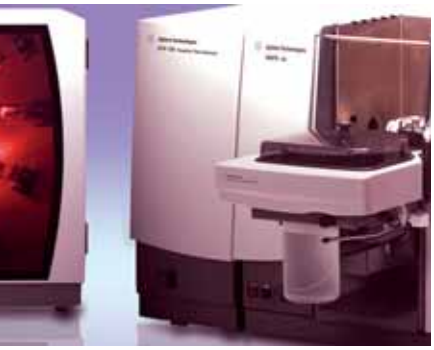
2011 EDITION

The Agilent Instrument and Accessories Catalog

Life Sciences and Chemical Analysis

The Measure of Confidence

Agilent Technologies



Welcome.

This year's edition of the Agilent Instruments and Accessories Catalog marks a major milestone: It's the first published since Agilent acquired Varian, Inc. in May 2010. We hope you'll view this resource in the same way we view our newly-expanded enterprise: as much more than a collection of instruments, components, software, services and reagents.

At Agilent, one of our core values is that tools should expand the horizons of scientific experimentation, not restrict them. This is what drives our R&D and our applications development. It's also the motivation behind the most aggressive expansion of Agilent's portfolio in our history.

Complementing Agilent's traditional strengths in chromatography, mass spectrometry and genomics, we've expanded our instrument family for elemental analysis and added systems for structural analysis, molecular spectroscopy, and polymer analysis. Scientists can also come to Agilent for a greatly expanded selection of sample prep solutions which now include filtration, protein precipitation, solid phase extraction, and solid supported liquid/liquid extraction.

In other words, we've expanded our horizons to better help you expand yours.

To learn more about these additions to Agilent's portfolio, please contact your local Agilent office or Authorized Agilent Distributor. Find your local contact at **www.agilent.com / chem / contactus**

We also encourage you to visit **www.agilent.com / chem** for the latest product information, applications and special offers.

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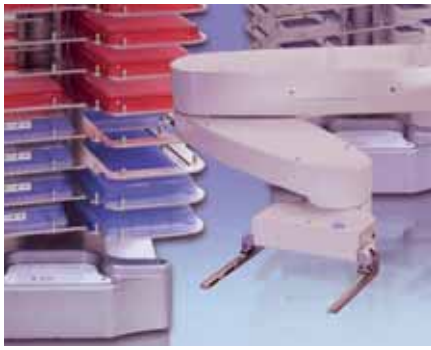
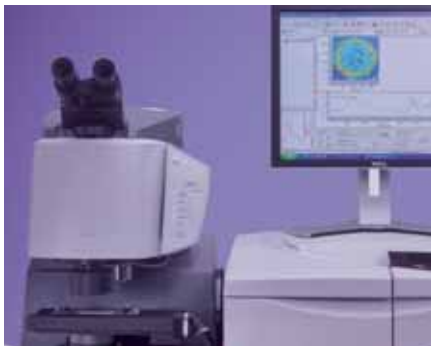




At Agilent, we subscribe to the practice of “relentless innovation.” This produces breakthroughs such as increasing an LC/MS system’s sensitivity 10-fold while reducing its footprint 25%, and it also raises the standards in traditional technologies supporting routine analysis.

Standards such as making the benefits of 600 bar performance accessible to the larger community of liquid chromatographers. Standards like faster-cycling gas chromatography systems that boost productivity while setting a new benchmark for pressure set point and retention time locking precision. The list goes on and on.

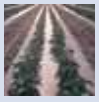
Relentless innovation also includes setting high customer expectations for service and support, and consistently meeting or exceeding those expectations.

Longtime Agilent customers know our commitment. Our newly expanded portfolio, brings us many new customers and we look forward to demonstrating how Agilent's approach to "relentless innovation" will work to your advantage too.

Chemical Analysis Solutions

Food

From high-volume screening of vegetables for large numbers of pesticides, through rapid identification of pathogens, Agilent understands the analytical needs of food producers, shippers and regulators. When a new toxin appears, we deploy substantial resources to quickly help customers develop robust, reliable methods. Agilent is also at the forefront of applying biological techniques to food analysis.



Environmental

Agilent offers more than 40 years of environmental analysis and regulatory expertise. We help government and private labs with the full range of assays, from routine testing of soils for heavy metals through detection of pharmaceuticals in groundwater in concentrations down to parts-per-trillion.

Energy and Fuels

Agilent collaborates closely with process industry customers to offer analytical systems to meet their needs for separation, detection, throughput and support. We’ll even preconfigure custom or standard analyzers so they arrive at the lab ready-to-go. Agilent’s expertise in both chemical analysis and life science is a powerful combination for researching and producing biofuels, including a wide range of analytical techniques for fatty-acid methyl ester (FAME). Our newly-expanded portfolio also offers powerful tools for developing and producing photovoltaic films and solar panels.

Forensics

Because the careers of world class athletes and many other individuals hinge on drug testing, it’s critical that those doing the testing have the highest level of confidence in the results. Forensics analysts worldwide have grown to depend on Agilent tools for accuracy, reliability and speed in this high stakes, high throughput field. Our best selling GC, GC/MS and popular LC and LC/MS are workhorses in forensics labs.

Traditional Lab Informatics

The ways labs generate and store data profoundly affect their efficiency. Agilent offers a comprehensive selection of software, ranging from industry-leading instrument control and data systems through an innovative “laboratory operating system” that provides a fully searchable archive for all data, regardless of file type. Agilent lab IT systems facilitate collaboration around the world or across town.

Materials Science

Agilent offers a newly expanded portfolio of instruments used for the research, manufacturing and testing of advanced materials, from precision optics through pulp and paper. Tools for atomic absorption spectroscopy, molecular spectroscopy, X-ray crystallography and nuclear magnetic resonance support continuous progress in materials science.

Life Science Solutions

Biopharmaceutical

As “multi-omics” studies gain momentum in the search for new therapeutics, Agilent is uniquely positioned to provide the instruments, reagents and powerful software needed to perform experiments in multiple disciplines and combine the massive amounts of data into biological insight.

Pharmaceutical

Drug manufacturing requires the accuracy, sensitivity and high throughput of other analytical applications, with the added demands of regulatory record-keeping and validation requirements. Agilent provides a potent combination of rugged, high-throughput tools along with unmatched compliance services. Agilent now offers the market-leading family of dissolution apparatus and sampling systems that pair perfectly with our HPLC and UV systems.

Proteomics

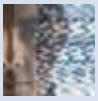
Research into how large sets of proteins affect the health of an organism requires special sets of analytical tools. Agilent has built a formidable arsenal of liquid chromatograph/mass spectrometers, bioinformatics systems, multiple affinity protein removal columns and OFFGEL electrophoresis for protein identification and protein biomarker discovery. Accurate Mass mass spectrometry and the microfluidic HPLC-Chip/MS are two Agilent innovations speeding the work of proteomics researchers around the globe.

Metabolomics

These collections of small molecules are increasingly being seen as rich sources of biomarkers, but studying metabolites presents many challenges. Molecules are constantly entering, leaving or changing within the metabolome, underscoring the need for speed, accuracy and powerful interpretation capabilities in looking at chemical profile snapshots. Agilent’s GC, LC, NMR and MS portfolios align well with needs of metabolomics researchers, along with the company’s excellent bioinformatics offerings, the user-customizable METLIN metabolite database for LC/MS and the industry’s first commercial GC/MS retention time locked metabolite library.

Genomics

Agilent is a global leader in microarrays, scanners, and reagents used in a wide variety of genomic-based disease research experiments. Agilent’s SureSelect Target Enrichment System dominates the category, streamlining next generation sequencing studies worldwide. We offer a wide range of catalog microarrays and a highly-developed capability to produce custom arrays thanks to ink jet-based SurePrint fabrication and the eArray on-line design tool. All Agilent microarrays feature highly-sensitive, selective 60 mer probes. With as many as eight arrays printed on a standard 1-in. x 3-in. slide, the cost per experiment becomes very affordable.



Life Science Informatics

Mirroring its extensive instrument portfolio, Agilent offers the industry’s most extensive portfolio of bioinformatics software, helping users derive knowledge from complex genomic, proteomic, metabolomic and other biologic data. This includes DNA Analytics for analyzing CGH, ChIP and methylation microarray data. The GeneSpring suite includes informatics software for microarray-based gene expression data, genotyping data and GeneSpring MS useful for analyzing mass spec data from proteomics and metabolomics experiments. Scientists can compare complex datasets to explore biological questions from multiple perspectives.

Lab Automation

To meet the skyrocketing demand for more throughput and automation, Agilent has substantially expanded its lab automation offerings. The Velocity 11 lines of liquid handlers and microplate processors are designed to streamline high-volume life science workflows. Agilent is also continually upgrading its advanced autosamplers for LC, GC, LC/MS and GC/MS, adding functionality and speed to reflect the performance of its advanced instruments.

Vacuum Technology

Agilent works with customers to solve vacuum challenges from experiments in high energy physics to developing systems for producing flat panel displays. We manufacture vacuum systems used in our own mass spectrometry instruments as well as those of other manufacturers.

Agilent Atomic Spectroscopy Solutions

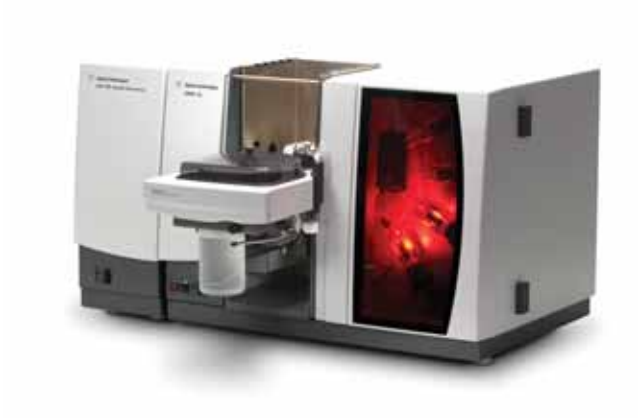
Atomic Absorption Spectrometers

Agilent's AA range is productive, user-friendly and utterly reliable. The instruments enable analysts to extend their performance and output boundaries, while being equally at home in routine laboratories where reliability and simple operation are vital. With the world's fastest flame AA, the world's most sensitive furnace AA, straightforward software and unbeaten instrument ruggedness and reliability, you can be sure that an Agilent AA will give you answers you can trust.

Agilent 240FS and 280FS AA

Agilent's 240FS/280FS AA are the world's fastest, and most productive flame AA systems, with Fast Sequential capabilities ensuring high performance and lower running costs. Able to handle multi-element suites with ease, they are ideal for food and agriculture or any high throughput labs.

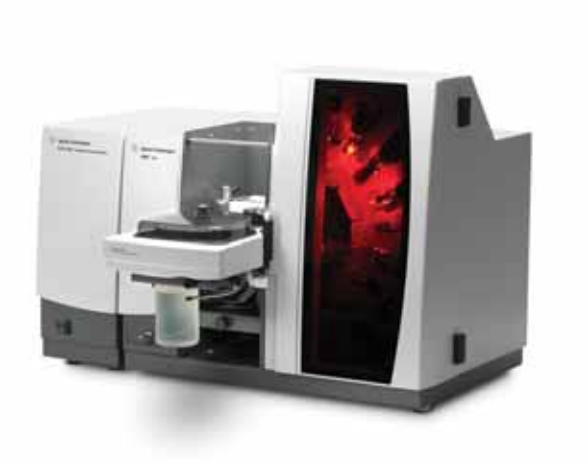
- Determine your entire element suite without repeatedly aspirating samples
- Halve your analysis time by reducing sample analysis delays
- Determine 10 elements per sample in < 2 minutes
- Get full elemental coverage, no matter how many elements you are determining
- Reduce sample consumption — with less delay throughout analysis, less sample is wasted
- Save labor and reduce running costs — the more elements you determine, the more you save on gas, reagent and lamp usage
- Improve precision and accuracy with online internal standard corrections for physical differences, sample preparation errors, or drift
- Compatible with the full range of Agilent AA accessories to provide extra capabilities



Agilent 240Z and 280Z AA

Agilent's 240Z and 280Z AA Zeeman Graphite Furnace AA (GFAA) systems are productive and precise, providing superior furnace performance and accurate background correction.

- Enhanced graphite furnace system performance with correction over the full wavelength range for structured background, spectral interferences and high background absorbances.
- Outstanding performance at ppb levels from the Constant Temperature Zone (CTZ) furnace design
- High sensitivity and freedom from interferences. Competing systems may limit performance by restricting elements, the wavelengths available for analysis, or compromising furnace conditions
- Easy alignment — only a single light source is required
- Most accurate correction with Agilent's unique magnetic waveform providing double the background correction speed of longitudinal Zeeman instruments
- 11-fold improvement in correction accuracy — three point polynomial interpolation accurately tracks the background signal
- Simple setup and operation. Tube-CAM furnace viewing camera and Surface Response Methodology (SRM) furnace optimization wizard aid method development, enabling you to select optimum conditions for your analysis.



Agilent 240FS/240Z Duo AA

The 240FS/240Z Duo AA offers simultaneous flame and furnace operation that delivers the lowest cost per analysis, making it ideal for busy Environmental laboratories.

- Double the productivity of your laboratory — the Agilent AA Duo is the world's only AA system that provides true simultaneous operation of flame and graphite furnace from a central computer
- Save time with dedicated atomizers that eliminate complex setup and time consuming changeovers. Each atomizer is permanently aligned for immediate use and never needs re-alignment
- Analyze any sample, with the widest linear dynamic range from sub ppb (using furnace and hydride techniques) to percent levels (flame)
- Simplify setup and operation with advanced features such as automated wavelength and slit selection
- User friendly software delivers rapid instrument setup, easy operation and simple method development

Agilent 140 and 240 AA

Agilent's 140 and 240 AA combine flexibility with reliable hardware, providing budget-sensitive users with a high performance AA for routine flame/furnace/vapor analyses.

- Full automation, including automatic wavelength and slit selection and easy-to-use software
- High intensity deuterium background corrector for fast response time and accurate correction
- The world's leading flame atomization system with 'twist and lock' assembly and plastic components for durability
- Completely sealed optics and the air purge system make it ideal for rugged environments
- Compatible with the full range of Agilent AA accessories to provide extra capabilities

Agilent 50 and 55 AA

Agilent's 50 and 55 AA standalone instruments are rugged and reliable, making them ideal for remote sites and harsh environments

- High performance, stand alone AA
- High sample throughput using Integrate Repeat
- Simple calibration with direct concentration read-out
- Configured for direct LIMS connection via RS232
- Suitable for challenging conditions

Agilent Atomic Absorption Accessories

Meet your analysis challenges

SIPS 20

- On-line addition of ionization suppressants during analysis, eliminating manual preparation before analysis
- Eliminates tedious, manual preparation of multiple calibration standards. SIPS requires only one calibration standard
- Fast, online dilution — even if your sample is out of the calibration range, you'll get an immediate result
- Enhances accuracy and precision — with < 2% error SIPS reduces manual dilution errors
- Performs online spiking of samples for spike recovery studies
- Automates the tedious task of flame standard addition calibrations when tackling samples with complex matrices
- Enables automated flame internal standardization ensuring enhanced accuracy and precision during extended runs

Combine an Agilent flame AA system with the VGA 77 for a dedicated solution for trace level determination of Hg or hydride forming elements such as As and Se.

Automate your analyses with Agilent's SPS 3 Sample Preparation System and speed up flame AA or ICP-OES even further.

Agilent 700 Series ICP-OES

The world's most productive high performance simultaneous ICP-OES

Agilent's ICP-OES range offers the finest performance, speed and flexibility. The range covers the needs of all users from budget conscious labs to those requiring unrivalled performance and productivity. The 700 Series ICP-OES feature an advanced optical design with temperature controlled optics and no moving parts ensuring superb stability for excellent long term precision. An exceptionally fast warm up time allows you to start analyzing your samples quickly. Agilent's superior plasma performance allows direct analysis of samples ranging from organic solvents to industrial waste and brines, minimizing sample preparation times. With extended dynamic range, robust plasma and one view, one step measurement of major, minor, and trace elements, the Agilent 700 Series ICP-OES gives you maximum confidence in your results.

Dedicated axial and radial versions of each model are available:

- Axially viewed ICP-OES models (710/720/730) are optimized to ensure maximum sensitivity for routine trace level applications with dissolved solids content up to 5%, including the determination of trace and toxic elements in soils and waters. Featuring an innovative cooled cone interface, this eliminates the use of expensive shear gases, saving you money
- Radially viewed ICP-OES models (715/725/735) offer the benefits of robust operation and programmable viewing height so you can select the optimum plasma viewing position to reduce background and eliminate interferences. The radially viewed plasma is vertically oriented, venting exhaust vapors immediately for reduced injector blockage and providing long term stable performance with very high levels of dissolved solids. This makes it ideal for use in chemicals manufacture, wear metals analysis, petrochemical production and precious metals refining

Agilent 710 Series ICP-OES

Agilent's 710 Series offers uncompromised performance for laboratories with low to moderate sample loads performing routine ICP-OES analyses. Easy to use, the 710 ICP-OES series is also ideal for educational institutes and industries that need to comply with WEEE/RoHS directives.

- A large area CCD array detector with over 1.1 million pixels captures the entire spectral image in one reading, ensuring true simultaneous measurements with simultaneous background correction and internal standardization for more accurate and precise results.
- Continuous wavelength coverage provides extended dynamic range and reduced interferences, giving you maximum confidence in your results
- Robust plasma ensures reliable and reproducible results — even with the most complex matrices
- One view, one step measurement of major, minor, and trace elements, plus the fastest warm-up increases throughput and productivity
- Choice of optimized axial (710) or radial (715) configurations to suit your application needs
- Intuitive, powerful, and easy-to-use software

Agilent 720/730 Series ICP-OES

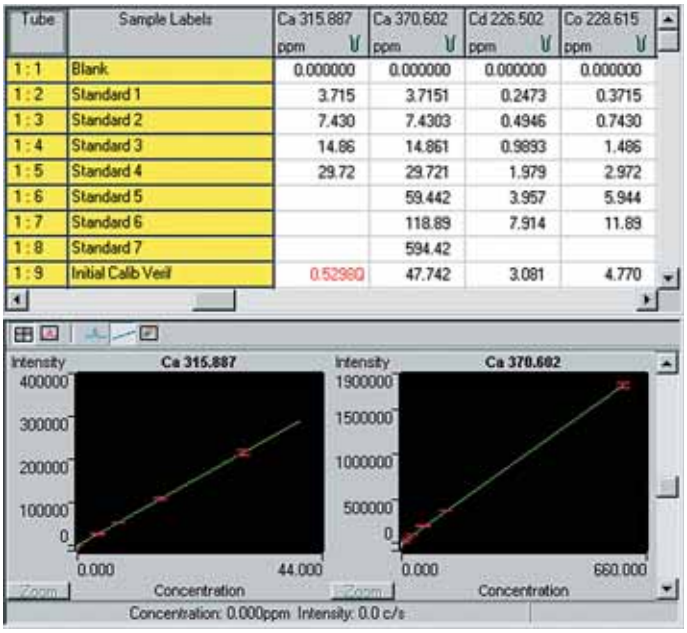
Featuring a custom-designed CCD detector, the 720/730 Series is the world's most flexible, best performing and fastest ICP-OES platform. The Agilent 720 Series is completely customizable, allowing you to match the instrument to your application. Alternatively, choose Agilent's fully optioned 730 Series, which is configured for maximum productivity.

- A custom designed and Unique CCD detector provides full wavelength coverage from 167–785 nm and the fastest readout speed for maximum flexibility and productivity.
- Image Mapping Technology (I-MAP) ensures complete coverage of all wavelengths by arranging 70,000 pixels in an uninterrupted array that exactly matches the two-dimensional optical image. This ensures complete wavelength coverage from 167-785 nm and eliminates the need for multiple measurements.
- Continuous wavelength coverage provides extended dynamic range and reduced interferences, giving you maximum confidence in your results.
- Adaptive Integration Technology (AIT) prevents overrange signals by adjusting the measurement time simultaneously for each wavelength to achieve the optimum signal-to-noise ratio.
- One view, one step measurement of major, minor, and trace elements, plus the fastest warm-up increases throughput and productivity.
- Choice of optimized axial (720/730) or radial (725/735) configurations to suit your application needs
- Completely customizable, allowing you to match the instrument to your application.
- Superior software features providing enhanced productivity and outstanding ease-of-use.
- Switching Valve System provides instant rinse solution to the sample introduction system for fast washout, increasing productivity by 33% and reducing argon consumption by 25%.

Agilent ICP Expert II software for the 700 Series ICP-OES

Agilent's powerful ICP Expert II worksheet software is user-friendly and makes extensive use of wizards and comprehensive multimedia tools to guide you through operation. It also includes a range of flexible performance and productivity enhancing features.

- Innovative MultiCal feature extends the linear range of analysis from parts-per-billion to percentage levels, providing the dynamic range needed for your application using only one plasma view
- Patented Fast Automated Curve Fitting Technique (FACT) resolves complex spectral interferences, ensuring the right result with difficult matrices.
- Fitted background simplifies method development as you don't need to select correction points. This ensures better correction and fast method development so you can start measuring samples sooner.
- For fast and simple method development, AutoMax eliminates manual optimization (720/730 Series only)
- The status display provides an overview of all instrument settings with diagnostics for performance optimization and fast diagnosis. This maximizes operating time and minimizes costs.



Agilent ICP-OES Accessories

The range of accessories of performance and productivity enhancing accessories for the Agilent 700 Series ICP-OES instruments ensures you can meet your most demanding analysis challenges

Combine the SVS 1 with Agilent's SPS 3, the fastest spectroscopy autosampler, for up to 30 % improvement in productivity.

SVS1 Switching Valve System

Make the switch to higher productivity with Agilent's SVS 1 Switching Valve System. The SVS 1 immediately rinses the sample introduction system while the next sample is being presented to the instrument. Excess sample is diverted away from the spray chamber immediately after measurement, reducing sample carry-over.

- Combine the SVS 1 with Agilent's SPS 3, the fastest spectroscopy autosampler, for up to 30 % improvement in productivity (compared to traditional sample introduction presentation).
- The metal- and contamination-free liquid flow path, makes it suitable for analysis of environmental samples, strong acids, hydrofluoric acid and high dissolved solids.
- As sample is aspirated through the torch for a reduced time, deposition within the injector from samples containing high levels of dissolved solids is minimized, improving long term stability.

Argon Saturation Accessory

The Argon Saturator Accessory (ASA) is commonly used when running aqueous samples with high dissolved solids or high dissolved salt content. When using the ASA, the nebulizer gas flow is passed through the saturator to increase the water vapor in the gas. This has been found to be beneficial by reducing the build-up of salt and other dissolved solids in the sample introduction system. By reducing blockages, the ASA ensures uninterrupted, maintenance-free operation.

Agilent 7700 Series ICP-MS

Extraordinary design. Unparalleled performance.

As ICP-MS has evolved into the premier technique for trace metals analysis, Agilent has been at the forefront of development and design, introducing many important innovations and achieving unrivalled sales success. With the 7700 Series, Agilent continues to shape the ICP-MS landscape by increasing performance, reducing interferences and improving productivity – all while making the technology easier to use, maintain and service. The 7700 Series consists of 3 models, the 7700x, 7700s and new 7700e.

Common features across all 3 models include:

- New, fast frequency-matching RF generator – Provides exceptional tolerance to a changing matrix, including switching from aqueous to organic matrices
- 3rd generation Octopole Reaction System (ORS^3) – Works effectively in helium (He) mode, for simplified operation and consistent results, even in complex sample matrices
- Unique, hyperbolic quadrupole – Effective peak separation and the best Abundance Sensitivity specification of any ICP-MS
- Full 9 orders dynamic range – Allows trace and major elements to be measured in the same acquisition, without user-input

MassHunter WorkStation

Provided as a simplified and streamlined "Core" version with the 7700e, and a "Full" version with advanced functionality and full flexibility for the 7700x and 7700s.

Includes full system control for the 7700 Series mainframe and peripherals, with Startup function to ensure consistent operation, and Pre-set Methods to pre-define run conditions for many common applications.

- Interactive Batch-at-a-glance data table showing concentration, RSD,replicate data and more – all updated in real time
- Outlier flagging of values such as count RSD, ISTD recovery, calibration linearity, calibration range, etc. ensures potential analytical problems can be located immediately
- Graphical display of internal standard recovery, QC stability plots, calibration curves and mass spectrum (or chromatogram)
- Flexible reporting – export raw data and processed results for single samples, user-defined selections, or an entire batch to Microsoft Excel or your LIMS

Agilent 7700x ICP-MS

Powerful ICP-MS workhorse for routine, high throughput and high matrix applications

The 7700x is configured for routine analysis of high matrix samples, and includes High Matrix Introduction (HMI) capability for analysis of very high matrix samples as standard. With its high temperature plasma (resulting in lower oxide interferences), matrix tolerant interface and 9 orders dynamic range, the 7700x provides the ideal combination of robustness, sensitivity and analytical range required from a workhorse instrument.

The 7700x ICP-MS also retains the flexibility to handle research applications, and includes features expected from the highest specification ICP-MS systems (such as temperature-controlled spray chamber; separate nebulizer and make-up gas controls; high transmission ion lens and true hyperbolic quadrupole).

High Matrix Introduction (HMI)

- Allows very high sample matrix levels – up to several % total dissolved solids (TDS) – to be run routinely.
- Dilution gas control and sophisticated plasma optimization algorithms give consistent operation from day to day and between different operators

Octopole Reaction System (ORS^3)

- Universal He mode significantly reduces or eliminates matrix-based polyatomic interferences on all analytes, in all sample types – without prior knowledge of sample composition
- He mode gives more reliable data in complex samples, as all polyatomic interferences are removed and no new ones are created, regardless of the matrix
- Provides simplified method development, as the same cell conditions are used for virtually all analytes in all common sample types

Agilent 7700s ICP-MS

High performance for ultratrace semiconductor applications

The 7700s is configured for the ultratrace elemental analysis of high purity materials such as those monitored in the semiconductor industry. With a high efficiency sample introduction system, platinum interface cones, 5th plasma gas line (for addition of optional carrier gases), and second (reaction) cell gas line as standard – the 7700s offers the highest performance for the removal of intense interferences in known and consistent matrices.

With unmatched cool plasma capability, as well as unsurpassed collision/reaction cell performance, the 7700s also delivers industry leading performance for the measurement of easily ionized elements (Li, Na, K Fe and Ca) in high-purity materials, allowing all common semiconductor analytical methods to be performed on the same instrument.

- Enhanced performance in He mode with the ORS^3 cell that provides up to 10x lower LODs compared to the 7500cs
- Reaction mode using hydrogen cell gas as standard, and optional 3rd cell gas line for other reaction gases, such as NH_3 or O_2
- Built-in preset method templates for all common semiconductor applications, including collision/reaction mode and cool plasma, ensure the highest data quality and lowest BECs
- Lower heat output and reduced exhaust vent flow, with a redesigned cooling air-flow management system – particularly important in clean-room installations

Agilent 7700e ICP-MS

Simplified ICP-MS for routine applications

The 7700e includes He mode ORS^3 for reliable interference removal, and core MassHunter software functionality. It provides a simple, highly automated user interface and standardized hardware configuration, for simple operation in a range of common applications.

