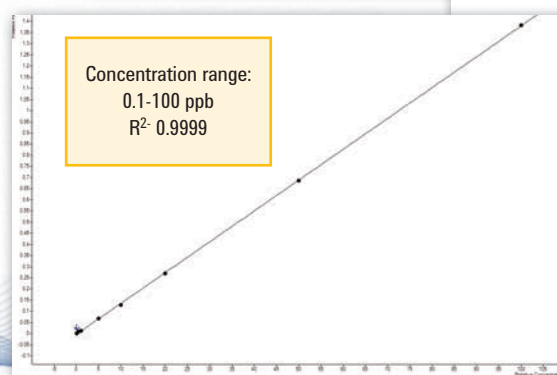
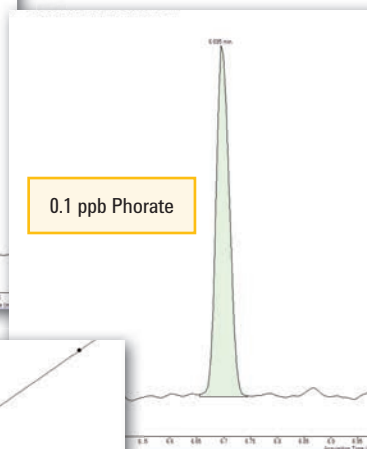
To request your copy of the Pesticides Analysis Reference Guide, contact your Agilent Representative at [agilent.com/chem/contactus](http://agilent.com/chem/contactus)

## Routine analysis, outstanding results

- Reliable analysis of a wide range of commodities and pesticides
- Low detection levels, down to sub-ppb
- Remarkable stability – even at low levels – proven by accurate area reproducibility, stable ion ratios, and accurate recoveries
- Wide calibration ranges
- Retention time locking (RTL) and column backflush
- Low maintenance: less frequent analyzer cleaning, fewer column changes, and easy replacement of inlet liners

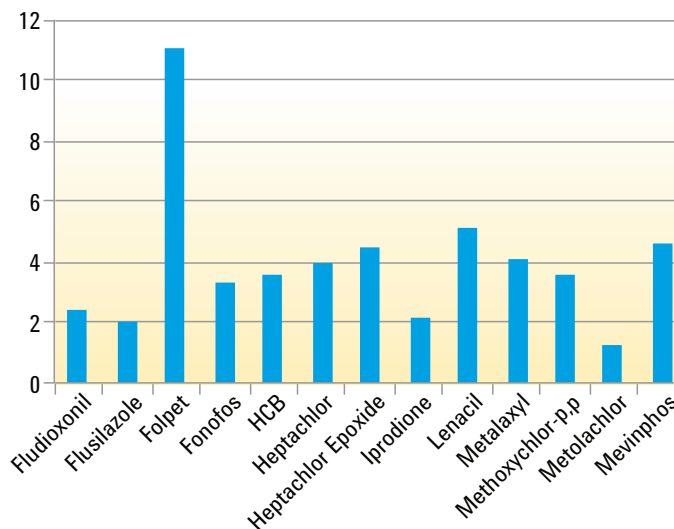


Phorate quant ion plots at 0.5 and 0.1 ppb in plum matrix as part of a 100+ analyte screen.



Calibration plot of Phorate in matrix.  $R^2$  value in the 0.1-100 ppb range was 0.9999.

### %RSD Area



Extraordinary area precision was achieved even for difficult analytes such as folpet at 1 ppb – at 1/10 of the widely accepted Maximum Residue Limits (MRL).

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## PAH ANALYSIS IN ENVIRONMENTAL SAMPLES

