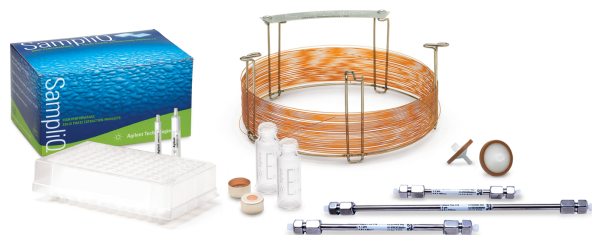




*Agilent Columns and Supplies*

# Productivity and accuracy enhancements

for your pharmaceutical analysis



Our measure is your success.

products | applications | software | services



**Agilent Technologies**

# *Optimize your pharmaceutical analyses with Agilent Technologies columns and supplies.*

*Get the best possible performance from your new LC and LC/MS – GC and GC/MS instruments with Agilent columns and supplies.*

When you set out to complete an analysis, you're relying not just on the sensitivity of the instrument you're using, but on the quality of the column you select and all the supplies that are being used at each stage of the analysis.

Sometimes the smallest part of the analysis can have a big impact on your results. For example, using vials that aren't created to the specifications of your instrument can cause downtime, lost samples or expensive autosampler repairs. Agilent vials are quality controlled to conform to tight specifications, so they don't get dropped or become jammed in the autosampler. The bottoms of the vials are also manufactured to strict specifications, so the syringe can accurately withdraw the sample.

When it comes to columns, you don't want to worry about inconsistencies in the silica in the columns, which can impact resolution and reproducibility. The silica particles in Agilent columns are manufactured at Agilent's U.S. manufacturing plant, under careful control, so your lot-to-lot reproducibility is reliable and traceable. For customers who need it, Agilent can even provide customized lot control, so you have fewer variables and consistent control in your labs worldwide.

Using Agilent columns and supplies enhances the sensitivity and performance you get from your instrument. *That adds up to less worry, less rework and more productivity for your lab.*



Go to [www.ZORBAXmethod.com](http://www.ZORBAXmethod.com) to receive customized HPLC column recommendations and information.

## 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 LC, LC/MS and GC, GC/MS analyses are more accurate and reliable.

**SampliQ SPE sets you up to be efficient and accurate all through your analysis.** SampliQ sorbents in both 96 well plates 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 Polymer sorbents save time in method development.** 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.

SampliQ SPE products:

- Offer Polymer, silica and other sorbents, including protein precipitation plates, to meet every SPE requirement in 96 well plate or cartridge format
- Save time during method development and minimize rework
- Provide cleaner, concentrated samples
- Help ensure reproducible results
- Complete Polymer line available in both 30  $\mu$ m and 60  $\mu$ m particles sizes

|   | SampliQ OPT | SampliQ SCX | SampliQ WCX | SampliQ SAX | SampliQ WAX |
|---|-------------|-------------|-------------|-------------|-------------|
| 100 x 1 mL tubes, 30 mg                     | 5982-3013   | 5982-3213   | 5982-3513   | 5982-3313   | 5982-3613   |
| 50 x 3 mL tubes, 60 mg                      | 5982-3036   | 5982-3236   | 5982-3536   | 5982-3336   | 5982-3636   |
| 30 x 6 mL tubes, 150 mg                     | 5982-3067   | 5982-3267   | 5982-3567   | 5982-3367   | 5982-3667   |
| 50 x 3 mL tubes, 60 mg, 60 $\mu$ m particle | 5982-6036   | 5982-6236   | 5982-6536   | 5982-6336   | 5982-6636   |
| 96 well plate, 30 mg                        | 5982-3097   | 5982-3296   | 5982-3596   | 5982-3396   | 5982-3696   |



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

## Vials and Caps

**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.

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



## Sample Filtration

### Simplify Sample Filtration with Mini-UniPrep.

These innovative preassembled filtration devices remove 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)

### 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.



For more information and to find a part number, see [www.agilent.com/chem/syringefilters](http://www.agilent.com/chem/syringefilters)

6400 Series Triple Quadrupole  
LC/MS with 1200 Series  
Liquid Chromatograph



LC/MS

***From sample prep to confirmation,**  
Agilent Technologies has all the tools to help you increase lab  
productivity and accuracy for pharmaceutical analysis.*

## 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. (PN G3440-60004)



5795C Mass Selective Detector with  
7890A Gas Chromatograph and  
7693A Automatic Liquid Sampler



GC/MS



## LC Supplies

**Long-life Agilent pistons and seals are manufactured to optimize your LC/MS performance.** Agilent pistons are made from high-purity, long-life monocrystalline 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.



