Infinitely better for bio-molecule analysis

Agilent 1260 Infinity Bio-inert Quaternary LC System

The Measure of Confidence

Agilent Technologies
The Agilent 1260 Infinity Bio-inert LC sets new standards in performance, reliability and robustness for analysis of bio-molecules. Based on the proven technology of the 1200 Infinity Series liquid chromatography platform, the 1260 Infinity Bio-inert LC handles with ease the challenging solvent conditions commonly used for analysis of proteins and bio-therapeutics as well as minimizing problems associated with these molecules’ non-specific tendencies to bind to surfaces. The 1260 Infinity Bio-inert LC is the best choice for your analytical and semi-preparative separations of proteins!

100 percent bio-inert
The entire flow path of the 1260 Infinity Bio-inert LC is biologically inert. All capillaries and fittings throughout the autosampler, column compartment and detectors are completely metal-free so that the bio-molecules in your sample come in contact only with ceramics or PEEK. This minimizes secondary interaction of proteins and peptides with metallic surfaces, which could cause peak tailing, low recovery and decreased column lifetime.

True UHPLC performance
The 1260 Infinity Bio-inert LC has a power range up to 600 bar and is capable of handling the higher pressures demanded by new emerging column technologies with smaller particles. This makes the 1260 Infinity Bio-inert LC a perfect match for all of your current SEC and IEX columns with particle sizes down to 1.7 µm. The 1260 Infinity Bio-inert LC is the only truly bio-inert LC with UHPLC capability.

10 times higher sensitivity
The superior optofluidic waveguide technology of the bio-inert Agilent Max-Light cartridge cell in the new 1260 Infinity Diode Array Detector helps you to achieve up to 10 times higher detection sensitivity. This boost means you require smaller amounts of your precious protein samples, which is especially important for profiling of minor components in complex mixtures and for improved QC accuracy. As a result, you can perform more assays than ever before with the same amount of protein, saving time and money.
Robust – even under harshest conditions
Buffers with high salt concentrations such as 2 M NaCl or 8 M urea and extreme pH values of 1-13 are commonly used in the analysis of bio-molecules, posing a significant challenge for LC equipment. The dedicated design of the 1260 Infinity Bio-inert LC handles these harsh solvent conditions with ease. Corrosion-resistant titanium in the solvent delivery system and metal-free materials in the sample flow path create an extremely robust instrument – protecting not only your samples but also your investment.

Flexible and modular for bio-analysis and bio-purification
The modularity of the 1260 Infinity Bio-inert LC gives you a high degree of flexibility.
• Quaternary solvent capability for online buffer mixing from up to four solvents
• Bio-compatible valves for even more options such as solvent selection or column switching – making method development an easy task
• Bio-inert flow cells for your choice of detector
• Flow rates up to 10mL/min in gradient operation and bio-inert fraction collection for automated bio-purification and semi-prep work with larger column dimensions
• Mix-and-match compatibility with existing Agilent systems for full flexibility to meet future requirements

To learn more about the Agilent 1260 Infinity Bio-inert LC, visit www.agilent.com/chem/1200BioLC
Agilent 1260 Infinity Bio-inert LC

More confidence in bio-molecule analysis.

More resolution per time
The 1260 Infinity Bio-inert Quaternary Pump provides true UHPLC performance up to 600 bar, allowing you to run any current large bio-molecule application at high or low pressures. All solvent lines are titanium, making them completely corrosion resistant. Quaternary solvent mixing with integrated degassing and seal washing gives you superior functionality, robustness and performance.

More confidence in sample handling
The 1260 Infinity High-performance Bio-inert Autosampler handles vials and microtiter plates and enables you to inject volumes from 0.1 µL to 100 µL—extendable to 900 µL. The ceramic needle, PEEK needle seat and wash, and stainless-steel-clad PEEK capillaries ensure highest injection accuracy and precision with minimum carryover. To protect labile compounds from degradation during analysis or storage, the autosampler is cold-room compatible or you can add a cooling module. The 1260 Infinity Bio-inert Manual Injector is available for single injections or larger injection volumes.

More flexibility to optimize your chromatography
The 1290 Infinity Column Compartment includes bio-inert heating elements to pre-heat the solvent before it reaches the column. The column compartment houses either four short columns or two columns up to 30 cm in length. Agilent Quick-Change valves are available for more complex workflows such as column switching, column screening or method development.