- Simplified user interface - easy to learn and easy to use
- Pre-set methods and auto-tune ensure consistent performance
- Upgrades to "Full" version software and 7700x/7700s hardware configuration are available

Agilent ICP-MS Sampling Options

Autosamplers and Sampling Peripherals

(Check model compatibility)

- Agilent ASX-520 Autosampler for medium to high sample throughput applications, with rack configurations providing up to 360 vial positions
- Agilent Integrated Autosampler (I-AS) – a covered autosampler with pumped rinse station, ideal for ultra-trace analysis and small sample volumes (as low as 0.5 mL); flexible rack configurations offer a maximum capacity of 89 vials, plus 3 rinse vials
- Inert Sample Introduction kit suitable for high-purity reagents – O-ring-free and manufactured from PFA for the lowest contamination levels and HF resistance
- Organics kit contains the sample introduction parts you need to run volatile organic solvents
- Pre-configured LC-ICP-MS kits are available for turn-key methods, such as separation of As species in urine and water
- Fully heated GC-ICP-MS interface for separation and detection of volatile species

Agilent Integrated Sample Introduction System with Discrete Sampling (ISIS-DS)

Fully integrated discrete sampling solution, providing very fast (<1minute) sample analysis for increased productivity in very high throughput applications

Optional Software

- MassHunter Intelligent Sequencing Software provides the ultimate in QA/QC software functionality in real-time, by comparing measured results against expected values and taking appropriate and flexible QC actions
- Direct setup and control of Agilent's liquid and gas chromatography systems, providing fully integrated LC- or GC-ICP-MS speciation measurement with MassHunter Chromatographic Software
- MassHunter User Access Control Software provides configurable multilevel user access and audit trail capability to record user logon/logoff event information
- 21 CFR Part 11 compliance made easy through integration with Agilent OpenLab ECM

Simplified Tuning and Maintenance

- Simpler, more reproducible optimization with one-click plasma setting and Expert Auto Tuning
- Fastest, most effective and most reliable system optimization program ever developed for ICP-MS and Expert Auto Tuning
- One-touch access to the interface area, and easier sampling cone removal/refitting during routine maintenance

Extensive ICP-MS Supplies Portfolio

From the highest quality ICP torches, sampling and skimmer cones, to our long lifetime electron multiplier detector, Agilent ICP-MS parts and supplies are manufactured to tight tolerances and stringent specifications. They are also rigorously tested to ensure that you'll always get the best performance and results from your instrument

Unrivaled Support

With more than 15 years of ICP-MS leadership and close to 5000 ICP-MS systems installed around the world, Agilent has an extensive and unrivaled support structure in place for ICP-MS users. Worldwide support is available for hardware, software or application questions, delivered by experienced engineers. In addition, Agilent users have access to built-in Preset methods or Standard Operating Procedures (SOPs) for most common matrices and regulated methods, to simplify method development.

Agilent GC and GC/MS Solutions

Agilent 7890A Series GC System

A higher level of GC reliability, productivity and confidence

Adding an exciting new chapter to a 40 year history of GC leadership, Agilent's flagship 7890A GC gives you everything you need to take your lab to the next level of GC and GC/MS performance. The system brings important new analytical and productivity features to the Agilent GC platform, including advanced separation capabilities, simplified routine maintenance and real-time self-monitoring instrument intelligence. Plus, legendary Agilent reliability.

Agilent Performance and Reliability

- 5th-generation electronic pneumatics control (EPC)
- Advanced digital electronics

Higher Productivity

- Faster oven cool down and faster GC/MS oven ramps
- Robust backflush capability
- Advanced automation capabilities

Expanded Chromatographic Capabilities

- Highly flexible EPC design enables more sophisticated analyses
- Optional third detector (TCD) can speed up complex gas analyses, and allows more types of analyses to be run on a single GC
- Fully compatible with Agilent Capillary Flow Technology
- New Multimode Inlet used as split/splitless inlet or with temperature programming and large volume injection capabilities

Easier Operation

- Powerful, chromatographer-friendly software simplifies method setup and system operation and minimizes training time
- Practical, time-saving design features speed up and simplify routine maintenance
- Automated monitoring and diagnostics software tracks consumables usage, monitors chromatographic quality and alerts you to problems before they happen
- Automated monitoring and diagnostics software can track injections and consumables usage.

Turn Top Inlet Sealing System

Convenient new turn top design is built into every 7890 Split/Splitless and Multimode Inlet, allowing you to change liners in less than 30 seconds without special tools or training.

Agilent GC Inlets and Inlet Systems

A broad range of GC inlets and inlet systems

Split / Splitless

For 0.32, 0.25 and 0.10 mm capillary columns and 0.53 mm megabore columns

Packed

For glass and metal 1/4 and 1/8 inch packed columns and 0.53 mm megabore capillary columns

Cool On-Column

Temperature programmable cool on-column for direct liquid injection minimizes discrimination during injection and separates low boiling point constituents selectively

Valves

The reproducible way to introduce gaseous samples to 7890 and 6890 GCs; Call for details

Multimode Inlet (7890 GC only)

Use as a split/splitless, PTV inlet and more; Capabilities include temperature programming and large volume injection to enhance sensitivity, minimize sample decomposition and eliminate needle discrimination

Programmable Temperature Vaporizing (PTV)

Perform large volume injections for low minimum detection limits and less thermal degradation of labile compounds

Volatiles Interface

Facilitates trace level detection of pre-vaporized samples

Turn Top – The Easiest Way to Change Inlet Liners (7890 GC only)

Agilent's Turn Top Inlet Sealing System for 7890 GC is already built into Agilent's Split/Splitless and Multimode inlets; The user can safely and reliably change an inlet liner in as little as 30 seconds without tools

Flip Top – The Easiest Way to Change Inlet Liners (6890 and 6850 GC only)

Agilent's Flip Top Inlet Sealing System for the 6890/6850 GC is a device designed to allow the user to safely and reliably change an inlet liner in as little as 30 seconds without tools; Available exclusively from Agilent

Factory chemically-tested analyzers put you on the fast track to productivity

Save time and money with pre-packaged application-specific components

- Pre-configured and tested GC analyzer
- Checkout sample(s)
- Application-specific column
- Easy to use documentation showing how to run the analysis
- CD-ROM with factory checkout analysis methods, data files and reports

Agilent GC Analyzers

Proven, reliable solutions based on extensive industry expertise

From crude oil, natural gas, and refining – to specialty chemicals or alternative fuels – Agilent offers the most complete analytical solutions portfolio for the hydrocarbon processing industry. Whether you need simple instrument modifications such as substitution of specially deactivated tubing, or standard analyzers based on common industry standards, or customized solutions based on your unique requirements – Agilent GC Analyzers are designed to meet specific applications.

All analyzers are factory pre-configured and tested, including installation and performance verification – plus after–sales support by Agilent's worldwide customer support organization or by our Channel Partners. You will spend less time setting up your analysis methods and more time producing outstanding results, right from day one.

- More than 115 factory-tested SP1 Analyzers, pretested to run analyses in line with industry standards such as ASTM, UOP, EN and GPA
- Fully guaranteed SP2 solutions – sold and supported by Agilent – offer flexible customization, third party detectors, custom hardware and software to fulfill all your analysis needs
- A whole range of expert solutions offered by Agilent Channel Partners – designed, delivered and supported by these partners

Proven, reliable GC Analyzer solutions – backed by more than 40 years of trusted industry partnership

Natural Gas Analysis Solutions

Agilent provides a family of GC analyzers for natural gas and natural gas liquids. Based on the industry-leading 7890A GC system, these analyzers include all software, supplies, methods, and support to help you address your specific measurement and technical business needs. Agilent also offers a natural gas analyzer based on the Agilent 490 Micro GC that provides a complete natural gas analysis in less than 1 minute.

Refinery Gas Analysis Solutions

Agilent provides a family of GC analyzers for natural gas and natural gas liquids. Based on the industry-leading 7890A GC system, these analyzers include all software, supplies, methods, and support to help you address your specific measurement and technical business needs. Agilent also offers a natural gas analyzer based on the Agilent 490 Micro GC that provides a complete natural gas analysis in less than 1 minute.

High-Purity Gas and Monomer Analysis Solutions

Producers of high-purity monomers such as ethylene and propylene face stiff competition and increasingly tight customer specifications. With the catalysts' susceptibility to poisoning and contamination and the high cost of catalyst replacement and plant downtime, impurity measurement becomes critical. Agilent Analyzers for polymer-grade monomers analyze almost everything you desire, including difficult components such as arsine and ammonia.

Transformer Oil Gas Analysis Solutions

Agilent's transformer oil gas analyzers analyze fixed gas impurities and light hydrocarbon compounds in transformer oil. Our solutions include both traditional packed-column and new capillary-based systems, and comply with standard ASTM test methods.

Reformulated Fuels Analysis Solutions

Regulation has made production of motor fuels more complex, requiring more varied analysis. Agilent GC analyzers provide critical information for the effective production and blending of reformulated gasoline by measuring additives such as oxygenates, or aromatic content. Agilent's Deans Switch-based Oxygenates Analyzer allows simplified and fast 2-dimensional GC analysis. Co-eluting peaks on the first column are "cut" into another column of different phase where the co-eluted peaks are separated from each other.

Sulfur Analysis Solutions

Agilent offers a complete portfolio of analyzers for trace sulfur analysis. An Agilent 7890A GC system can be equipped with our enhanced FPDs or highly sensitive and selective SCDs to analyze trace-level sulfur compounds in a wide range of matrices. Factory-tested analyzers are available for sulfur compounds in light hydrocarbons and in natural gas according to ASTM methods.

Biodiesel Analysis Solutions

As with petroleum diesel, biodiesel must undergo extensive chemical analyses before it can be sold as a fuel. This presents new challenges to laboratories using gas chromatography to measure the properties and quality of biodiesel and biodiesel blends. Agilent offers three complete solutions for the most widely run industry-standard B100 methods, plus a new two-dimensional GC solution for biodiesel blends.

These are only a few examples of what is available. For more detailed information on Agilent's hydrocarbon processing solutions, visit our website to download our HPI Solutions Guide or contact your Agilent Representative.

Agilent GC Detectors

A comprehensive selection of detectors

Flame Ionization Detector (FID)

- Designed for maximum sensitivity and ease of use, the most popular and versatile detector
- Flame that can be ignited from keyboard or automatically
- Full digital linear dynamic range (10^7) in a single run

Thermal Conductivity Detector (TCD)

- Universal detector responds to all compounds, excluding carrier gas
- Single-filament, single-column design

Micro Electron Capture Detector (ECD)

- Micro ECD designed for better linearity, sensitivity and reduced susceptibility to contamination
- Nickel plating on the inner surface of the lower cell body to reduce adsorption and degradation of sensitive compounds
- Anode purge to extend cell lifetime

Nitrogen Phosphorous Detector (NPD)

- Optimized selectivity and sensitivity for nitrogen- and phosphorus-containing compounds
- NPD with Blos bead offers robust operation, better stability and longer bead lifetime
- Bead is digitally set from the keyboard and is auto-correcting

Flame Photometric Detector (FPD)

- Selective for sulfur- or phosphorus-containing organic compounds
- Dual wavelength FPD can detect both sulfur and phosphorus in the same run

Agilent 255
Nitrogen Chemiluminescence Detector (NCD)

Sensitive, selective nitrogen detection

The Agilent Nitrogen Chemiluminescence Detector (NCD) is the world's most sensitive and selective chromatographic detector for nitrogen-containing compounds. It uses a Dual Plasma Burner to achieve high temperature combustion of nitrogen-containing compounds to form nitric oxide (NO); a photomultiplier tube detects the light produced by the subsequent chemiluminescent reaction of NO with ozone. Because of the specificity of the reaction, complex sample matrices can be analyzed with little or no interference.

Enhanced performance and ease of use

- PPB-level detection limits
- No hydrocarbon quenching
- Linear, equimolar response to organic nitrogen compounds; also responds to ammonia, hydrazine, hydrogen cyanide, and NOx
- Dual Plasma Burner and Controller also provides an embedded nitrosamines option
- Adapters for simultaneous NCD and FID operation

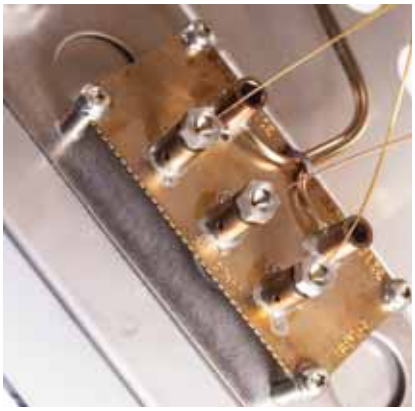
Agilent 355
Sulfur Chemiluminescence Detector (SCD)

Sensitive, selective sulfur detection

The Agilent Sulfur Chemiluminescence Detector (SCD) is the most sensitive and selective chromatographic sulfur detector available. It uses a Dual Plasma Burner to achieve high temperature combustion of sulfur containing compounds to form sulfur monoxide (SO); a photomultiplier tube detects the light produced by the chemiluminescent reaction of SO with ozone. This results in a linear and equimolar response to the sulfur compounds without interference from most sample matrices.

Enhanced performance and ease of use

- Detection limits at ppb-level
- No hydrocarbon quenching
- Linear, equimolar response to sulfur compounds
- ASTM Methods approval
- Adapters for simultaneous SCD and FID operation



Capillary Flow Technology

Small device, big boost in productivity

Agilent's easy-to-use Capillary Flow Technology elegantly solves a problem chromatographers have been wrestling with for decades: How to make reliable, leak-free capillary connections that can stand up to the temperature extremes of a GC oven.

These inert, low-mass, low-dead volume devices not only make it easy to make secure connections, they also give you the ability to precisely divert your gas flow pneumatically, where and when you want. This opens the door to highly useful techniques that can improve your analytical results, as well as saving time and resources.

Capillary Flow modules are available in a variety of useful configurations that can be added to your Agilent 7890A or 6890 GC system.

Backflushing

- Improves data quality for better analytical results
- Reduces cycle time by eliminating long bake-out times for highly-retained compounds
- Reduces maintenance and lowers operating costs by protecting columns and detectors

Deans Switch

- Enables two-dimensional GC ("heart-cutting")
- Allows for lower detection limits of trace compounds in complex matrices
- Allows for backflushing

QuickSwap

- Allows safe disconnection of GC column without venting mass spectrometer and without losing vacuum
- Lets you change columns in about 30 seconds
- Allows for backflushing

Flow Splitting

- Sends sample to multiple detectors to maximize information from a single run
- Helps locate peaks of interest faster, and achieve better integration of target peaks
- Use of multiple detectors provides higher confidence when identifying unknowns
- Allows for backflushing

Agilent LTM Rapid Heating/Cooling System for Gas Chromatography

Increases productivity by reducing GC cycle times

To address the growing need for increased GC productivity, Agilent LTM (Low Thermal Mass) technology interweaves a fused silica capillary column with separate strands of heating, temperature sensing and insulating elements to form an out-of-oven LTM column module. Without the thermal mass of the oven walls and door, the LTM module heats and cools the column much more efficiently and more quickly – allowing significantly shorter analytical cycle times than with a conventional air-bath GC oven.

The Agilent LTM System consists of a replacement door for the Agilent 7890 GC that has built-in electronics and slots for inserting from 1 to 4 LTM column modules.

Add speed and flexibility to your GC analyses

- Direct heating of a capillary column allows ramp rates of up to 1800°C/min (although practical rates depend on column, configuration and desired resolution)
- Fast cooling times – less than one minute for some configurations
- Excellent retention time repeatability comparable to conventional GC
- Run up to four column modules simultaneously with different temperature programs to address more difficult analytical challenges
- Works seamlessly with Agilent Capillary Flow Technology to minimize column maintenance and provide significant new capabilities in multi-dimensional gas chromatography and comprehensive GC
- LTM column modules (30 m maximum length) are available in two column assembly sizes: 5 inch diameter (standard) and 3 inch diameter (small). The standard format provides faster cooling speeds than the small format. As such, Agilent typically recommends the 5 inch standard configuration. The 3 inch (small) configuration is used primarily when 3-4 LTM column modules are installed on the GC.

7693A Series Automatic Liquid Sampler

Inject new performance into your gas chromatography

Agilent's all-new 7693A Automatic Liquid Sampler is a complete redesign of our venerable 7683 ALS, the long-time industry leader. The new system takes advantage of today's latest technology to deliver even greater reliability, performance and flexibility. So whether you have hundreds of samples to analyze, or just a few, the 7693A system gives you sample handling and injection capabilities that are both world-class and best-in-class.

Maximum uptime

- Self-aligning "plug and play" injector mounts in seconds without tools; Can be easily moved from one inlet to another, or quickly and easily transferred between GCs when workloads change
- Greater solvent capacity (>20 mL); Ability to load up to 150 samples allow longer unattended operation
- Lightweight, removable design permits easy inlet maintenance

Enhanced performance and productivity

- Exclusive dual simultaneous injection feature saves time by doubling your sample throughput
- Proprietary Agilent fast-injection technology – 2x faster than any competitive ALS – minimizes needle discrimination and sample degradation
- Next sample overlap capability allows you to significantly decrease turn-around-time by performing pre-run rinses and picking up the next sample before the current run is complete

Unmatched flexibility

- Modular design lets the 7693A ALS work seamlessly with all Agilent 7890 and 6890 (optional controller box required) gas chromatographs; the 7693A injection tower is also supported on Agilent 6850 and 7820 systems
- Easily add features or capabilities as your needs change

Fully customizable injection

- Programmable injection capability lets you optimize for performance, cost-efficiency or unique research requirements
- Variable injection parameters: In addition to two standard injection speeds, you can customize all injection parameters – including injection speed, syringe plunger speed on draw and injection and needle height into the sample vial and injection port
- The 7693A system can also perform simple liquid manipulations on the sample prior to injection; for example, a derivatization agent could be added, the sample vial heated, mixed and then injected into the system – all automatically

New automatic sampler syringes expand capabilities and productivity

Agilent's new "blue line" of syringes is specifically designed to work with the Agilent 7693A Automatic Liquid Sampler for even greater productivity.

- Available in new 250 µL and 500 µL volumes, as well as a full suite of volumes from 0.5 µL to 100 µL
- Deliver better accuracy via alignment with the Agilent autosampler stroke
- Provide longer plunger lifetime before failure
- Show less wear on inlet septa due to a superior needle finish
- Fully compatible with Agilent's earlier autosamplers
- Provide excellent results for low carryover between samples
- Packaged in environmentally friendly, easy-to-open packaging

G1888 Headspace Sampler

Exceptional sensitivity, repeatability, and productivity

Headspace sampling lets you automatically introduce volatile compounds from virtually any sample matrix directly into a GC or GC/MSD system. The G1888 features an inert sample pathway for superior chemical performance without analyte degradation or loss. Its high sample capacity and increased sensitivity ensure excellent performance for a wide range of analytes. The G1888 is the perfect companion for the 7890A GC and together these instruments can significantly improve sensitivity and boost productivity.

- 70-sample tray
- 12 positions in the heating oven
- Multiple headspace-extraction mode
- Integrated ChemStation control software available

Related Supplies

Agilent offers a wide selection of headspace supplies including certified vials, caps and septa.

For more information about Agilent's comprehensive offering of columns and supplies, order the 2011-2012 Essential Chromatography and Spectroscopy Catalog, publication number 5990-6674EN. Visit www.agilent.com/chem/reserve to request your free copy.

GC PAL Autosampler Systems

Expand your lab's injection capabilities with a single autosampler system

You perform several types of injections every day. With the Agilent CTC PAL Autosampler, you can avoid the hassles and extra cost of using separate autosamplers from different companies, while controlling the level of software automation.

The Agilent GC PAL Autosampler System lets you change injectors quickly, allowing you to perform the following techniques on a single autosampler:

- Low-volume injections with minimal needle discrimination and background interference
- High-volume injections up to 500 µL without chromatographic degradation (requires an appropriately configured GC)
- Headspace vial processing that promotes simple, transparent analysis for ultimate confidence in your results
- SPME injections that reduce sample preparation time and eliminate the need for large volumes of extraction solvents

Smooth integration with Agilent GC and GC / MSD systems

Agilent GC PAL Autosampler Systems work with any Agilent 7890A, 6890, or 6850 GC or GC/MSD system. Specialized software controls

are also available for GC ChemStation, MSD Productivity ChemStation, and EZ Chrom. Additionally, Agilent PAL sample injectors are designed to expand your lab's capabilities with features such as:

- A top-mounted design that saves valuable bench space
- Multiple sample vial and well plate options for greater automation
- Integrated software for easy setup, control, and sequencing
- Automated sample preparation and large-volume injection capabilities for greater productivity
- Large tray capacity for higher sample throughput and increased periods of unattended operation
- Temperature-controlled Peltier cooling to prevent sample degradation
- A variety ofAgilent GC PAL-compatible supplies to support your specific applications

Solid Phase Micro Extraction (SPME)

SPME mode can be used in many different analyses, including the characterization of environmental, forensic, food/flavor, and pharmaceutical compounds.

Start with liquid mode for simple, transparent sample processing

- Large-volume injection allows you to inject samples up to 500 µL without the usual degradation in chromatographic performance
- Eliminates the need to concentrate samples through evaporation, which can translate into substantial time savings
- Low-volume injection minimizes needle discrimination and reduces background interference, giving you better results with less work
- Fast injection cycle time, together with the nanoliter injection mode, fits perfectly into the field of fast GC
- With either large- or low-volume injection type, control steps – including fill/inject speed, pre- and post-injection delay times, and pre- and post-injection cleaning – using Agilent's ChemStation software for GC and GC/MSD systems

Add the headspace mode for increased speed and precision

- Simple, straightforward sample analysis
- No dead volume or adsorption effect in sample
- No loops and transfer lines
- The ability to adjust sample volumes without changing sample loops
- Vial pressurization eliminates the need to dilute the sample

Upgrade to SPME mode for ultimate speed and efficiency

Solid Phase Micro Extraction (SPME) reduces sample preparation time and eliminates the need for large volumes of extraction solvents. During this fully automated process, analytes first establish equilibria among the sample matrices. The analytes are then adsorbed onto stationary phases coated with fused silica or metal fibers. Finally, the analytes are thermally desorbed from the fibers to a GC inlet, and later, onto a capillary column. As a result, no solvent injection is necessary. What's more, the analytes are rapidly desorbed onto the column, resulting in improved minimum detection limits and increased resolution.

Agilent 7696A Sample Prep WorkBench

Automate your tedious manual sample prep

Agilent Technologies has developed an automated sample prep instrument that combines common sample prep techniques with an easy, intuitive software interface.

This standalone instrument can be used for the preparation of samples and standards for chromatographic analysis – eliminating the variability of manual techniques and exposure to hazardous solvents.

The Agilent 7696 Workbench offers precise handling of liquids for routine sample preparation protocols such as aliquoting, dilution, standard or reagent addition, liquid/liquid extraction, heating for reactions such as derivitization , vortex mixing, and peltier temperature control of samples and reagents.

Standard Sample Prep

- Dilution / Aliquoting / Reconstitution
- Additions of standards, reagents, etc.
- Heating for Reactions, Derivatization, etc.
- Mixing via spin vortex

Additional Capabilities

- Sample Tray Heating – 50 vial positions
- Sample Tray Peltier Cooling – 50 vial positions
- Dedicated Sample Prep Software
- Liquid/Liquid Extraction

Thermal Desorption

Purchase Markes International Thermal Desorption products directly from Agilent

Thermal Desorption (TD) allows you to introduce volatile and semi-volatile compounds from a wide range of sample matrices, directly into a GC or GC/MSD. Markes TD products are fully supported by Agilent's sales and service network.

For over a decade, Markes International has pioneered and commercialized enhancements to analytical TD instrumentation and associated sampling apparatus. The Markes Series 2 TD platform consists of the UNITY 2, UltrA 2, Air Server 2, and CIA8 products allowing analysis of single tubes, real-time air samples, and canisters with options for automated analysis.

- SecureTD-Q for quantitative repeat analysis
- Electronic RFID tube tagging
- DiffLok caps for sample integrity
- Patented inert valving for compound compatibility
- Electrically-cooled trapping
- Choice of autosamplers for unattended analysis
- Wide range of supplies and sampling equipment

Agilent 490 Micro GC

The ‘measure anywhere’ gas chromatograph

The 490 Micro GC is a rugged, compact, laboratory quality gas analysis platform that always delivers the information you need, whenever and wherever you need it. When the composition of gas mixtures is critical, this fifth generation micro-gas chromatograph generates more data in less time for faster, and better business decisions.

The 490 Micro GC is designed to provide maximum flexibility and ease-of-use for engineers and analysts in a variety of industries. With the 490 Micro GC you benefit from customization utilizing a full palette of options, including optimized sample conditioning to achieve greater sensitivity, performance and practicality. With available autonomous operation, operators can generate measurement results without special training or skills.

- Unparalleled configuration flexibility uses up to four separate GC channels individually or together for completely self-contained operation
- Very fast answers with separations in seconds achieved through the use of narrow-bore capillary, PLOT and micro-packed columns
- Quick and easy start-up delivers results in minutes, making it practical and efficient if you need to change measurement locations frequently
- High performance laboratory quality results improve confidence in your decision making
- Very compact dimensions, with a footprint smaller than the area of this page, open up myriad measurement possibilities, in the laboratory, in the field, on the road and in process
- Convenient array of cabinets and housing types, including 1 or 2 channel, 3 or 4 channel “bench”, 19 in. rack mount, and fully self-contained and portable cabinet
- Maximum flexibility with comprehensive instrument control, data acquisition and report generation with Agilent EZChrom or Galaxie Chromatography Data Systems, for maximum flexibility

Agilent 490-PRO Micro GC

Sensor-like operation with chromatography performance for fast, reliable and fully unattended operation

Designed as a "system" component, the 490-PRO Micro GC does not require an external computer to generate data or results. Instead, it features onboard data collection and integration, and results' generation. The instrument is initially set up via an external computer using PROStation software. Analysis method is quickly established and optimized, and calibration runs conducted and validated. The computer is then disconnected and the on-board data handling system takes over complete operation of the 490-PRO Micro GC. No local operator is required. Measurements are generated according to the onboard method protocol or from an external system. The 490-PRO Micro GC is designed for continuous operation, automatically transferring raw or processed results to an external system (typically a process control computer) via a variety of industry-standard communication protocols, including ModBus, RS-485, TCP/IP, RS-232, and FTP/Webserver.

- Unattended operation frees up staff time
- 19-inch rack-mounted chassis for added convenience for on-line/at-line analysis
- Sampling and sample conditioning devices, such as stream selection valves and Genie membrane filters, can be conveniently mounted within the housing
- No use of flammable gases makes the 490-PRO Micro GC the preferred choice for use in environments where operational safety is of paramount importance

Agilent 7820A GC System

The easy choice for routine analyses

Is your lab looking for better, more reproducible results for all your standard GC analyses, run after run and day after day? Are you looking for proven quality in an affordable solution that maximizes uptime, minimizes maintenance and provides the highest return on your investment? Here's exactly what you've been looking for: the 7820A GC system from Agilent.

Agilent's affordable 7820A GC delivers the reliability you are looking for and performance you can count on, the Ideal for small- to medium-sized labs using standard GC for routine analysis.

Consistent, dependable results

The 7820A GC offers uncompromising GC performance for all your routine applications—including those that must comply with regulatory requirements. Agilent's proven electronic pneumatic control (EPC) and digital electronics ensure excellent reproducibility, as well as reliable accuracy and precision.

Easy to learn and use – for all users

With an intuitive user interface and "minimalist" five-button keypad, the 7820A GC is very easy to operate, even for inexperienced or infrequent users. Because there are no gauges or manual gas knobs, errors are minimized. And with convenient, realworld design features and built-in self-diagnostics, the 7820A GC is also easy to maintain.

Lab-proven quality and long-life Agilent reliability

Why settle for "good enough," when you can invest in quality? With a heritage of more than 40 years of GC leadership, Agilent has earned a worldwide reputation for reliability and uptime under the most demanding operating conditions.

