

Keep Pace with Your Processes

Agilent InfinityLab Online LC Solutions



Monitor, Understand, and Control Your Processes with Confidence

Unlock accurate, robust, and accelerated process monitoring with the InfinityLab Online LC Solutions. The key component, the Agilent 1260/1290 Infinity II Online Sample Manager, was designed to seamlessly interface the analytical with the process world in process analytical technology (PAT) applications.

The InfinityLab Online LC Solutions support process design, analysis, and control through real-time measurement of critical process parameters (CPPs) and critical quality attributes (CQAs). Closely assessing CPPs and CQAs contributes towards quality by design (QbD).

Unique valve technology

The dual-valve system enables not only direct injection for real-time monitoring, but also vial sampling for automated dilution, online sample preparation, and retain sample collection for additional offline analysis.

External sampling interface

The location of the sampling interface makes connecting to reactors or external sampling devices straightforward. The innovative valve design allows for flexible sampling volumes from 0.1 to 100 μL .

Flexible injection options

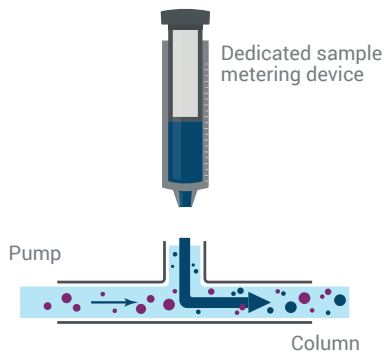
The Online Sample Manager gives you freedom to choose the injection principle that best suits your analysis. Alongside classic flow-through injection, we have introduced Agilent Feed Injection as a novel LC injection technique.



Agilent 1260/1290 Infinity II Online Sample Manager

Agilent Feed Injection

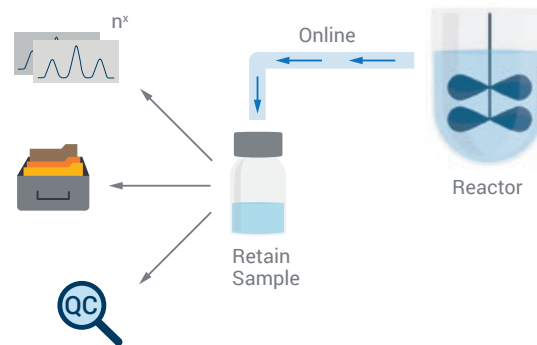
Unique to Agilent, Feed Injection minimizes the negative effects of strong sample solvents and supports rapid gradients due to low delay volume.



The sample is added directly into the mobile phase flow path by forming a three-way junction between the pump, injector, and column.

Sure analysis—made surer

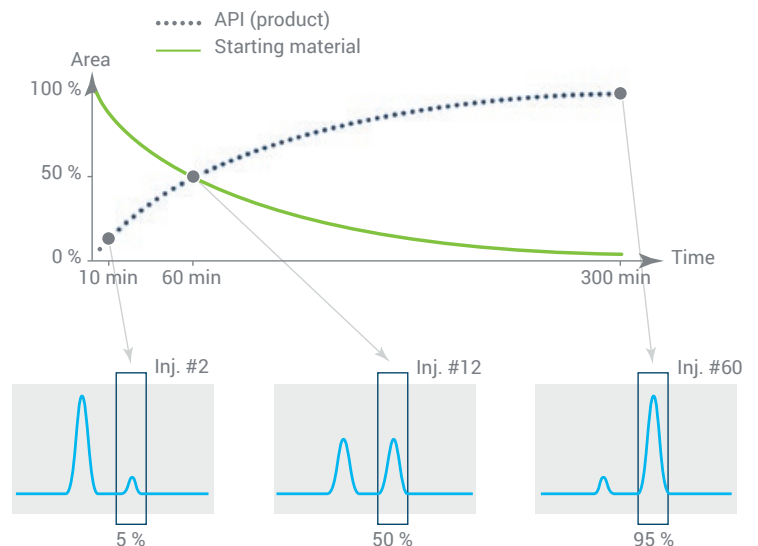
The Retain Sample function is exclusive to the Online Sample Manager, enabling multimethod analysis, sample archiving, and additional quality control to give you even greater confidence in your process monitoring results.



The Retain Sample feature allows for full control over the process sample in an online LC workflow.

Automate your process analysis

Agilent Online LC Monitoring Software coordinates sampling and sample analysis and provides all the tools required for process monitoring. OPC UA also enables the secure and reliable exchange of data with established sampling devices and ensures the seamless flow of information among devices from multiple vendors.



