

**BUILT-IN
DIODE ARRAY
DETECTOR**



Agilent 1220 Infinity LC

Infinitely more affordable

1220

The Measure of Confidence



Agilent Technologies

INFINITELY MORE AFFORDABLE

Is your lab looking for a future-proof system that provides superior performance and robustness for routine analyses, run after run and day after day? Are you looking for the best system on the market that fits your application needs and your budget? Here's the answer: the **1220 Infinity LC** from Agilent – the manufacturer of the most-trusted LC with 40 years of innovation and experience in separation science. Take the advantage of Agilent's unmatched combination of advanced instrumentation, versatile software and application-matched columns and consumables.

Integrated, Robust and Easy to Use

Each system is tested in its final configuration prior to shipment, making start up in your lab fast and trouble free. Right out of the box even inexperienced users can master the system quickly and obtain first-rate results.

Superior Performance in a System Optimized for Everyday Productivity

Run-after-run, day-after-day reproducibility. Extraordinary results. For all your routine applications – including those that must comply with regulatory requirements – the 1220 Infinity LC offers uncompromised performance for HPLC and UHPLC.

Industry-leading Quality and Agilent Long-life Reliability at a Highly Attractive Price

With more than 100,000 LC systems sold Agilent is the acknowledged leader in liquid chromatography. Invest in quality – at an affordable price.

Simply More Value

The Agilent 1220 Infinity LC is ideally suited to address the needs of small to medium sized labs that are mainly concerned with routine analysis using standard HPLC but would like to take advantage of UHPLC. The system delivers all the performance needed to meet stringent regulatory demands – while setting new standards for compactness and ease of operation.

As part of the 1200 Infinity Series and representing the entry-point system, the Agilent 1220 Infinity LC leverages the latest technology by sharing components with 1260 Infinity and 1290 Infinity LCs.



Whatever your budget or application, the Agilent 1200 Infinity Series delivers the best LC value in the industry. Now, our most popular 1200 Infinity Series LC configurations are available with a 3-5 year up-and-running guarantee.*

*Regional differences might occur, please contact your local Agilent representative.



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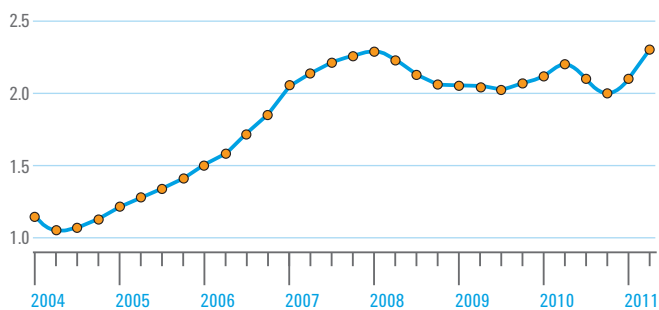
The popular Agilent 1220 Infinity LC is now available with a built-in diode array detector:

- 80 Hz data rate
- 190-950 nm wavelength range
- $\pm 7 \mu\text{AU}$ noise at 254 and 750 nm



Agilent Quality Index

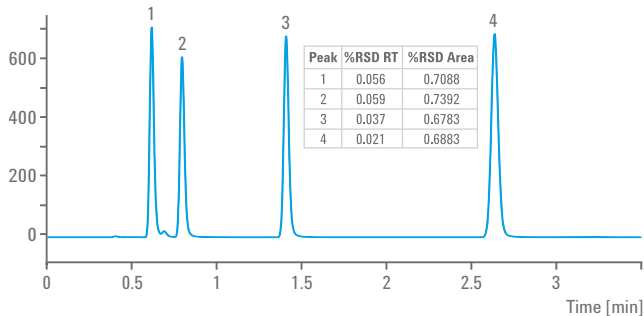
Our continuous commitment to reliability and robustness is reflected in the Agilent Quality Index that has more than doubled over the last 6 years.



Area and Retention Time Precision

UHPLC capability and excellent reproducibility of retention times and areas from six repetitive isocratic analyses of a standard sample – with 3 μL injection volume.

ZORBAX Eclipse Plus C18, 3.0 x 50 mm, 1.8 μm
Absorbance [mAU]



Learn more: www.agilent.com/chem/1220

SIMPLY MORE IN TUNE WITH YOUR LAB'S NEEDS

Take a close look at the Agilent 1220 Infinity LC System and you'll find everything you need for first-class results and rewarding day-after-day productivity. Choose from four standard configurations to fit your LC workflow and rest assured that you have made an investment that is truly future-proof.