Standard High Precision Inlet

- Split/splitless (SSL) for large bore, wide bore and all capillary columns
- Packed purged injection port (PPIP) for packed columns

High-sensitivity Agilent detectors for every sample type

- Flame ionization detector (FID)—Wide dynamic response range enhances accuracy and minimizes sample prep requirements for samples that contain very high or very low compound concentrations.
- Nitrogen-phosphorus detectors (NPD)—Offers superior sensitivity and selectivity for nitrogen- or phosphorus-containing compounds, such as pesticide residues in food and environmental samples.
- Thermal conductivity detector (TCD)—Single-filament design provides lower noise and higher sensitivity for general purpose applications.
- Electron capture detector (micro-ECD)*—Combines unprecedented sensitivity and linearity with ruggedness and reliability—an ideal choice if your lab is analyzing halogenated organic compounds such as pesticides, PCBs and chlorinated solvents.

Agilent 5975C Series GC/MSD with High Sensitivity Triple-Axis Detector

Proven performance, superior productivity and maximum confidence in your results

The Agilent 5975C Series MSD with Triple-Axis HED-EM Detector is built on a solid foundation of industry leadership, reliability and performance. It combines innovative design features to boost your lab's productivity and advanced analytical capabilities that help you achieve better results faster. Perfectly complemented by the new 7890A GC, the platform delivers all the elements for perfect chemistry: superior performance, unmatched reliability, greater productivity and enhanced ease of use.

Advanced analysis capabilities

- The Triple-Axis Detector combines a next-generation off-axis design and triple-channel electron multiplier for the industry's lowest detection limits
- Synchronous SIM/Scan mode lets you selectively monitor for ions of interest at high sensitivity while simultaneously acquiring spectra at scan rates up to 12,500 µ/s
- Trace Ion Detection lowers your Method Detection Limit (MDL), as well as your Limit Of Quantitation (LOQ), while reducing false negatives

Faster analysis, higher throughput

- Deconvolution Reporting Software, together with new Retention Time Locking databases, dramatically reduce false negative results and post-run analysis time
- Backflush using Capillary Flow Technology reduces the analysis cycle time, minimizes chemical interference from matrix carryover, and extends column life
- In addition to backflush, Agilents proprietary Capillary Flow Technologies provide a wide array of robust enhancements to your separation and daily operations. Tasks such as solvent peak venting and splitting to a parallel detector can be easily automated.

Day-after-day reliability and simple operation

- The inert, ultra-reliable, high temperature ion source maintains optimal peak shape and reduces cleaning requirements, especially when analyzing dirty samples
- High temperature gold-plated quartz quadrupole with 1050 µ mass range stays clean even with complex, high boiling samples
- Simple, automatic tuning takes the trial and error out of system setup, saves time and improves instrument-to- instrument consistency
- Advanced GC inertness is achieved with Inert MS columns, inlet liners and supplies

MSD ChemStation software

- Advanced instrument control, high productivity data analysis and easily customizable reporting features help you get more work done in less time
- Agilent's Retention Time Locking (RTL) is now easier to use and ensures reproducible retention times – instrument-to-instrument and lab-to-lab – anywhere in the world
- Integration with Agilent OpenLAB Enterprise Content Manager (ECM) streamlines data handling and organization

5975 and 5973 GC/MSD Software and Accessories

Deconvolution Reporting Software

Agilent's second generation DRS integrates the power of NIST AMDIS deconvolution into ChemStation QEdit review and reporting. Together with a wide array of Retention Time Locked databases for targeted for specific applications, DRS extracts accurate qualitative and quantitative information that would be missed by standard Scan and SIM GC/MS methods.

MS Spectral Libraries and Retention Time Locked Databases

Agilent's MSD Series has played a key role in generating the spectra contained within every commercial MS spectral library. Full compatibility of these libraries with MSD Data Systems are guaranteed.

Agilent's RTL databases contain spectra, retention times, and the analytical methods optimized for specific applications. The RTL databases combine the certainty of MSD spectral identification with the precision of CFT to optimize the qualitative value of the MS and GC. Each database can be modified to meet the evolving requirements of the method.

	California Department of Food and Agriculture (CDFA)	Deconvolution Reporting Software (DRS)
Number of pesticide hits	37	Same 37 plus 99 additional
Number of false positives	1	0
Time required to process	8 hours	32 minutes

Extend the qualitative and quantitative power of your MSD with Deconvolution Reporting Software (DRS)

NIST AMDIS (Automated Mass Spectral Deconvolution and Identification Software) is now fully integrated with ChemStation QEdit and reporting. It is easier than ever to extract trace analytes from complex matrices and deconvolute coeluting peaks for high quality library searches against Retention Time Locked databases and the NIST library.

Agilent 7000 Series Triple Quadrupole GC/MS System

Target compound analysis at the lowest limits of detection

Agilent's 7000 Triple Quadrupole GC/MS gives you extraordinary sensitivity and selectivity on a routine basis. It delivers lower limits of detection and advanced high-speed GC/MS/MS quantification, even with the dirtiest samples in the most demanding environments. Engineered from the ground up as an easy-to-use GC/MS Triple Quadrupole for day-after-day high performance operation, this breakthrough system is the ideal choice for labs requiring maximum sensitivity, maximum uptime, and maximum productivity.

Whether you are measuring pesticides in food and water, drugs in complex biological matrices, or contaminants in environmental samples, the 7000 system helps you meet the increasing demand for trace-level detection of target analytes. The combination of Agilent's proprietary solid inert ion source, high temperature quartz quadrupole, innovative collision cell design, and new Triple-Axis detector provides industry-leading reliability with femtogram-level sensitivity in complex matrices.

Sensitivity and selectivity you can use every day

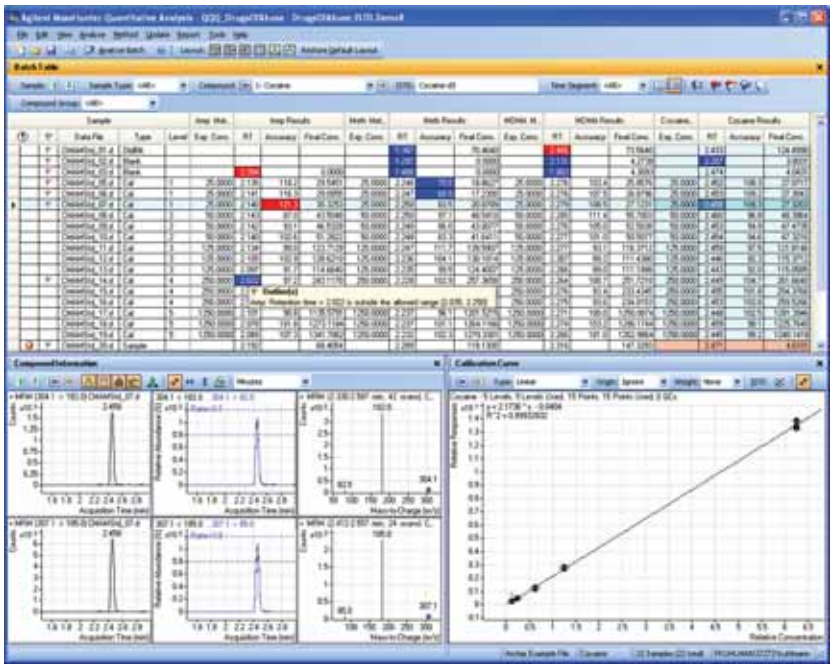
- Routine femtogram-level sensitivity and superior selectivity in complex matrices
- Next-generation off-axis, triple-channel detector minimizes noise and maximizes signal for the lowest detection limits

Faster analysis, higher throughput

- Outstanding data acquisition speed – up to 500 MRM transitions per second – matches the front-end performance of the fastest chromatography without compromising data quality – enabling you to automatically quantify and confirm more targets in a single method
- MassHunter software provides powerful, easy-to-use data analysis; Review and reporting tools let you process more samples in less time with complete confidence in your results

Day-after-day reliability and simple operation

- Inert, ultra-reliable ion source – Agilent's unique, dual-filament ion source design increases productivity and reduces cleaning requirements, especially when analyzing dirty samples
- High temperature, gold-plated quartz quadrupole with 1050 µ mass range stays clean even with complex, high boiling samples – eliminating frequent retuning, time-consuming maintenance and ensuring superior mass analyzer performance
- Proprietary collision cell technology with patent-pending helium quench gas contributes to outstanding high-speed performance without ion ghosting or cross-talk
- Simple, automatic tuning takes the trial and error out of system setup, saves time and improves instrument-to-instrument consistency



Agilent 5975T LTM GC/MSD System

The industry's first transportable GC/MSD system delivering lab-quality analysis in the field

The Agilent 5975T LTM GC/MSD is the first commercial transportable GC/MS system that delivers the same reliability, high performance and quality results as our high-end bench top 5975 Series GC/MSD system – at one-third the size smaller. Now you have a lab-quality GC/MS system that allows you to go into the field with confidence, knowing that you'll get the best performance, and the best results – anywhere – to help you make quick and accurate decisions affecting life, health, and safety.

Performance, speed, and reliability – all in one

- Takes the outstanding performance and advanced design elements of the Agilent 5975 Series MSD
- Integrated LTM column module–for faster separation with short cycle time
- Anti-vibration base for safer transportation
- Oil-free mechanical pump convenient for field application
- Full Agilent 5th generation EPC- proven performance
- Inert ion source- highest performance for active compounds (e.g. polar compounds)
- Heated Quartz Quadrupole -stable performance
- Classical EI spectra- quadrupole technology delivers NIST searchable spectra of unknowns
- 1.8 to 1050u mass range -greatest range of applications
- Split/splitless inlet with full Electronic Pneumatics Control (EPC)
- Liquid auto injector option

Faster analysis on site

- Agilent's proprietary LTM technology providing dramatically faster temperature ramp rates to shorten GC cycle times, and makes it easier to deal with the varied and sometimes difficult analytical challenges you may face in the field.
- Leverages DRS (Deconvolution Reporting Software) and the RTL (Retention Locking Time) database to allow for faster screening and rapid analysis of compounds in the field.
- Vacuum-keeping technology is used to keep the 5975T system in a vacuum state even after the system is turned off. This allows the instrument to be up and running in less time when compared to conventional systems.
- LTM column module is designed for quick and easy installation or exchange of columns while on site.
- Best fit field application with 46% less power consumption, 38% smaller footprint, and 35% less weight compare with Agilent lab bench top 5975C system.

One system for both lab and field use

- The 5975T is not only a powerful on-site monitoring GC/MSD system for rapid analysis in the field – it can also be applied to daily routine analysis in the lab. You can count on reliable, reproducible results – every time, everywhere, in the lab or in the field. You will get the best return from the investment.

Agilent 5975E GC/MS System

Everyday GC/MS reliability and performance made simple

Whether you're performing routine environmental analysis or teaching analytical courses, Agilent's easy to learn and use 5975E GC/MSD can help you maximize productivity for all your routine applications – including those that must comply with regulatory requirements. Now any lab can benefit from Agilent's world-class combination of GC and MS instrumentation, software, and essential columns and supplies.

Dependability and value for your day-to-day applications

Looking for the best value for your routine analysis? Agilent's 5975E GC/MSD increases your uptime so you spend more time running your analysis and less time maintaining the system. The GC/MSD delivers all the consistent, dependable results, and robustness you expect from Agilent at a truly exceptional value.

A bundled system that lets you start your analysis in a fraction of the time

The Agilent 5975E GC/MSD includes a 7820A GC that is easy to operate with a five-button keypad and built-in diagnostics, and arrives ready to perform with a split/splitless inlet, splitless liner, and preconditioned Agilent J&W Low Bleed GC column.

Supports optional 7693A 16-sample automatic liquid sampler and 150 vial tray for greater productivity

Agilent 220-MS Ion Trap System

A powerful, flexible GC/MS for any application

The Agilent 220-MS Ion Trap Mass Spectrometer delivers a flexible platform and outstanding analytical performance with simple, easy-to-use and robust hardware which makes it a valuable tool for every laboratory. The 220-MS offers advanced ionization and scanning techniques to enhance selectivity and lower limits of detection. MS/MS and MSn reduce matrix influences and provide more detailed structural information. Take advantage of liquid or gas reagent based chemical ionization for compound confirmation and increased selectivity.

Agilent 240-MS Ion Trap System

Unparalleled capabilities for both research and routine applications

The most sensitive full scan GC / MS for any application

The Agilent 240-MS Ion Trap Spectrometer delivers exceptional performance and unsurpassed flexibility. The detector can be configured in internal or external ionization modes, offers MS/MS and MSN scanning and provides positive and negative chemical ionization. The 240-MS is the perfect tool to carry out trace analysis in full scan EI or CI modes. The addition of the MS/MS option extends easy quantification and accurate identification of target analytes in complex matrices at very low levels.

Configuration	EI Full Scan	PCI	NCI
Internal	X	X	
External	X	X	X
Hybrid		X	X

MS/MS is available in all modes of operation.

Factory-tested analyzers put you on the fast track to productivity

Save time and money with a factory chemically pre-tested and pre-configured analyzer, including the following application-specific components:

- Checkout samples
- Retention Time Locked column ensuring reliable database matching
- Application-specific database or library
- Promotional QuEChERS sample preparation kit included with the Pesticide Analyzers lets you quickly and easily extract residues from complex matrices
- DRS Video training tools for easy learning of more advanced Analyzer features (only with the GC/MSD DRS Analyzers)
- Quick-start guide and Application Note that show how to run the screening method provided
- CD-ROM with factory checkout analysis methods, data files and reports

Agilent GC/MS and GC/MS/MS Analyzers

Simplify your application startup with ready-to-use workflow solutions

With any new technology, getting started is the biggest challenge. But Agilent Analyzers help you spend less time on set-up and configuration, and more time generating the highest quality results.

Agilent's pre-configured, factory-tested GC/MS and GC/MS/MS Analyzers make it easy to implement the latest technologies with built-in features and pre-packaged components. So you can start producing consistent, high-quality data from day one.

Built-in features make it faster and easier to screen and perform sensitive analysis.

- Retention Time Locking (RTL) for consistent retention times after column maintenance and easy matching with application specific library or database
- Integrated Capillary Flow Technology (CFT) backflush promotes shorter analysis times, lower chemical background, longer column life and less frequent source cleaning
- Deconvolution Reporting Software (DRS) included with the GC/MSD analyzers for fast data review, screening and quantitation
- Sensitive, multiresidue GC/MS/MS analyses in complex matrices with the Triple Quadrupole GC/MS Analyzers – feature excellent sensitivity and exceptional area precision even at a dwell time of 1 millisecond, and an acquisition speed of 500 transitions per second, all with zero cross-talk between transitions.
- Multimode Inlet (MMI) lets you choose from several injection options

Single Quadrupole and Triple Quadrupole GC/MS Pesticide Analyzers

Quickly screen and quantitate large numbers of pesticides and endocrine disruptors in a single GC/MS or a highly sensitive GC/MS/MS analysis. Screening methods conform to the latest worldwide pesticide testing requirements, and save weeks of method development.

Single Quadrupole GC / MS Pesticide Analyzer

Order an Agilent 5975C Series GC/MSD along with an Agilent 7890A GC system with one of the following options:

- SP1 7890-0456: Pesticide DRS Screening GC/MSD Analyzer
- SP1 7890-0457: Japanese Positive List DRS Screening GC/MSD Analyzer
- SP1 7890-0473: Pesticide DRS Screening GC-FPD, micro ECD, MSD Analyzer

Triple Quadrupole GC / MS Pesticide Analyzer

Order an Agilent 7000 Series Triple Quadrupole GC/MS with an Agilent 7890A GC system with one of the following options:

- SP1 7890-0501 Pesticide GC/MS/MS Analyzer with Constant Pressure, Post Column Backflush Method
- SP1 7890-0502 Pesticide GC/MS/MS Analyzer with Constant Flow, Mid-Column Backflush Method

Single Quadrupole and Triple Quadrupole GC/MS PAH Analyzers

Perform sensitive GC/MS or GC/MS/MS analysis for PAHs in environmental and food samples. The combination of QuEChERS and advanced GC/MS technologies reduces analysis time and improves detection limits.

Single Quadrupole GC / MS PAH Analyzer

Order an Agilent 5975C Series GC/MSD with an Agilent 7890A GC system and choose the following options:

- SP1 7890-0528 PAH GC/MSD Analyzer with post-column backflush method
- SampliQ QuEChERS sample preparation kits: 5982-5755, 5982-9313, 5982-5158, 5185-5833

Triple Quadrupole GC / MS PAH Analyzer

Order an Agilent 7000 Series Triple Quadruple GC/MS with an Agilent 7890A GC system and choose the following options:

- SP1 7890-0522 PAH GC/MS/MS Analyzer with post-column backflush method
- SampliQ QuEChERS sample preparation kits: 5982-5755, 5982-9313, 5982-5158, 5185-5833

GC/MSD Forensic/Toxicology Analyzer

Quickly screen and quantitate large number of target compounds in complex matrices, all within a single analysis. Its full-scan EI methods give you many advantages for broad-range screening, such as unlimited targets, full-spectrum identity confirmation and library searching for non-target identification.

Order an Agilent 5975C Series GC/MSD along with an Agilent 7890A GC system with the following option:

- SP1 7890-0458: Forensic/Toxicology DRS Screening GC/MSD Analyzer

GC/MSD Semi-Volatiles Analyzer

Quickly screen and quantitate large numbers of target compounds in complex matrices, all within a single analysis. Its built-in features include Deconvolution Reporting Software (DRS), plus a semi-volatiles library with 338 single-component analytes from EPA methods 525 and 8270.

Order an Agilent 5975C Series GC/MSD along with a Agilent 7890A system with the following option:

- SP1 7890-0459: Semi-Volatiles DRS Screening GC/MSD Analyzer

Best solution for any application and any budget!

For utmost flexibility Agilent has created a continuum of products – from compact instruments for routine LC to ultrahigh performance LC/MS systems. Choose the best configuration to optimize every part of your laboratory operations and be assured that each system can be enhanced as required to meet future challenges.

Agilent LC and LC/MS Solutions

A complete portfolio of scalable LC solutions for multiple performance levels and future expandability

The new Agilent 1200 Infinity Series is infinitely better. It offers a comprehensive portfolio of LC solutions that give you uncompromised chromatographic performance while remaining within the confines of your budget. Whatever your application requires – now or in the future – common technology across the portfolio helps you increase laboratory productivity and decrease operational costs. And because it's from Agilent, you get everything you expect from a chromatography leader with over 40 years of innovative contributions to LC and LC/MS technology.

The Agilent Value Promise – Infinitely better investment protection

Agilent offers unlimited module and system compatibility between the new 1200 Infinity Series and previous 1100 or 1200 Series. This unique capability of Agilent's LC solutions facilitates flexible, stepwise upgrade for any Agilent LC – now or in the future!

Upgrade your current Agilent 1100 or 1200 Series LC system now with a new 1200 Infinity Series module

- Detectors – for higher sensitivity and detection speed
- Pump and autosampler – for support of latest 1.8 µm rapid resolution column technology
- Column compartments – for 8 columns and 24 solvents for fully automated multi-method or method development

Invest in the Agilent 1200 Infinity Series today and be assured that your system can be upgraded in future with any new or enhanced module.

Agilent 1290 Infinity LC System

Infinitely more powerful

The Agilent 1290 Infinity LC is the last word in chromatographic performance providing highest speed, resolution and sensitivity.

- Wide power range up to 1200 bar – deploy any particle type, any column dimensions, or any mobile and stationary phases
- Ultimate method flexibility from conventional HPLC to RRLC and UHPLC – run your existing methods and solve all your LC and LC/MS challenges on one system
- Lower total cost of ownership – get UHPLC productivity at service costs comparable to HPLC equipment quality

Agilent 1260 Infinity LC System

Infinitely more confident

The Agilent 1260 Infinity LC raises the standard in HPLC – without raising the price. It offers new levels of productivity, data quality and robustness to give you highest confidence in your investment.

- 600 bar standard pump pressure, 80 Hz standard detector speed and up to 10 times higher UV detection sensitivity – be prepared for today's and tomorrow's challenges
- 100% compatible with all your HPLC methods – ensuring riskless replacement of existing equipment
- Priced similar to earlier 1200 Series HPLC and markedly below 1200 Series RRLC systems – get enhanced RRLC capability for HPLC price
- Available for isocratic, binary or quaternary solvent delivery – configure a system that exactly matches your needs for chromatographic performance and flexibility

Agilent 1220 Infinity LC System

Infinitely more affordable

The Agilent 1220 Infinity LC is a high quality, integrated system for routine HPLC and advanced RRLC analysis, for maximum return on investment.

- 600 bar power range up to 5 mL/min and 80 Hz detector speed – prepare your lab to take advantage of latest advances in LC column technology
- Full compatibility with all other detectors within the 1200 Infinity Series and with 6100 Series Quadrupole MS – run any existing HPLC or RRLC method
- Uses same technology and parts as 1260 and 1290 Infinity LC systems

Agilent 1200 Infinity Series LC Multi-method Solutions

Infinite flexibility and versatility!

The Agilent 1200 Infinity Series LC Multi-method Solutions offer highly flexible systems that can be used for up to eight columns up to 100 mm in length and up to six columns with lengths of up to 300 mm. Several independent heated zones are available to optimize the temperature for different columns. The systems use a sequence with different methods to automate column and solvent changes. The systems can be combined with sophisticated method development software such as ACD/AutoChrom for ChemStation from ACD/Labs or ChromSword Auto for ChemStation from ChromSword Baltic.

Agilent 1260 Infinity Bio-inert Quaternary LC

Infinitely better for bio-molecule analysis

The Agilent 1260 Infinity Bio-inert Quaternary LC system is a dedicated solution for large bio-molecule analysis. The design of new metal-free components in the sample flow-path and the absence of iron and steel in solvent delivery ensures the integrity of the bio-molecule, minimizes unwanted surface interactions and increases column life-time. This is ideal when working under harsh solvent or pH conditions. The power ranges from lowest pressure for traditional bio-purification columns up to high pressure STM analytical bio-columns. Together with the new Bio-HPLC column portfolio for SEC and IEX and 10 x higher sensitivity, highest resolution per time is achieved for protein and NBE characterization.

Agilent 1260 Infinity Analytical SFC System

Easy-to-use SFC system for superior resolution in chiral separations

Super critical fluid chromatography (SFC) is a seamless extension of conventional HPLC, offering an alternative and attractive separation technology for superior resolution of chiral compounds and trace analytes in pharmaceutical samples. SFC has many advantages over conventional HPLC such as significantly reduced consumption of organic solvent and ultrafast separation at moderate operating pressures using conventional particle size columns. The 1260 Infinity Analytical SFC System provides you with a breakthrough, tenfold increase in sensitivity compared to existing SFC solutions. The system comprises a modified 1260 Infinity Binary LC coupled to an Aurora SFC Fusion A5 module for conversion of gaseous CO_2 to the supercritical state.

- Combined Aurora and Agilent solvent delivery system for delivery of CO_2 flow with same pulseless precision as for water and organic solvent
- Dynamic range greater than 10,000 for measurement of enantiomeric excess and quantification of impurities that are 0.1 percent of the main peak
- Special high pressure SFC detector cell for superior sensitivity and low baseline noise
- Ten- to fifteen fold lower operating costs by using standard grade gaseous CO_2 instead of highly expensive SFC grade liquidified CO_2
- High separation efficiency through low mobile phase viscosity and better diffusion characteristics

Agilent 1260 Infinity GPC-SEC Analysis System

Easy and reliable polymer characterization

The Agilent 1260 Infinity LC system is ideally suited for GPC-SEC analysis. The precision of its isocratic solvent delivery system provides the constant, stable flow rate that is essential to maintain the high resolution of the GPC-SEC column. The high flow precision and the excellent temperature stability of the Agilent 1260 Infinity Thermostatted Column Compartment ensure highest accuracy and precision of molecular weight determinations. Column temperature stability is guaranteed from 10 °C below ambient to 80 °C or alternatively to 100°C.

- Provides interactive and automated GPC-SEC analysis including recalibration and GPC reporting
- Allows internal standard and detector delay corrections and includes narrow, broad, universal and integral calibration
- Complete with validation and automated instrument verification procedures and fully compliant with ISO/EN 13885 and DIN 55672 GPC standards

Agilent 1260 Infinity Purification Systems

High recovery and purity are key issues for the isolation and purification of valuable pharmaceutical and biological compounds. Agilent offers preparative LC solutions for purification of nanogram to gram quantities of samples. Based on Agilent's industry-leading liquid chromatography portfolio, these systems can be tailored to your sample and detection requirements and are supported by a multitude of application examples. Fraction collection can be triggered by UV, mass or other detection signal, or even by a combination of these.

Agilent 1260 Infinity Analytical-scale Purification System

The Agilent 1260 Infinity Analytical-scale Purification System is the most flexible and versatile fraction collection system in Agilent's portfolio and can be easily extended for higher flow rates or converted to a low dispersion version. It can be connected to any Agilent 1260 Infinity pump or detector and is often used as add-on to a typical Agilent 1260 Infinity analytical HPLC system to provide fraction collection capability if needed.

Agilent 1260 Infinity Micro-scale Purification / Spotting System

The Agilent 1260 Infinity Micro-fraction Collection/Spotting System for capillary and nanoflow rates (100 nL/min to 100 µL/min) is designed for collection of small fractions in 96 and 384 wellplate format, vials and Eppendorf tubes. It is capable of spotting nanoliter amounts reliably, precisely and fast onto MALDI targets of all major vendors. The unique liquid contact control mode for droplet deposition in combination with proprietary tip design of the outlet capillary guarantees reproducible deposition of even the smallest droplets without bubble formation or cross contamination.This feature ensures that even at lowest flow rates combined with fast spotting rates the droplets are exactly positioned where they need to be.

1260 Infinity Preparative scale Purification System

The Agilent 1260 Infinity Preparative scale Purification System handles high flow rates up to 100 mL/min for laboratory-scale purification. This system is the premium choice when milligrams to grams of starting material are available for purification. The flow rate range covered is ideal for columns with internal diameters from 9.4 to 50 mm. The system can be deployed as either a workhorse to fulfill the automated day-to-day highthroughput requirements of combinatorial and medicinal chemistry core facility labs or as a method scale-up solution for optimizing the resolution and recovery of individual compounds. This starts with an analytical run and transfers to preparative dimensions.

Agilent 1260 Infinity Low-flow LC Systems

Agilent 1260 Infinity Capillary LC system

Using a unique technology, the Agilent 1260 Infinity Capillary LC system is optimized for capillary LC. A wide range of flow rates expands laboratory flexibility, offering unparalleled sensitivity and reproducibility. The system is ideally suited for both UV and MS applications.

Agilent 1260 Infinity Nanoflow LC System for MS

Nanoflow LC is widely used for high resolution separations and high sensitivity MS detection. The Agilent 1260 Infinity Nanoflow LC system incorporates Agilent's unique Electronic Flow Control (EFC) with active feedback and real time flow adjustment for constant flow delivery to the column independent of system backpressure. After its first introduction with Agilent capillary and nanoflow pumps, EFC with real time flow control is the gold standard for reliable and robust nanoflow performance. Easy to use, the Agilent 1260 Infinity Nanoflow LC simply requires the user to input the desired nanoflow set-point to obtain the precise flow and gradient performance required for retention time reproducibility and stable ion generation essential for high sensitivity nanoflow LC/MS performance.

Agilent 1260 Infinity HPLC-Chip / MS System

The Agilent 1260 Infinity HPLC-Chip/MS system is a microfluidic chip-based technology for nanospray LC/MS. Combined with the high performance Agilent 6000 MS systems, the HPLC-Chip II for LC/MS offers even more overall robustness, reliability and ease-of-use. Applications include proteomics and small molecule analysis. A custom chip program delivers customized success.