Follow the progress of a reaction in real-time for improved understanding and optimization of your process.

Achieve Convenience in Your Everyday Process Analysis

The 1260 Infinity II Prime Online LC is a highly capable and convenient online LC solution. Equipped with exceptional Agilent 1290 Infinity II technology, the system offers superb ease of use and functionality for your routine process analysis.

Multiple detection options

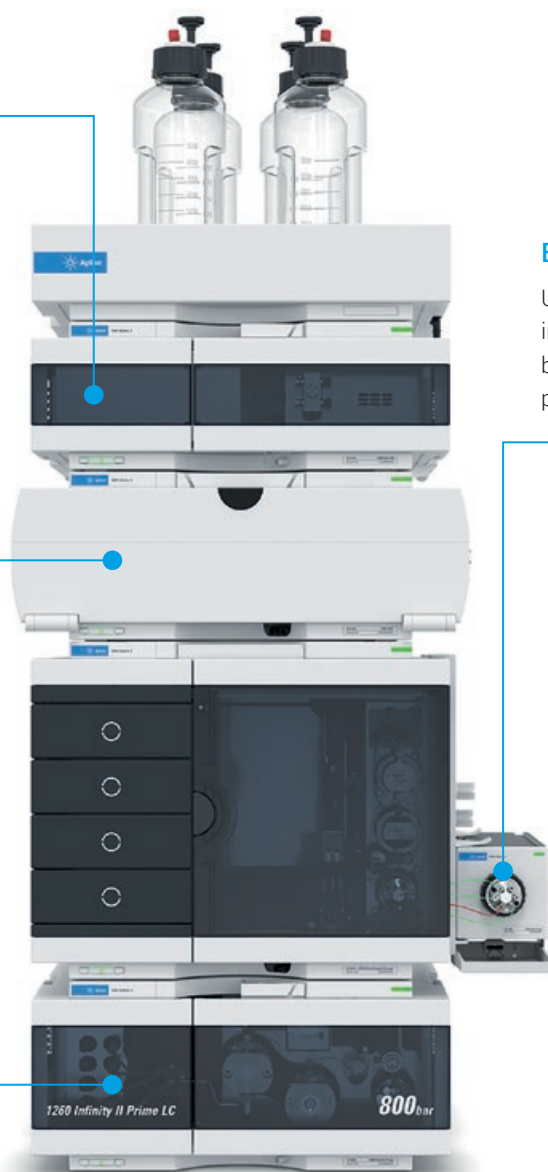
Choose from a variety of detectors, including UV and single quadrupole LC/MS.

Versatile column handling

Apply high adaptability and temperature stability to the most complex analyses.

Reliable solvent delivery

Benefit from flow rates up to 5 mL/min within a pressure range of up to 800 bar.



Easy process monitoring

Use the external sampling interface to simplify connection between the analytical and process worlds in PAT applications.



Flow chemistry monitoring

The online LC can be used to determine optimal reaction conditions during small molecule pharmaceutical synthesis.

5994-5099EN

A System for Process Bioanalysis and Beyond

The growing complexity of biopharma analysis—atline, offline, or online—calls for innovation delivering excellence across the workflow. The 1290 Infinity II Bio Online LC enables robust and accurate bioanalysis from the development lab to the production line. In combination with established aseptic sampling devices and immediate process feedback, we can help you create a complete solution to meet your biopharma challenges.

Expand your scope with MS and LS

Advance your detection capabilities by adding MS and/or different light scattering options.