Solvent Delivery

Based on the design used in the Agilent 1260 Infinity LC, the pumping module ensures stable, virtually pulse-free solvent flow up to 10 mL/min. Servo-controlled, dual floating pistons enable variable stroke volume optimized for the selected flow rate, and keeps maintenance to a minimum. The pressure range up to 600 bar lets you discover the advantages of columns with smaller particles for better resolution and faster run times. Choose from different configurations, including either an isocratic pump or a gradient pump with up to four solvents and integrated two-channel degassing unit. Pump options include:

- Automated solvent selection valve for gradient pump, combining two-out-of-four solvents for gradient formation or for column flushing with different solvents
- Continuous seal wash kit – based on the design of the Agilent 1260 Infinity pumps – to prevent corrosion for applications running buffer solutions with high salt concentrations (> 0.1 M)

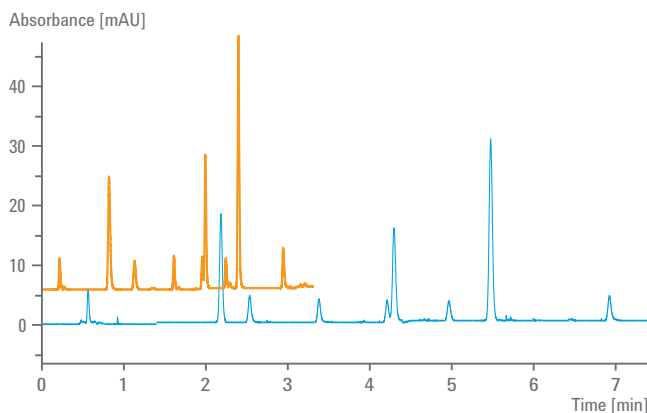
The gradient pump includes an integrated dual-channel degassing unit that creates continuous vacuum using the same technology used in the 1290 Infinity Binary Pump. With low internal volumes of 1.5 mL per channel, the degassing unit eliminates baseline fluctuations and shortens equilibration times.

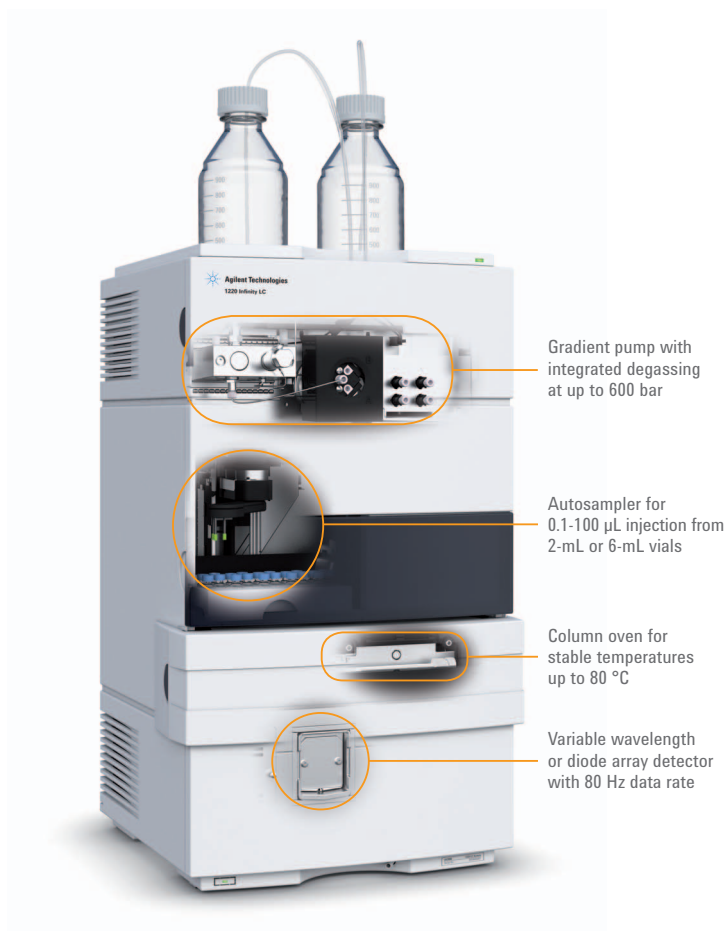
| Isocratic Configuration | Gradient Configurations | | |
|------------------------------|------------------------------|------------------------------|----------------------|
| Isocratic Pump | Gradient Pump | Gradient Pump | Gradient Pump |
| Manual Injector | Manual Injector | Autosampler | Autosampler |
| ... | ... | Column Oven | Column Oven |
| Variable Wavelength Detector | Variable Wavelength Detector | Variable Wavelength Detector | Diode Array Detector |

