

Agilent 1100 and 1200 LC Control Software for EZChrom Elite™ CDS and Agilent OL Operating System for the Laboratory

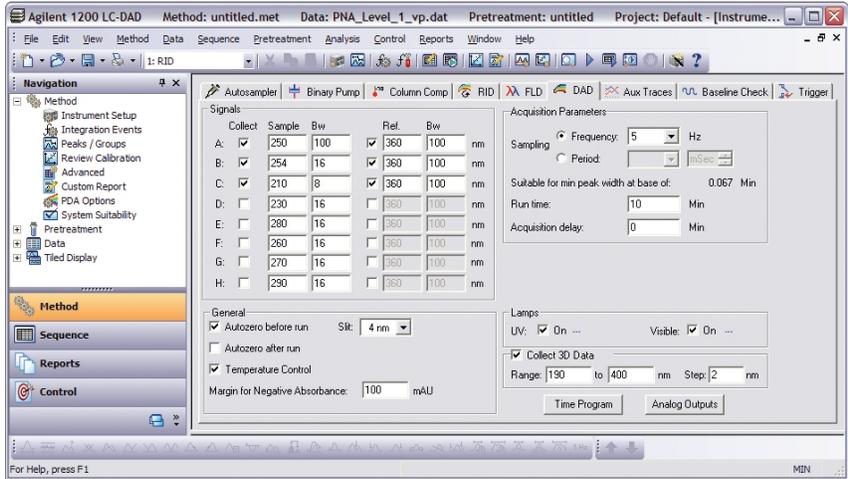


Figure 1. Software control of the Agilent LC DAD. Full DAD spectra can be collected and presented in a variety of post-analysis views with the chromatography data.

Control the Agilent 1100 and 1200 LC with EZChrom Elite and Agilent OL

Agilent LCs, one of the world's most popular LCs, can be controlled by Agilent Technologies' EZChrom Elite Chromatography Data System and Agilent OL Operating System for the Laboratory. Full control is offered for these highly versatile LCs, used in major pharmaceutical and chemical laboratories. The Agilent 1100/1200 LC Control Software is a software add-on that provides integrated instrument control for Agilent 1100 series and 1200 series modules including autosamplers, pumps, column compartments and 2D detectors. An additional Diode Array Detector (DAD) Control Software option is available for those Agilent LC systems with DADs.

Specifications

- Control the Agilent 1100 and 1200 LC including the Agilent DAD through EZChrom Elite software along with over 300 other instrument modules from more than 25 different manufacturers.
- Deploy a flexible, scalable EZChrom Elite CDS for a variety of different lab needs - from single user/single instrument configurations, networked workstations, to multi-user/multi-instrument client/server configurations.
- Built-in software features address GLP/GMP needs including complete records of instrument settings with each result, full method and sequence audit trails, and electronic signature and signoff for 21 CFR Part 11.
- Perform special automated control of the Agilent LC with EZChrom Elite's SmartSequence™ technology - automate responses to recalibrate, run shutdown methods, even email messages to users.

Easy Auto Configuration

Configuring the Agilent LC modular systems has never been simpler. A special "Auto Configuration" mode in EZChrom Elite and Agilent OL can automatically detect the connected Agilent 1100 and 1200 components to configure the instrument in software. The software identifies all powered on modules, and even verifies the serial numbers and firmware versions. The configuration is saved, and the user subsequently develops methods specifically for those modules, rather than for a generic configuration.

Built-in Agilent Pump Control

When controlling Agilent LC pumps, all gradient information, flow and maximum pressure programs are presented in a spreadsheet view. A graphic display provides quick and easy visual comparison of flow rates and gradient composition.

Advanced parameters such as minimum stroke settings, compressibility, gradient acceleration and 1200 series solvent calibration settings are easy to find.

Powerful Diode Array Data Handling

The optional Agilent LC Diode Array Detector (DAD) Control Software provides unlimited number of analysis and data acquisition channels for the Agilent DAD. All data are saved in one file, so any spectrum or wavelength chromatogram can be recalled for review after analysis. You'll never lose a compound because it was below the threshold. Views showing the DAD contour chromatogram, spectrum, and similarity (peak profile and purity) are provided. Analysis options include spectral library searches, peak purity/analysis, spectral filtering and processing and more.