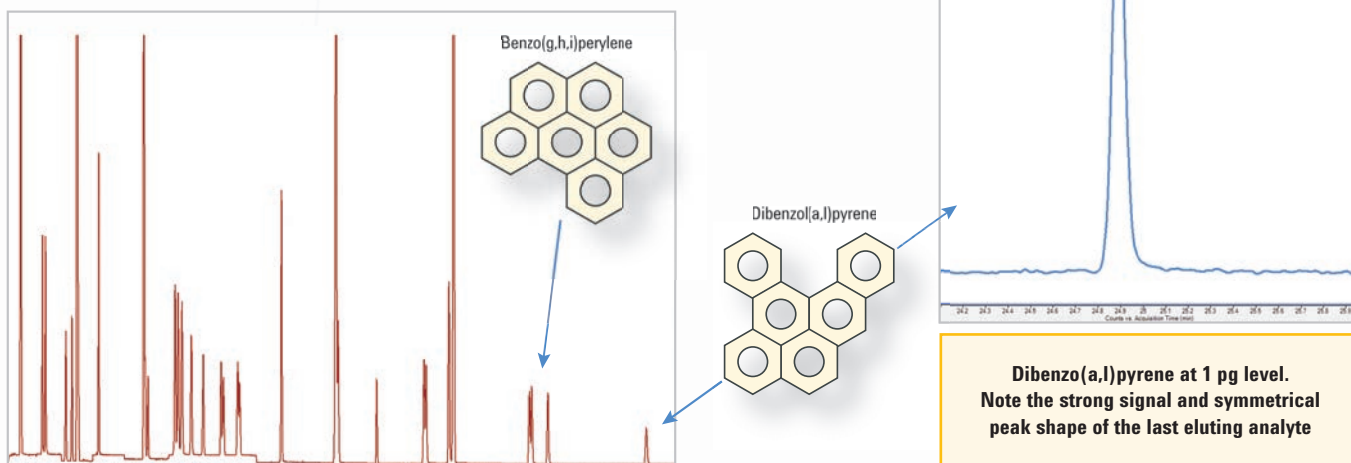
# PERFORM HIGHLY SENSITIVE, MULTIRESIDUE TARGET ANALYSIS

Concern about the bioaccumulation and genotoxicity of polycyclic aromatic hydrocarbons (PAHs) and other persistent organic contaminants is driving the demand for rapid, reliable identification of chemical residues.

To complicate matters, the list of PAHs studied has grown and those with high toxic equivalency (TEQ) values, such as benzo(a)pyrene, must be monitored at much lower levels.

With its unmatched detection limits, peak symmetry, linearity, ion ratio stability, and accuracy for both native and labeled analogs, the Agilent 7000C Triple Quadrupole GC/MS can help you meet these challenges.

And to top it all off, the ion source does *not* need cleaning.



TIC Chromatogram of 28 PAH and 5 deuterated IS using the 7000C Triple Quadrupole GC/MS with Self-Cleaning Ion Source. Analyte concentration is 50 pg.

Analyte conc. (pg/ $\mu$ L)	Dibenzo(a,l)pyrene			Perylene-d12, IS at 500 pg, all levels		
	RRF Q1	RRF Q2	Ion Ratio Q1/Q2	Area Q1	Area Q2	Ion Ratio Q1/Q2
1	6.13	0.83	1.42	221364	21054	10.5
5	6.34	0.84	1.39	229847	21903	10.5
10	6.27	0.82	1.38	227708	21561	10.6
50	6.37	0.84	1.38	226981	21573	10.5
100	6.28	0.81	1.37	225185	21388	10.5
500	6.24	0.81	1.37	231002	21865	10.6
1000	5.97	0.78	1.38	216076	20393	10.6
<b>%RSD</b>	<b>2.2%</b>	<b>2.5%</b>	<b>1.4%</b>	<b>2.3%</b>	<b>2.5%</b>	<b>0.3%</b>

Linearity of native analytes in the range of 1 pg to 1 ng, resulting in  $\leq 3\%$  RSD for the Relative Response Factors (RRF). Exceptionally stable ion ratios of 1.4% (analyte) and 0.3% (IS) were achieved, with unrivaled precision of the deuterated internal standard areas. The IS area RSD was less than 3%, while the coeluting native concentration changed by 1000 fold. The  $R^2$  value was 0.9998 in this range.

## How does the Self-Cleaning Ion Source boost your productivity?

During prolonged GC/MS use, matrix contamination and column bleed can interfere with precise trace-level measurements.

Fixing this problem typically requires you to interrupt your analysis and clean the ion source. But now, the patented **Self-Cleaning Ion Source** option on the Agilent 7000C Triple Quadrupole GC/MS greatly *reduces* or *eliminates* the need for source cleaning – simplifying maintenance and enhancing your productivity.

Other benefits include:

- No waiting for the system to cool down before accessing the ion source
- No source assembling or disassembling
- No scrubbing of the lenses (or other components)
- No retuning
- No recalibrating

Two operational modes are available: continuous cleaning and cleaning between runs, while the system is equilibrating.

Now available with the PAH analyzer.



## No more disassembling!

The Self-Cleaning Ion Source delivers “in-situ” cleaning, so you rarely need to touch the source.