Choose from four standard configurations to fit your LC workflow – then upgrade as required to meet your lab's future needs.

HPLC-to-UHPLC Method Transfer

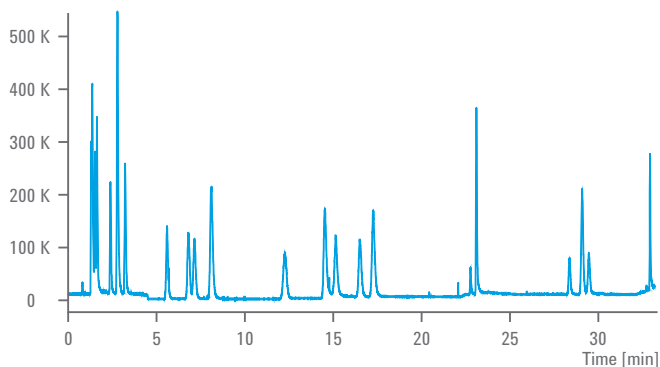
Easy transfer of an HPLC method to UHPLC by deploying a shorter column with sub-2-micron particles. Shorter analysis time and improved resolution are the result.





Screening for EU-banned Dyes in Textiles

Total ion chromatogram (TIC) of a mixture of 22 aromatic amines operated in time programmed SIM mode.



Autosampler/Manual Injector

The integrated autosampler is designed for reliability, safety and easy maintenance, and enables injections from 0.1 to 100 μ L. The autosampler's flow-through design ensures that there is no loss of sample; the entire sample drawn from the vial is injected. The standard configuration offers a sample capacity of 100 2-mL vials.

The easy-to-use manual injector includes a long-life injection valve and standard 20 μ L loop. Injection volumes up to 5 mL are possible with respective loops.

Column Oven

The optimized column oven houses a single column, and provides accurate, stable column temperature from 5 degrees above ambient to 80 °C, for applications where retention time reproducibility and separation quality improve above ambient temperatures.

Variable Wavelength Detector

Featuring simplified optics for high sensitivity, low baseline drift, wide linear range and 80 Hz data rate, Agilent's variable wavelength detector not only lowers your detection limits and expands your capabilities – it lowers your cost of ownership with easy front access for fast lamp and flow cell replacement.

Diode Array Detector

Capable of spectral analysis the diode array detector is the ideal tool for detection and quantification of impurities. A variety of flow cells are available to match your application's needs and the detector's 80 Hz data rate guarantees highest sensitivity.

Add Any 1200 Infinity Series Detector

Extend your detection capabilities with any 1200 Infinity Series detector. Choose fluorescence, refractive index or evaporative light scattering detection, or Agilent's multi-detector suite (MDS) with refractive index, dual-angle light scattering and viscosity detection. For demanding applications, simply add a 6100 Series Single Quadrupole MS.



Learn more: www.agilent.com/chem/1220

SPECTRAL DATA FOR MORE DETECTION CONFIDENCE

The Agilent 1220 Infinity LC is now available with a built-in diode array detector, providing you with spectral data for more confidence in the qualification and quantification of your samples.

Spectral Analysis

Simultaneous measurement of up to 8 signal wavelengths and detection with data rates up to 80 Hz facilitates precise identification, quantification and purity analysis for ultrafast LC separations.

Flexible Software Options

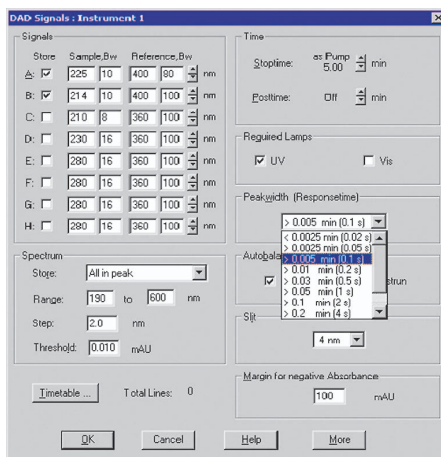
Feature-rich spectra extraction capabilities are available through Agilent's OpenLAB CDS. This solution provides easy and convenient instrument control, data handling and evaluation, and final reporting.