Agilent 971-FP Flash Purification System

Automated flash chromatography system for drug discovery

Compound purification with confidence

- The “Guide Me” feature removes the need for complex method development and simplifies choice of conditions to purify your compound.
- Liquid detection modules reduce solvent use during priming of the system, provide uninterrupted solvent supply and tells you when solvent bottles are empty.
- Waste level monitoring and feedback.

Additional functionality

- Enclosed fume enclosure eliminates spillages and significantly reduces exposure to solvent vapor; recommended for occasions when the 971-FP is used outside an extracted fume cupboard.
- Multi-Column Controller connects additional stations for uninterrupted column operation.
- An evaporative light scattering detector, such as the Agilent 385-ELSD, can be directly controlled by the IntelliFlash software. This lets you detect compounds with no UV chromophore, and ensures you don’t lose samples during purification (a flow splitter is required to divert a proportion of the mobile phase into the ELSD).

Flash consumables – An important part of the Flash Solution

- SuperFlash columns in a wide range of different dimensions
- Different column chemistries, including unbonded silica, alumina, aminopropyl, C18, SCX, PLRP-S
- DASi* sample injection modules of different sizes
- Column Performance Test Cartridges
- Flash bulk media

* Dissolve, Absorb, Sample injection

Agilent pre-configured systems for preparative HPLC

Fully integrated, fully automated, modular systems for every application and budget

PrepStar 218

With a wide range of flow rates covering virtually all semi-prep applications.

- Up to 200 mL/min flow rate
- Rugged, single-piston design saves time and seal replacement costs
- Piston wash option dramatically extends seal life in biochromatography applications with high concentration salt buffers
- Self-contained and user-friendly pump heads can be changed rapidly by simply loosening a finger-tight clamp, to provide different flow-rate ranges

PrepStar SD-1

For maximum efficiency from small-particle, prep-HPLC columns

- Up to 500 mL/min flow rate
- Virtual pulse-free solvent flow
- Easy-change pump heads for variable flow-rate ranges
- Seamless scale-up from analytical to prep with one system

PrepStar SD-2

The smallest bench-top prep/process HPLC system

- Up to 1,200 mL/min flow rate
- Designed for economical scale-up
- Excellent reproducibility
- Accurate gradient performance

SepTech Skids

Engineered to comply with typical biotechnology, pharmaceutical, engineering and chemical industry formats (CGMP, sanitary, CIP, CE, Atex, XP, 21 CFR part 11, etc.)

- cGMP compliance – high/low flow and high/low pressure HPLC and Bio-LC (sanitary) systems with standard-process Load & Lock columns up to 24 in. id
- Better separation management – UV, density, flow , pH, conductivity, NIR, high/low level switching valves, and pressure, flow, temperature and vapor monitors
- 21 CFR Part 11 compliance – total control and documentation with LC ReSponder software, with reporting to external databases such as corporate-history depositories

Agilent Load & Lock Systems for preparative and process chromatography

Preparative and process chromatography typically involves multiple, large injections of valuable materials, and flawless purification scale-up capability. The Agilent Load & Lock (L&L) columns combine excellent packed-bed stability with enhanced flow distribution to deliver the highest quality purification with maximum speed, flexibility, loadability, and ease of use. There are two basic Load & Lock self-packed column types that provide high performance; high throughput; and high yield preparative and process purifications: standard L&L columns up to 3 in. id, and LLRP columns up to 12 in. id. LLRP columns are uniquely designed L&L columns, made especially for use with the pilot/process-scale MultiPacker Station.

The MultiPacker Station (MPS) is a compact, mobile, fully integrated packing station, in three different scale-up versions (MPS123, MPS468, and MPS1012) that meet the needs of the multiple-column users. For single-column requirements, Agilent provides fully integrated stand-alone columns from 4 in. id up to 24 in. id.

All columns can have water jackets for temperature control.

Load & Lock Columns

The only column system that provides Dynamic Axial Compression and Static Axial Compression for high quality purification

- Excellent packed-bed stability with enhanced flow distribution delivers high-quality purification with improved speed, flexibility, ease of use, and 20% greater sample loading compared to conventional DAC columns
- Sorbent can be unpacked, cleaned and re-packed if the column becomes contaminated, reducing downtime
- Columns take only 30 minutes to pack, significantly less time than waiting for a supplier to send a new pre-packed column
- Powered by compressed air for safe use with any solvent, even in hazardous locations

MultiPacker Stations (MPS)

The only system that provides self packing capability for multiple column sizes on one packing station. Available in three scale-up size ranges

- The MPS123 with 1 in., 2 in., and 3 in. id standard L&L columns for the laboratory
- The MPS468 with 4 in., 6 in., and 8 in. id LLRP columns for scale-up applications in the laboratory, or at pilot scale
- The MPS1012 with 10 in. and 12 in. id LLRP columns for production

Fully Integrated Stand-alone Load & Lock Columns

Bench-top prep and SepTech process skid systems for high volume and high quality purification in multi-kilogram quantities

- Integrated, mobile and easy to handle hydraulic packing station with individual L&L column starting from 4 in. id and scalable up to 24 in. id
- Available in a number of column lengths and pressure ratings
- Application-driven column solutions also available

Agilent GPC/SEC Instrumentation and Systems

Gel Permeation Chromatography (GPC) / Size Exclusion Chromatography (SEC) is the technique of choice for rapid and reliable characterization of polymer molecular weight and molecular weight distribution. Modular and integrated GPC/SEC instrumentation is available to cover the range of applications from simple room temperature analysis to high temperature analysis of engineering polymers, all with simple intuitive control and in-built safety features. Agilent manufactures a range of GPC/SEC instruments and systems, delivering greater accuracy, reproducibility, and reliability with automated high sample throughput.

Agilent PL-GPC 50 Plus

The complete solution for polymer analysis

Versatile detection

- Completely integrated system including solvent and sample delivery as well as a full range of detector options
- Any combination of refractive index, light scattering and viscometry detectors possible for all common forms of the GPC experiment
- Easily upgraded by the addition of extra detectors

Increased quality

- Column oven operates up to 50 °C, reducing column pressures in viscous solvents to improve column lifetime and chromatographic quality

Easy to use

- Software control through a straightforward and intuitive software interface
- Simple to use and suitable for users with the minimum knowledge of chromatography

Agilent PL-GPC 220

The most advanced GPC/SEC system available

Agilent GPC / SEC Instrumentation and Systems

- Any combination of refractive index, light scattering and viscometry detectors to perform all common forms of GPC
- Easily upgraded by the addition of extra detectors at any time

Reliable performance

- Columns, injection valve and detectors can be heated to 220 °C, the widest temperature range available
- Dual-zone custom-heated autosampler delivers samples without risk of degradation
- All sample-carrying components are heated, allowing analysis of materials that precipitate on cooling, such as polyolefins

Easy to use

- Software control through a straightforward and intuitive software interface
- Simple to use and suitable for users with the minimum knowledge of chromatography

PL-SP 260VS Sample Preparation System

Dissolve and filter GPC samples

The PL-SP 260VS sample preparation system controls heating to 260 °C with programmable agitation. A unique pipettor device efficiently dispenses hot filtered sample solution direct from preparation vials to autosampler vials with minimal handling.

Agilent 6100 Series Single Quadrupole LC/MS Systems

Clearly better confidence, performance, throughput, with day-after-day reliability

From routine QC to research applications, Agilent 6100 Series Single Quadrupole LC/MS Systems deliver unmatched analytical performance and proven day-after-day reliability. Available with performance characteristics to match your needs and budget, they offer best-in-class data quality in a space-saving benchtop package.

For more than 40 years, Agilent's single-quadrupole technology has earned a reputation for robustness and dependability in pharmaceutical and chemical analysis laboratories around the world. The easy-to-use 6100 platform gives you the capability to:

- Rapidly screen compounds and confirm molecular weights
- Purify target compounds in complex mixtures
- Quantitate target compounds
- Identify impuritieshour

Choose from three upgradable configurations to meet your application and performance needs:

- 6120 – Budget friendly and very easy to use—with Agilent's 1120 Compact LC, a perfect workhorse addition for labs just getting into LC/MS.
- 6130 – Flexible, high performance solution ideal for any quantitation application with 3000 amu mass range and 1 pg sensitivity.
- 6150 – Unsurpassed data quality for UHPLC and high-throughput screening and qualitative applications, with faster scan speed (10K amu/sec) and the power of Agilent Jet Stream technology

- Faster acquisition speeds let you take full advantage of the higher throughput of today's faster chromatography such as UHPLC
- Ultra fast ion polarity switching gives you maximum information from a single injection—even with narrow LC peaks.
- Faster injection-to-injection cycle times let you run more samples per hour.
- Widest selection of interchangeable ion sources to analyze a wide range of molecules.

Agilent 6200 Series Accurate-Mass TOF LC/MS Systems

True Hi-Def TOF technology measurably surpasses any other TOF system

The 6200 Series Accurate-Mass TOF LC/MS Systems deliver unmatched speed and performance in a compact benchtop instrument for confirming synthetic compounds, profiling biomarkers, identifying impurities, screening for pesticides or characterizing intact proteins. True Hi-Def TOF technology delivers outstanding TOF performance without any performance compromises.

- Sub-1 ppm typical mass accuracy improves confidence and reduces false positives
- Resolving power up to 40,000 separates compounds of interest from interferences
- Data acquisition rates up to 40 spectra per second assure maximum data quality and compatibility with fast chromatography
- Up to five orders of in-spectrum dynamic range reveal trace-level targets even in the presence of vastly more abundant compounds
- High, femtogram-level sensitivity finds impurities or biomarkers at extremely low concentrations

Agilent 6400 Series Triple Quadrupole LC/MS Systems

Breakthrough sensitivity – now routine for your lab

Whether you are quantifying pharmaceutical candidates, measuring trace-level environmental or food contaminants, or confirming biomarkers, the Agilent 6400 Series Triple Quadrupole LC/MS Systems offer greater sensitivity, productivity, and value than ever before.

- iFunnel technology – dramatically increases the number of ions that enter the mass spectrometer, enabling zeptomole sensitivity for your most demanding analyses
- Innovative, Dynamic Multiple Reaction Monitoring (MRM) – simplifies method development and ensures consistent ion statistics with constant cycle times resulting in greater reproducibility than other methods for peak area measurements
- MassHunter MS Optimizer software – automatically optimizes ion transitions and fragmentor and collision energies for both singly charged small molecules and multiply charged peptides
- Hexapole collision cell – eliminates cross-talk even at very short dwell time, enabling fast, multi-analyte assays
- High-throughput analyses – the Agilent version of the popular CTC autosampler with sample capacities up to 36 plates
- MassHunter Quantitative Analysis software – compound- and sample-centric with unique features like a parameterless integrator that helps you reduce mass spectrometry data to meaningful quantitative results with minimal manual intervention
- Fully customizable reports – enable better-informed and more collaborative decision making

The new 6490 Triple Quadrupole LC/MS with breakthrough iFunnel technology advances performance to provide unmatched quantitative excellence for applications such as environmental analysis, pharmaceutical analysis, food testing, and protein/peptide quantification. The 6490 LC/MS features:

- Unprecedented, six logs of linearity
- Up to 10x higher signal intensities
- Attogram limits of detection
- Zeptomole sensitivity

Agilent 6500 Series Accurate-Mass Q-TOF LC/MS Systems

Sensitive, accurate mass MS and MS/MS analysis

Using the power of Ultra High Definition Q-TOF technology, the 6500 Accurate Mass Q-TOF systems provide superior data quality and advanced analytical capabilities for profiling, identifying, characterizing, and quantifying low molecular-weight compounds and biomolecules with confidence. These Q-TOF systems deliver exceptional MS and MS/MS analyses that support demanding applications such as proteomics, metabolomics, impurity testing, product degradation studies, forensics, food safety, and environmental analyses. .

- Sub-1 ppm MS and 2-ppmMS/MS mass accuracy rivals or exceeds that of more expensive FTMS and orbital trapping instruments
- Resolving power up to 40,000 separates compounds of interest from interferences
- High, femtogram-level sensitivity helps you identify even very low abundance compounds
- Fast data acquisition rates of up to 20 MS or 10 MS/MS spectra/second ensure maximum compatibility with fast LC and high-throughput methods
- MassHunter Software takes advantage of accurate mass MS and MS/MS and high definition isotopic data to facilitate profiling, characterization, identification and Quantitation of compounds in complex mixtures

Relentless innovations for highest performance

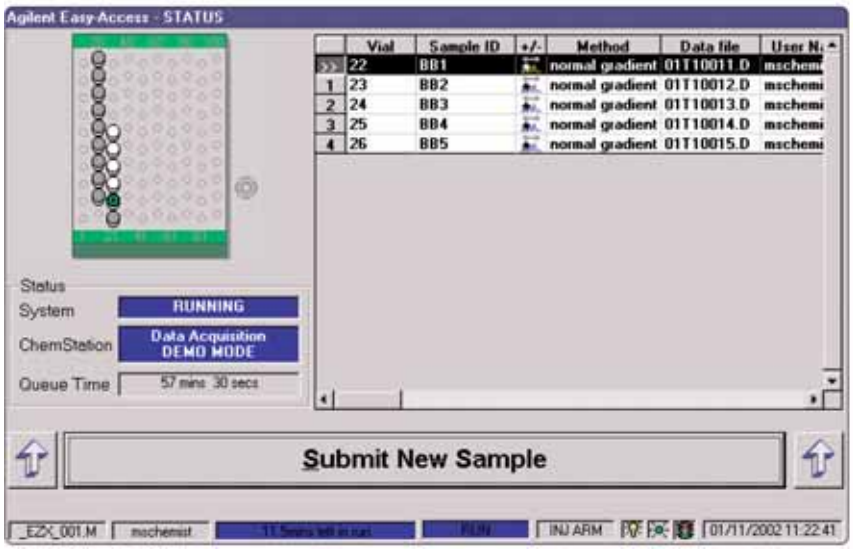
The new 6540 Q-TOF delivers outstanding performance characteristics without speed related performance compromises (sensitivity, dynamic range, isotopic fidelity, mass range) associated with orbital trapping instruments. Ultra High Definition Q-TOF technology enables outstanding mass accuracy , resolution and dynamic range. Combined with Agilent Jet Stream technology, the result is enhanced sensitivity with stronger signals and lower RSD's at the limit of detection.

Easy Access Software

Simplifying access to the power of LC/MS

For casual LC/MS users, or workgroups that share LC/MS instruments, the Agilent LC/MS Easy Access software enables simple, walk-up operation of 6100 Series Quadrupole LC/MS and 6210 Time-of-Flight LC/MS systems. Users can simply "walk up" to an LC/MS system, input simple sample information, and choose from a list of analytical methods or purification schemes. The software shows exactly where to place the samples. Results are emailed to the user's office or laboratory.

- Supports Agilent high-throughput and purification LC/MS systems
- Multiple-instrument networking
- Very simple sample submission and monitoring
- Flexible administration tools
- Automatic e-mailing of data and reports to sample submitters



MassHunter Workstation Software

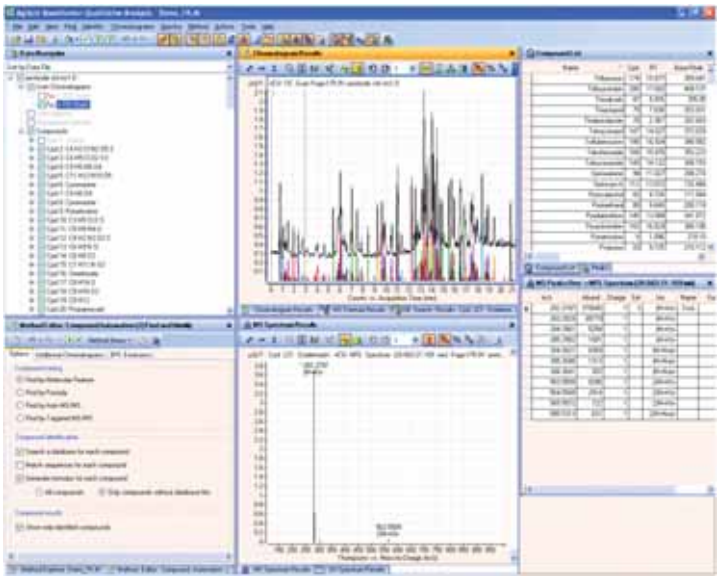
The fastest, easiest way to transform MS data into answers

Agilent MassHunter Workstation software was designed to make your MS analyses faster, easier, and more productive. In addition to data acquisition, and instrument control for your Agilent LC/MS, GC/MS, and ICP-MS instruments, the software incorporates advanced data mining and processing tools that let you rapidly and accurately extract all available information from the compounds in your samples—not just peaks and data points, but answers, with flexible reporting in XML and Microsoft® Excel. MassHunter Workstation software can be complemented by application-specific MassHunter software packages that provide even more power and stream-lined operation for specialized analytical tasks such as expression profiling.

MassHunter BioConfirm

Easily confirm protein and peptide identities

Agilent MassHunter BioConfirm software is ideally suited for scientists who need to support recombinant protein expression and process development, known-protein characterization, or synthetic peptide confirmation. BioConfirm software will help you confirm identities and identify variants before you start expensive testing.



Spectrum Mill for MassHunter Workstation

Faster, more accurate protein identification

Large-scale proteome characterization frequently leads to bottlenecks in data interpretation and review. Spectrum Mill for MassHunter Workstation quickly identifies proteins and peptides via fast database searches, with automatic or manual match validation and unique algorithms that minimize false positives. It also offers de novo spectral interpretation for proteins not found in any database. Spectrum Mill software can identify relative abundance differences of twofold or greater without complicated isotope labeling. And Spectrum Mill summarizes and correlates results in ways that provide maximum insight and convenience.

MassHunter Metabolite ID

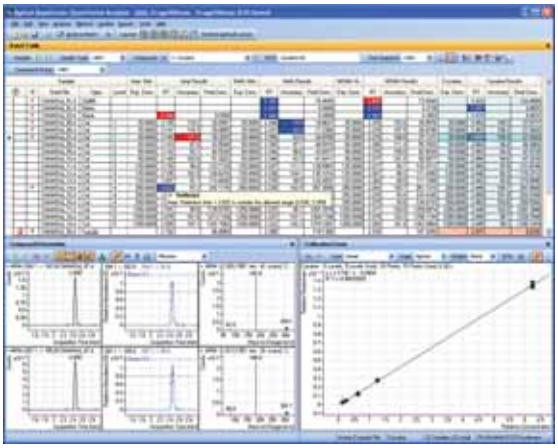
Streamlined metabolite identification

The MassHunter Metabolite ID software vastly simplifies metabolite identification without taking away your choice or control. It is used with the Agilent 6510 Q-TOF LC/MS which delivers the MS and MS/MS data quality of a research-grade mass spectrometer with the reliability and ease of use of a single quadrupole or TOF instrument.

MassHunter Analytical Studio Reviewer

Making drug development decisions faster with higher confidence

The Agilent Analytical Studio Reviewer (ASR) provides fast, flexible, and accurate review and reporting of LC/MS data for small compound characterization, to expedite the development process. The combination of this with Easy Access software—along with Agilent's rugged LC and MS systems—provides a flexible and powerful solution to the ever present need for rapidly obtaining high quality data.



MassHunter Personal Compound Databases and Library

Rapid, cost-effective screening of samples for target compounds

Agilent provides accurate mass (AM) databases that have the greatest amount of application specific content in the industry. Personal Compound Databases (PCDs) reside and can be searched on a local computer, keeping all searches completely confidential with the ability to add proprietary compounds to customize them. The integration of the powerful MassHunter software products with the Personal Compound Databases tremendously increases the speed and specificity of screening analyses.

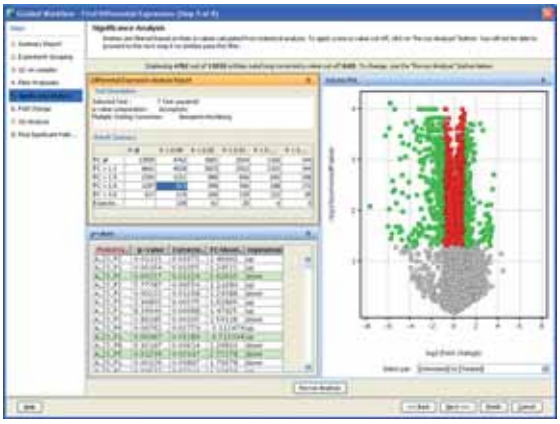
The following databases are available:

- Agilent METLIN Personal Metabolite Database which contains more than 23,000 compounds related to metabolomics, including 8000 lipids for lipidomics studies
- MassHunter Personal Pesticide Database with over 1600 pesticides gathered from five regional regulatory laboratories from Europe and Asia
- MassHunter Personal Forensic and Toxicology Database with about 6700 compounds, including controlled substances (for example, drugs of abuse), explosives, compounds from the World Anti-Doping Agency (WADA) Exclusion List, toxins, and mycotoxins

MassProfiler Professional Software

Explore relationships in complex mass spectral data

Agilent Mass Profiler Professional software is the only chemometrics software package designed to exploit the high information content of mass spectrometry data. Mass Profiler Professional integrates smoothly with Agilent MassHunter Workstation and is ideal for any MS-based application where you need to determine relationships among sample group and variables, including metabolomics, proteomics, food safety, environmental, forensics and toxicology. For metabolomics and proteomics studies, the optional Pathway Architect helps you evaluate MS data in biological context.



Agilent LC/MS Application Kits

Simplify your application startup with ready-to-use workflow solutions

With any new technology, getting started is the biggest challenge. But Agilent Application Kits help you spend less time on method development, and more time generating the highest quality results.

Leading-edge Triple Quadrupole and QTOF LC/MS technologies deliver speed, sensitivity and powerful MassHunter data mining tools. Easy-to-use application packages, available as accessory kits for these LC/MS instruments, include methods of analysis and all the tools and components you need to get started quickly with your application.

- An application-specific Accurate Mass or Dynamic MRM database and/or spectral library for fast screening of large numbers of target or non-target compounds
- CD-ROM with examples of screening methods, data files, and reports
- Agilent application-specific column
- Application-specific test mix
- Promotional QuEChERS sample preparation kit included with the Pesticide Application Kits
- Quick-start guide and Application Note that show you how to run the test mixes and create screening methods

Pre-packaged Application Kits will put you on the Fast Track to higher productivity

Triple Quadrupole LC / MS Pesticide Application Kit

Quickly and efficiently implement target screening methods. The kit features easy-to-use examples, as well as a more than 750-Pesticides Dynamic MRM database and pretested analysis methods using the database for target screening of pesticides routinely monitored around the world.

TOF and QTOF LC / MS Pesticide Application Kit

Simplify your broad-range screening for non-target compounds. Combines pretested analysis methods with powerful software tools to simplify the setup of screening applications. Using QTOF technology allows you to retain all spectral data, not just your original mass range of interest.

Triple Quadrupole LC / MS Forensic / Toxicology Application Kit

Quickly and efficiently implement target screening methods. The kit features easy-to-use examples, as well as a more than 200-compound Forensic/Toxicology Dynamic MRM database and pretested analysis methods using the database for forensic screening of analytes routinely monitored around the world.

Triple Quadrupole LC / MS Pesticide Application Kit

Quickly and efficiently implement target screening methods. The kit features easy-to-use examples, as well as a more than 750-Pesticides Dynamic MRM database and pretested analysis methods using the database for target screening of pesticides routinely monitored around the world.

Triple Quadrupole LC / MS Pesticide Application Kit

Simplify your broad-range screening for non-target compounds. Combines the specificity of an accurate mass database with the confidence of high-quality, accurate mass MS/MS spectra into one personal compound database and library (PCDL). Using QTOF technology allows you to retain all spectral data, not just your original mass range of interest.

The following are required but not included with the Agilent Application Kits:

- Agilent 1260 Infinity Binary LC or 1290 Infinity LC system
- Agilent 6200 Series TOF, 6500 Series QTOF or 6400 Triple Quadrupole LC/MS system
- Agilent MassHunter Software 3.01 or higher

Agilent LC/MS Ion Sources

An LC/MS ion source for every application

Effective ionization is an essential first step to successful mass spectrometry analysis. Agilent Technologies is a leader in ion source technology, with LC/MS ion sources to meet the widest range of applications.

Agilent Ion Sources use highly effective technologies such as orthogonal nebulization and high-temperature, counter-flow drying gas to maximize performance, reliability, and ease of use.

- Patented orthogonal nebulization simplifies operation and reduces maintenance
- Heated counterflow drying gas improves performance
- Dual nebulizer maximizes mass accuracy

Agilent Multimode Source

True simultaneous ESI & APCI to maximize coverage and sample throughput

The Agilent Multimode Source is a true breakthrough in LC/MS ionization – the only ion source capable of simultaneously generating ions by Electrospray Ionization (ESI) and Atmospheric Pressure Chemical Ionization (APCI).

- Maximizes throughput and eliminates reanalysis by acquiring positive and negative ESI and APCI data in a single run
- Eliminates significant loss of data and sensitivity by acquiring data in both ionization modes 100% of the time
- Delivers spectra identical to spectra from dedicated sources
- Powerful infrared emitters accommodate a wide range of LC flows and also drastically reduce drying gas consumption

Agilent Electrospray Source

Electrospray Ionization (ESI) is a mainstay of LC/MS and can be used to analyze large and small analytes. The Agilent electrospray ion source uses our patented orthogonal nebulization and heated counterflow drying gas system to achieve excellent sensitivity and robust, reliable performance. It can generate both positive and negative ions, and ion polarity can be switched on a scan-by-scan basis to double the information acquired from a single run.

The following are special nebulizers that can be added to the standard Electrospray Source:

Agilent Capillary Electrospray Nebulizer

For compatability with capillary LC separations, the standard Agilent Electrospray Ion Source can be equipped with a capillary nebulizer that is optimized for microliter flow rates. No modification of the source is required; you retain all the benefits of orthogonal nebulization and counterflow drying gas. The capillary nebulizer supplies outstanding sensitivity and easy, reliable operation for capillary LC/MS.

Agilent Electrospray Ionization Nebulizer for Capillary Electrophoresis

A specialized CE nebulizer is available to interface a CE system to Agilent LC/MS Systems. It is most commonly used with the Agilent Electrospray Source, but can also be used with our APCI, Multimode, and APPI Ion Sources. No modification of the source is required; you retain all the benefits of orthogonal nebulization and counterflow drying gas. The CE nebulizer operates at ground potential, making CE separation conditions and MS operating conditions independent.

Agilent Nanospray Source

The Nanospray Source provides attomole level sensitivity and gives you the flexibility of using conventional nanocolumns in one-dimensional or multidimensional chromatography to achieve optimum sample separation. The Nanospray Source requires minimal adjustment and is sealed for increased safety when working with potentially hazardous biological samples.

Agilent Atmospheric Pressure Chemical Ionization (APCI) Source

APCI is a popular complement to electrospray ionization and is commonly used to analyze smaller, thermally stable polar and non-polar compounds. The Agilent APCI Source is sensitive, yet extremely robust. It can generate both positive and negative ions, and ion polarity can be switched on a spectrum-to-spectrum basis.

Agilent Atmospheric Pressure Photoionization (APPI) Source

For analysis of compounds that ionize poorly by ESI and APCI, the APPI Source provides a useful alternative. It combines Agilent's proven orthogonal spray nebulization and counterflow drying gas with innovative photoionization from Syagen Technology. The long-lasting krypton lamp emits photons at energy levels high enough to ionize many large classes of compounds, but low enough to minimize the ionization of air and common HPLC solvents.