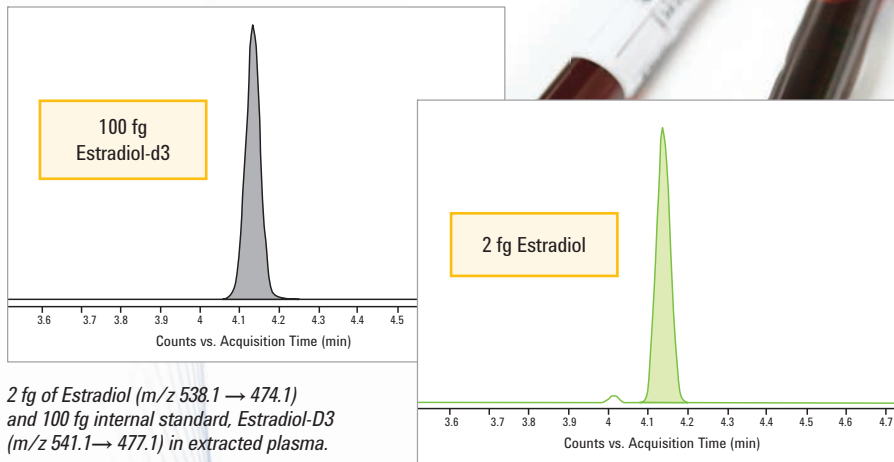
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# ESTRADIOL ANALYSIS IN ENVIRONMENTAL AND TOXICOLOGY SAMPLES

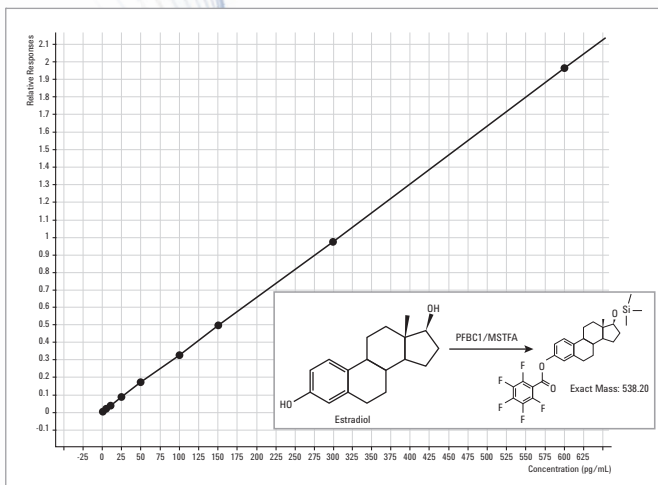
## ULTIMATE SENSITIVITY AND SELECTIVITY WITH NCI-MS/MS

When you combine the selectivity of negative chemical ionization (NCI) with the selectivity and sensitivity of the 7000C MS/MS, ultra trace levels – *lower than 1 fg* – of analytes can be measured.

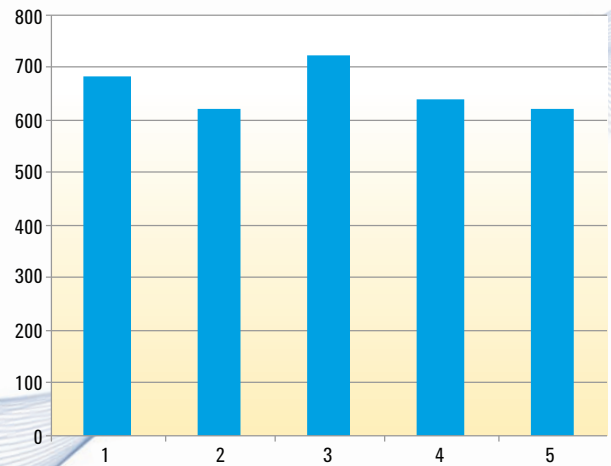
These unrivaled detection levels are accompanied by the excellent linearity and accuracy you expect from the leading GC/MS/MS system.



2 fg of Estradiol ( $m/z$  538.1  $\rightarrow$  474.1) and 100 fg internal standard, Estradiol-D3 ( $m/z$  541.1  $\rightarrow$  477.1) in extracted plasma.



Estradiol calibration from 1.0 to 600 pg/mL, resulting in  $R^2$  of 0.9999.



The area precision of Estradiol at 0.5 fg/ $\mu$ l concentration was 6.8% RSD.