### Agilent lamps – another bright idea!

- All lamps are tested for noise and drift specifications, correct operating voltage, light intensity and proper alignment
- Improved coating process increases Agilent 1100/1200 lamp lifetimes up to 50%
- Agilent deuterium lamps are designed with a much narrower aperture, providing increased light intensity and decreased noise – translating into an appreciably higher signal-to-noise ratio
- By providing higher sensitivity, Agilent lamps can extend detection capabilities and improve qualification at trace levels – for more than 2,000 hours of use



## Agilent Mass Spec Instrument Supplies

**Everything you need to sustain world-class performance** from your Agilent single quadrupole, ion trap, triple quadrupole, TOF and Q-TOF LC/MS systems, including tuning mixes, calibrants, performance standards and proprietary instrument supplies.

Agilent MS parts and supplies are designed to keep your LC/MS running at peak performance. Why compromise your LC/MS results with parts not engineered for Agilent instrumentation?

## GC Certified Supplies

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



**Certified Non-Stick BTO Inlet Septa** – reliable inlet seal with low-bleed profile, even at 400°C



**Non-Stick Liner Certified O-Rings** – ready for chromatographic use with proprietary pre-cleaning and conditioning



**MS-Certified Liners** – made and tested to our highest level of scrutiny to assure reproducibility



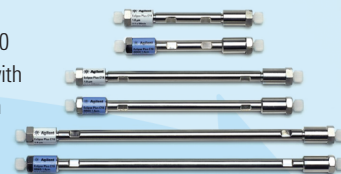
**Certified Gold Seals** – best available with smoothest sealing surface and industry-leading gold plating to prevent leaks and sample degradation

**Pre-Conditioned Vespel/Graphite Capillary Column Ferrules and MS Interface Ferrules** – unique packaging delivers one clean ferrule at a time for fast, easy column installation

For a complete guide to certified supplies, request a catalog by visiting [www.agilent.com/chem/catalogrequest](http://www.agilent.com/chem/catalogrequest)

## LC Columns – Accurate results quickly and confidently

**Agilent ZORBAX Rapid Resolution High Definition (RRHD) columns** were designed for the new Agilent 1290 Infinity LC System. The new ZORBAX RRHD columns' improved packing processes achieve stability up to 1200 bar with the Agilent 1290 Infinity LC. The RRHD 1.8  $\mu\text{m}$  columns are available in 50, 100 and 150 mm lengths for fast or high resolution – truly high definition – separations of your most complex samples.



**Agilent ZORBAX Eclipse Plus Rapid Resolution High Throughput (RRHT) columns** provide the ultimate in performance for silica-based columns and deliver increased resolution for trace compounds, such as cholesterol drugs. Peak shape is excellent for the most challenging basic compounds, improving efficiency and resolution with these sample types. Because of their high level of performance, Eclipse Plus columns are the ideal first choice for method development. With a full range of particle sizes available, easy method transfer is possible.\*

**Agilent ZORBAX Rapid Resolution HT StableBond (SB) columns** – Use fewer methods and get more done – with greater certainty! See the flexibility that ZORBAX RRHT SB can have on your method development, whether for cardiac drugs, anti-inflammatory steroids or painkillers.\*

| Agilent ZORBAX Eclipse Plus columns   |            |
|---|------------|
| Eclipse Plus C18 Rapid Resolution (RR), 4.6 x 150 mm, 3.5 $\mu\text{m}$                   | 959963-902 |
| Eclipse Plus C18 Rapid Resolution High Throughput (RRHT), 4.6 x 150 mm, 1.8 $\mu\text{m}$ | 959994-902 |
| Eclipse Plus C18 Solvent Saver Plus, 3.0 x 150 mm, 3.5 $\mu\text{m}$                      | 959963-302 |
| Eclipse Plus C8 Rapid Resolution (RR), 4.6 x 50 mm, 3.5 $\mu\text{m}$                     | 959943-902 |
| Eclipse Plus C18 RRHD, 3.0 x 100 mm, 1.8 $\mu\text{m}$                                    | 959758-302 |
| Eclipse Plus C18 RRHD, 3.0 x 50 mm, 1.8 $\mu\text{m}$                                     | 959757-302 |
| Eclipse Plus Phenyl-Hexyl, 4.6 x 150 mm, 3.5 $\mu\text{m}$                                | 959963-912 |