Agilent iFunnel Technology

The 6490 Triple Quadrupole LC/MS achieves its unprecedented sensitivity from breakthrough iFunnel technology, designed to dramatically increase the number of ions that enter the mass spectrometer. iFunnel technology is a combination of three innovations:.

- Agilent Jet Stream technology, a precision sprayer that surrounds droplets with a sheath of superheated gas to desolvate and concentrate ions near the MS inlet for more effective sampling;
- Hexabore capillary, a circular array of six capillaries spread across the ion-rich part of the Agilent Jet Stream thermal confinement zone for sampling up to six times more ions; and
- Dual-stage ion funnel, an innovation that efficiently removes gas while focusing ions into the entrance of the mass analyzer to provide substantial gains in ion intensities.fluids

Agilent 500 Ion Trap LC/MS

Performance, Productivity, Value

Quantifying target analytes in complex matrices is a challenge. Identifying unknown compounds in a mixture is even more so. The Agilent 500 Ion Trap LC/MS is the tool you need to answer those challenges. Excellent sensitivity over the entire mass range in full scan mode quickly delivers superior quantitation of target analytes even in complex matrices. The system sensitivity, mass resolution, and scan speed reflect the inherent advantages of the ion trap, while the Enhanced Charge Capacity (ECC) extends the number of ions that can be stored. The results are greater sensitivity and reduced background noise for reliable quantitation. TurboDDS Data Dependent Scanning, using exceptional MS/MS and MSn capabilities reveals the structural information needed to identify unknowns. The Agilent 500 Ion Trap LC/MS features:

- Enhanced Charge Capacity to detect trace amounts in a high concentration of coeluting analytes in heavy matrices.
- SelecTemp, and SelectFlow for optimum analysis of thermally labile compounds and reduced contamination.
- Unidirectional triple resonance scanning to improve sensitivity by preferentially ejecting trapped ions toward the detector.
- Easy switching between the standard electrospray ionization source (ESI) and the optional (APCI) source in less than a minute.
- TurboDDS™ Data dependent scanning for automated qualitative analysis.

Agilent Software Solutions

Agilent OpenLAB Software

OpenLAB is a rich, integrated software suite built on a set of customer driven architectural values. OpenLAB delivers superior performance, open systems integration, and investment protection that supports each step in the life cycle of analytical data. OpenLAB delivers an environment without barriers so laboratories can capture, analyze, and share data faster and more efficiently. OpenLAB software:

- Accelerates research and development efforts.
- Optimizes laboratory processes to facilitate problem solving.

OpenLAB CDS

Integrating data acquisition under a single platform, the OpenLAB Chromatography Data System:

- Provides multi-technique, multi-vendor instrument control.
- Supports ChemStation and EZChrom Elite workflows.
- Enables full scalability with central data storage.

OpenLAB ECM

Providing a secure, central repository and rich content services, the OpenLAB Enterprise Content Management System:

- Enables you to automate and optimize business processes.
- Enables searching, managing, archiving, and reporting of your business critical information.
- Manages raw data and human-readable documents of nearly all file types.

OpenLAB ELN

Providing scientists with a way to capture and manage the details from each days' experiments, OpenLAB Electronic Lab Notebook:

- Improves collaboration throughout the lab or across a global enterprise.
- Supports workflows across multiple disciplines.
- Streamlines data capture and retrieval and secures intellectual property.

Agilent OpenLAB Chromatography Data System (CDS)

The Next Generation of ChemStation & EZChrom Elite

OpenLAB CDS is the next generation of Agilent ChemStation and Agilent EZChrom Elite. It is available in two configurations as OpenLAB CDS EZChrom Edition and as OpenLAB CDS ChemStation Edition. Both configurations are administrated from the OpenLAB Shared Services application in the OpenLab Control Panel that is an integral part of OpenLAB CDS. OpenLAB Shared Services manages all administrative, instrument management configuration and system documentation functions.

OpenLAB CDS – part of the Agilent OpenLAB portfolio

The OpenLAB CDS architecture is future proof and makes the solution fully scalable from single workstations to enterprise-wide configuration. OpenLAB CDS uses industry standards e.g. for reporting and instrument control – making it easy for other suppliers to integrate their instruments into OpenLAB, resulting in more powerful advanced reporting paired with unmatched intuitiveness in report template creation.

- Full control for all Agilent chromatographic and single quad LC/CE-MS systems including SFC
- Control of all major non-Agilent chromatographic instrumentation
- Full backwards compatibility for raw data, methods and results to previous ChemStation, EZChrom Elite and OpenLAB ICM revisions
- Independently scalable in storage, administration and instrument access
- OpenLAB Intelligent Reporting as new, intuitive Custom Reporting Module. OpenLAB Intelligent Reporting offers drag and drop report template creation, feature rich reporting including standard and advanced calculation and interactive reporting depending on limit pass/fail events
- Flexible data review and reprocessing workflows to suit the needs of predictable routine and flexible R&D operations
- Support for Pharmaceutical, Chemical and Petrochemical workflows
- Full compliance with 21 CFR Part 11 and GLP and GMP regulations

OpenLAB Control Panel showing central instrument management and Lab-at-a-Glance view

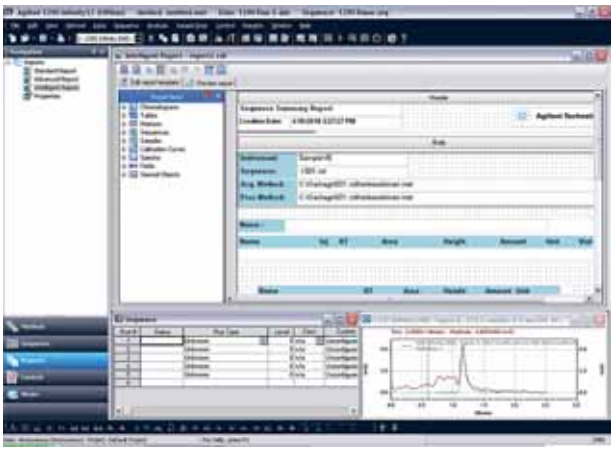
Maximizing Lab Efficiency with OpenLAB CDS

OpenLAB CDS let's you run your lab more efficiently with fewer analytical errors. It provides:

- A common environment for scaling the world's two most popular chromatography workstations – ChemStation and EZChrom – to full networked data systems.
- Full lab-at-a-glance view for optimum instrument utilization with status information for all instruments connected
- The most reliable and most comprehensive control of Agilent and non-Agilent chromatographic instruments
- A single data system with one set of methods and reports for GC, LC, CE, SFC, LC-MS and CE-MS instrumentation
- Faster access to your final results with OpenLAB Intelligent Reporter
- Real dashboard monitoring for your asset utilization

Optimize your analytical performance with OpenLAB CDS and benefit from:

- Consistent instrument control and user interfaces in both EZChrom Elite and ChemStation through the use of patented RC.net technology
- Ability to add control for new instrumentation without changing the software revision with the new modular instrument control architecture
- Ongoing bidirectional real time communication (level 4 instrument control) for secure and uninterrupted instrument control
- ID tags for LC columns or flow cells offering user-independent error-free documentation of key analytical separation parameters
- Data Recovery Card in the Infinity Series detector buffering instrument data even in case of a complete network/connection break down
- Instrument Control for more than 300 non-Agilent chromatographic modules instruments from all major vendors
- Continuous and immediate access to the latest in innovative technology in Agilent's instrumentation at release (e.g. Sample Prep automation on new GC Autosampler, new LTM technology for 7890 GCs, full 80 or 160 Hz dynamic range on Infinity LC detectors)

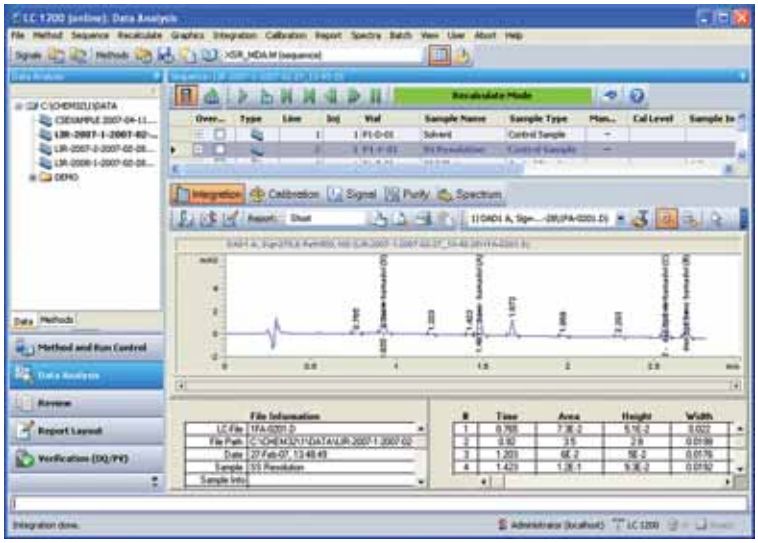


OpenLAB CDS EZChrom Edition

The modern OpenLAB CDS architecture reduces your cost-of ownership and secures your investment because it:

- Is based on Industry Standards which makes it easy to operate and maintain the system components and interface to other applications
- Supports virtualization of Acquisition Controllers and storage
- Offers lower cost per channel supporting up to eight instruments on one Acq Controller
- Ensures full backwards compatibility for all ChemStation, EZChrom and OpenLAB ICM raw data and methods
- Can be configured for full and unlimited access to your instruments - even when the network is down

In essence, OpenLAB CDS gives your analysts more time to work on samples in the laboratory and gives your system administrator an efficient and intuitive way to administer your CDS.



OpenLAB CDS ChemStation Edition

Agilent OpenLAB Enterprise Content Manager (ECM)

Managing Scientific Data

OpenLAB ECM is an enterprise content management system for scientific data. By providing a secure central data repository and rich content services, this fully-integrated solution simplifies lab operation and helps you make more effective use of valuable scientific information resources. OpenLAB ECM manages all your raw data and human-readable documents-in any form, from any supplier.

- Simplifies data searches by ensuring information is immediately available and easy to find within a lab, across a site, or across a distributed global enterprise
- Manages all aspects of a lab's data needs including analytical data, reports, XML files spreadsheets, Word documents, PDF files, molecular drawings, HTML files, email, images, and more
- Makes viewing and sharing data easy with a fully scalable, web-based application that gives users a familiar, consistent interface across multiple analytical platforms

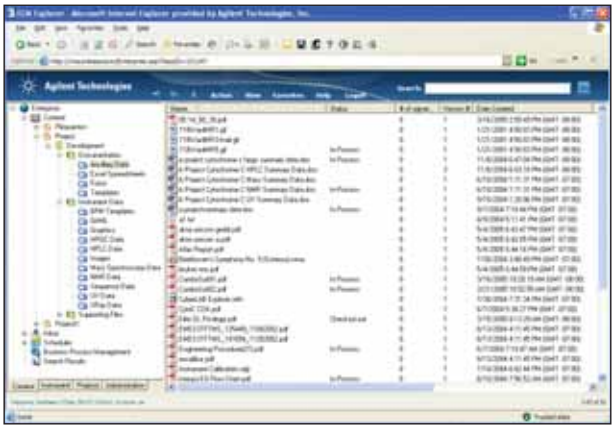
OpenLAB Business Process Manager (BPM)

OpenLAB BPM seamlessly integrates with OpenLAB ECM and across the entire OpenLAB portfolio, optimizing key laboratory and business processes, such as signature approval routing to increase employee productivity, reduce costs, manage risk, and support compliance.

OpenLAB ECM Intelligent Reporter

OpenLAB ECM Intelligent Reporter provides quick, easy creation and generation of complex chromatographic reports. Tightly integrated into OpenLAB ECM, this valuable add-on allows you to:

- Substantially reduce tedious labor required to produce reports
- Increase quality and reduce time to report, review and approve
- Simplify understanding and justification of investment in analysis



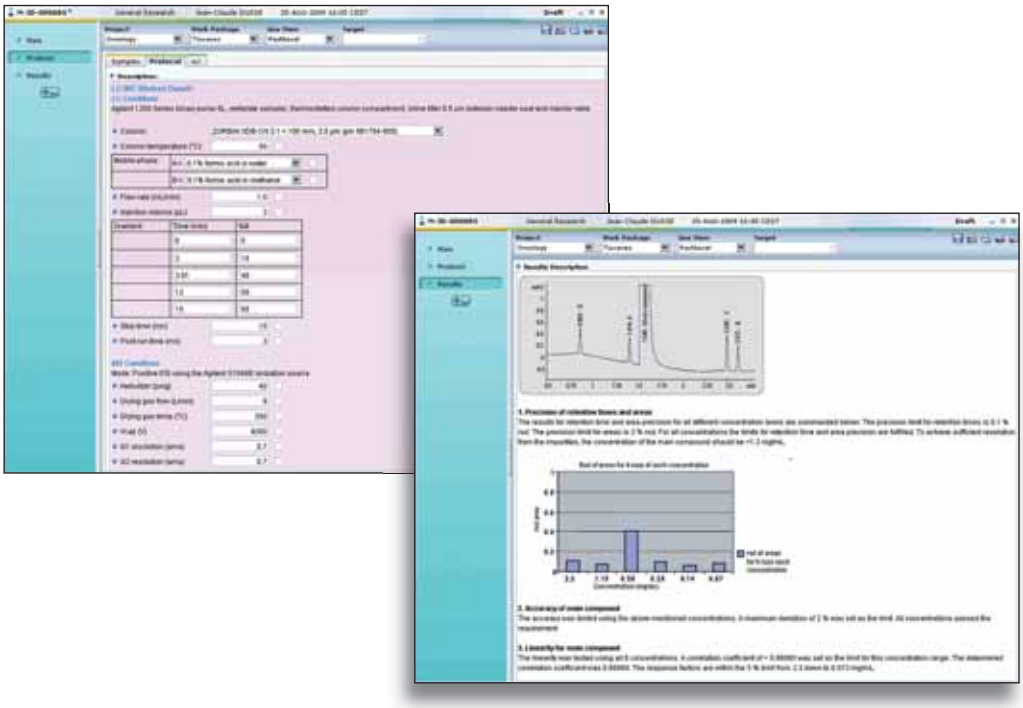
Agilent OpenLAB Electronic Lab Notebook (ELN)

Accelerating research through collaboration

OpenLAB ELN is a flexible laboratory notebook solution that simplifies and accelerates the capturing, managing, and sharing of all types of laboratory information.

A high productivity alternative to traditional paper notebooks, OpenLAB ELN saves valuable analysts' time, shortens the path to results, and expedites better-informed decision-making. It safeguards intellectual property and supports 21 CFR Part 11 requirements through advanced security features, a comprehensive audit trail and robust IP protection capabilities.

- Facilitates cross-team collaboration and productive data sharing throughout your lab or across a global enterprise
- Streamlines data capture and retrieval through an easy to use interface that accepts electronic data from any type of analytical instrument – as well as most other file formats
- Supports workflows across multiple disciplines and integrates seamlessly with your existing processes, as well as scientific data management systems such as OpenLAB ECM



Agilent Dissolution Systems

Agilent Dissolution Systems Overview

Quality and Value Beyond the System

Agilent offers much more than just innovative dissolution products. We provide a complete solution including qualification services, training, SOP guidance and support options, as well as educational seminars, hotline and technical support for equipment, regulatory and method questions, and sponsorship for the vendor-neutral online Dissolution Discussion Group (DDG) forum.

Use Agilent's Analytical Instrument Qualification (AIQ) Services to ensure your instruments are properly maintained. Our documentation and qualification support includes: Installation Qualification (IQ), Operational Qualification (OQ), Performance Qualification (PQ) and Mechanical Qualification (MQ).

Agilent 708-DS Dissolution Apparatus

Better Design, Better Results

The Agilent 708-DS Dissolution Apparatus is designed for testing a variety of pharmaceutical products including tablets, capsules, transdermal patches and membranes. The superior design eliminates or minimizes the chance of errors due to external variables. A highly customizable instrument, the 708-DS gives you the flexibility to configure your apparatus in accordance with your established methodologies and standard operating procedures. The 708-DS platform supports USP Apparatus 1, 2, 5 and 6, including small-volume. A 2-Liter version is also available. New auto alignment features ensure conformance to enhanced mechanical qualification (MQ) standards and the easy access design allow MQ measurements to be taken easily. The Agilent 708-DS is designed with automation in mind and seamlessly integrates with the Agilent 8000 sampling station.

The 708-DS features an intuitive user interface and offers the flexibility to accommodate a range of laboratory workflows. It features:

- A choice of motorized or manual drive unit lift.
- An angled, circulating water bath to maintain constant temperature and simplify draining and cleaning.
- Options for both AutoTemp and Auto Sampling to match your needs.
- A complete, integrated software solution, scalable from a single user to an entire enterprise.
- A touch screen display, supporting multiple languages for easy navigation.
- An optional built-in printer can record key operating parameters for each run.

Agilent Dissolution Automation (UV)

Seamless Integration for Multicell & Fiber-Optic UV-Vis Analysis

As a leader in dissolution and spectroscopy, and through collaboration with our customers, Agilent developed both an online Multicell and a Fiber-Optic UV Dissolution System that save you time and increase your laboratory's productivity and throughput. We combine Agilent's industry-leading dissolution instruments with the award-winning Cary 50 UV-Vis spectrophotometer to create a flexible solution that supports a wide range of methods and products.

Choose the UV System to Meet Your Needs

Both the multicell and fiber-optic options are designed for R&D and QC laboratories. Either configuration allows up to two baths to operate simultaneously using one spectrophotometer. In the dual bath configuration, each bath can be configured to run differing methods. The software is capable of analyzing single and multicomponent products. Multicomponent capability requires optional software.

The choice of measuring in a a flow cell or in-situ will depend on your dosage form as well as existing methodology. Some of the differences are highlighted below.

Advantages of Multicell UV Dissolution

- Best for dissolution testing where sample filtration and/or sample archiving are required.
- Bracketing standard and blank readings taken during each timepoint.
- Allows for sample archiving. The software automatically corrects sample results for volume and analyte loss when the Agilent 8000 is used for sample collection.
- Each vessel position is configured for its own flow cell and tubing, eliminating cross-contamination.

Advantages of Fiber-Optic UV Dissolution

- Ideal for rapid time point requirements with the ability to take readings as often as every 45 seconds. Samples are read directly in the dissolution vessel media, which eliminates possible contamination, carryover and dilution of samples.
- Fiber-optic probe height is programmable. In order to minimize the hydrodynamic disturbance caused by resident dwelling probes, the fiber-optic probe can be either raised out of the media entirely or left with the tip submersed to prevent drying or bubble formation.
- Compensates for samples with excipient and background interferences.
- Cleaning is simple, requiring only rinsing and wiping of the fiber-optic probes and tips.
- Fewer moving parts and consumables reduce long-term costs.

Agilent Dissolution Systems for Extended Release Products

Agilent offers three apparatus for the testing of extended release products. BIO-DIS III Extended Release Testing Station for USP Apparatus 3 is ideal for extended release products or any dosage form requiring release profiling at multiple pH levels. The standard Apparatus 7 is available in both a traditional large volume format as well as the newer small-volume design. The 400-DS Apparatus 7 is a compendial small-volume dissolution apparatus for testing medical devices such as drug-eluting stents as well as other novel dosage forms.

Agilent BIO-DIS III Extended Release Testing Station

The Agilent BIO-DIS III Extended Release Testing Station allows almost any aspect of a test to be programmed including dip speed, time in each row, hold dip time, and drain time.

- Simple programming allows in vitro dissolution pH profiling with biorelevant agitation rates and retention times.
- One instrument can test a variety of different dosage forms, saving valuable bench space. The dosage forms are automatically transported from one medium to the next without operator intervention.
- Select a standard volumetric reciprocating cylinder option or small and large volume configuration to meet needs for low dose or poorly soluble formulations.
- BIO-DIS is compliant with the reciprocating cylinder apparatus, USP Apparatus 3 and EP harmonized specifications.
- The Agilent 8000 Autosampler can be integrated to automatically withdraw samples at designated time points.

Agilent Apparatus 7 Reciprocating Holder Apparatus

The Agilent Apparatus 7 Reciprocating Holder Apparatus features seven shafts for holding various extended-release dosage forms including transdermal systems, osmotic pumps and various combination devices. The dosage forms are attached directly to a specific holder and reciprocated through 2 cm in compliance with the USP.

Two primary configurations are available: The standard system is a 7-position, 6-row platform with 300mL vessels and the small volume 12-position, 12-row platform with 50mL vessels.

- Uninterrupted operation is possible for up to six days.
- Various optional holders are available including: the reciprocating disk, cylinder, pointed rod, spring holder, and angled disk.
- All systems include vessel removable vessel racks for easy transportation.
- A complete set of glassware is available along with sets of evaporation covers and two evaporation control screens.
- Sampling systems based on the Agilent 8000 are available for 7-position and 12-position systems.

Agilent 400-DS Apparatus

The Agilent 400-DS has been developed as a small volume Apparatus 7 which operates at significantly lower volumes of media than the traditional 50mL volumes. The small volume of the 5mL and 10mL dissolution cells, with the ability to handle media volumes as low as 3mL, provides significant gains in sample concentration for UV or LC analysis while virtually eliminating evaporation even when used with organic solvents. The 400-DS was developed for high potency, low dose forms such as drug eluting stents, pacemaker leads, and various ophthalmic dosage forms. It features:

- A heating jacket around the dissolution cell to eliminate water baths and built-in temperature probes to ensure reliable and accurate results.
- Available custom reciprocating holders to test a range of combination drug products.
- Magnetically-coupled agitators allowing holder reciprocation between 5 and 35 dips per minute (DPM) to best match your hydrodynamic requirements.
- A multiport valve for automated media replacement with up to four different media types.
- An integrated autosampler including 13 individual racks containing either 2- or 4-mL HPLC sampling vials for up to 36 time points.
- Sampling ports at the base of the dissolution cell to ensure reliable autosampling at the designated time points.

Agilent 5010 and QAII C

Eliminate Guesswork with Mechanical Qualification

It's essential to know that your dissolution apparatus are set up and functioning properly. The Agilent 5010 Mechanical Calibration System and Agilent QAII C Dissolution Systems Suitability Station will help you do just that. The 5010 provides pharmaceutical laboratories with fast and convenient measurements of shaft centerline and paddle or basket height. The QAII C measures essential parameters without the guesswork including wobble, level, RPM, shaft perpendicularity, temperature and vibration. There are no gauges to interpret. You get a specific value for each parameter. These products are ideally suited to meet the needs of high throughput enhanced mechanical qualification.

Agilent 5010 Mechanical Calibration System

- Fast and accurate digital readings for shaft centering and paddle or basket height measurement.
- Easily calibrated and traceable gauges eliminate visual interpretation of measurements. Digital sensors ensure consistent results.
- Conforms to ASTM and FDA standard practices for mechanical calibration of apparatus using paddles and baskets.
- Line-operation and battery-powered options allow you to quickly move from one apparatus to the next.
- Non-volatile memory stores critical information for up to 30 dissolution apparatus.

QAII C Dissolution Systems Suitability Station

- No interpretation of measurement is required. Data is stored automatically after each measurement.
- Self-prompting menu walks user through the measurement of chosen parameters.
- Designed to work in a 21 CFR Part 11 environment.
- Traceability to NIST standards.
- Works on all major brands of dissolution testers with an open drive unit design.
- Conforms to ASTM and FDA standard practices for mechanical calibration of apparatus using paddles and baskets. Measure a full range of parameters or only the one that you want. Data may be retrieved for mechanical parameter investigation or trending purposes.

Agilent Physical Testers for Pharmaceutical Tablets

A Complete Collection of Tools

Tablets must withstand the rigors of manufacturing, processing, handling and transportation. Physical test apparatus have been developed to verify physical parameter specifications vital to the integrity of dosage forms and compounds. Agilent offers a complete collection of tools for the physical testing of your tablet formulations.

Disintegration Testers

Disintegration devices measure the time it takes for a dosage form to completely disintegrate. Agilent offers a variety of disintegration testers from manual units to automated pass/fail systems. The Agilent 100 Disintegration Tester will automatically lift the basket from the beaker at the end of the test in the pass/fail mode. It features:

- Microprocessor controlled with built-in heater circulator.
- Available in two models: single or three basket design.
- Three-basket unit has three individual time displays for so three independent tests can be performed simultaneously. Meets all USP specifications.
- Optional printer available.

Hardness Testers

Hardness testers measure the breaking force of tablets. The Agilent 200 Hardness Tester is a dedicated hardness tester with a small footprint. This economical, microprocessor controlled instrument is rugged and easy to use.

- Top loading design allows for quick insertion and cleaning.
- Jaws automatically adjust.
- Variety of jaw plates available for almost any tablet size or shape.
- Rugged design can be easily used in production areas for at line measurement.
- Easily field calibrated.

Tapped Density Testers

Tapped Density testers assess the compactibility of powders. The Agilent Tapped Density Tester measures the tapped or packed volumes of powders as well as granulated or flaked materials.

- USP and ASTM models available.
- Single and dual platforms.
- Wide variety of cylinders are available (from 10mL to 500mL).
- Platforms are interchangeable.

Friability Testers

Friability testers determine the tablet and coating integrity. The Agilent Friability Tester determines tablets resistance to chipping and abrasion through tumbling in an enclosed chamber. They are available in either single- or dual-drum configuration.

- Programming allows for a specific time interval or a set number of rotations.
- Agilent's unique two-chamber drum doubles the testing capacity (2 batches can be processed on a single drum model; 4 batches on a dual drum unit).
- Roche (single chamber) drums and Abrasion (non-compendial informational) drums are available as well.

Agilent Automated Dissolution Sampling

Dedicated autosamplers designed specifically for dissolution.

Looking to improve your productivity and eliminate missed sampling time points?

The Agilent 8000 is the answer. The Agilent 8000 is designed to be an integral part of your dissolution equipment. All operating parameters (including those of the dissolution bath) are programmed from the Agilent 8000.

Agilent 8000 Features

- Can be used with all apparatus 1, 2, 3, 5, 6 and 7 (the Agilent 8000 is configured for the type of tester you are using).
- Septa piercing capability eliminates pressure buildup within an HPLC vial and also prevents evaporative loss.
- Choice of pumps: syringe or peristaltic.
- Patented autocalibration block built into systems using peristaltic pumps.
- Optional media replacement capabilities.
- Ability to store up to 15 sampling methods.
- Each program accommodates up to 10 time points per sampling tray; linking programs along with tray. replacement allows for up to 10 additional time points.
- Built-in printer for complete documentation.

Agilent Molecular Spectroscopy

Agilent 8453A UV-Visible Spectrophotometer

Excellent Performance at Unprecedented Speed

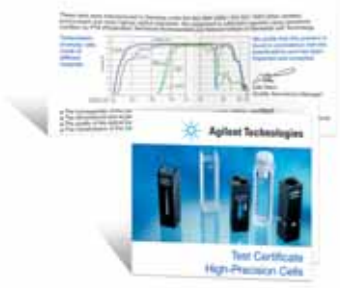
The Agilent 8453 UV-Visible Spectrophotometer features a powerful diode-array for fast scanning, excellent sensitivity, virtually absolute wavelength reproducibility, exceptional reliability, minimum maintenance and excellent optical performance. Direct access to an open cell holder and front panel buttons for triggering makes the instrument easy to use.

