

# Let us help you find the right column for your application.

The dependable performance and consistency of Agilent J&W GC columns and Agilent ZORBAX LC columns translates to better lab productivity and confidence in the accuracy of your important food safety work. The chart below is intended to help you find the columns that Agilent customers use most often for various food safety applications. It is not a complete list. For a complete guide to column selection, request a copy of our *Agilent J&W GC Column Selection Guide* (Pub# 5989-6159EN) or *Agilent ZORBAX Column Selection Guide for HPLC* (Pub# 5989-5992EN).

Your Application	Application Notes	Column
Pesticides / Pesticide Retention Data	<i>Replacing Multiple 50-Minute GC and GC-MS/SIM Analyses with One 15-Minute Full-Scan GC-MS Analysis for Nontargeted Pesticides Screening with &gt;10x Productivity Gain</i> (Pub# 5989-7670EN)	<b>GC:</b> Agilent J&W DB-5ms 15 m x 0.25 mm, 0.25 µm, (p/n 122-5532)
	<i>A Direct Column-Performance Comparison for Rapid Contract Laboratory (CLP) Program Pesticide Analysis</i> (Pub# 5989-8031EN)	<b>Dual Column approach for standard GC operation: Primary –</b> Agilent J&W High Efficiency DB-17ms 20 m x 0.18 mm, 0.18 µm, (p/n 121-4722) <b>Confirmation column:</b> Agilent J&W DB-XLB 20 m x 0.18 mm, 0.18 µm, (p/n 121-1222)
	<i>Contract Laboratory Program (CLP) Pesticide Analysis with 0.18 mm ID High-Efficiency GC Columns Utilizing Helium Carrier Gas</i> (Pub# 5989-7816EN)	<b>GC:</b> Agilent J&W DB-35ms 30 m x 0.32 mm, 0.25 µm, (p/n 123-3832) and Agilent J&W DB-XLB 30 m x 0.32 mm, 0.50 µm, (p/n 123-1236)
	<i>Rapid Analysis of CLP Pesticides Using High-Temperature DB-35ms and DB-XLB Columns</i> (Pub# 5988-4973EN)	
	<i>A Complete Solution for Chlorinated Pesticides and Herbicides Using DB-35ms and DB-XLB Columns</i> (Pub# 5988-4971EN)	
	<i>Screening for Pesticides in Food Using the Japanese Positive List Pesticide Method: Benefits of Using GC/MS with Deconvolution Reporting Software and a Retention Time Locked Mass Spectral Database</i> (Pub# 5989-7436EN)	<b>GC:</b> Agilent J&W DB-5ms 30 m x 0.25 mm, 0.25 µm, (p/n 122-5532)
Trace Analysis	<i>Polycyclic Aromatic Hydrocarbon (PAH) Analysis Using an Agilent J&amp;W DB-5ms Ultra Inert GC Capillary Column</i> (Pub# 5989-9181EN)	<b>GC:</b> Agilent J&W DB-5ms Ultra Inert 30 m x 0.25 mm, 0.25 µm, (p/n 122-5532UI)
FAME	<i>Improving the Analysis of FAMES using Retention Time Locked Methods and Retention Time Databases</i> (Pub# 5988-5871EN)	<b>GC:</b> Agilent J&W DB-Wax 30 m x 0.25 mm, 0.25 µm, (p/n 122-7032)
Melamine	<i>A Total Solution for the Analysis of Melamine and Cyanuric Acid in Pet Food by GC/MS and Aqueous Normal-Phase LC/MS/MS</i> (Pub# 5989-7546EN)	<b>GC:</b> Agilent J&W DB-5ms 30 m x 0.25 mm, 0.25 µm, (p/n 122-5532)
Pesticides / Pesticide Retention Data	<i>Multi-residue Analysis of 301 Pesticides in Food by LC/Triple Quadropole Mass Spectrometry</i> (Pub# 5989-8614EN)	<b>LC:</b> Agilent ZORBAX Rapid Resolution HT SB-C18 4.6 mm x 150 mm, 1.8 µm, (p/n 829975-912)
	<i>Determination of Aflatoxins in Food by LC/MS/MS</i> (Pub# 5989-7615EN) and <i>Determination of 44 Pesticides in Foodstuffs by LC/MS/MS</i> (Pub# 5989-5459EN)	<b>LC:</b> Agilent ZORBAX Extend C-18 100 mm x 2.1 mm, 1.8 µm, (p/n 728700-902)
	<i>Multi-residue Analysis of 100 Pesticides in Food by LC /Triple Quadropole Mass Spectrometry</i> (Pub# 5989-5469EN)	<b>LC:</b> Agilent ZORBAX Eclipse XDB-C8 4.6 mm x 150 mm, 5 µm, (p/n 993967-906)
Trace Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)	<i>Addressing the Challenges of Analyzing Trace Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Using LC/QQQ</i> (Pub# 5989-7790EN)	<b>LC:</b> Agilent ZORBAX Eclipse Plus Rapid Resolution HT 2.1 cm x 50 mm, 1.8 µm, (p/n 959741-902)
Mycotoxins	<i>Separation of Aflatoxins by HPLC</i> (Pub# 5989-3634EN)	<b>LC:</b> Agilent ZORBAX Eclipse XDB-C18 4.6 mm x 150 mm, 3.5 µm, (p/n 996367-902)
Melamine	<i>A Total Solution for the Analysis of Melamine and Cyanuric Acid in Pet Food by GC/MS and Aqueous Normal-Phase LC/MS/MS</i> (Pub# 5989-7546EN)	<b>LC:</b> Agilent ZORBAX RX-Sil 2.1 mm x 150 mm, 5 µm, (p/n 883700-901)
Dyes	<i>Using TOF for Screening and Quantitation of Sudan Red Colorants in Food</i> (Pub# 5989-4736EN)	<b>LC:</b> Agilent ZORBAX XDB-C18 2.1 mm x 50 mm, 1.8 µm, (p/n 922700-902)
Malachite Green	<i>Determining Malachite Green and Leucomalachite Green in Food by LC/MS/MS</i> (Pub# 5989-5807EN)	<b>LC:</b> Agilent ZORBAX Eclipse XDB-C18 2.1 mm x 150 mm, 5 µm, (p/n 993700-902)
Drug Residues	<i>Analysis of Nitrofurantolone Metabolites in Tilapia</i> (Pub# 5989-5808EN)	<b>LC:</b> Agilent ZORBAX Eclipse XDB-C18 2.1 mm x 150 mm, 3.5 µm, (p/n 930990-902)
Vitamins	<i>Separation of Water Soluble Vitamins</i> (Pub# 5988-6365EN)	<b>LC:</b> Agilent ZORBAX SB-C8 4.6 mm x 150 mm, (p/n 883975-906)