| Agilent ZORBAX StableBond (SB) columns                     |            |
|--|------------|
| Rapid Resolution SB-C8, 4.6 x 100 mm, 3.5 $\mu\text{m}$    | 861953-906 |
| Rapid Resolution HT SB-CN, 3.0 x 50 mm, 1.8 $\mu\text{m}$  | 827975-305 |
| Rapid Resolution SB-Phenyl, 4.6 x 75 mm, 3.5 $\mu\text{m}$ | 866953-912 |
| SB-C18 RRHD, 3.0 x 100 mm, 1.8 $\mu\text{m}$               | 858700-302 |
| SB-C18 RRHD, 3.0 x 50 mm, 1.8 $\mu\text{m}$                | 857700-302 |

For customized HPLC column selections, visit [www.ZORBAXmethod.com](http://www.ZORBAXmethod.com)

\*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.

## Agilent J&W Capillary GC Columns – Quality that translates to performance

**Agilent J&W High Efficiency GC columns** are ideal for applications that require faster run times (up to 50% or more) without loss of resolution, such as high-throughput screening, process monitoring and method development.\*

**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 in avoiding compound adsorption to the active sites on the columns, which renders inaccurate results.\*



| Agilent J&W DB-624 columns (Equivalent to USP Phase G43)                |          |
|---|----------|
| Agilent J&W DB-624 High Efficiency, 20 m x 0.18 mm x 1.00 $\mu\text{m}$ | 121-1324 |
| Agilent J&W DB-624, 30 m x 0.32 mm x 1.80 $\mu\text{m}$                 | 123-1334 |
| Agilent J&W DB-624, 30 m x 0.53 mm x 3.0 $\mu\text{m}$                  | 125-1334 |

| Agilent J&W Ultra Inert and High Efficiency                         |            |
|---|------------|
| Agilent J&W Ultra Inert DB-5ms, 30 m x 0.25 mm x 0.25 $\mu\text{m}$ | 122-5522UI |
| Agilent J&W DB-5ms Ultra Inert, 20 m x 0.18 mm x 0.18 $\mu\text{m}$ | 121-5522UI |

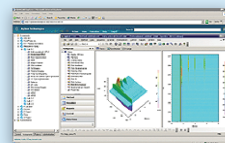
| Agilent J&W DB-WAX and HP-INNOWax (Equivalent to USP Phase G16) |            |
|---|------------|
| Agilent J&W DB-WAX, 30 m x 0.32 mm x 0.25 $\mu\text{m}$         | 123-7032   |
| Agilent J&W HP-INNOWax, 30 m x 0.32 mm x 0.25 $\mu\text{m}$     | 19091N-113 |
| Agilent J&W DB-WAX, 30 m x 0.53 mm x 0.25 $\mu\text{m}$         | 125-7031   |
| Agilent J&W HP-INNOWax, 30 m x 0.53 mm x 0.25 $\mu\text{m}$     | 19095N-123 |
| Agilent J&W DB-WAX, 20 m x 0.18 mm x 0.18 $\mu\text{m}$         | 121-7022   |
| Agilent J&W HP-INNOWax, 20 m x 0.18 mm x 0.18 $\mu\text{m}$     | 19091N-577 |

# Confirmation & Quantitation

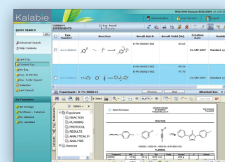
## Start-to-Finish Software Solutions

Agilent has expanded and strengthened our portfolio of informatics software for the life science and pharmaceutical industry. The integration of our software solutions addresses the complete life cycle of analytical information — from experimental design to data acquisition through knowledge management and analysis. Agilent's combined software products give you access to an open system architecture that can integrate applications, instruments and data into a rich source of information and control of your lab — regardless of vendor.