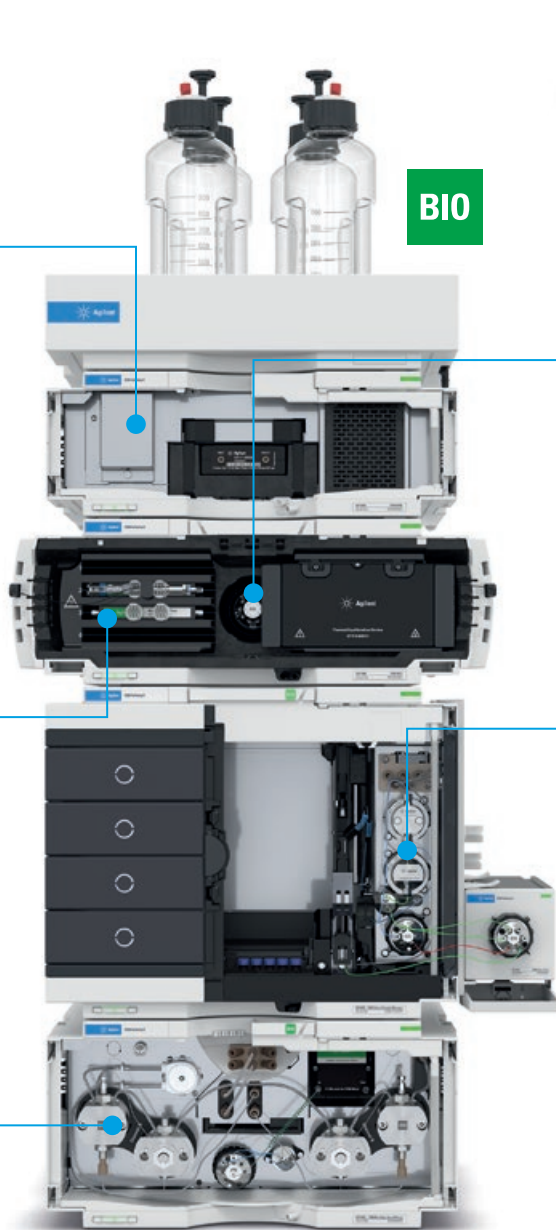


Robust column operation

Make use of high temperature stability for the most challenging applications, along with various bio heat exchangers, capillaries, fittings, and kits.

Powerful solvent delivery

Maintain precise flow rates at pressures up to 1300 bar for the most demanding applications.



Biocompatible valve automation

Achieve sample enrichment and cleanup, automated column regeneration, and enhanced system flushing.

Built-in sampling versatility

Take advantage of adaptable injection volumes, thermostating of temperature-sensitive bioanalytes, and ultralow carryover.



Multiple CQA assessment

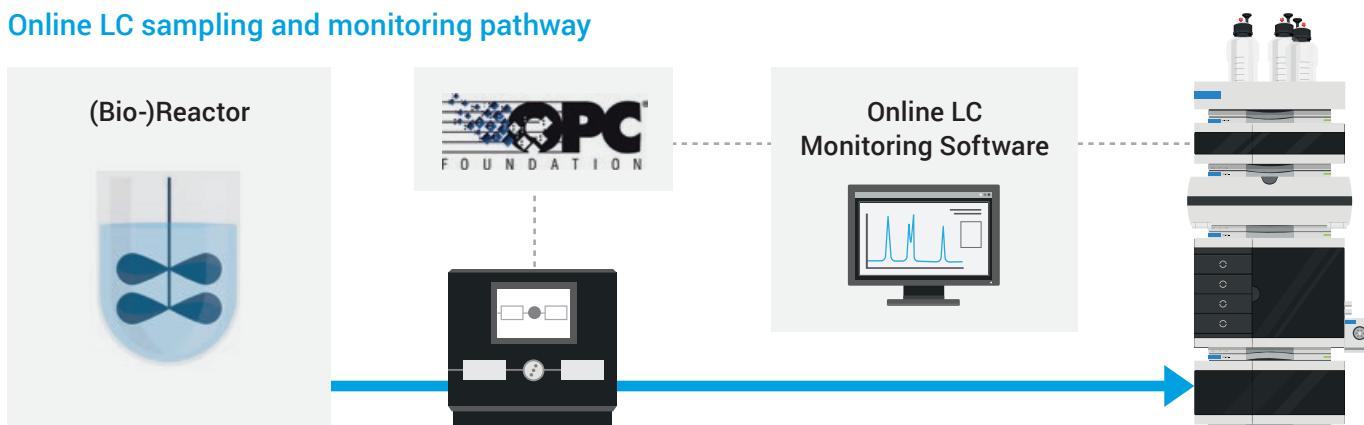
Automated heart-cutting 2D-LC can be applied to the online process control of mAb production and purification.

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Manage Your Complete Monitoring Process

The dedicated Online LC Monitoring Software allows for intuitive sample scheduling to quickly set up sampling events, and provides data visualization tools such as trending plots to easily monitor processes.

Online LC sampling and monitoring pathway



Schematic of an exemplary instrumental setup. The Online LC Monitoring Software coordinates sampling, either directly or via an OPC UA interface, and sample analysis.

Remote control capabilities (web API/OPC UA)

Added support is available for communication between non-Agilent devices and the InfinityLab Online LC Solutions, with different modes of operation.

Client/server setup

Centralized user management is possible through the OpenLab CDS server (shared services) and data storage/data repository, including OpenLab CDS topologies and extendable instrument controllers (AICs).