### IDL's for Estradiol:

In water: 0.13 pg/mL (0.26 fg injected)  
 In serum: 0.41 pg/mL (0.82 fg injected) at 99% confidence level



# AGILENT INERT FLOW PATH SOLUTIONS ENSURING AN INERT FLOW PATH HAS NEVER BEEN MORE CRITICAL

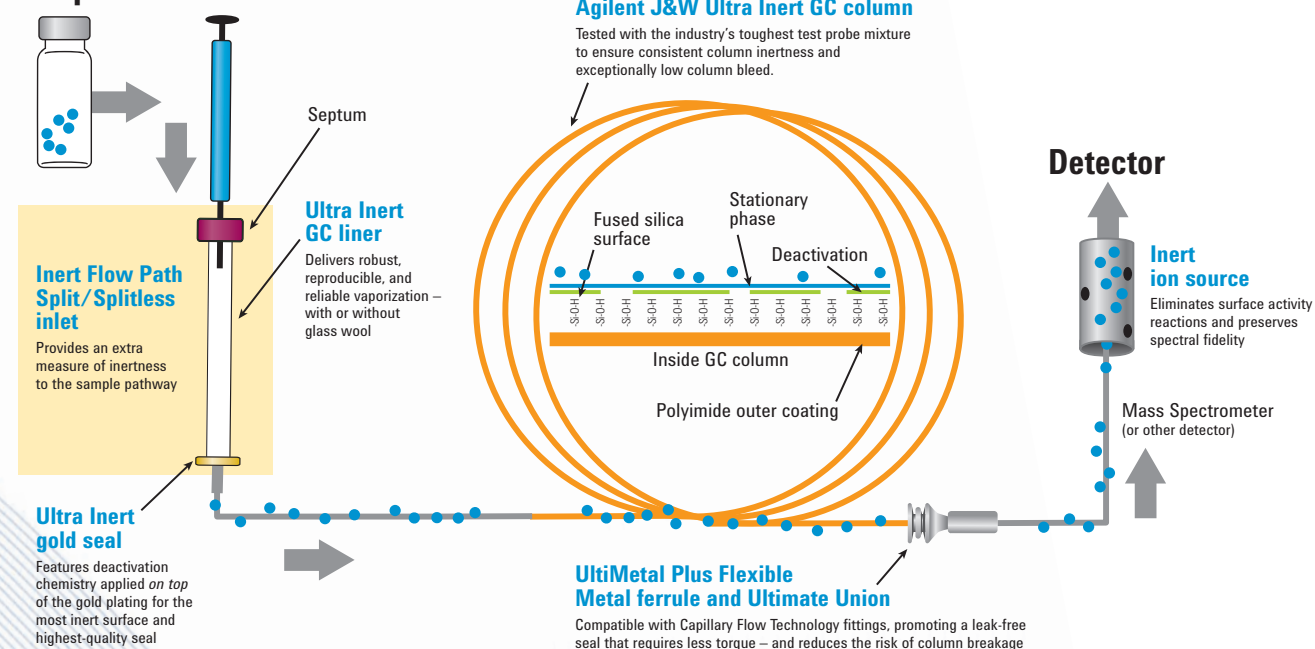


Lower detection levels, simpler sample preparation, and more chemically active sample extracts are the norm for today's trace-level analysis. That means you cannot afford losses caused by flow path activity.

For starters, having to repeat or verify suspect analyses wastes valuable resources, hinders productivity, and hurts your bottom line. And with minute amounts of sample, you might not even get a second chance, because there may be no more sample left to analyze.

## Agilent's Inert Flow Path allows your samples to safely pass from injector to detector

### Sample



### An integrated approach to inertness: The Agilent advantage

As the GC/MS industry's premier measurement company, Agilent is uniquely positioned to help ensure the inertness of every surface that touches your sample, so you can achieve the parts-per-billion – or parts-per trillion – detection levels that today's analyses demand.

For more information about creating an inert GC flow path, visit [agilent.com/chem/inert](http://agilent.com/chem/inert)

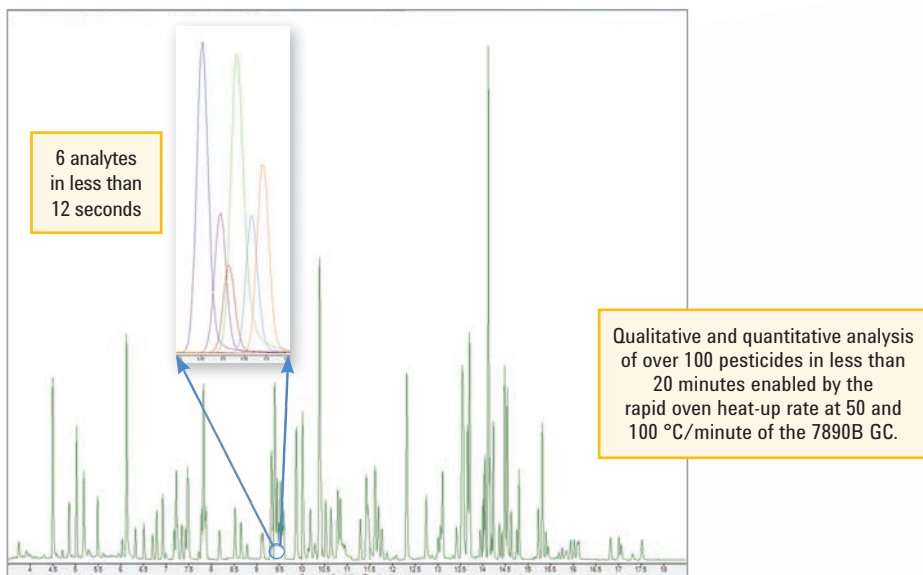
To learn more about the Agilent 7000C Triple Quadrupole GC/MS, visit [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

