Agilent Sample Preparation Portfolio

ACCURATE, REPRODUCIBLE RESULTS RIGHT FROM THE START
Accurate, productive chromatography demands sample preparation that is straightforward, cost-effective, and compatible with your analytical goals and methods.

**From filtration and purification to solid phase extraction, Agilent makes delivering accurate results easier.**

Reduce the need for repeated runs, and minimize interferences that can compromise separation, detection, and quantitation. The Agilent Sample Preparation Portfolio combines innovative products, state-of-the-art manufacturing, and stringent quality-control monitoring to ensure reliable, consistent results.

“False positives and negatives are unacceptable in our trace-level analysis. How do we prevent impurities and matrix effects from interfering with our detection and quantitation?”

“Sample prep trial and error is causing us to spend too much time – and money – on method development. How can we more quickly determine the right technique for our samples?”

“Our lab sometimes has to repeat analytical runs because of inconsistent results. Could variability in our sample preparation be causing this rework?”
Take the first step toward more reliable outcomes

Because sample preparation is such an essential component for successful chromatography, Agilent offers a complete line of sample prep products.

More formats to fit your analytical needs

Whether you need individual SPE cartridges or multiple plate and bed configurations, Agilent sample preparation formats support a broad range of requirements.

- **Bond Elut SPE cartridges** offer flexibility across diverse formats and bed masses. Specialized cartridges are also available, including flangeless options for automated operations.
- **Bond Elut 96-well plate formats** support high sample throughput, are compatible with many automation platforms, and are available with a variety of sorbents.
- **VersaPlate design options** — prepackaged and loose cartridges — let you customize plate configurations to reduce waste, and choose different phases for sorbent screening.

High-quality choices from a single trusted source

As instruments have become more selective and sensitive, Agilent’s manufacturing standards have evolved as well. Our multi-step quality assurance (QA) and quality control (QC) processes minimize variability and deliver the consistency, reliability, and robustness you expect.

In addition, our technical representatives and online resources are always available to take the guesswork out of finding the right products for your sample preparation needs. So you can minimize method development time and costs.

To learn more about extracting and concentrating samples from complex matrices, visit agilent.com/chem/sampleprep
Agilent’s sample preparation portfolio enables you to extend analytical uptime, reduce rework, and minimize interferences that can affect your results. In addition, our sample prep products are automation-friendly to help you reduce backlogs and get more done in less time.

The table and product details below will help you quickly identify the best product for your analysis, based on required selectivity, sample technique, and the interference being removed.

**Interference guide:** Select your sample preparation technique based on the type of interference(s) you need to remove.

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<th>Interference Removed</th>
<th>Filtration</th>
<th>Supported Liquid Extraction (SLE)</th>
<th>Precipitation</th>
<th>Lipid Removal 'Hybrid' Filtration</th>
<th>QuEChERS</th>
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*Suggested Agilent Products*  
Captiva Chem Elut Hydromatrix  
Captiva Non-Drip (ND)  
Captiva ND Lipids  
Bond Elut QuEChERS  
Bond Elut Silica and Polymeric SPE

Consistency and value across a broad spectrum of chromatography requirements

**Bond Elut SPE produces clean, consistent extracts**

Solid Phase Extraction (SPE) is the technique of choice when you are looking to remove sample matrix or if you need to concentrate your target analytes.

- Benefit from an advanced polymer design that delivers consistent flow and recovery with **Plexa Polymeric SPE** products. Versatile enough for any application, Plexa SPE products combine the advantages of matrix removal with ease of use and streamlined method development.
- Combine selectivity with cost effectiveness by using **Silica-based SPE**, including reversed-phase, normal-phase, ion-exchange, and mixed mode options.
- Analyses that require highly targeted matrix removal are ideal applications for **Inorganic SPE and specialty SPE** products.
Make sample prep as easy as 1-2-3 with pre-packaged Bond Elut QuEChERS Kits

Time-saving formats deliver excellent recovery and reproducibility for multi-class, multi-residue analysis. Different dispersive combinations let you selectively remove matrix components for cleaner extracts, based on the sample type you are testing.

Produce injection-ready filtrates in minutes with Captiva filtration plates, cartridges, and syringe filters

Reliably remove particulates with Agilent Captiva products – including precipitated proteins – with minimal analyte loss.

• Deliver high-throughput filtration for organic-based protein precipitation with Captiva and Captiva ND cartridges and plates.

• Efficiently remove ion-suppressing phospholipids, proteins, and surfactant interferences from precipitated plasma samples using Captiva ND Lipids cartridges and plates.

• Ideal for small sample batches, Captiva Syringe Filters are portable, and require no plates or manifolds. They are available in a variety of membrane types and pores with the industry’s highest flow rates and loading capacities.

• One-step HPLC and UHPLC filtration is easy with Filter Vials, which combine a filter with a sample vial.

Improve sample consistency with Chem Elut Supported Liquid Extraction (SLE)

Chem Elut cartridges and 96-well plates contain an inert, high-purity diatomaceous earth sorbent that removes matrix components and some particulates. They also enable automation, saving you both time and solvent. Chem Elut SLE is available in buffered and unbuffered formats for rapid preparation of aqueous samples.