More sensitivity – wider dynamic range
Agilent offers a variety of detection options to address the requirements of protein research applications or of assays to assess the integrity of bio-therapeutic compounds. Bio-inert flow cells are available for the following detectors to meet your needs for highest sensitivity and widest dynamic range.
• 1260 Infinity Diode Array Detector (10x sensitivity, pH 1-12)
• 1260 Infinity Diode Array Detector VL (pH 1-14)
• 1260 Infinity Multiple Wavelength Detector
• 1260 Infinity Fluorescence Detector
More flexibility in fraction collection

The 1260 Infinity Bio-inert Fraction Collector is the ideal extension to your system when you need to investigate your separated compounds further. It fits perfectly in Agilent’s modular LC design and does not require extra benchspace. Like the autosampler, a cooling module is available to prevent degradation of thermally-labile bio-molecules.

Patented fraction delay calibration and time- or peak-triggered fraction collection facilitates superior recovery and purity. A wide range of collection vessels, including vials, microtiter plates or custom vessels, give you highest collection flexibility. With flow rates up to 10 mL/min possible, you can even run separations using columns with larger inside diameters.

New capillary and fitting technology for robust and secure operation – day in, day out.

With the 1260 Infinity Bio-inert LC, Agilent introduces new capillary and fitting technology that facilitates the unique combination of metal-free bio-inertness and high pressure operation. Three different types of capillaries are deployed:

- Highly corrosion resistant titanium capillaries for the solvent delivery lines
- Metal-clad PEEK capillaries in the autosampler and column compartment
- PEEK capillaries in the low pressure parts of the system downstream of the separation column

The metal-clad PEEK capillaries feature a unique connection system. The front end of the fitting socket is ceramic for complete bio-inertness at every connection.

To learn more about the Agilent 1260 Infinity Bio-inert LC, visit www.agilent.com/chem/1200BioLC
Agilent 1260 Infinity Bio-inert LC and Agilent BioHPLC Columns

A complete solution for NBE analysis.

More confidence for your bio-analytical assays and workflows

The physico-chemical characterization and identity confirmation of therapeutic monoclonal antibodies (MAbs) play an important role in the development and production workflow of a new biological entity (NBE). Agilent offers a broad spectrum of tools for all major assays that need to be performed to fulfill drug safety and efficacy requirements. The combination of Agilent’s BioHPLC columns with the 1260 Infinity Bio-inert LC provides a superior solution to improve the performance, sensitivity, reliability and productivity of aggregation analysis, charge variant analysis, deamidation and peptide mapping. Instrument robustness and reliability combine with column performance to translate directly into faster, more confident results.

Bio-inert HPLC Solutions

Highest confidence in protein analysis

The Agilent Bio MAb HPLC columns feature a unique resin specifically designed for high-resolution charge-based separations of monoclonal antibodies. Bio MAb columns are available in 1.7 µm, 3 µm, 5 µm and 10 µm sizes, providing higher resolution with the smaller particles.
Highest resolution for superior efficiency in size exclusion

The Agilent Bio SEC column portfolio features a new series of high performance porous silica columns with unique hydrophilic coating. The columns achieve high resolution, excellent lot-to-lot reproducibility and increased lifetime even under low salt conditions where other columns exhibit significant secondary interactions.

**Agilent Bio SEC-3 HPLC Columns** promote sharper peaks and faster size-based separations for bio-molecules and watersoluble polymers. Available in three different pore sizes (100 Å, 150 Å, 300 Å). These columns are the ideal choice for quantification of aggregation levels in antibody QA/QC.

**Agilent Bio SEC-5 HPLC Columns** provide improved recovery for a wide range of molecular sizes. With a larger range of pore sizes, 100 Å, 150 Å, 300 Å, 500 Å, 1000 Å and 2000 Å, the Agilent Bio SEC-5 columns provide good recovery and column lifetime when characterizing bio-molecules over a broad size range.

Superior resolution and higher productivity for charge variants and deamidation

An essential part of monoclonal antibody characterization is the identification of acidic and basic isoforms. The unique design of Agilent Bio MAb non-porous PS/DVB particle with a stable and uniform weak cation exchange layer provides charged based separations with increasing efficiency and recoveries — rapid resolution of isoforms for enhanced identification.

**Agilent Bio MAb HPLC Columns** are specifically designed for high-resolution monoclonal antibody charge isoform separations. Also available in PEEK hardware with column particle size range from 1.7 µm to 10 µm.

**Agilent Bio IEX HPLC Columns** are designed for charged-based analytical separations of proteins and peptides. This family of ion exchangers is based on the same particle technology as the Agilent Bio MAB HPLC columns but with strong and weak anion and cation functionalities for the analysis of cationic and anionic bio-molecules.

To learn more about the Agilent 1260 Infinity Bio-inert LC, visit [www.agilent.com/chem/1200BioLC](http://www.agilent.com/chem/1200BioLC)
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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.

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Further information

For full details of the Agilent 1200 Infinity Series LC systems and application-based LC solutions, ask for a brochure or visit our web site at www.agilent.com/chem/1200

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