Unmatched Performance

Low-noise electronics and flow cells with 2, 5 or 13- μ L volume deliver maximum sensitivity for standard or ultrafast LC applications. Radio frequency identification (RFID) tags for all flow cells and UV lamps provide highest levels of data traceability by recording parameters such as cell dimensions, lamp usage or serial number.

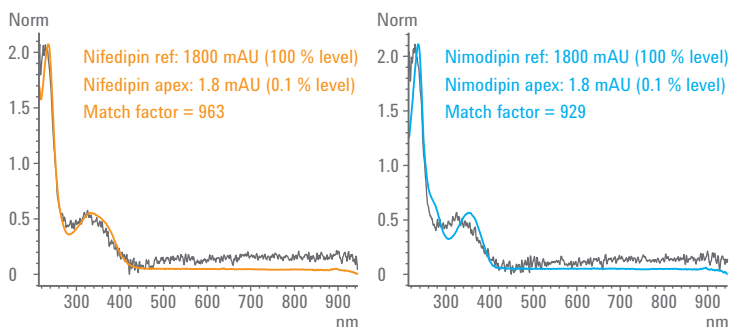
Signal Selection

Selection of up to 8 signal wavelengths provides for increased sensitivity and selectivity for complex samples.



Spectra Confirmation at Trace Levels

Identification of Nifedipin at trace levels of 0.1 % using 80 Hz sampling rate. Library search gave a match factor of 962 for Nifedipin – compared to 929 for the primary compound Nimodipin, which shows high spectral similarity to Nifedipin.



| # | Match | Entry | Time | Name | ID | ID Name |
|---|---------|-------|------|-----------|----|---------|
| 1 | 962.911 | 1 | 0.94 | Nifedipin | 0 | |
| 2 | 929.294 | 2 | 1.07 | Nimodipin | 0 | |



UPGRADE OPTIONS MEET FUTURE NEEDS

Upgrade your 1220 Infinity LC at any time to meet the increasing demands of your laboratory. A variety of upgrade options are available to enhance the chromatographic performance and productivity of your system.

Enhance Your System's Capabilities

- Upgrade your pump from isocratic to gradient for higher method flexibility
- Upgrade the manual injector with an autosampler for higher sample throughput and sample pretreatment programming
- Add a click-in column oven for better reproducibility and method development flexibility

Extend Sample Handling

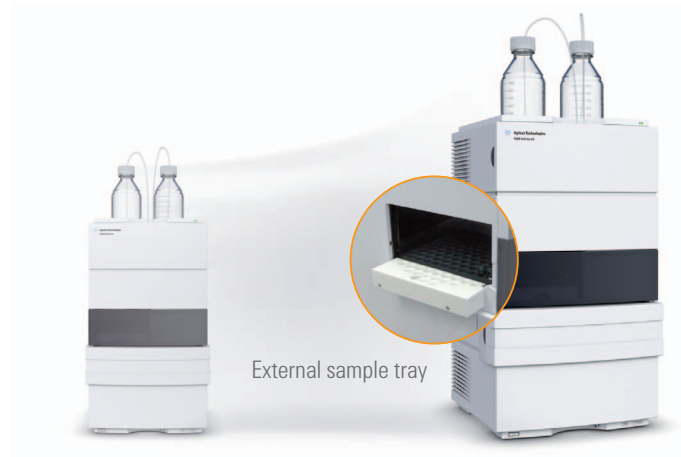
- Upgrade with external sample tray for easy sharing of one instrument for LC/MS analysis

Simplify Mobility

- Upgrade with attenuation unit for vibration protection when used in a mobile laboratory, see page 8

Add Any 1200 Infinity Series Detector

Any 1200 Infinity Detector can be combined with the 1220 Infinity LC system. Choose fluorescence detection for analysis of compounds such as aflatoxins, refractive index detection for analysis of sugars, evaporative light scattering detection for analysis of non-UV absorbing chromophores, or Agilent's multi-detector suite for advanced GPC. For small-scale preparative LC, purification or sample re-analysis, simply add a fraction collector.