Download publications by visiting [www.agilent.com/chem/library](http://www.agilent.com/chem/library) and entering the publication number in the keyword search. You will need to register to view all content.



To learn more, visit Solution Source for Food Safety at [www.agilent.com/chem/ssfood](http://www.agilent.com/chem/ssfood)

### Certified Supplies

Below is a partial list of the certified supplies available from Agilent. For a complete list of these and other high-quality GC/MS and LC/MS supplies, request a catalog by visiting [www.agilent.com/chem/reserve](http://www.agilent.com/chem/reserve).

#### MS-Certified Septa

11 mm BTO septa, 50/pk	5183-4757
11 mm BTO septa, 100/pk	5183-4757-100
5 mm BTO septa through-hole for on-column, in glass jar, 50/pk	5183-4758

#### MS-Certified O-Rings

Certified non-stick fluorocarbon O-rings, 10/pk	5188-5365
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#### MS-Certified Liners

Splitless, single-taper with glass wool, 5/pk	5188-6567
Split straight liner with glass wool, 5/pk	5188-6569
Split liner, single-taper with restriction to hold glass wool, 1/pk	5188-6576

#### MS-Certified Ferrules – 85% Vespel, 15% Graphite

Inlet	
Ferrule, 0.1, 0.2, 0.25 mm column ID, 10/pk	5181-3323
Ferrule, 0.32 mm column ID, 10/pk	5062-3514
MS-Interface	
Pre-conditioned ferrule, 0.1, 0.2, 0.25 mm column ID, 10/pk	5062-3508
Pre-conditioned ferrule, 0.32 mm column ID, 10/pk	5062-3506