Product Specifications

- Wavelength range – 190 to 1100 nm
- Acquisition speed – down to 0.1 s
- Stray light of less than 0.03%

Accessories

- PC controller with ChemStation software
- Multi-cell transport
- Peltier thermostatted cell holder
- Sipper system
- Autosamplers



Agilent high-precision cells are tested to meet the highest optical standards. Every Agilent cell comes with a test certificate, ensuring that the following areas have been tested and are within specifications:

- Homogeneity of the raw material
- Dimensional and angle tolerances of the component parts
- Flatness of the optical surfaces
- Transmission of the cells

Agilent Cary 50 UV-Vis Spectrophotometer

The performance of a Cary with the power of Xenon

The Agilent Cary 50 offers all the advantages of a scanning UV-Vis instrument plus the convenience and speed traditionally associated with a diode array. With a maximum scan rate of 24,000 nm/min and unique Xenon flash lamp technology, the Agilent Cary 50 delivers speed, performance and convenience for budget-conscious laboratories.

Cary 50 features

- With a maximum scan rate of 24 000 nm per minute, scan the whole wavelength range of 190–1100 nm in less than 3 seconds.
- 80 points per second data collection rate provides all the information you need about your kinetics assay.
- The Cary 50 can measure samples up to 3 Abs so you won't have to dilute as often.
- The cost-efficient Xenon lamp flashes only when acquiring a data point and does not degrade photosensitive samples.
- As the Xenon lamp is very intense, the Cary 50 can use a beam splitter without the loss in energy causing excessive photometric noise. The beam splitter allows simultaneous reference beam correction, so peaks will not shift as the scan speed changes.
- The narrow and very intense light beam ensures excellent noise performance whether you performing fibre optic work or using microcells.
- Operate with the sample compartment open or closed — the Cary 50 is unaffected by room light.

Accessories

- The Fibre Optic Dip Probe is a trouble-free alternative to a conventional sipper.
- The Temperature Probe accessory measures the temperature inside the cuvette.
- The Multicell Holder houses up to 18 cells and can be connected to a water bath.
- The Sipper accessory delivers liquid samples to a flow cell.
- The Solid Sample Holders are compatible with a range of sample types.

Agilent Cary 100 & 300 UV-Vis Spectrophotometers

High Performance, flexibility and ease of use

The Agilent Cary 100 is ideal for routine laboratory work, while the Agilent Cary 300 is the cost-effective, research-grade instrument of choice for laboratories doing analyses of biological or highly absorbing samples.

Cary 100 and 300 features

- Quartz overcoating protects the optics from the environment and allows cleaning without damage to their reflective surface.
- Sealed optics prevent exposure in corrosive environments.
- Variable slits enable optimum control over data resolution. The spectral bandwidth is not fixed, and can be set down to 0.2 nm.
- Phase locked wavelength drive prevents peak shifts and peak suppression at high scan speeds.
- Double choppers ensure that the sample and reference beam strike the detector at the same point, removing any errors due to non-uniformity of the detector.
- The large sample compartment compartment provides greater flexibility in sample size.
- All accessories are centrally controlled by the built-in Accessory Controller, which interfaces between the software and accessories. Custom built accessories and external accessories such as titrators, lasers and pH meters can also be controlled.
- The Cary 300 features a pre-monochromator that lowers the stray light levels, and extends the working range of the spectrophotometer past 5 Abs so sample dilutions are not required.

Accessories

- Temperature Probe accessory measures the temperature inside the cuvette.
- Peltier thermostatted cell holders enable enable temperature-controlled measurements.
- Solid Sample Holders are compatible with a range of sample types.
- Polarizer/depolarizers control the plane polarization of the light beam in the spectrophotometer.
- Specular and diffuse reflectance accessories measure the reflectance off a sample surface.
- Photoacoustic spectroscopy (PAS) accessory.

Agilent Cary 4000, 5000, 6000i UV-Vis-NIR Spectrophotometers

Unmatched quality and performance

The Agilent Cary 4000, 5000 and 6000i Series sets new standards for UV-Vis-NIR performance. With unsurpassed photometric accuracy and a wide range of flexible accessories, this research grade series is the only choice for researchers who need to stay at the forefront of their field.

Cary 4000 Spectrophotometer features

The Cary 4000 sets the standard for photometric noise, range and linearity, providing excellent resolution across the UV-Visible spectrum and making it ideal for use as a primary reference UV-Vis spectrophotometer. Cary 4000 features include:

- Wavelength range: 175-900 nm.Optical Isolation System incoporating a 'floating' solid aluminium casting that isolates the optics from external disturbances.
- Schwarzchild coupling optics for maximum light throughput. This produces more accurate measurements at low transmission levels.
- Silica overcoating protects the optics from the environment and allows cleaning without damage to their reflective surface.
- Variable and Fixed slits enable optimum control over data resolution. The spectral bandwidth can be set down to 0.01 nm.
- Out-of-plane double Littrow monochromator minimizes photometric noise and stray light, providing excellent resolution.
- Advanced electronics design means the instruments can typically measure beyond 8 Abs with reference beam attenuation.
- The monochromator and sample compartments have separate nitrogen purging capabilities, allowing the sample compartment to be purged at a higher rate than the instrument.

Cary 5000 Spectrophotometer features

The Cary 5000 combines unparalleled Cary performance with Agilent's innovative PbSmart technology, extending the wavelength range into the NIR to 3300 nm. In addition to the features of the Cary 4000, the Cary 5000 offers:

- Wavelength range: 175-3300 nm.
- PbSmart technology — optimizes the performance of the PbS NIR detector in real time, providing noise and linearity performance never before achieved using this detector technology.

Cary 6000i Spectrophotometer features

The Cary 6000i combines the UV-Vis-NIR performance of the Cary 5000 with an InGaAs (Indium-Gallium-Arsenide) detector to offer unmatched NIR performance. In addition to the features of the Cary 5000, the Cary 6000i offers:

- Wavelength range: 175-1800 nm.
- High sensitivity InGaAs detector — superior signal-to-noise performance over extended range In Gas or conventional lead sulfide detectors. This results in improved detection limits and increased scan rates, giving scan rates, giving cleaner spectra with better resolution in less time.

Accessories

- The Temperature Probe accessory measures the temperature inside the cuvette.
- Peltier thermostatted cell holders enable you to perform temperature controlled measurements.
- Solid Sample Holders are compatible with a range of sample types.
- Polarizer/depolarizers control the plane polarization of the light beam in the spectrophotometer.
- Specular and diffuse reflectance accessories measure the reflectance off a sample surface.

Agilent Cary Eclipse Fluorescence Spectrophotometer

Superior design. Cary performance.

Agilent's Cary Eclipse fluorescence spectrophotometer offers the high performance you've come to expect from a Cary. With Xenon flash lamp technology, plug-and-identify electronics, and feature-packed, intuitive software, the instrument embodies the Cary name.

The instruments have found a home in many of the routine laboratories around the world where their reliability and ease-of-use are vital.

Cary Eclipse FIluorescence Spectrophotometer features

- Choose the collection mode: fluorescence, phosphorescence or chemi/bio luminescence.
- Collect 80 points/second: get all the steady-state fluorescence kinetic data kinetic data that is required. Then display it display it, analyze it, print it and email it to a colleague.
- Scan the entire wavelength range in less than 3 seconds.
- Push the limits of detection, with sensitivity so high that picomolar fluorescein concentrations are measured with ease.
- Photosensitive samples are not exposed to continuous light as the Xenon flash lamp flashes only to acquire a data point.
- With room light immunity for fluorescence measurements, sample size is no longer a restriction — just leave the sample compartment open while collecting data.
- Save bench space — the Cary Eclipse footprint is only 600 mm (24 inches).
- Modular designed software means each application is tailored to meeting a particular analytical requirement, so you are only presented with the options you need.

Cary Eclipse Microplate Reader

The easily-installed Microplate Reader accessory turns the Cary Eclipse fluorescence spectrophotometer into a Microplate Reader in less than 30 seconds.

- Measure 96 wells in less than 50 seconds and 384 wells in less than 90 seconds.
- Perform a full wavelength scan on each well within minutes.
- Measure samples in steady-state fluorescence, phosphorescence, bio-/chemi-luminescence or time-resolved delayed fluorescence modes.
- Customize measurement positions for non-standard microplate or substrates.
- Measure minute sample quantities deposited on the sides or base of the wells.
- Automatically align the excitation beam on your microplates.
- Use it as an x-y transport transport if the requirements includes measuring samples such as gels, films and solids.

Agilent 600-IR Series FTIR Spectrometers

The world's best FTIR

The Agilent 600-IR Series FTIR spectrometers provide unrivaled analytical performance under real-world conditions. The 600-IR Series delivers performance, reliability and flexibility, with a full upgrade path from the Agilent 660-IR through to the Agilent 680-IR FTIR.

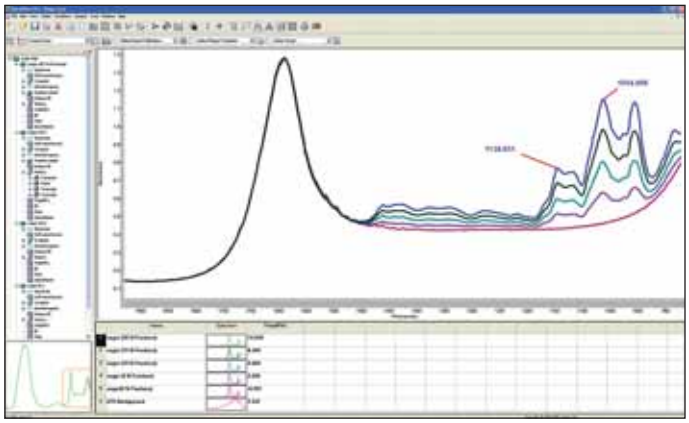
The Agilent 660-IR FTIR is a versatile high-performance spectrometer designed to meet your routine and research needs; while the Agilent 670-IR and 680-IR FTIR are research-grade spectrometers in a class of their own, designed to extend performance boundaries in application areas such as polymers/materials, pharmaceuticals, biotechnology and chemicals.

- Highest signal-to-noise (S/N) performance — up to four times better than any other available FTIR, to provide the highest sensitivity and productivity.
- Best spectral resolution and fastest kinetics speeds, providing information-rich results without expensive upgrades.
- Full upgrade path from the Agilent 660-IR FTIR through to the 680-IR FTIR.
- Comprehensive range of options such as step-scan, TGA-IR, FT, microscopy and chemical imaging, to meet all types of application needs.
- Intelligent electronics for accessory and component recognition, providing seamless changeovers and automatic method optimization.
- Robust and reliable hardware with unique, powerful, intuitive software for ultimate productivity.

Resolutions Pro software — powerful, flexible and easy to use

Whether you are performing routine measurements or cutting edge research, with Resolutions Pro software you will be able to acquire, process, analyze and manage your FTIR data quickly and easily.

- 'Method Editor' enables users of all levels to easily set up a method and start a measurement from one window.
- Plug-and-play accessory and component recognition detects instrument configurations and automatically optimizes the method ,to allow minimal set up time and more time on analysis.
- Drag and drop report elements such as spectra, method parameters, and peak tables to quickly and easily customize reports.
- Access to ALL original data, including sample and background interferograms and post-collection
- transformations — allows determination of how the data was collected and manipulated, and ensures complete data integrity.
- Spectral searching tools assist in unknown identification and material verification.
- Advanced data collections such as step-scan, high speed kinetics, microscopy, and imaging, are all available in ONE software package.



Whether you are performing routine measurements or cutting edge research, with Resolutions Pro software you will be able to acquire, process, analyze and manage your FTIR data quickly and easily.

Accessories

- Attenuated total reflectance (ATR) accessories.
- Diffuse reflectance (DR) accessories.
- Near and mid IR fiber optic accessories.
- PM-IRRAS accessory.*
- Large sample (LS) accessory.
- Universal reflectance/sampling accessory.

*Only compatible with 660/670/680 spectrometers.

Agilent 610/620 Series FTIR Microscopes

See More Than Ever — Fast!

Agilent 610/620 Series FTIR Microscopes are the highest performing, most versatile FTIR microscope and spectrochemical imaging systems. The 610 is a single element detector FTIR microscope ideal for characterizing small and heterogeneous samples. The 620 extends microscopy to true Focal Plane Array (FPA) imaging, enabling you to collect hundreds to thousands of spectra simultaneously. The series offers the complete solution — from single point analysis to mapping to chemical imaging — enabling you configure the system to your needs.

Agilent 610 / 620 Series features

- Superior sensitivity at high spectral and spatial resolution, reducing measurement time and maximizing productivity.
- Versatile, easy to use software, making microscopy and imaging accessible to all users.
- Micrometer-to-meter measurements using the patented large sample microscope objective, to analyze a wide range of samples.
- Multi-measurement modes including transmission, reflection, Attenuated Total Reflectance (ATR) and grazing angle.
- Patented ATR micro and macro imaging, to extend traditional imaging measurements to new boundaries, reducing sample preparation and improving spatial resolution.
- Patented 'view-thru' apertures allow you to easily view the entire sample, to quickly select the area of interest for measurement.
- Complete access to all raw data for fast data reprocessing and generation of infrared images, eliminating the need to recollect data, saving valuable time and money.
- Ability to upgrade the 610 to the 620 for the ultimate in flexibility, to meet changing application needs.

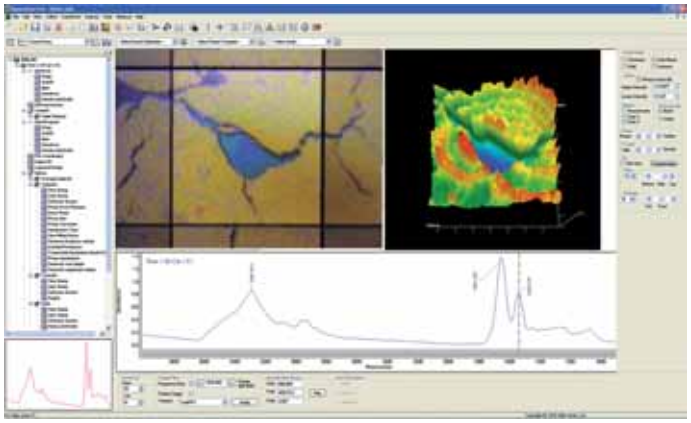
Resolutions Pro software

For single point and mapping experiments

- Fully automated mapping for consecutive, unattended analysis of large sample areas or multiple samples.
- Grid mapping templates customized to your sample to create chemical contour maps for speedy analysis.
- Ability to create application-specific methods to simplify routine experiments.

For chemical imaging experiments

- Unsurpassed spectral collection of hundreds to thousands of spectra.
- Mosaic option to extend the field of view for unlimited image size.
- Individual spectra corresponding to a selected part of the image; and conversely, image region corresponding to a selected wavenumber — useful as a quick check of a sample's heterogeneity.
- Control of chemical imaging detector integration time to maximize dynamic range and S/N performance to increase the quality of data for difficult to analyze samples.
- 2D and 3D views, which simplify the interpretation of spatially-resolved components.



Powerful Resolutions Pro software has multiple views including image, 3D chemical image and spectrum, for comprehensive confirmation.

Agilent Research Products

X-ray Crystallography

Reliable and Flexible X-ray Diffraction

Can't wait to see the molecular structure of your sample? Agilent provides researchers with a versatile portfolio of modular single- and dual-source systems which can be optimized for small molecule and protein x-ray crystallography. Our user-friendly systems allow non-experts as well as specialist crystallographers to obtain extremely high quality results with scope for intelligent automation or full manual control of experiments.

Our diffractometers use sealed tube molybdenum and copper wavelength x-ray sources which contain no moving parts. They are highly reliable and avoid the expense and inconvenience of regular servicing and maintenance.

With a low cost of ownership and excellent uptime, our systems are ideal for both in-house laboratoriesvand centralized service laboratories.

Versatile X-ray diffraction systems

- Xcalibur E – Small molecule crystallography made simple
- Gemini – The world's first dual wavelength diffractometer
- Gemini Ultra – The world's most popular dual wavelength system
- SuperNova – The fastest, most intense dual wavelength X-ray diffractometer for small molecule or protein applications
- PX Scanner - Unique instrument for the x-ray screening of protein crystals, in situ and undisturbed in the multi-well crystallization plate

Software

- CrysAlisPro – Intelligent data collection and reduction software
- AutoChem – Real-time structure solution and refinement plug-in for CrysAlisPro
- CrystalEyes – PX Scanner crystal screening software

Cryogenic and heating devices

- Helijet – Openflow liquid helium cooling device (15-90K)
- CryoJet XL – Liquid nitrogen cooling (90-300K)
- CryoJet HT – Liquid nitrogen cooling and heating (90-490K)

Xcalibur E

Small molecule crystallography made simple

The Xcalibur E is our most popular single wavelength system for routine crystal structure determination and challenging high resolution electron density studies for small molecules. It comes mounted with a fine focus molybdenum or copper Enhance x-ray source and our Eos detector – the fastest and most sensitive CCD detector available today. Our user-friendly software can fully automate your crystallography experiments and produce accurate molecular structures in just three clicks.

Ideal for central research facilities, synthetic chemistry laboratories or specialist crystallography users

- Single wavelength molybdenum or copper fine focus Enhance x-ray source
- Eos CCD detector – the fastest, most sensitive detector available, but option for Atlas upgrade
- 4-circle kappa goniometer that allows easy crystal mounting and alignment
- Compatible with all commonly-available cryo- and heating devices
- CrysAlisPro software for user-friendly automation and expert data collection and processing
- AutoChem software available for real-time structure solution, refinement and report generation
- Housed in a lead-doped, radiation proof cabinet
- Compact, with modular components for easy maintenance, servicing and upgrades
- Upgradable to a dual wavelength system – add a second Enhance or Enhance Ultra x-ray source

SuperNova

The fastest, most intense dual wavelength X-ray diffractometer for small molecule or protein applications

The SuperNova combines our hi-flux x-ray micro-focus sources with our fast, high performance CCD detectors. The SuperNova's X-ray sources provide up to 4 times the intensity of traditional sealed tube systems and up to 3 times the intensity of a 5kW rotating anode. This combination of high intensity and fast CCD enables fast data collection in both small molecule and protein experiments. The highly reliable and automated system needs little servicing and maximizes uptime and throughput; it is the ideal diffractometer for both the modern crystallographic research and the leading analytical service laboratories.

The fastest, most intense dual wavelength system for small molecule applications

- Configurable as a dual wavelength system, or an upgradable single wavelength option
- High intensity Nova (copper) and Mova (molybdenum) micro-focus sources for faster, higher resolution output
- Choose from our fast CCD detectors – the highly sensitive Eos or the large active area and high performance Atlas
- 4-circle kappa goniometer for simple crystal mounting and alignment.
- Compatible with all commonly-available cryo- and heating devices
- CrysAlisPro software for user-friendly automation and intelligent data collection, processing and analysis
- AutoChem plug-in available for automatic and real-time structure solution and refinement
- Elegant, compact and self contained system with integrated x-ray and CCD cooling
- Modular design allows easy maintenance, servicing and upgrades

The highest quality and reliability protein system

- Configured as a single wavelength copper system with the high intensity micro-focus Nova source
- The Nova provides up to 3 times the intensity of a 5kW rotating anode. With no moving parts there is no need for expensive maintenance contracts and scheduled downtime
- Choose from our fast and large active area CCD detectors – the Atlas or the largest active area CCD available for the home lab, the Titan (Ø 165mm)
- 4-circle kappa goniometer for simple crystal mounting and alignment
- Compatible with all commonly available cryo- and heating devices
- CrysAlisPro software for user-friendly screening and automation, with intelligent data collection, processing and analysis
- Elegant, compact and self contained system with integrated x-ray and CCD cooling
- Large cabinet design available providing more space for dewars and allowing greater sample-to-detector distances
- Modular design allows easy maintenance, servicing and upgrades, with dual wavelength upgrade available at a later date

Agilent PX Scanner

Unique instrument for the x-ray screening of protein crystals, in situ and undisturbed in the multi-well crystallization plate

The selection of good quality crystals for diffraction experiments does not have to be a dark art. Our unique PX Scanner lets you automatically screen a 96-well crystallization plate and test crystals for their x-ray diffraction qualities. Combining an optical imager and x-ray diffraction system, the PX Scanner lets you visualize, identify and automatically screen an unlimited number of crystals without having to remove them from their growth environment. By eliminating the manual handling of potential crystals during screening, the PX Scanner can accelerate the study of crystals at all stages of the crystallization work flow. This offers more than productivity improvements. In many cases, the PX Scanner has been demonstrated to save projects where crystals are perceived to be of insufficient quality, due to their diffraction properties once removed from the growth media.

Ideal for high-throughput protein crystallography laboratories

- Compatible with most SBS multi-well, sitting drop plates
- Touch-screen controlled plate loading and integrated plate barcode reader for high throughput screening
- Digital microscopes and cool LED lighting for visual identification of droplets and crystals using a proprietary image processing algorithm
- Automated multi-well plate carriage table with precise position of candidate crystals within the x-ray beam
- x-y-omega goniometer table with up to 6° of tilt
- Vertically oriented high intensity Nova micro-focus source and 135 mm CCD detector
- CrystalEyes control and processing software
- Self contained, compact design requiring only standard electrical and water supplies

Agilent Gemini A Ultra

The world's most popular dual wavelength X-ray diffractometer

The Gemini A Ultra combines speed, co-mounted copper and molybdenum wavelengths, high sensitivity and the large active area Atlas CCD detector. This extremely versatile system is capable of a wide range of routine and specialist applications in small molecule and protein crystallography. Our user-friendly software makes it easy to function within a centralized service laboratory whilst giving specialists full control for more refined experimentation.

Gemini A Ultra

- Dual wavelength system mounted with an Enhance molybdenum (Mo) fine focus x-ray source and our high intensity Enhance Ultra copper (Cu) source
- Suitable for both small molecule and protein applications, the Enhance Ultra combines a copper, ceramic tube with a state-of-the-art multi-layer optic to provide a high intensity x-ray beam.
- Atlas CCD detector – fast, sensitive with a large active area
- 4-circle kappa goniometer that allows easy crystal mounting and alignment
- Compatible with all commonly-available cryo- and heating devices
- CrysAlisPro software for user-friendly automation and expert data collection and processing
- AutoChem plug in available for automatic and real-time structure solution and refinement
- Housed in a radiation-proof cabinet
- Compact, with modular components for easy maintenance, servicing and upgrades
- Options for alternative Eos or Titan CCD detectors

Gemini – The world's first dual wavelength system

- Dual-wavelength system mounted with Enhance molybdenum (Mo) and copper (Cu) fine focus x-ray sources
- Choose from any of our fast readout CCD detectors
- Operates using the same goniometer platform as the Gemini Ultra, with CrysAlisPro software for system control and AutoChem option available
- Options to upgrade to a Gemini Ultra with high intensity Enhance Ultra copper source

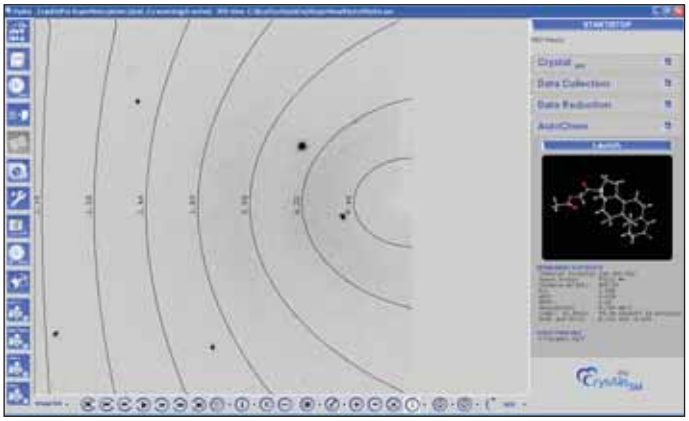
CrysAlisPro

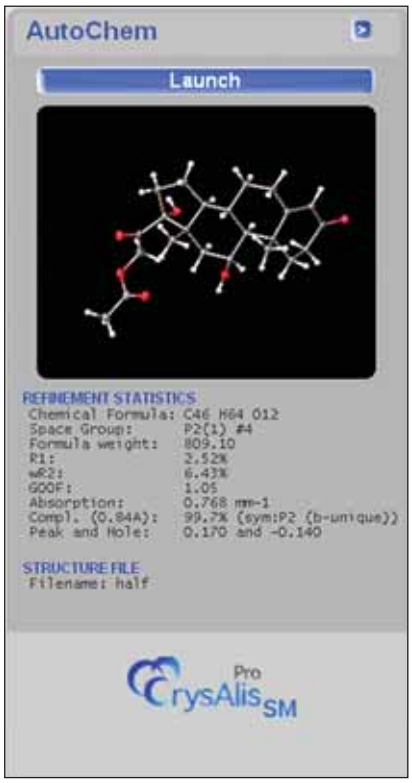
Intuitive data collection and reduction software, with AutoChem for real-time structure solution and refinement

CrysAlisPro is the friendly face of our x-ray diffraction systems. It allows both non-experts and crystallography specialists to set up, run and process their experiments intuitively and efficiently, in fully automatic, semi-automatic and fully manual modes. Intelligent software modules automatically screen crystals to establish an efficient data collection strategy; a typical five minute pre-experiment evaluates the crystal quality and suggests optimal experimental parameters. You can access and start to analyze data in real time, thanks to concurrent data processing and reduction.

CrysAlisPro

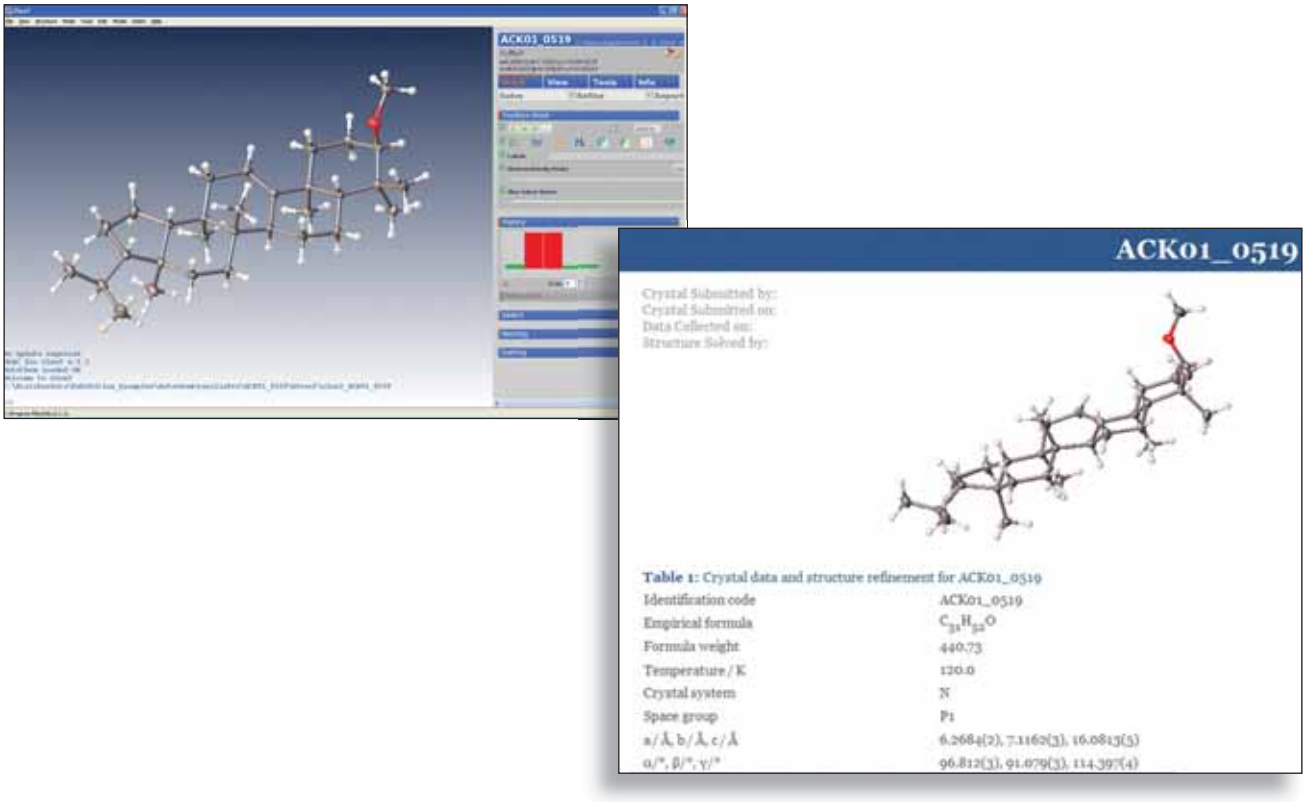
- User friendly, intuitive graphical interface with options for fully automatic, semi-automatic and fully manual modes of operation
- Rapid pre-experiment evaluation of crystal quality and unit cell to assess optimal experimental strategy for fast, high quality and complete data collection
- Screening mode for simple and effective protein evaluation
- Complete user control to adjust the experimental strategy for a wide variety of experimental targets including multiplicity, time and resolution
- Concurrent data processing and reduction and seamless interface with optional AutoChem module
- Hundreds of specialist tools and functions for dealing with non-standard and problematic crystals
- Automatic data output in HKLF format and direct interfacing with OLEX2, SHELX and third party data reduction packages including MOSFLM and XDS
- Multi-site, multi-user license, providing third party access to research collaborators





Autochem

- Seamless integration with CrysAlisPro data collection software
- Developed using more than 2800 structures
- Intelligent selection of best method for structure solution (e.g. Patterson, direct methods, charge flipping, etc.)
- Fast and powerful SMTBX-based refinement approach as standard, but with options for SHELX (license permitting)
- Majority of routine tested structures completed in under 15 seconds
- Complete with full version of OLEX2 for more specialist review and control of structure solutions



Magnetic Resonance Products

Agilent is a leading supplier of research magnetic resonance imaging (MRI) and nuclear magnetic resonance (NMR) systems, having installed thousands of systems worldwide. We offer customers a broad portfolio of products designed with flexibility and expandability in mind; many standard and custom configurations are available for a variety of chemical, biomedical and material sciences applications.