Sample preparation accessories facilitate interference removal

Agilent manifolds, collection plates, sealing mats, and other accessories boost throughput, productivity, and efficiency. The unique Vac Elut SPS 24 supports easy preparation of up to 24 samples at one time, with a valve that diverts waste to a collection container. Changing the manifold lid to a “Collect” position reduces the number of steps needed to perform the SPE method compared to traditional vacuum manifolds. Vacuum manifolds designed for 96-well plates, as well as standard glass-basin SPE manifolds are available.
For more than 35 years, Agilent has been developing sample prep and analytical technologies to suit diverse applications:

**FOOD**
Enable high-volume screening for organic contaminants in food, beverages, nutritional supplements, and consumer products with Agilent QuEChERS kits and Bond Elut products.

**PHARMACEUTICAL**
Achieve the sensitivity, accuracy, and throughput that analytical, regulatory, and validation requirements demand using Captiva ND Lipids and Bond Elut SPE technologies.

**FORENSICS**
For speed, reliability, and accuracy, top labs around the globe rely on Bond Elut Certify* and Bond Elut Plexa SPE.

**ENVIRONMENTAL**
Support your testing for pharmaceuticals, pesticides, and other soil and water toxins—in concentrations down to parts-per-trillion—with Bond Elut Plexa Polymeric SPE products.

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**Analysis of pesticide residues after QuEChERS AOAC sample preparation**

MRM chromatograms of 10 ng/g fortified chicken processed by QuEChERS. No peaks of interference were present for the target analytes.

**LC/MS/MS analysis of β-blockers after filtration with Agilent Captiva ND Lipids**

Superior chromatographic separation and sample cleanliness:

MS chromatograms of human plasma sample spiked with β-blockers.

*For Forensic Use.*
AGILENT KNOWLEDGE AND SUPPORT:
ONE SINGLE, SIMPLE SOURCE FOR YOUR ENTIRE WORKFLOW

Find fast answers to your test protocol questions

Agilent helps you meet tough sample preparation challenges with comprehensive application compendia and expert personal guidance. In addition, our industry and academic collaborations enable us to develop new insights into evolving analytical issues.

An extensive sample prep knowledge base at your fingertips

Application Compendia: agilent.com/chem/library

- Drugs and Metabolites in Oral Fluid: Immunoassay Screening and LC/MS/MS Confirmation and Quantification (5991-1820EN)
- Agilent Food Safety Applications Notebook: Volume 1 – SPE, SPME, SLE, and Captiva Filtration (5990-4917EN)
- Agilent Food Safety Applications Notebook: Volume 2 – Bond Elut QuEChERS (5990-4977EN)
- Sample Preparation and Analysis for Drug Screening and Confirmation: agilent.com/chem/drugscreeningandconfirmation
- Sample Preparation Fundamentals for Chromatography (5991-3326EN)

Reference Library

- The Agilent Library may also be searched for additional application notes agilent.com/chem/library

Information-packed videos

- Review SPE core concepts and best practices: agilent.com/chem/spevideo
- Follow the QuEChERS technique step by step: agilent.com/chem/quechersvideo

eSeminars

- Find upcoming eSeminars and view past recordings: agilent.com/chem/spp_eseminars

Beyond sample prep...
Agilent helps you optimize your productivity

Ensure an inert GC flow path

As available sample becomes increasingly smaller, active, and complex, you cannot afford interferences caused by flow path activity. Agilent Inert Flow Path solutions ensure a consistently inert flow path for higher trace-level sensitivity, accuracy, and reproducibility – and are qualified using chromatographic QC tests. Learn more at: agilent.com/chem/inertflowpath

Choose from more than 2,000 LC column configurations

With more than 50 years of HPLC column manufacturing experience, Agilent leads the way in global scalability and method transfer flexibility. We also manufacture – and rigorously test – all the silica used in Agilent ZORBAX, InfinityLab Poroshell 120 and Poroshell 300 columns. For more information visit: agilent.com/chem/LCcolumns

Get the parts and supplies you need quickly

Agilent’s global distribution network ensures that essential supplies are readily available making Agilent your single source for sample prep, instruments, and supplies. Expedite your purchasing schedule and minimize work interruptions. To order supplies now, go to: agilent.com/chem/store

Find it with ease.
Find it with confidence.
The sample prep products, columns, and supplies you need are just a few clicks away.
Go to agilent.com/chem/finditnow

To learn more about extracting and concentrating samples from complex matrices, visit agilent.com/chem/sampleprep
Move more easily from sample to success

Your most reliable analyses start with samples that are representative, reproducible, homogenous, and suitable for column injection or assay.

Agilent sample preparation products let you get your samples ready for analysis quickly, and produce sample aliquots that are:

• Interference free
• Compatible with all your separation and detection methods
• Safe for your columns and detectors

From Captiva filter kits that remove precipitated proteins and particulates... to Bond Elut SPE for sample cleanup and concentration... to QuEChERS kits for simple multi-class, multi-component extraction, Agilent can help you find the products that are just right for your application.

For more information

To learn more about the Agilent Sample Preparation portfolio, visit agilent.com/chem/sampleprep

To find your local Agilent Representative or Agilent Authorized Distributor, visit agilent.com/chem/contactus

Find an Agilent customer center in your country: agilent.com/chem/contactus

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