#### MS-Certified Gold Seals

Certified gold seal includes washer	5188-5367
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For complete parts and ordering assistance, and to request a catalog, go to [www.agilent.com/chem/store](http://www.agilent.com/chem/store)

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Agilent Technologies



Agilent Columns and Supplies

Productivity and accuracy enhancements for food safety analysis

Our measure is your success.

products | applications | software | services



Agilent Technologies

# From sample prep to confirmation,

Agilent Technologies has all the tools to help you increase lab productivity and accuracy for food safety analysis.

## Sample Preparation

### SampliQ High-Performance Solid Phase Extraction (SPE)

Impurities in samples can contaminate results. Agilent SampliQ SPE will help you confidently extract and concentrate samples from complex matrices – so all your GC and LC analyses are more accurate and reliable.

**SampliQ SPE sets you up to be efficient and accurate all through your analysis.** SampliQ sorbents and cartridges are made with the same exacting quality you've come to expect from Agilent instruments and columns. Now you can get that superior performance at the very beginning of your analysis.

SampliQ SPE products:

- Offer Polymer, silica and other sorbents to meet every SPE requirement
- Help ensure reproducible results
- Provide cleaner, concentrated samples

**SampliQ polymer sorbents save time in method development and re-work.** New Agilent SampliQ Polymers allow for retention of target molecules over a wide pKa range. And unlike silica-based phases, they yield the same results if they inadvertently dry out during the conditioning stage – so you don't have to start over.



Visit [www.agilent.com/chem/SampliQ](http://www.agilent.com/chem/SampliQ) for more information, part numbers and application notes.

### Start with certified supplies for consistency all through your analysis

Don't let the least expensive part of the sequence become the biggest cause of failed analysis. All certified vials and caps are manufactured to exacting specifications for use in GC/MS and LC/MS applications and come with a quality assurance certificate and 90-day warranty.



### Gas Purification

**Increase system efficiency – and save money – with Renewable Gas Purifiers.**

The high-efficiency, high-capacity Renewable Gas Purifier reduces oxygen, moisture and carbon contamination in GC gas streams to minimize column bleed, giving you longer column lifetime and less frequent detector maintenance. An added benefit: the Renewable Gas Purifier can be recycled, saving our environment and your laboratory budget. (p/n G3440-60004)



GC/MS



### Sample Filtration

**Mini-UniPrep Syringeless Filters are innovative preassembled filtration devices for removing particulate matter from samples.** A single disposable unit can replace the combination of syringe filters, syringes, autosampler vials, transfer containers, septa and caps. For more information, and to find a part number, see [www.agilent.com/chem/uniprep](http://www.agilent.com/chem/uniprep).



LC/MS

### Boost your HPLC Performance with Premium Syringe Filters.

Agilent Premium Syringe Filters are high-quality, ready-to-use filter units that are tested and certified for the absence of UV-absorbing substances at typical HPLC wavelengths with water, methanol and acetonitrile.



### MS-Certified supplies for your GC/MS systems: We take the time to ensure the purity and quality of your supplies – so you don't have to!



#### Reduce bleed with Certified Non-Stick BTO Inlet Septa.

Exclusive Agilent BTO septa are plasma-treated to eliminate sticking and coring, keeping the inlet free of external contamination.



**Non-Stick Liner Certified O-Rings are cleaner and less sticky – easier on you.** Proprietary pre-cleaning and conditioning procedures eliminate out-gassing of contaminants critical for trace analysis with MSD. Certified O-rings are plasma-treated to prevent sticking and unnecessary inlet maintenance.



**MS-Certified Liners ensure consistency.** Agilent MS-Certified liners are FID- and MSD-tested for acid/base deactivation response linearity, peak symmetry, bleed and background noise, so you get consistent quality.



**Pre-Conditioned Vespel/Graphite Capillary Column Ferrules and MS Interface Ferrules help you optimize your GC/MS sensitivity.** The most reliable, leak-free column connections to reduce column bleed and allow lower levels of detection.