**OpenLAB is the latest innovation from Agilent Technologies for the laboratory.** A scalable, feature-rich operating system for instruments and laboratory information, OpenLAB will provide you with a strategy for integrating instrumentation, local data systems and laboratory electronic information into a fully protected, searchable and archivable system. Utilizing the latest advances in software and database design, OpenLAB becomes your way of addressing present and future instrumentation needs, protecting and sharing your laboratory information safely and securely, and integrating and managing total laboratory information content.



**Kalabie ELN Industry Solutions** — An Electronic Lab Notebook (ELN) is a paperless lab archive with a scalable, integrated platform for cross-team collaboration. ELNs are not only about moving from paper to electronic notebooks, they are a natural environment where collaborative work can be organized. Agilent's ELN solutions apply to various domains including pharma, biotech and dermo-cosmetics.



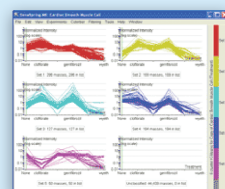
Agilent has developed ELN solutions for:

- ELN Core Functions
- ELN for Biological Experiments
- ELN for Medicinal Chemistry
- ELN for Process Development
- ELN for Dermo-Cosmetics
- ELN for Other Disciplines

**Chromatography Data System (CDS) integrates all instruments and client workstations together** with a central data repository based on a network infrastructure. This allows for multiple users to access and concurrently work with the central data repository and any connected instrument transparently from any connected client workstation. Within the client/server environment of a CDS, you can configure as many clients and instruments as necessary, considering any licensing and resource limitations. All raw data (acquired signals), meta-data and calculated results are stored centrally along with the computer-generated audit trail information.



**GeneSpring MS software enables the rapid discovery of protein and metabolite biomarkers** through the analysis of mass spectrometry data. Researchers can easily import, analyze and visualize GC/MS and LC/MS data from large sample sets and complex experimental designs. Using a comprehensive array of powerful statistical analyses, GeneSpring MS can profile proteins or small molecules associated with changes in cellular function, enabling the rapid discovery of biomarkers that can detect disease or drug toxicity.



Visit Solution Source for Pharmaceutical Analyses at [www.agilent.com/chem/sspharma](http://www.agilent.com/chem/sspharma) for more resources.



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

The dependable performance and consistency of Agilent ZORBAX LC columns and Agilent J&W GC columns translate to better lab productivity and confidence in the accuracy of your important pharmaceutical work. The chart below is intended to help you find the columns that Agilent customers use most often for various pharmaceutical applications.\*