NMR

The Agilent's NMR systems features a full range of products designed to work in an integrated fashion. The principal components include magnets, control systems, probes, automation systems, software and automation accessories. Agilent's PremiumCOMPACT magnet family provides the smallest footprint and best field uniformity in the industry. Control consoles are based on Agilent's proprietary DirectDrive architecture, providing unsurpassed performance and flexibility to implement a multitude of different experiments depending on the sample and type of analysis required. Agilent probes are available to support most all sample types and applications. The highly acclaimed VnmrJ software makes data acquisition and processing simple. The Agilent NMR system is the optimal tool for applications in research, product/ process development or routine analysis. Agilent offers NMR instrumentation in field strengths ranging from 300 to 900 MHz with bore sizes from 54 to 89 mm.

MRI

Using the same base technology as our NMR spectrometers, Agilent offers the most advanced magnetic resonance scanners for research applications. Engineered with our innovative DirectDrive technology and delivering unsurpassed performance, the Agilent MRI system is the most advanced magnetic resonance scanner ever developed. Unique parallel controllers, one for each RF transmitter and receiver channel, and VnmrJ software, provide flexible, easy-to-use pulse programming power to make the Agilent MRI system the optimal instrument for state-of-the-art MRI experiments and methods development. Our MRI instruments range in field strength from 3 to 16.4 Tesla with bore sizes from 160 to 920 mm.

Agilent NMR Systems

Flexible Architecture, Multiple Options and Advanced Features for Routine to Advanced Analyses

A rich history of NMR technology innovations and applications development is just part of the Agilent NMR story. With Agilent NMR systems, you gain the highest sensitivity, productivity, and flexibility to address the most demanding molecular characterization applications, from research through production. Agilent NMR Systems are designed to provide the utmost in flexibility to perform any liquids, solids, or microimaging experiment. Each system features the cleanest DirectDrive architecture and DirectDigital receiver, a wide selection of high sensitivity probes, and accessories optimized for each application.

Agilent NMR Systems can be equipped with up to five RF channels, four receivers, a range of powerful gradient, amplifiers and other options. Systems also feature parallel controllers for each transmitter and receiver channel, providing pulse sequence programming power with functionality and user friendliness.

Supported by easy-to-use VnmrJ software for data acquisition and processing, Agilent NMR are the systems of choice for methods development, routine analysis, or advanced research applications.

For every application, Agilent delivers key performance advantages:

- Easier siting. Superior magnet shielding design minimizes space and ceiling height requirements.
- Cleanest RF architecture. Unique DirectDrive technology delivers precisely timed RF and gradient events and enables the most demanding acquisition sequences.
- Performance optimization. The widest selection of probes, including the revolutionary OneNMR probe, easy to use software, and an automation suite that lets you work faster and smarter.

Agilent MRI System

Superior Architecture. Superior Data.

Engineered with our innovative DirectDrive technology and delivering unsurpassed performance, the Agilent MRI System is the most advanced magnetic resonance scanner ever developed. Unique parallel controllers, one for each RF transmitter and receiver channel, and the highly acclaimed VnmrJ software, provide flexible, easy to use pulse programming power to make the Agilent MRI System the optimal instrument for state-of-the-art MRI experiments and methods development.

- The DirectDigital receiver delivers high dynamic range and high sensitivity in real applications.
- Advanced RF and gradient controllers offer outstanding performance for the toughest MRI and MRS applications.
- Scalable parallel architecture for transmitter and receiver channels offers expanded capabilities for phased array and parallel MRI, increased signal-to-noise and reduced scan time.

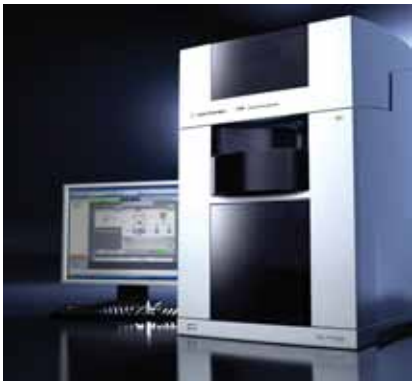
Discovery MR901 MRI System

Pre-Clinical 7T Imaging System

The collaboration between GE Healthcare and Agilent provides the best of both worlds, with the small bore imaging technology of Agilent and the clinical user interface of GE Healthcare to give you the perfect environment for high throughput pre-clinical imaging.

- Robust pre-clinical imaging for MR research environment
- User interface is identical with GE clinical MRI scanners
- Clinical protocols optimized for 7T pre-clinical applications
- Complete clinical analysis tools
- Outstanding resolution and signal-to-noise ratio at 7T

Agilent Electrophoresis Solutions



Agilent 7100 Capillary Electrophoresis System

Maximum sensitivity. Maximum productivity.

Agilent's new 7100 Capillary Electrophoreses System brings unprecedented HPLC-like sensitivity to a wide range of analytical challenges. The system delivers best-in-class analytical performance, the industry's broadest selection of detectors and plug-and-play compatibility with all of Agilent's 6000 Series mass spectrometers. Legendary Agilent reliability, familiar ChemStation software and the confidence of a single-vendor solution all add to the value equation – making the Agilent 7100 CE the clear choice for your lab's next (or first) CE or CE/MS system.

Detector options

- Best in class UV-DAD for detection of impurities as little as 0.05% of a main peak
- Direct connection to external detectors, for example, MS, LIF, CC

Easier handling, reliability and service

- 30% lighter with a 25% smaller footprint
- Modular architecture enables easy servicing & maintenance
- Ideally suited for ready to use reagent kits (Agilent or others)

Improved robustness, reduced cost-of-ownership

- Double lifetime of UV lamps, rugged pressure-vacuum system
- Low volume replenishment for unattended operation
- Includes A/D-converter to handle external detector signals
- Self test of instrument with Agilent LabAdvisor software

Agilent 3100 OFFGEL Fractionator

pI-based fractionation of proteins and peptides with liquid-phase recovery

Research shows that prefractionation of proteins and peptides prior to LC/MS analysis can dramatically increase the number of proteins ultimately identified. The new Agilent 3100 OFFGEL Fractionator uses a novel isoelectric focusing technique to achieve excellent pI-based fractionation. The resulting fractions are in solution, making recovery for LC/MS analysis much easier than with old-fashioned gels. Results are highly reproducible, and the 3100 is a model of simplicity and ease of use.

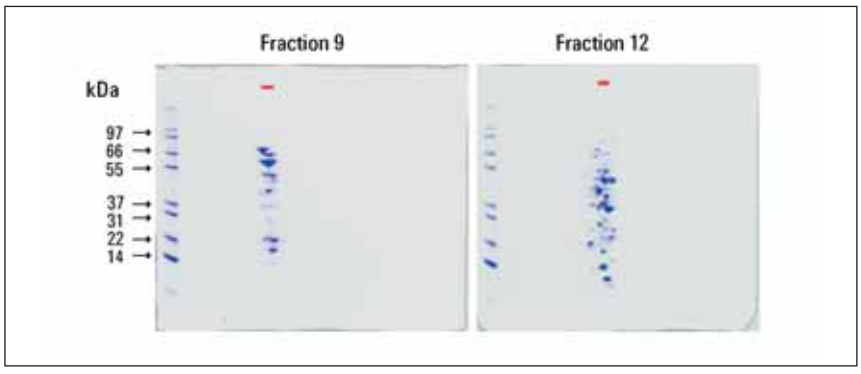
Up- or downstream sample processing steps such as immunodepletion, protein digestion and liquid chromatography can be easily interfaced with this technique for multi-dimensional separations of complex samples.

Simple, reproducible, and easy to use

- pI-based OFFGEL fractionation with 0.1-0.6 pH resolution depending on consumable kit used
- In-solution fraction recovery for easy transfer to LC/MS
- Two power supplies allow simultaneous fractionation of two sample sets with broad differences in concentration
- Up to 16 samples fractionated at the same time
- µg to mg loading capacity
- Possible to run conventional in-gel IEF as well as OFFGEL fractionation
- Preconfigured methods for novel OFFGEL and conventional IEF modes
- State-of-the-art user interface for online control of each individual sample, method editing and data analysis

Achieve highest resolution

The Agilent 3100 OFFGEL Fractionator provides pI-based fractionation of peptides or proteins with exceptional resolution. Samples can be fractionated into 12 or 24 fractions for standard or highest resolution as shown here for 2 protein OFFGEL fractions analyzed in 2nd dimension by SDS-PAGE.



Agilent Bioanalyzer Solutions

Agilent 2100 Bioanalyzer

One platform – endless possibilities for DNA, RNA, protein and cell analysis

The Agilent 2100 Bioanalyzer is the industry standard for RNA sample QC and has replaced labor-intensive gel electrophoresis for this application. It is also rapidly replacing gel electrophoresis for DNA fragment analysis and SDS-PAGE analysis of protein samples. A unique feature of the Agilent 2100 Bioanalyzer is that it can be used for both electrophoretic separation and flow cytometric analysis of cell fluorescence parameters. This versatility makes the Agilent 2100 Bioanalyzer an indispensable tool for the molecular biologist and biochemist.

Automated, fast analysis with excellent data quality

- Ready-to-use assays and pre-packaged reagent kits for DNA, RNA, proteins and cells
- Minimal sample consumption (1-5 µL) and results within 30 minutes
- Replaceable electrode cartridge for contamination-free switch of methods
- Digital data for convenient analysis, archiving and storage – share data with others and export it for publication or presentation
- Various data-display options as gel view, electropherograms and tables
- Easy to use with simplified sample comparison
- Minimum exposure to hazardous materials
- Supports compliance with 21 CFR Part 11

2100 Bioanalyzer Application Compendium

This comprehensive compendium with more than 120 pages presents the wide range of 2100 Bioanalyzer applications for DNA, RNA, proteins and cells. Request your copy at **www.agilent.com / chem / 2100compendium**.

RNA Solutions

Fast quality control of RNA with minimal sample consumption

RNA quality is critical to the success of microarray, NGS, and qPCR experiments. The Agilent 2100 Bioanalyzer with its RNA kit portfolio is the industry standard for RNA quality control. It allows monitoring the quality of RNA samples and reliably identifying degraded RNA samples. The software embedded RIN algorithm automates RNA integrity assessment and provides user-independent data.

RNA quality control solutions

- RNA 6000 Nano Kit – assess the integrity of total and miRNA samples in the ng/µL range
- RNA 6000 Pico Kit – assess the integrity of total and mRNA in the pg/µL range
- Small RNA Kit – detect and visualize miRNA content in total RNA

Advantages of the Lab-on-a-Chip approach

- Minimal sample consumption – use as little as 50 ng of total RNA or 200 pg of total RNA for analysis, saving most of your valuable preps
- Faster results – complete automated analysis – 11 or 12 samples in about 30 minutes
- Improved assay accuracy and precision – all-included pre-packaged reagents and standardized assay protocols yield highly accurate and reproducible data
- RNA Integrity Number (RIN) – a reliable tool to compare integrity of RNA samples automatically
- Analyze Small RNA molecules, e.g. miRNA, siRNA, t-RNA within 6-150 nt range
- Freely accessible RNA Integrity Database (RINdb) of RNA profiles

Related Information

Order your free copy of the Agilent 2100 Bioanalyzer RNA Integrity CD at **www.agilent.com / chem / rna-cd**.

DNA Solutions

A smarter solution for nucleic acid analysis

The Agilent 2100 Bioanalyzer with its DNA kits allow you to automatically size and quantitate PCR fragments and restriction digests accurately and reproducibly. PCR and RT-PCR are among the most widely used techniques in molecular biology. While in some cases, it is sufficient to detect the presence or absence of a PCR product, in many cases quantitation of this product and detection of unspecific amplification is critical. The Agilent 2100 Bioanalyzer is the tool of choice for automated sizing and quantitation of PCR and RT-PCR products in single or multiplex mode with unprecedented accuracy.

With the advent of Next-Generation Sequencing (NGS) platforms; sizing, quantification and quality assessment of fragmented DNA starting material, as well as DNA sequencing libraries, have become essential to achieve highest quality sequencing data. The new Agilent High Sensitivity DNA Kit allows the sizing and quantification of DNA samples in the single-digit pg/µL concentration range.

Advantages of the Lab-on-a-Chip approach

- Increased sensitivity for DNA fragment analysis – down to 5 pg/µL
- Sizing, quantification and quality control of complex DNA samples – down to 100 pg/µL for fragmented DNA or DNA sequencing libraries
- Sizing accuracy – Normalization to two internal markers and a ladder
- Quantitation accuracy and reproducibility – Automated quantitation of each DNA fragment against internal standards
- High resolution of a large number of bands – Critical for any multiplex PCR application
- Broad linear dynamic range – Enables the detection of less abundant products, e.g. low abundance messages in multiplex RT-PCR amplifications or non-specific amplifications
- Minimal sample consumption – Only 1 µL of material required per analysis
- Improved assay precision – Pre-packaged reagents and standardized assay protocols yield highly reproducible data

Protein Solutions

The fast and reliable way to replace analytical SDS-PAGE methods

The Agilent Protein kit portfolio for the 2100 Bioanalyzer provides a fast and flexible way to assess protein concentration, identity, and purity in a wide variety of samples. The microfluidics approach reduces sample and reagent consumption, speeds up analysis time, and eliminates labor-intensive handling of SDS-PAGE slab gels, staining and imaging steps. Today, the Bioanalyzer represents a key platform for routine QA/QC of protein samples by supporting three distinguished protein kits:

The Agilent High Sensitivity Protein 250 kit is the first microfluidic assay for protein detection in the low picogram range. It offers four orders of magnitude linear dynamic range, allowing quantification of low concentrated impurities next to dominant main peaks in a single run.

Advantages of the Lab-on-a-Chip approach

- Protein 80 kit - for protein analysis in the low molecular weight range
- Protein 230 kit - for general protein analysis up to 230 kDa
- High Sensitivity Protein 250 kit - for picogram sensitivity and lowest level of impurity detection

Besides the ease-of-use of prevalidated reagents, the Bioanalyzer protein kits offer a number of advantages over techniques like slab-gel electrophoresis or standard CE-SDS methods:

- Fast results – Complete automated analysis of 10 samples in 30 minutes
- No manual staining and destaining steps required – All procedures automated during chip run
- Improved precision – Pre-packed reagents and standardized assay protocols yield highly reproducible data
- Highest sensitivity - High Sensitivity Protein 250 kit provides silver stain sensitivity and four orders of magnitude linear range in quantification
- Minimal sample consumption – Only 4-5 µL of protein sample required per analysis
- Quick and easy sample comparison – One-click overlay, scaling or zooming features
- Sizing and quantitation in one assay – Allows for relative and absolute quantitation
- CFR 21 Part 11 compliance – optional security pack feature available

Cell Solutions

On-chip flow cytometry – an easy way to acquire cell-based fluorescence parameters

The flow cytometry set for the Agilent 2100 Bioanalyzer allows scientists working with cells to perform simple flow cytometry assays. The set extends the lab-on-a-chip application portfolio of the Agilent 2100 Bioanalyzer from electrophoretic separation assays to automated two color flow cytrometric assays. In brief, six samples each 10 µL with 20,000 prestained cells are loaded onto the chip and the fluorescence intensities in two channels for about 750 single cells per sample are measured within 25 minutes. Please note: cell solutions are not suitable for the electrophoresis-only Bioanalyzer (G2939AA).

Advantages of the Lab-on-a-Chip approach

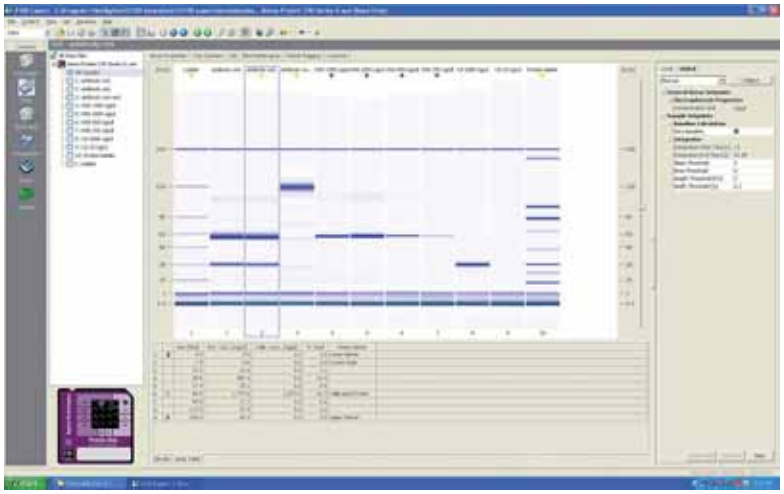
- Easy to use, short setup time with no adjustment of complex instrument parameters
- Analysis of a wide range of cell fluorescence parameters
- Predefined flow cytometric assays for easy startup or protocol development for extra flexibility
- Low cell consumption (20,000 down to 2,500) – enables flow cytometry analysis of primary and other precious cells
- On-chip staining procedure speeds up workflow
- Agilent Cell Checkout Kit checks proper instrument and cell assay operation
- Agilent Cell Kit for analysis of cell fluorescence parameters

2100 Expert Software

Powerful software for the analysis of RNA, DNA, proteins and cells

Powerful data evaluation tools – single platform for all assays, automatic and manual integration, smear analysis and many assay specific tools

- Flexible – result tables and graphics allow easy instrument control and support standard and advanced user modes
- Supports all Bioanalyzer assays for the analysis of RNA, DNA, proteins, and cells.
- Unique RNA Integrity Number (RIN) algorithm – the industry standard for unbiased total RNA integrity assessment, now including the specific analysis of RNA from plants
- Integrated – single click overlay, scaling and zooming features allow quick and easy comparison of up to 48 samples within one chip or across multiple chip runs.
- Multiple exportable data formats (AIA, xml, csv, html, pdf, wmf, jpg, tif and bmp) – for integration into presentations or Laboratory Information Management Systems (LIMS)
- Easy to share – free data review software enables offline evaluation and sharing
- Efficient – improved and integrated diagnostic and troubleshooting minimize system downtime
- Ready for compliance – system validation services (IQ and OQ) and 21 CFR Part 11 compliance with the optional Security Pack
- Color coded Result Flagging Tool – an easy to use, rule defined system for automated result display

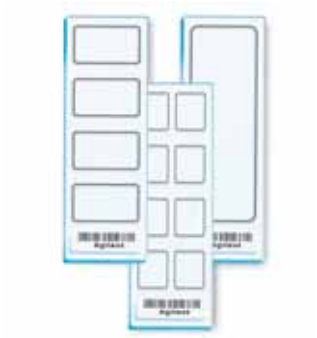


Agilent Microarray Solutions

Agilent DNA Microarray Scanner with SureScan High Resolution Technology

Experience a New Level of Performance and Precision

Agilent's new DNA Microarray Scanner with SureScan High-Resolution technology is the key component of microarray-based applications in which increased coverage of the genome is a necessity. Whether performing gene expression studies, aCGH, miRNA profiling, or other novel applications, Agilent's scanning technology is responsible for providing the highest quality data. Agilent's DNA Microarray Scanner provides a complete workflow solution by the integration of hardware, sample processing kits, microarrays and data analysis software.



Workflow Solutions

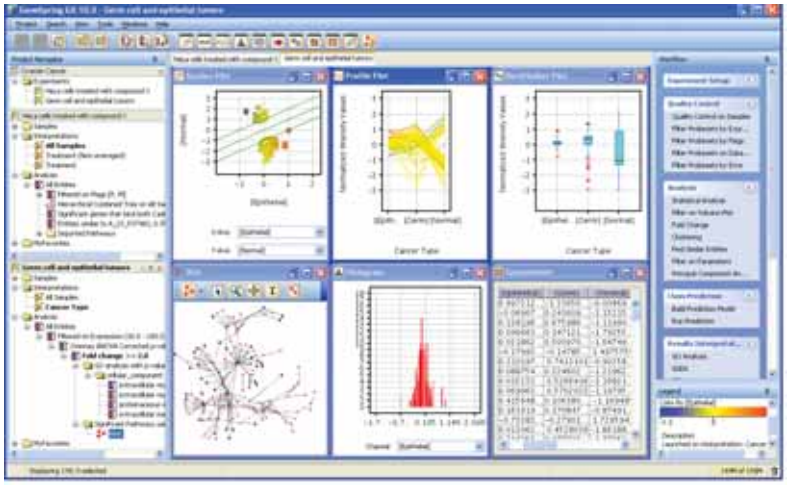
- User-changeable thermal blocks for 96-well, 96-well fast, and 384-well operation
- Preloaded, preprogrammed user protocols for Stratagene-brand PCR enzymes
- Gradient operation with temperature range of 30°C-99°C and up to 30°C gradient span

Agilent GeneSpring

The Gold Standard for Desktop Expression Analysis

GeneSpring provides powerful, accessible statistical tools for fast visualization and analysis of gene expression data. Regarded as the gold standard in desktop expression analysis, GeneSpring allows you to quickly and reliably identify targets of interest that are both statistically and biologically meaningful.

- Identify differentially expressed microRNAs and use TargetScan information to identify their gene targets, analyze real-time PCR data, and build relevant biological interaction networks from a database of gene product interactions provided in GeneSpring; Detect significant differences in alternative splicing events.
- Guided workflows step you through a typical analysis with limited decision points while advanced workflows allow expert users to access all GeneSpring tools and define parameters and cut-offs for each analysis.
- GeneSpring provides a suite of statistical tools including paired and unpaired t-tests, 1-way and multi-way ANOVA, Repeated Measures ANOVA, and the permutative method of p-value calculation.



The GeneSpring user interface showing flexibility available for calculating and displaying analytical results.

PCR and qPCR Solutions from Agilent

Agilent offers the most comprehensive workflow solution for gene expression analysis.

Mx3005P qPCR System

Offering unmatched flexibility and capability

The Mx3005P QPCR System can support both current and emerging real-time QPCR applications and chemistries to accommodate your research needs now and into the future. Open platform design supports all fluorescent dyes and chemistries including Brilliant III SYBR and probe kits.

With its 5-color detection and user-selectable filters, the Mx3005P system accommodates virtually all fluorescent dyes and chemistries. Precision optics and uniform thermal response ensure maximum sensitivity and linear performance over a broad wavelength range. So, all the users in your lab have the freedom to run their applications of choice, including gene expression analysis, SNP genotyping, pathogen detection, and microarray validation.

- Five optical channels with user-selected filter pairs for greater flexibility
- Defined excitation and emission detection wavelengths are ideal for superior multiplex results
- Independent excitation and emission filter control to further expand available dye choices
- Flexbile, easy-to-use, powerful MxPro user interface and analysis software

Brilliant III qPCR & qRT-PCR Master Mixes

Specificity, sensitivity, and speed – what matters most in your qPCR

Agilent's Brilliant qPCR reagents are optimized for superior sensitivity, delivering exceptional quantification and reproducibility. The new Brilliant III qPCR Reagents have been specifically developed and validated on fast-cycling real-time PCR instruments, to deliver superior performance right out of the tube.

Next generation Brilliant III Ultra-Fast reagents are designed and optimized for fast-cycling qPCR instruments, providing even faster assay times with the same consistent performance and sensitivity as our Brilliant II reagents.

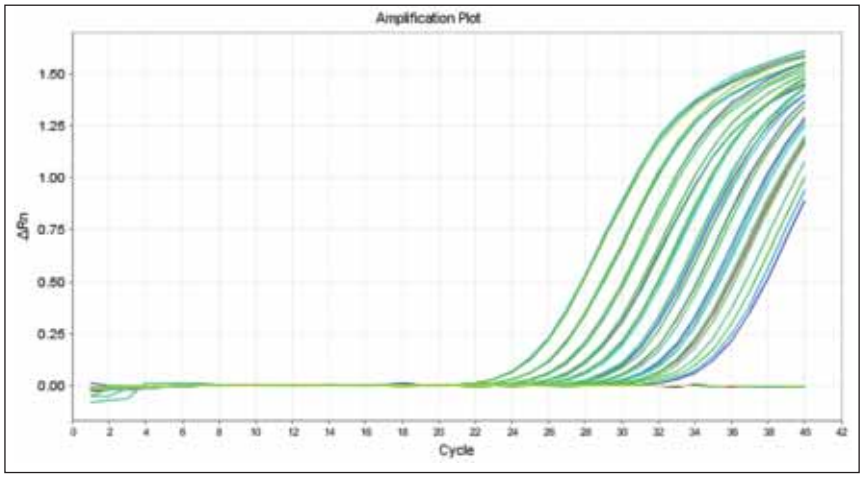
These unique reagents are compatible with sequence-specific probes and SYBR Green fluorescent detection, and support both qPCR and qRT-PCR applications. With run times of less than 40 minutes and increased sensitivity, Brilliant III reagents deliver pristine results faster than ever before.