Compliance features (GxP compatible)

A basic set of compliance features, including installation and usability services (IQ/OQ), are available to facilitate compliance audits.

User roles (tool for both experts and non-chromatographers)

Define the privileges for different users or personas, limiting the need for procedural controls (standard operating procedures) thanks to manageable software feature access.

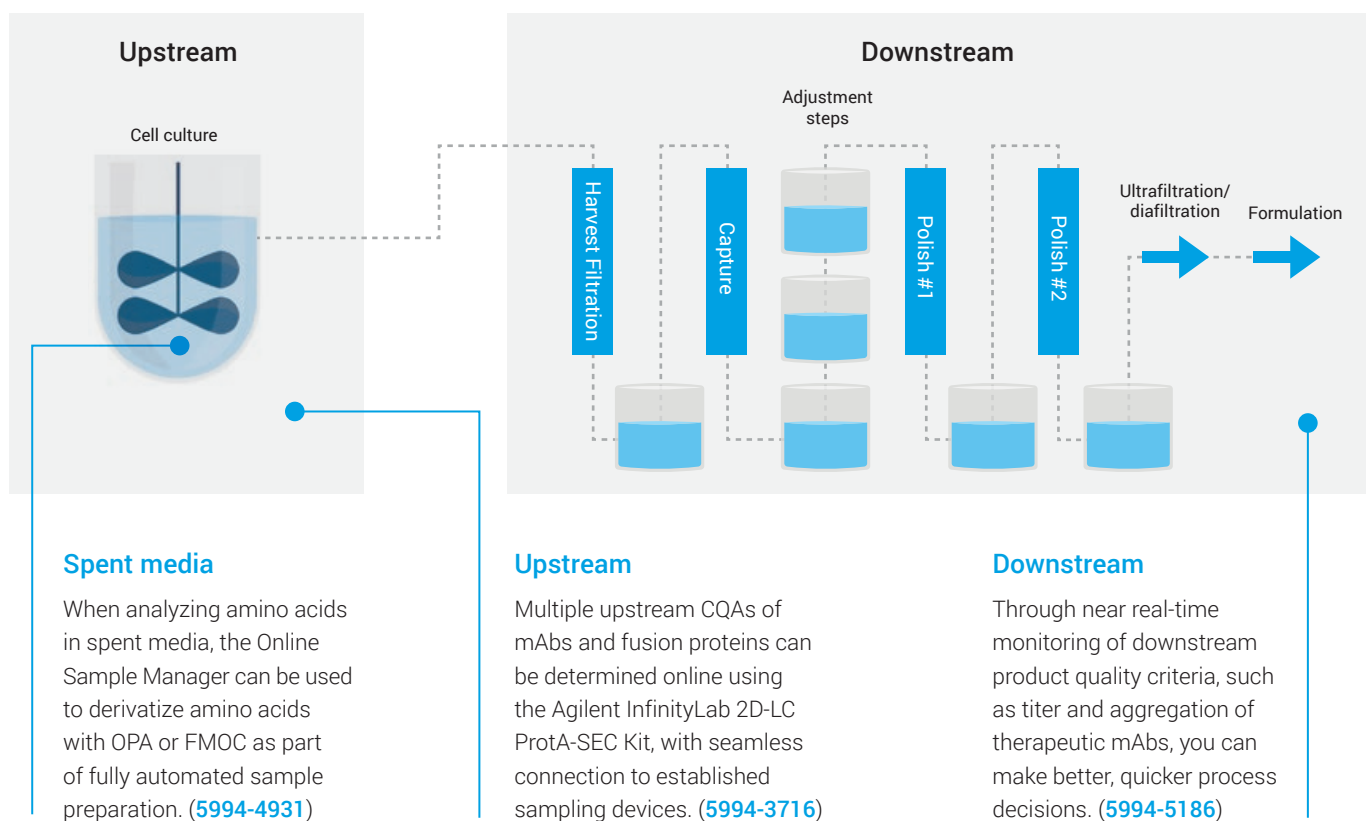


Biopharma applications

Perform Sensitive and Reliable CQA Analysis

HPLC is used as a gold standard in biopharma to monitor a great variety of CQAs, such as aggregation. Now, this capability is also available as a PAT tool for online monitoring across the entire bioprocessing workflow.

Biopharma process workflow



Reliable, efficient, always innovating for your best result

You can rely on Agilent InfinityLab LC instruments, columns, and supplies to deliver rugged quality and robust analytical results. But our promise to you does not stop there. Every component of the Agilent InfinityLab family is designed to work together to help you improve your workflow, increasing efficiency and reducing operational costs.

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