| Your Application             | Application Notes   | Column   |
|------------------------------|---|--|
| LC Method Development        | <i>Improved Simvastatin Analysis Using Agilent ZORBAX Eclipse Plus C18 5 µm, 3.5 µm and 1.8 µm Columns.</i>   | <ul style="list-style-type: none"> <li>• ZORBAX Eclipse Plus C18, 4.6 x 250 mm, 5 µm (PN 959990-902)</li> <li>• ZORBAX Eclipse Plus C18 RR, 4.6 x 100 mm, 3.5 µm (PN 959961-902)</li> <li>• ZORBAX Eclipse Plus C18 RRHT, 4.6 x 50 mm, 1.8 µm (PN 959941-902)</li> </ul> |
|                              | <i>Tailoring Speed, Sensitivity and Resolution in an RRHT Analysis of Cardiac Drugs.</i> (Pub No. 5989-5899EN)  | <ul style="list-style-type: none"> <li>• ZORBAX SB-C18 RRHT, 4.6 x 250 mm, 3.5 µm (PN 884950-567)</li> <li>• ZORBAX SB-C18 RRHT, 4.6 x 150 mm, 1.8 µm (PN 829975-902)</li> <li>• ZORBAX SB-C18 RRHT, 4.6 x 50 mm, 1.8 µm (PN 827975-902)</li> </ul>                      |
|                              | <i>Rapid and Selective Quantification of Drug Compounds for Cassette-Dosing DMPK Studies by Multi-MRM Triple Quadrupole MS.</i> (Pub No. 5989-7211EN)   | <ul style="list-style-type: none"> <li>• ZORBAX SB-C18 RRHT, 2.1 x 50 mm, 1.8 µm (PN 822700-902)</li> </ul>  |
| LC Metabolite Identification | <i>Analysis of Oxycodone and Its Metabolites – Noroxycodone, Oxymorphone and Noroxymorphone in Plasma by LC/MS with an Agilent ZORBAX StableBond C18 LC Column.</i> (Pub No. 5990-3815EN)       | <ul style="list-style-type: none"> <li>• ZORBAX Narrow Bore SB-C18 RRHT, 2.1 x 50 mm, 1.8 µm (PN 827700-902)</li> </ul>  |
|                              | <i>Fast Identification of Main Drug Metabolites by Quadruple Time-of-Flight LC/MS.</i> (Pub No. 5989-6759EN)  | <ul style="list-style-type: none"> <li>• ZORBAX SB-C18 RRHT, 2.1 x 150 mm, 1.8 µm (PN 820700-902)</li> </ul>   |
| LC Method Scalability        | <i>Scalability as a Function of Column Dimensions Using ZORBAX Rapid Resolution HT Columns for the Analysis of the Pharmaceutical Triamcinolone.</i> (Pub No. 5989-4878EN)                      | <ul style="list-style-type: none"> <li>• ZORBAX SB-C18 RRHT, 4.6 x 250 mm, 5 µm (PN 880975-902)</li> <li>• ZORBAX SB-C18 RRHT, 4.6 x 150 mm, 3.5 µm (PN 863953-902)</li> <li>• ZORBAX SB-C18 RRHT, 4.6 x 50 mm, 1.8 µm (PN 822975-902)</li> </ul>                        |
| LC Impurity Detection        | <i>High Throughput LC/MS TOF Analysis of Drug Degradation Products.</i> (Pub No. 5989-6507EN)   | <ul style="list-style-type: none"> <li>• ZORBAX SB-C18, 2.1 x 50 mm, 1.8 µm (PN 822700-902)</li> </ul>   |
| LC Derivative Separations    | <i>High-Resolution Analysis of Taxanes Using Rapid Resolution HT (1.8 µm) Agilent Eclipse Plus Phenyl-Hexyl Columns.</i> (Pub No. 5989-9340EN)  | <ul style="list-style-type: none"> <li>• ZORBAX Eclipse Plus Phenyl-Hexyl, 4.6 x 50 mm, 1.8 µm (PN 959941-912)</li> <li>• ZORBAX Eclipse Plus C18, 4.6 x 50 mm, 1.8 µm (PN 959941-902)</li> </ul>  |
| GC Residual Solvents         | <i>Better Precision, Sensitivity and Higher Sample Throughput for the Analysis of Residual Solvents in Pharmaceuticals – Using 7890A GC with G1888 Headspace Sampler.</i> (Pub No. 5989-6023EN) | <ul style="list-style-type: none"> <li>• Agilent J&amp;W DB-624, 30 m x 0.45 mm x 2.55 µm (PN 124-1334)</li> </ul>   |
|                              | <i>Simultaneous Dual Capillary Column Headspace GC with Flame Ionization Confirmation and Quantification of Residual Solvents According to USP &lt;467&gt;.</i> (Pub No. 5989-8085EN)           | <ul style="list-style-type: none"> <li>• Agilent J&amp;W DB-WAX, 30 m x 0.32 mm x 0.25 µm (PN 123-7032)</li> <li>• Agilent J&amp;W DB-624, 30 m x 0.32 mm x 1.80 µm (PN 123-1334)</li> </ul>   |
|                              | <i>Improved Retention Time, Area Repeatability and Sensitivity for Analysis of Residual Solvents.</i> (Pub No. 5989-6079EN)   | <ul style="list-style-type: none"> <li>• Agilent J&amp;W DB-624, 30 m x 0.45 mm x 2.55 µm (PN 124-1334)</li> </ul>   |

\*For a complete guide to column selection, request a copy of our *Agilent J&W GC Column Selection Guide* (Pub No. 5989-6159EN) or *Agilent ZORBAX Column Selection Guide for HPLC* (Pub No. 5990-4435EN).

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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