Single View Display Makes Things Easy

The software graphical displays can show chromatogram plots, gradient, flow, and temperature, and other valuable information in a single screen view. When controlling the Agilent DAD, the additional DAD software option can show the spectrum at a specific time, a mixed view plot, or all of the extracted chromatogram channels.

Autosampler Control is Simple and Sophisticated

For simple operation, just load the autosampler and start. For more involved operation, the user may go to advanced mode, and define customized injector programs, selecting from a variety of different available functions, including mixing, moving vials, and performing dilutions.

These advanced routines may be saved as a pretreatment file, so a sophisticated pre-injection sequence can be developed just once, and then used with any other method or sample that applies.

Multi-vendor LC Control

In addition to full control for the Agilent 1100 series and 1200 series LC components, EZChrom Elite and Agilent OL can provide control of other instruments and modules. This unprecedented level of support for instruments from different manufacturers provides laboratories with freedom to use the best hardware for their particular application with the confidence of controlling and processing information through a single software platform.

Whether you adopt EZChrom Elite or Agilent OL, you have the freedom to control more than 300 different instrument modules from over 25 different manufacturers including hardware from Agilent, Shimadzu, Hitachi, Varian, Waters, PerkinElmer, Thermo Electron and more. Specialty devices and detectors from leading manufacturers such as CTC Analytics, ESA, Grace/Vydec (Alltech), and others allow you to flexibly customize your hardware solution and still control the instruments through the same software platform.

Chromatogram Reports are Easily Modified

The custom report editor has the ability to graphically resize graphs and objects in the report. In order to see a zoomed-in section of the graph, just select the area with the mouse and it is resized.

No more guessing about scale settings. Objects can be resized and moved in templates for the perfect presentation. The trace and the zoomed sections, and even previous runs, can be included in the report.

Communications Options

The Agilent 1100 and 1200 series components can be controlled via an Ethernet LAN (TCP/IP) interface. In addition, Agilent 1100 series components with the Agilent IEEE-488 interface are also supported.

Depending on the interface on the Agilent module, an appropriate Agilent Instrument Controller (Ethernet or IEEE-488) is used for EZChrom Elite Client/Server or Agilent OL Operating System for the Laboratory. The appropriate PC computer interface is also required in Stand-Alone environments.

Fully Protected Data Acquisition and Control

Agilent's unique data acquisition and instrument control architecture for EZChrom Elite Client/Server and Agilent OL make it possible to perform data collection even in the event the host computer network is down. The special Agilent Instrument Controller network appliance can take control of each Agilent LC and run injections, collecting and protecting the data completely. If the network is down, these injections will be securely stored in non-volatile flash RAM in each instrument controller and are protected.

The data storage in each Agilent Instrument Controller allows multiple injections from entire sequences (including injections based on different methods) to be safely stored and protected so your instrument runs can continue under such serious network problems.

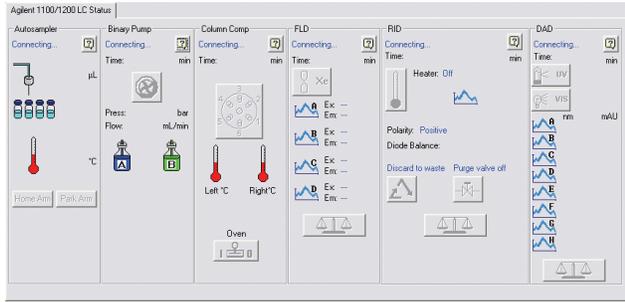


Figure 2. Convenient instrument status screens for the Agilent LC make it easy to understand the current state of the instrument. These real time displays can be seen on PC Clients of EZChrom Elite, or when using Agilent OL, they can be viewed across the enterprise on Agilent OL clients.

Up to four (4) Agilent LCs with 2D detectors can be connected to a single Agilent Instrument Controller; up to two (2) Agilent LCs with PDA can be connected to a single Agilent Instrument Controller.