## PRODUCTIVITY ENHANCEMENTS

# GREATER MS/MS SELECTIVITY, FASTER ANALYSIS

The increased selectivity provided by the MS/MS detection mode lessens the need for thorough chromatographic separation to deliver reliable qualitative and quantitative results. This leads to increased productivity, as the analysis can be accomplished in shorter times without sacrificing data quality.

### Shorter analysis time + MS/MS selectivity = PRODUCTIVITY



*Take advantage of the 7890B GC unmatched, fast oven heat-up rate to shorten analysis time, while the highly selective 7000C reduces the need for chromatographic separation.*

The high selectivity of the 7000C Triple Quadrupole detector also allows you to use simple sample introduction devices, such as Agilent's Thermal Separation Probe (TSP). The TSP requires little or no sample preparation, easy control of sample delivery by temperature and split ratios, and the elimination of contamination associated with direct sample probes. It can be used either with traditional columns or ultra-short 2 m columns for rapid sample delivery.

For more information, visit [agilent.com/chem/TSP](http://agilent.com/chem/TSP)



# GET ON THE FAST TRACK TO PRODUCTIVITY



GC/MS Analyzers let you focus on system validation and data generation... not system configuration

Agilent GC/MS Analyzers are factory configured and chemically tested to meet method requirements for food safety, environmental, and forensic/toxicology testing applications. These workflow solutions get you on the "Fast Track" to producing quality data and processing sample backlogs.

More than just instruments, Agilent Analyzers are *complete workflow solutions* that incorporate advanced technologies, such as Capillary Flow Technology and target compound databases, which allow us to optimize your system for your unique application.

Each Analyzer arrives ready to perform with pre-set chromatography and checkout samples to verify separation capabilities. That means your team can work toward system validation much sooner – and reduce method development costs by up to 80%. And as always, our support team is available, should any problems arise.



**Application-optimized columns and supplies**



**Application setup**

**Customized reporting**



**Training and consulting**

## The broadest portfolio of samplers

Agilent's 7890B GC supports all of your sample introduction needs with a wide range of devices for liquids, headspace, purge-and-trap, gases – and even solids.



**PAL  
Autosampler**



**Agilent 7693A Series  
Automatic Liquid  
Sampler**



**Agilent 7693  
Automatic  
Liquid Sampler  
(ALS)**

To learn more about the Agilent 7000C Triple Quadrupole GC/MS, visit [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

Our catalog of new applications is ever growing.

To learn more about the Agilent 7000C Triple Quadrupole GC/MS, visit us online at [agilent.com/chem/7000C](http://agilent.com/chem/7000C)

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## The Agilent 7000C Triple Quadrupole GC/MS **Unprecedented reliability, system intelligence, and limits of detection**

- **Lower detection limits** give you ultimate confidence in your trace-level analysis
- **Second-generation extractor EI or PCI/NCI Ion source** with improved thermal profile delivers stable performance
- **MRM method generation** is efficient, yet easily customizable
- **The Pesticides and Environmental Pollutants MRM Database** is the most comprehensive database providing pertinent MS/MS parameters
- **Inert Flow Path solutions** create an inert sample path for higher sensitivity, accuracy, and reproducibility – especially at trace levels
- **MassHunter software** streamlines your workflow from instrument tune to report generation
- **Direct GC↔MS communication** minimizes downtime while conserving power and gas
- **Integrated parts database** makes it easy to find and order columns, parts, and supplies
- **Early maintenance feedback** keeps the system performing at its best
- **Eco-friendly features**, such as Sleep/Wake modes, conserve electricity and other resources
- **Secure data storage, archival, and search** with OpenLAB
- **Agilent service and support** maximize your uptime and your return on investment

## Agilent Value Promise

We guarantee you at least 10 years of instrument use from your date of purchase, or we will credit you with the residual value of the system toward an upgraded model.



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Printed in the USA August 28, 2013  
5991-2951EN



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