Brilliant III reagents offer several outstanding benefits:

- A newly-engineered, highly-processive Taq mutant with a faster extension rate
- A novel hot-start technology that enhances specificity by reducing the formation of primer-dimers and secondary non-specific PCR products

Brilliant III Master Mix protocols available for:

- IDT's PrimeTime® Assays
- Agilent Mx3005P
- ABI 7500 FAST
- ABI 7900HT
- BioRad CFX96
- ABI StepOne Plus
- Roche LC480
- Life Technologies *Taq*Man



Low Copy Discrimination

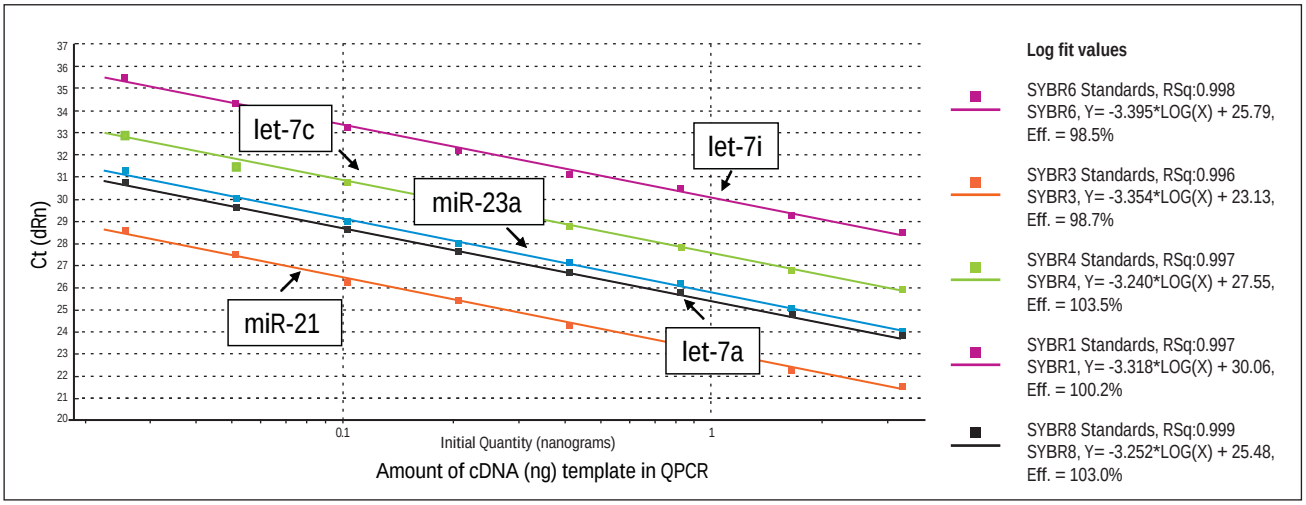
Amplification plot for a 2-fold dilution of linearized plasmid run on a StepOnePlus real-time PCR system. Brilliant III Ultra-Fast qPCR Master Mix exhibits precise detection of 2-fold differences from 1536 copies down to 3 copy equivalents.

Probe Reagents	Description
Brilliant III Ultra-Fast qPCR Master Mix	Brilliant III Ultra-Fast qPCR Master Mix for ABI StepOnePlus and BioRad CFX96
Brilliant III Ultra-Fast QRT-PCR Master Mix	Brilliant III Ultra-Fast QRT-PCR Master Mix for ABI StepOnePlus and BioRad CFX96
SYBR® Green	
Brilliant III SYBR® Green qPCR Master	Brilliant III Ultra-Fast SYBR® Green qPCR Master Mix for ABI StepOnePlus and BioRad CFX96
Brilliant III SYBR® Green QRT-PCR Master	Brilliant III Ultra-Fast SYBR® Green QRT-PCR Master Mix for ABI StepOnePlus and BioRad CFX96

Highly Specific miRNA QRT-PCR Detection

Our High-Specificity miRNA QRT-PCR Detection kits provide qualified reagents for the polyadenylation of microRNAs (miRNAs) from total RNA and the synthesis of 1st strand cDNA from miRNAs. This kit is designed to give the utmost specificity for miRNA qPCR detection. The kit includes two modules consisting of polyadenylation of the miRNA at the 3' end and reverse transcription to convert the polyadenylated miRNA to cDNA (miRNA 1st Strand cDNA Synthesis Kit) and cDNA detection by qPCR (High-Specificity miRNA qPCR Core Kit).

- Detects mature miRNA
- Differentiate miRNA that differ by a single nucleotide
- Sensitive detection down to 10 copies
- miRNA specific forward primers



Wide, Linear, Dynamic Range of at Least Seven Logs Allows Quantitation of a Few Copies to Millions of Copies

Linearity was demonstrated with twofold dilutions of HeLa cDNA and detection of five different miRNAs of varying abundance; miR-21, miR-23a, let-7a, let-7c, and let-7i. This wide range in signal linearity allows for accurate quantitation of miRNAs of varying abundance.

Automation Solutions for Life Science Applications

From stand-alone units to fully integrated systems, Agilent combines key sample preparation and creative walk-away automation approaches with personalized customer service to provide complete solutions for your laboratory. Combining innovative engineering with high standards of quality, Agilent designs and manufactures high-performance equipment for processes that are revolutionizing pharmaceutical, biotech, and genomic research.

Agilent Bravo Automated Liquid Handling Platform

The Bravo Automated Liquid Handling Platform is the fastest and most versatile small footprint liquid handling system available, capable of dispensing from 100 nL to 200 µL in 96, 384, and 1536 well formats or to a column, row or single well of any of these plate types. Its space-saving nine plate-position footprint can fit inside a standard laminar flow hood, enabling automated liquid handling for cell-based assays or hazardous reagent handling.

- Performs in a laminar flow hood
- Pipetting range of 100 nL to 200 µL
- Serial dilutions with standard pipette heads
- Interchangeable pipette heads are swappable in minutes
- User configurable positions for filtration, temperature control, shaking and more

Related Supplies

Agilent offers a wide selection of liquid handling and microplate handling consumables, such as disposable tips and thermal microplate seal and adhesive labels for barcoding. For more information, visit www.agilent.com/lifesciences/automation.

Agilent Vertical Pipetting System

Agilent's Vertical Pipetting System is the fastest precision pipettor on the market. The Vertical Pipetting Station features a choice of interchangeable heads, including a 96-, 384-, 8- or 16-channel. Eight sliding shelves are arranged on either side of the pipetting head permitting access to the plates, while conserving deck space. The pipetting head is fitted with a 2-axis positioning stage providing access to all quadrants of 96, 384, and 1536 well microplates. An intuitive user interface allows the operator to create and run complex pipetting protocols with ease.

- Unique eight plate position, small footprint design conserves space for all applications
- Seamless integration into a variety of Agilent and third party automation systems
- Simultaneously pipette while other plates are changed for impressive throughput and significant reduction in assay time
- Pipetting range of 100 nL to 200 µL provides savings on costly reagents and compounds so you can miniaturize your assays with confidence

Agilent BenchCel Microplate Handling Workstation

The BenchCel Microplate Handler is a combination of automated microplate handling and storage that delivers the speed and precision of a full-sized automation platform. The BenchCel Microplate Handler features a high-speed robot that can access integrated microplate stacks and peripheral instruments. This customizable, modular design provides the flexibility and scalability required to meet the needs of the most diverse laboratory applications.

- High speed, eight second transfer times from stack to instrument
- 2, 4, or 6 stack configurations for a maximum of 360 standard microplates
- Storage and handling of most microplates, lidded plates, tip boxes and tube racks
- 66% more walk-away time than competitive systems
- Integration of multiple instruments into a single benchtop workstation

Direct Drive Robot

One-person, one-touch teaching

Anyone can quickly teach the Agilent Direct Drive Robot (DDR) with the click of a button. At the center of the BioCel Systems or as the robot for do it yourself systems, the DDR is fast, precise, and designed with safety in mind. State-of-the-art direct drive technology reduces the number of moving parts, resulting in a robotic arm that has increased reliability and speed, moving smoothly with precision and accuracy. Innovative design simplifies the teaching process and enables one person to quickly integrate instruments into the system, minimizing setup personnel and time.

- Flexible and versatile - Fast and lightweight robotic arm with infinite rotation at each of four axes, designed for scientific applications; extended z-travel increases vertical reach for more functionality in a compact footprint
- State-of the-art design - Direct drive technology for remarkable performance
- Reduced collision impact - Contact sensing for safe robotic movement
- High-resolution encoders - High-resolution optical encoders at every joint for precision positioning
- Multiple gripping capabilities - Can grip in portrait or landscape orientation to minimize or eliminate re-gripping.
- Stand-alone option - Can be used in an Agilent BioCel System, or as a stand-alone robot.

Agilent PlateLoc Thermal Microplate Sealer

The PlateLoc Thermal Microplate Sealer has distinguished itself as the premier thermal sealer through its speed, small footprint, ease of use and dependability. The PlateLoc design team overcame the challenges of sealing a wide range of microplates by developing a versatile instrument that automatically accommodates deepwell, assay, PCR, and compound storage plates. Standalone mode operation enables full control of sealing time and temperature through the PlateLoc's touch screen, and the PlateLoc is ideal for robotic integration, featuring an extended-travel plate stage, RS-232 serial port and an ActiveX control.

- Touch screen interface for fast and easy manual operation
- Automatically adjusting to accommodate a wide range of microplates and tube racks, the PlateLoc can handle all of your sealing needs
- High precision, with sealing temperature control of ± 2°C and advanced seal slitting control, seal integrity will be the same for every plate
- Fast machine cycle times, and no required cool down periods mean you will spend your time sealing plates, not waiting
- With the industry's smallest instrument footprint and numerous proven integrations, the PlateLoc is an ideal choice for system integrators

Agilent Microplate Labeler

The Agilent Microplate Labeler applies barcode labels to any or all four sides of a microplate and provides the flexibility to create custom labels. Specifically designed to accommodate a wide range of microplates, the Microplate Labeler adjusts for different skirt heights and deepwell plates using a two-position plate stage which allows the instrument to automatically place labels at either of two vertical label positions (which can be adjusted by the user). Its compact size fits easily on a bench top, while its speed achieves the most aggressive throughput goals while software reads data from your comma-delimited file or can be integrated with a LIMS.

- Standalone (manual mode) or automated operation via host PC
- Applies labels on any permutation of one, two, three, or four sides of a microplate in one of two vertical positions
- Wide range of fonts, barcode formats and magnifications for maximum flexibility; Barcode symbologies include Code 39, Interleaved 2 of 5, Code 128 and many others
- Repeatedly print and apply labels at speeds of up to 1 every 4 seconds
- Verify bar codes with available barcode reader and reapply labels if necessary

Agilent Microplate Centrifuge

The Agilent Microplate Centrifuge is the smallest robotic-accessible automated centrifuge on the market. It provides unmatched vibration and noise control in a small, low maintenance package. Ideal for high- or medium-throughput applications, the Microplate Centrifuge features a dual position design to accommodate two standard microplates at a time. The Microplate Centrifuge is capable of rapid acceleration and deceleration (a customizable setting), minimizing the required cycle time. It is excellent for filtration protocols, air bubble removal in high density plates and spin-downs including cells and cellular debris.

- Compact footprint takes up very little bench space and fits easily in integrated systems
- Optional plate loader allows for simple integration into any robotic system
- Stackable design increases system throughput without adding to the footprint
- Low vibration design minimizes impact on adjacent instruments

Agilent Labware MiniHub

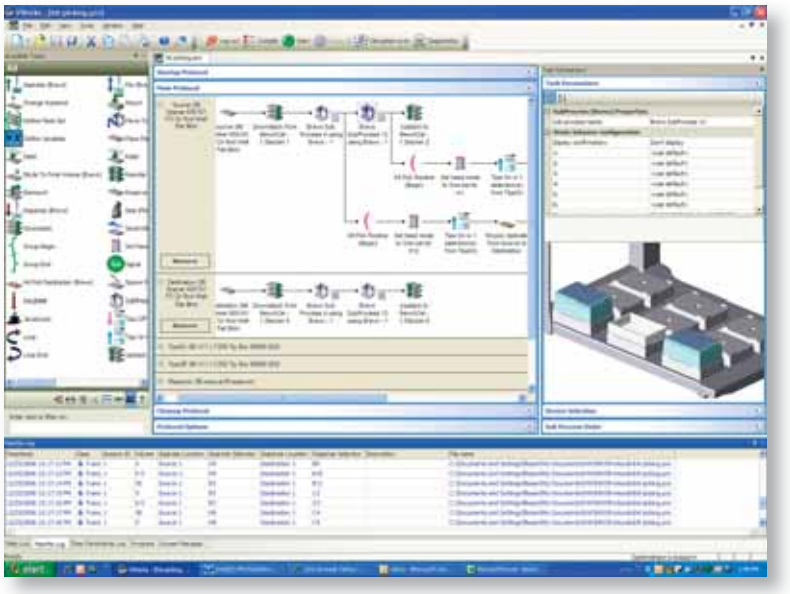
The Labware MiniHub is a rotating random- access labware storage device. Up to four pieces of labware can be placed on each shelf, in either the landscape or portrait orientation. Spacing blocks, also called spacers, can be added or removed to adjust the distance between shelves, accommodating different labware types (microplates, tipboxes, or tube racks). Two models of the Labware MiniHub are available:

- The Agilent Labware MiniHub for systems is designed to be integrated in large laboratory automation systems such as the BioCel System. The model permits up to 16 shelves, or a maximum of 64 microplates, when single spacers are used between shelves. The model can accommodate a maximum of 28 tipboxes with 7 shelves.
- The Agilent Labware MiniHub for BenchCel is Designed to be integrated in the BenchCel Workstation. The model permits up to 10 shelves, or 40 microplates, when single spacers are used between shelves. The model can accommodate a maximum of 16 tipboxes with 4 shelves.

Agilent BioCel System

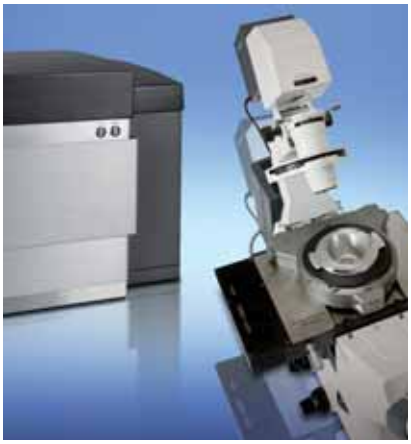
Through innovative design, the BioCel System delivers the functionality of much larger systems in an efficient package optimized for speed and flexibility. With industry-leading engineering, Agilent delivers fully-integrated automated solutions to fit your research requirements in high-throughput screening, cell based assays, plate based cell maintenance, compound management, and genomics applications.

- Compact footprint, saving valuable lab space
- Expand capacity and functionality in the future; just add another BioCel System
- Increased flexibility and capacity with under-table incubators or microplate carousels
- QuickDock docking tables available to easily swap devices or use instruments offline
- Inert, Class 100, and humidity-controlled environments available
- VWorks software, an event-driven controller, ensures highest instrument utilization and maximum system productivity



Agilent VWorks Automation Control Software

Agilent Atomic Force Microscopes



A wide range of high precision microscopes to meet your unique research needs

Agilent 5500 Atomic Force Microscope

Versatile, High-Resolution AFM

The Agilent 5500 AFM is a powerful multiple-user research system. In addition to atomic-scale resolution over a large scan range, its true modularity enables users to add capability-enhancing options. An intelligent design permits the simple integration of numerous imaging modes and easy-to-use, application-specific sample handling plates. The Agilent 5500 is well suited to electrochemistry, materials science, polymer science, life science, nanografting, and nanolithography.

Agilent 6000ILM Atomic Force Microscope

Life Science AFM for Light Microscopes

The 6000ILM AFM seamlessly integrates the capabilities of an AFM with those of an inverted light microscope or a confocal microscope, letting life science researchers go beyond the optical light diffraction limit to achieve nanoscale resolution. The 600ILM allows molecular imaging, live-cell imaging, force studies and mechanical stimulus studies with a single system solution, preserving an efficient, natural workflow. It is ideal for studying cell membranes, single DNA/RNA strands, individual proteins and biopolymers.

Agilent 8500 Field Emission Scanning Electron Microscope

Compact, Low Voltage, High Performance FE-SEM

The 8500 FE-SEM offers researchers a field emission scanning electron microscope (FE-SEM) in their own laboratory. This compact, innovative system has been optimized for low-voltage imaging, extremely high surface contrast, and resolution typically found only in much larger, more expensive FE-SEM. About the size of a laser printer, the easy-to-install 8500 provides convenient plug-and-play performance. No dedicated facilities are required, only an AC power outlet. This scientific-grade system offers several imaging techniques allowing nanoscale features to be observed on a wide variety of nano-structured materials, including biological materials and other energy-sensitive samples on any substrate, even glass.

Vacuum Solutions for Mass Spectroscopy and Analytical Instruments

User-friendly, complete vacuum solutions for laboratory and scientific research

As analytical instrumentation becomes increasingly sophisticated and precise, Agilent Technologies Vacuum Products Division continues to create innovative, dedicated vacuum pumping solutions for mass spectrometry, time-of-flight, and gas analysis instruments, for both OEMs and End-Users.

Building on years of experience and technological leadership, our application engineers can help to optimize your instrument, and reduce maintenance and cost of ownership, tailoring the products right to your needs.

Agilent Technologies' Vacuum Products Division, as a Total Vacuum Supplier, can improve the customization offering:

- Rotary Vane Pumps and Dry Scroll Pumps for stand-alone application
- Complete package
- Turbo Pump and RVP / SCROLL
- Capability of doing remote diagnostics thanks to "smart" backing pumps
- Possibility of tailoring every single component right to the application
- Integrated solutions

Turbomolecular Pumps Solutions

Agilent Turbo-V 81 and 301 Navigator

- Standard pumps
- Compact design with high performance turbo drag stages

Agilent Turbo-V 401 / 301

- Dual and triflow pumps in both cartridge and envelope version

Applications

- Agilent Turbo-V 81-T and 81-M for GC-MS, TOF, RGA, L.D.
- Agilent Turbo-V301 Navigator for GC-MS, LC-MS, ICP-MS, TOF, RGA
- Multi flow pumps for 3Quad and Q-TOF
- Medium size pumps for LC-MS, TOF

Dry Scroll Pumps, with and without Inverter

Agilent TriScroll 300 and 600, and TriScroll 300INV and 600INV with variable speed control

- Set-up customized rotational speed to optimize pump variables
- Low acoustic noise and unmatched vacuum performances
- Communication capability

IDP-Series Dry Scroll Pumps

- High performances in a compact design
- Low noise
- Affordable and convenient with low cost of ownership

Applications

- Agilent IDP-Series for GC-MS / small TOF, L.D.
- Agilent SH-110 for GC-MS / small TOF, L.D.
- Agilent TriScroll 300 for L.D. manufactures
- Agilent TriScroll 600INV for high end TOF, LC-MS
- Ideal for stand-alone applications

Rotary Vane Pumps from 24 to 38 m^3/h, with and without Inverter

- Variable speed control to optimize pumps variables (speed, pressure, noise)
- Constant and high performances world wide
- Remote and serial communication capability
- Compact and light

Applications

- Agilent DS42, DS102 for GC-MS / small TOF
- Agilent DS302, DS602 for ICP-MS / old LC-MS / other applications
- Agilent MS40+ for LC-MS, high-end systems
- Agilent HS652 for LC-MS

Agilent Service and Support for Instrument Systems

Focus on what you do best

For 40 years, Agilent has been building and maintaining the instruments you count on to stay competitive and successful. Trust us to protect your investment with a broad portfolio of services, backed by a global network of experienced service professionals dedicated to the productivity of your lab.

Agilent Advantage Service Plans

The best service available for your Agilent instruments

Agilent offers a flexible range of service plans so that you can choose the level of coverage that is best for your lab.

- **Agilent Advantage Gold –** Priority-one coverage for ultimate uptime and productivity
- **Agilent Advantage Silver –** Comprehensive coverage for dependable laboratory operations
- **Agilent Advantage Bronze –** Total repair coverage at a fixed annual price
- **Agilent Repair Service –** Basic coverage for reliable instrument repair

Agilent Advantage service plans include Agilent Remote Advisor for real-time remote monitoring and diagnostics. Through secure internet connections, you can interact with Agilent service professionals, receive detailed asset reports, and configure text or email alerts to notify you before problems occur – helping you to maximize instrument uptime and optimize laboratory workflows.

Get the Agilent Service Guarantee

Should your instrument require service while covered by an Agilent service agreement, we guarantee repair or we will replace your instrument for free.

No other company offers this level of commitment to keep your lab up and running at peak efficiency.

Laboratory decision makers and users ranked Agilent as their first choice for general laboratory compliance services.

The Agilent Value Promise – 10 Years of Guaranteed Value

In addition to continually evolving products, we offer something else unique to the industry – our 10-year value guarantee. The Agilent Value Promise guarantees 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. Not only does Agilent ensure a reliable purchase now, but we also ensure that your investment is just as valuable in the future.

Agilent Compliance Services

Equipment qualification that meets the most stringent requirements

Enterprise Edition Compliance was developed to streamline compliance across your entire lab. Used globally in regulated labs, including standards organizations and regulatory agencies, Enterprise Edition enables you to:

- **Improve qualification efficiency** by automating protocols across platforms to ensure greater efficiency and minimize regulatory risk
- **Standardize your entire compliance operation** with robust test designs that work with all your instruments
- **Add, remove or reconfigure tests** based upon your unique user requirements
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Agilent Education and Consulting Services

Our best minds, working for you

Make the most of your instrument with training and consulting from the same experts who designed the instruments, software and processes you use every day.

- **Classroom and on-site training** in instrument operation, troubleshooting and maintenance
- **Customized consulting service**s to meet your lab's unique needs

For more detailed information, please go to **www.agilent.com / chem / services** or contact your local Agilent Services and Support representative.

Sample Preparation

Agilent Bond Elut: Accuracy Starts Here

For over 30 years, Bond Elut has been the most trusted name in solid phase extraction. Years of use by demanding chemists at top companies worldwide have thoroughly documented its many applications and proven its performance. To this day, you will find more literature references for Bond Elut than any other SPE product in the industry.

- Heritage of Reliability: With years of use in some of the most demanding analytical laboratories in the world, Bond Elut products have a proven track record resulting in a strong publication pedigree
- Options for Your Needs: Offering extraction solutions for the widest range of analytes and matrices, (over 40 bonded silica phases for high specificity methods and polymeric phases for rapid method development), Bond Elut has the largest choice of formats and sorbents in the market
- Innovative Products Designed for Lab Efficiency: Whether it be fast flow polymeric particles or our patented 96-well plate design, all Bond Elut products are created for ease of use and flexibility to meet both manual and automated requirements
- Technical Support at Every Step: For your specific applications or to help solve occasional technical issues, a global team of analytical scientists are on hand to assist
- World Class Manufacturing and Quality: Unrivalled manufacturing control, plus exacting ISO 9001: 2000 compliant inspections guarantee the consistent quality of Bond Elut

Chem Elut Cartridges

Chem Elut brings the simplicity of liquid/liquid extraction (LLE) to a disposable cartridge. Packed with a specially cleaned diatomaceous earth called Hydromatrix, Chem Elut lets you process samples by LLE without the problems of LLE.

- The cartridge format eliminates sample shaking and emulsion formation
- Solvent flows by gravity only, improving extraction reproducibility
- The organic extract is automatically separated during the process, allowing for easier automation

Agilent QuEChERS Kits

Pre-packaged Agilent QuEChERS Kits are an easy way to capture the time-saving benefits of QuEChERS sample preparation.

- Extraction kits with pre-weighed salts in anhydrous packets allow you to add salts after you add organic solvent to your sample – avoiding an exothermic reaction that can compromise analyte recovery
- Dispersive kits with sorbents and salts supplied in 2 mL or 15 mL centrifuge tubes accommodate the aliquot volumes specified by current AOAC and EN methodologies
- Universal dispersive kits provide excellent recoveries and reproducibility for all types of fruits and vegetables
- Ceramic homogenizers break up salt agglomerates, promoting consistent sample extraction and increasing product recovery during extraction and dispersion; shaking time reduced from 60 to 20 seconds.

Captiva Filtration

Captiva's unique dual depth filtration media provides complete removal of precipitated proteins and outstanding resistance to sample clogging, with no loss of analytes or non-specific binding. All Captiva components are ultra clean, and rigorously tested to ensure against non-specific binding. With Captiva, your plasma samples are processed quickly and reliably. Captiva is easily automated for enhanced productivity, and also excellent for sample storage.

The Captiva range includes:

- Captiva ND^{Lipids}, the non-drip filtration plate for lipid and protein depletion
- Captiva 96-well filter plates for preparing precipitated proteins for LC/MS
- Captiva filter cartridges, all the usual Captiva benefits in a standard SPE cartridge format

Agilent Columns and Supplies

Get the best possible performance from your Agilent instruments with Agilent columns and supplies

Using Agilent columns and supplies enhances the sensitivity and performance you get from your instruments. Agilent tightly controls the specifications for every column and supply it sells. In many cases, Agilent adds several manufacturing steps beyond the "standard" processes that others might use, so that the product is optimized to the exacting standards that your work demands. This adds up to less worry, less rework and more productivity for your lab.

Columns

Agilent columns are designed and manufactured to offer excellent and reproducible performance.

Agilent HPLC Columns

Agilent ZORBAX HPLC Columns

Whether you are performing conventional or ultra-fast chromatography, separating biomolecules, or analyzing complex compounds, there is a ZORBAX HPLC column that offers an optimized solution for your specific measurement and purification application. Agilent's ZORBAX and Poroshell families offer a range of particle sizes and column technologies to support high throughput analyses. Rapid Resolution High Definition (RRHD) UHPLC columns are stable to 1200 bar, and Poroshell 120 columns (stable to 600 bar) help increase resolution and throughput for any HPLC/UHPLC instrument.

Agilent Columns for Biologic Characterization

Whether you are characterizing monoclonal antibodies, separating a target protein or monitoring your process scale purifications, Agilent columns and tools for biologic characterization can easily be integrated into your workflow for high-quality results, every time.

Agilent GPC / SEC Columns

Agilent Technologies now offers an extensive range of gel permeation (GPC) and size exclusion chromatography (SEC) columns and calibration standards developed by Polymer Laboratories. Our range of products includes various PL gels for organic solvents, PL aquagel-OH columns for aqueous based SEC separations, and a series of additional products developed for specific applications such as the analysis of polyolefins, oligonucleotides and more.

Agilent J&W GC Columns

As the world's leading provider of GC capillary columns, Agilent is uniquely positioned to offer you superior quality and unmatched service and support. Our vast portfolio of columns includes the following products:

- Agilent J&W Ultra Inert GC columns push the industry standards for consistent column inertness and exceptionally low column bleed, resulting in lower detection limits and more accurate data for difficult analytes
- Agilent J&W High Efficiency GC columns offer a simple and cost effective way to increase your sample throughput without a loss of resolution
- Agilent J&W Select GC Columns provide guaranteed performance for methods and applications in the environmental, food and fragrance, chemical and chiral markets
- Agilent J&W PoraBOND PLOT columns deliver superior mechanical and temperature stability when analyzing a wide range of gases and volatiles

Agilent Certified Vials, Caps and Septa

Prevent unexpected sequence problems

Don't let the least expensive part of the sequence become the biggest cause of failed analysis. Agilent's certified vials are manufactured with the same high-quality design, technical expertise, and exacting specifications that go into every Agilent instrument. Every order of certified vials, caps, and septa comes with a test certificate confirming product specifications. To find out more about the Agilent vials portfolio, visit www.agilent.com/chem/vials

GC and LC Instrument Parts and Supplies

You can trust Agilent to deliver the supplies that help you get the most out of the chromatography instruments in your lab.

Our commitment and leadership of continued innovation over the past 40 years in chromatography guarantees you have an expert source for the knowledge you need to solve your toughest challenges.

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The latest technology and newest developments are just a click away with free e-Seminars from Agilent

With different series and topics for troubleshooting, maintenance, informatics, compliance, and industry applications, Agilent e-Seminars are the easy way to get the latest information without the hassle or expense of travel. These free 60 to 90 minute online seminars are offered continuously:

- Choose from live or recorded events to best fit your schedule
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U.S. and Canada
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Europe
info_agilent@agilent.com

Asia Pacific
inquiry_lsca@agilent.com

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