Manage All Instrument Data with Agilent OL

The unique Agilent OL Operating System for the Laboratory provides powerful content management of all raw data and results from the Agilent 1100 and 1200 LC instruments. "Smart" electronic filters specific for the analysis results are used to extract key metadata from each LC run and store that information in a database. All results are automatically deposited in a safe, secure repository and made fully searchable.

Users can readily find their data based on queries that not only specify criteria such as instrument, username and Sample ID, but even extend to detailed results such as component names and concentration ranges. Three different types of database searches are provided in Agilent OL to accommodate different situations and make it easy for users to find the results of their searches.

Agilent OL manages all the electronic information in the laboratory. In addition to all Agilent LC raw data and results, Agilent OL can manage Microsoft Office files, e-mails, Adobe pdf files, chromatography data from EZChrom Elite and other CDS packages, mass spectrometry files, and much more. No other package offers this powerful capability to handle all electronic information and documents generated in the laboratory. Conduct quick, focused searches across all your data to find hits from various Agilent LC results, as well as Excel spreadsheets, Word documents, pdf reports, and more.

Furthermore, Agilent OL's management of the information makes it easier and safer to collaborate and share results with others with its powerful "check-in/check out" capabilities and electronic signoff capabilities.

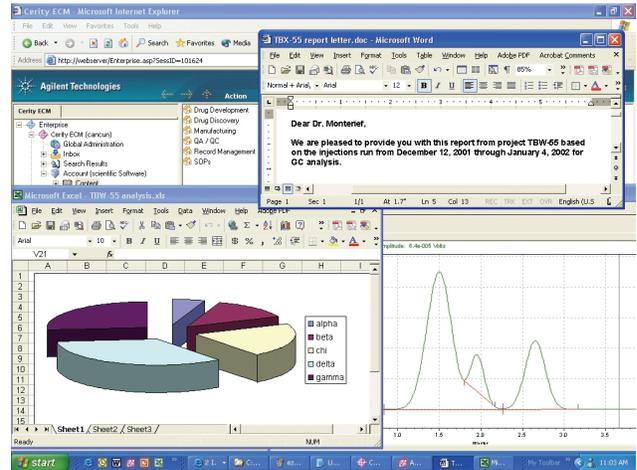


Figure 3. Agilent OL enables total content management of instruments as well as general laboratory information. Database searches across the entire enterprise can locate specific Agilent LC results, Word documents, Excel summaries, and even emails that match desired search criteria.

LC 1100 and 1200 Components and Minimum Firmware Requirements

Pumps	Models	Min. ROM Version
Isocratic	G1310A	3.18
Binary	G1312A	3.18
Binary SL	G1312B	A.06.02
Quarternary	G1354A (G1311A)	3.18
Micro Capillary	Planned 2006	
Nanoflow	Planned 2006	
Preparative	(Not Supported)	

Injectors	Models	Min. ROM Version
Standard	G1313A, G1329A	3.18
Well-Plate	G1367A	5.03
Hi-P ALS SL	G1367B, G1367C	A.06.02
Micro	G1389A	5.03
Micro-Well-Plate	G1377A	5.03
Dual-Loop	(Not Supported)	
Preparative	(Not Supported)	
Well-Plate-Handler	(Not Supported)	

Detectors	Models	Min. ROM Version
VWD	G1314A, G1314B	3.18
VWD SL	G1314C	A.06.02
MWD	G1365A, G1365B	3.18
MWD SL	G1365C	B.01.02
DAD	G1315A, G1315B	3.18
DAD SL	G1315C	B.01.02
RID	G1362A	3.18
FLD	G1321A	3.18
LC/MSD	(Not Supported)	

Other Modules	Models	Min. ROM Version
Column Compartment	G1316A	3.18
Column Compartment SL	G1316B	A.06.02
Handheld Controller	G1323A, G1323B	5.03
Instant Pilot	G4208A	A.06.02
Switching Valves	Planned 2006	
Contact Closure Board	Planned 2006	
Fraction Collectors	(Not Supported)	

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