1220 Infinity Gradient LC with 1260 Infinity MDS



1220 Infinity Gradient LC with 1260 Infinity FLD



1220 Infinity Gradient LC with 1260 Infinity RID



1220 Infinity Gradient LC with 1260 Infinity ELSD



1220 Infinity Gradient LC with 1260 Infinity Fraction Collector



1220 Infinity Gradient LC with 6150 Single Quadrupole MS



AGILENT LAB QUALITY WHERE AND WHEN YOU NEED IT

For mobile labs that need to measure samples at different locations or even remote sites, the Agilent 1220 Infinity Mobile LC Solution provides an ideal configuration for onsite liquid chromatography analysis. A special mounting plate absorbs shocks and vibration during transport or operation. Columns and solvent containers are held firmly in place, preventing instrument damage and maintaining operator safety.

Agilent 1220 Infinity Mobile LC Solution

- Gradient pump with integrated degassing unit, 600 bar, up to 10 mL/min, for reliable and robust analysis
- Vial sampler with injector programming
- 80 °C oven for one 25 cm column
- Variable wavelength or diode array detector with 80 Hz sampling rate for highest sensitivity
- Walk-up upgrade kit with external tray for easy sharing of one instrument for LC/MS analysis

Application Examples

Mobile LC applications range from analysis of non-volatile pesticides in environmental and food applications, through analysis of biofuels, to drug monitoring or testing of counterfeit drugs. It can also be used in teaching, when a mobile laboratory travels to students residing in remote areas.

Another application area that has recently gained interest is the authentication of food whereby a mobile LC facilitates direct qualification of imported foodstuffs at airports and harbors.



Mobile LC

The 1220 Infinity Mobile LC Solution offers high reliability and fast analysis even under challenging onsite conditions, making it the ideal LC system for fast response in the field.



REACH BEYOND THE LABORATORY

The Agilent OpenLAB Laboratory Software Suite is a rich, integrated suite of products – OpenLAB Chromatography Data Systems (CDS), OpenLAB Electronic Lab Notebook (ELN) and OpenLAB Enterprise Content Manager (ECM), a Scientific Data Management System (SDMS). OpenLAB addresses the complete life cycle of scientific data – from experimental design to data acquisition through knowledge management and analysis.

Agilent OpenLAB CDS ChemStation Edition

OpenLAB CDS ChemStation Edition is designed for the advanced needs of research and development scientists in chemical and pharmaceutical laboratories. It is easy to customize to specific needs and offers a broad range of add-on modules to support specific applications. For 1220 Infinity LC users on tight budgets, a special edition is available.

Agilent OpenLAB CDS EZChrom Edition

OpenLAB CDS EZChrom Edition is fully scalable from an entry-level configuration with EZChrom Compact to a multi-user, multi-site distributed systems with hundreds of instruments and users. This makes it ideal for routine operation in QA/QC laboratories.

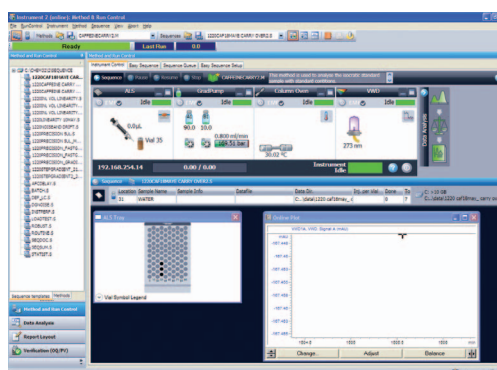
Agilent Instrument Control Framework

Agilent Instrument Control Framework (ICF) facilitates comprehensive and straightforward control of your Agilent LC instruments and modules regardless of the chromatography data system you deploy in your laboratory.

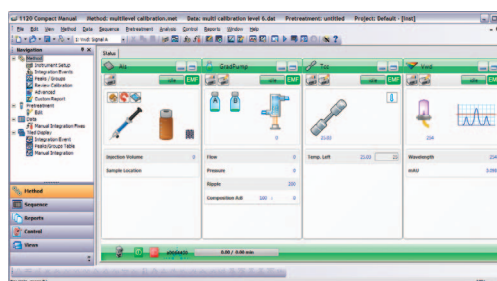
Agilent Lab Advisor

Lab Advisor helps you to keep your lab's instruments in top condition and reduces unnecessary lab downtime. It provides you with advanced diagnostic and maintenance capabilities for your 1200 Infinity Series LC – independent of the software you use to control your instrument. In short, Lab Advisor helps you achieve high quality chromatographic results in the most efficient way.