#### Enhance your system's inertness with Certified Gold Seals.

A unique, proprietary manufacturing process gives the most consistent, smooth and inert surface to seal the inlet and prevent leaks or sample degradation. A must when working with active compounds or high-sensitivity analyses.

*For certified part numbers noted here, see back of brochure.*

### Long-life Agilent pistons and seals are manufactured to optimize your LC/MS performance

Agilent pistons are made from high-purity, long-life mono-crystalline sapphire, making the surface highly resistant to abrasion and free of imperfections. Agilent's demanding piston specifications prevent scratches or defects that can cause premature system leakage. Proprietary spring-loaded polymer seals create a tight fit during delivery and intake over a high-dynamic flow and viscosity range.



## Separation

### GC Columns

**Agilent J&W Ultra Inert GC Capillary columns ensure maximum column inertness and low column bleed, which increases signal-to-noise level and sensitivity for all detectors.** Column inertness is important to avoiding compound adsorption to the active sites on the columns, which renders inaccurate results. Ultra Inert columns are the only columns that deliver on column inertness AND low bleed performance – the combination of both makes Ultra Inert results so reliable.\*

**Agilent J&W High Efficiency GC columns are ideal for applications that require faster run times, such as high-throughput screening, process monitoring and method development.** They can help reduce your sample run time by 50% or more without compromising your resolution and improve productivity so you can meet the tightest time constraints.\*



Order columns & supplies now at [www.agilent.com/chem/store](http://www.agilent.com/chem/store)

### LC Columns

**Agilent ZORBAX Rapid Resolution HT StableBond (SB): Use fewer methods and get more done – with greater certainty!** See what ZORBAX RRHT SB can do for pesticide analysis – it's possible to analyze 301 pesticides with one method.\*

**Agilent ZORBAX Eclipse Plus Rapid Resolution HT columns** deliver increased resolution for trace compounds, such as PFOA.\*

*\*See the application chart in this brochure for more information about these columns and others, and to help you select the right column for your method.*

Meet your biggest challenges – receive custom column recommendations at [www.ZORBAXmethod.com](http://www.ZORBAXmethod.com).



## Confirmation & Quantitation

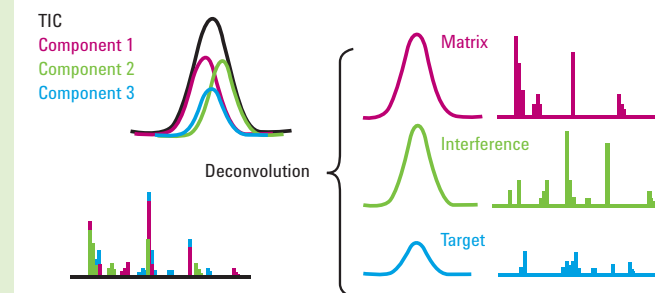
### Agilent Deconvolution Reporting Software (DRS) – Get the noise out!

Screen for hundreds of pesticides and endocrine disruptors in a single GC/MS analysis. Spectral deconvolution helps to identify pesticides even when they are buried under co-eluting matrix compounds.

DRS combines results from your Agilent GC/MSD ChemStation, Automatic Mass Spectral Deconvolution and Identification Software (AMDIS) and the National Institute of Standards and Technology (NIST) in an easy-to-read report. DRS-derived results work seamlessly with the Japanese Positive List and the Agilent Pesticide Libraries so you can complete your analysis quickly and confidently.

AMDIS Deconvolution Pulls Out Individual Components and Their Spectra

Components & Mixed Spectra | Deconvoluted Peaks & Spectra



### MassHunter Molecular Feature Extraction Helps Streamline Profiling and ID.

The advanced Molecular Feature Extraction (MFE) algorithm built into MassHunter software saves hours of analysis time by automatically locating sample components down to the lowest level abundance and extracting all relevant spectral and chromatographic information. The software can then identify compounds using an accurate mass database of pesticides or other food components. Optionally, RT can be used to further increase specificity (AMRT). For compounds not found in the AMRT databases, MassHunter's Molecular Formula Generator (MFG) exploits both accurate mass MS and MS/MS information to aid in identification.