Agilent ChemStation



Agilent EZChrom



Agilent Lab Advisor



ACCURATE RESULTS QUICKLY AND CONFIDENTLY

Maximize system performance and reliability for all your separation needs by combining your 1220 Infinity LC with Agilent Poroshell and ZORBAX LC columns and LC supplies. Designed with the same attention to detail, quality and superior performance you have come to expect from Agilent instruments, you can count on Agilent's columns and supplies to deliver the high quality results you need and expect, time after time.

Agilent Poroshell 120 Columns

This is the newest advance in column technology. The superficially porous 2.7 μm particle provides the ideal balance of high resolution at an HPLC operating pressure. The speed and efficiency is similar to sub 2 μm columns, allowing high productivity and sample throughput on your Agilent 1220 Infinity LC. In fact, Poroshell 120 columns are the ideal match and best choice for the 1220 Infinity LC!

Poroshell 120 and ZORBAX Eclipse Plus RRHT Columns are two great performing columns to consider for your Agilent 1220 Infinity LC.



Unparalleled Quality and Flexible Choices Within the ZORBAX LC Column Family

- Wide selection of chemistries – Eclipse Plus, Eclipse XDB, StableBond, Extend, Bonus-RP, HILIC and more – controlled and manufactured by Agilent to ISO quality standards
- Superior flexibility and product scalability with a wide range of particle sizes (1.8, 3.5, 5, 7 micron and new superficially porous 2.7 micron) and column dimensions
- Individual column performance reports to document column-to-column and lot-to-lot reproducibility
- Superior particle strength for even the most demanding high pressure applications

Agilent ZORBAX Eclipse Plus

These columns are a time-tested winner for HPLC applications. They are made with a groundbreaking bonding treatment and end-capping process to improve peak shapes.

Look to ZORBAX Eclipse Plus for:

- Exceptional peak shape, efficiency, resolution and lifetime for a broad application range of bases, acids and neutrals
- A first choice for method development
- An industry-leading range of configurations, including RRHT (1.8 μm) for enhanced speed and performance

For examples of how the 1220 Infinity LC can solve a wide range of application challenges, download the Application Compendium from www.agilent.com/chem/ac1023



INFINITELY BETTER VALUE FROM YOUR INVESTMENT

To ensure the ongoing performance of your laboratory and to maximize the value of your investment, Agilent provides a comprehensive range of service plans. With coverage for both Agilent and non-Agilent equipment our service agreements can help you control costs, increase productivity and benefit from our global network of expert service professionals to meet your strategic objectives.

Agilent Advantage Service and Support

Agilent provides customer-focused products and services for all stages in an instrument's life cycle, from installation and upgrade to preventive maintenance and repair. Whether you need support for a single instrument or a multilab, multivendor operation, Agilent offers an Advantage service solution to help you increase your uptime, optimize your lab's resources, and resolve any problems quickly.

Agilent Compliance and Functional Verification Services

Agilent has been ranked number one in compliance by independent survey for fifteen years. This means you get the proof of calibration or system qualification you need to support your ISO 17025 or GLP/GMP quality initiatives. And, with Enterprise Edition, you can even obtain consistent, harmonized reports across all your Agilent and non-Agilent systems.

Agilent Software Service and Support

Agilent's Professional Services organization facilitates process and productivity enhancements using software and informatics products and technology. Partner with Agilent consultants and let us help you develop comprehensive software and support strategies that ensure continued system uptime and maximum productivity.

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 that system toward an upgraded model. Not only does Agilent ensure a safe purchase now, we help ensure your investment is as valuable to you in the long run.

Agilent Service Guarantee

Should your Agilent instrument require service while covered by an Agilent service agreement, we guarantee repair or we will replace your instrument for free. No other manufacturer or service provider offers this level of commitment to keeping your laboratory running at maximum productivity.



Learn more

www.agilent.com/chem/1220

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© Agilent Technologies, Inc. 2010 – 2012
Published in the USA, October 1, 2012
5991-0204EN



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