Hitachi HPLC Control Software for EZChrom Elite™ CDS and Agilent OL Operating System for the Laboratory

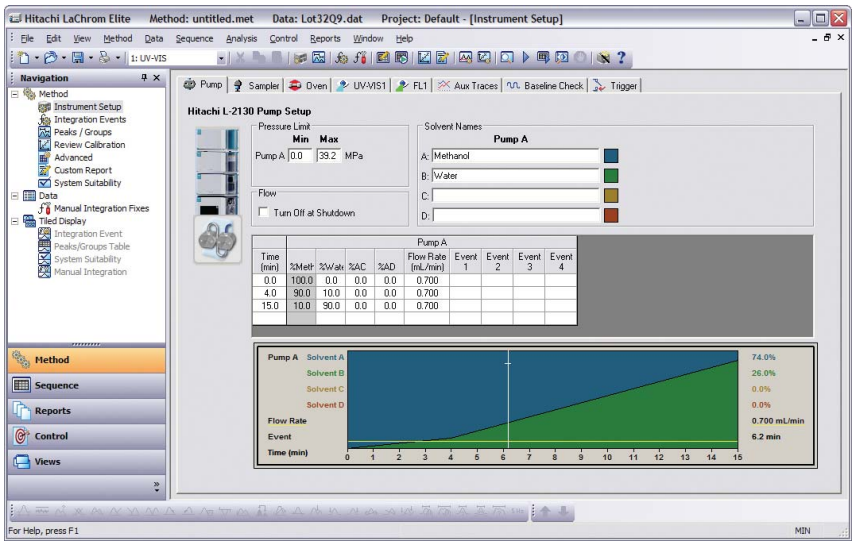

Figure 1. Agilent's control of the Hitachi HPLC provides a fast and easy way to set all instrument parameters for pumps, ovens, autosampler and detectors. Graphic displays make it easy to view all current settings. The control software supports both the Hitachi LaChrom HPLC and the LaChrom Elite HPLC.

Control the Hitachi HPLC with EZChrom Elite and Agilent OL

Hitachi HPLC systems are popular instruments in laboratories throughout the world. Many users enjoy the instrument's capabilities in performing a variety of different LC separations. Instrument Control Software for the Hitachi HPLC is an optional software add-on for Agilent Technologies' EZChrom Elite and Agilent OL Operating System for the Laboratory. By supporting multiple vendor instrumentation, EZChrom Elite and Agilent OL enable laboratories to directly control these Hitachi instruments along with instrumentation from other manufacturers such as Agilent, Shimadzu, Jasco, PerkinElmer, Varian, Thermo Electron and others. A uniform, single software interface is used to create methods, sequences, instrument control parameters and data reduction and report settings for all instrumentation.

The Instrument Control Software for the Hitachi HPLC supports these HPLCs with 2D detectors. If using the Hitachi PDA detectors, additional Hitachi PDA Control and Analysis software for EZChrom Elite and Agilent OL is required to collect and process PDA data.

Specifications

Hitachi HPLC control software supports the following Hitachi LaChrom and LaChrom Elite HPLC modules (Hitachi PDA Control Software is required for PDA control):

- D7000 A/D
- L-7100 Pump
- L-7200 / L-7250 Autosampler
- L-7300 Oven
- L-7400 / L-7420 UV Detector
- L-7480 / L-7485 Fluor Detector
- L-7450 / L/7420 / L-7455 DAD
- L-2100 SMASH Pump
- L-2130 HTA Pump
- L-2200 Autosampler
- L-2300 / L-2350 Oven
- L-2400 / L-2420 UV/VIS Detector
- L-2480 Fluorescence Detector
- L-2490 RI Detector
- L-2450 DAD

Agilent Technologies

Flexible Control of Hitachi Pumps and Detectors

The Instrument Control Software for Hitachi HPLC provides full pump control; all gradient information, flow, auxiliary events and a Time Program to specify flow and gradient composition as a function of time are provided. Hitachi UV and Fluorescence detectors can be setup in software to specify wavelength, autozero controls, and lamp status as well as a time program to specify desired wavelengths and other parameters as a function of time.

Powerful Diode Array Data Handling

Agilents's Hitachi PDA Control and Analysis Software provides unlimited number of analysis and data acquisition channels for the Hitachi PDA detectors. All data are saved in one file, so any chromatogram or spectrum can be recalled for review after analysis. You'll never lose a compound because it was below the threshold.

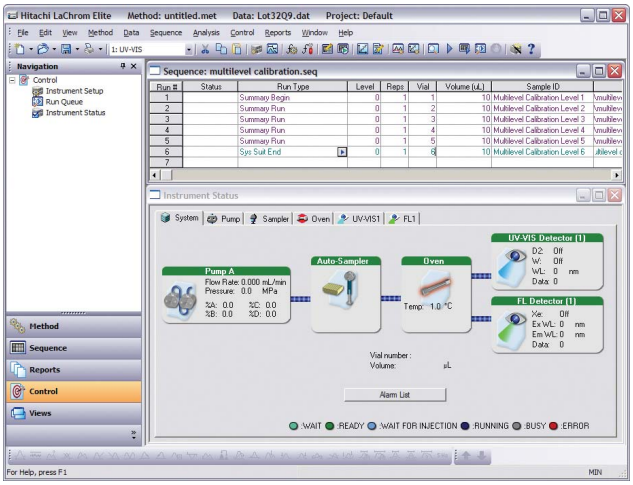

Figure 2. EZChrom Elite and Agilent OL provide complete control of the Hitachi LaChrom and LaChrom Elite LC. Graphical display screens show the status of all components and provide easy access to editing key instrument parameters.

Special Direct Control Mode Displays All Hitachi Information

The Direct Control screen for Hitachi HPLC shows all status information in a convenient single screen. Users can easily see instrument status in real time on either the EZChrom Elite client PC or the Agilent OL web client. Hitachi Instrument settings can be changed directly from this Direct Control screen.

Fully Protected Data Acquisition & Control

The unique data acquisition and instrument control architecture of EZChrom Elite 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 Hitachi HPLC and run injections, collecting and protecting the data completely. If the network is down, these injections will be securely stored in special flash RAM in each Agilent Instrument Controller and passed for data processing in the background with the network is restored.

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 even under serious network problems.

Up to four (4) Hitachi HPLC systems with 2D detectors or two (2) Hitachi HPLC systems with PDA can be connected to a single Agilent Instrument Controller.

Powerful Data Analysis & Automation Features

Hitachi HPLC data can be subjected to a full range of flexible data analysis. Overlay runs, perform System Suitability calculations, and create a wide variety of data reports. Built in GLP/GMP features ensure that Hitachi HPLC results are securely controlled with a full featured audit trail to track all changes. Additionally, the built-in features for electronic signature enable all results to be handled according to 21 CFR Part 11 rules.

A special *Baseline Check* feature lets the user impose automated checking of the HPLC baseline based on any of several noise test methods and drift specifications. The software will automatically perform this baseline test prior to injecting actual samples to ensure a stable baseline before running.

Agilent's unique SmartSequence[tm] Technology lets you impose conditional actions (stop, abort, re-calibrate, shutdown, etc.) in the sequence based on certain criteria. SmartSequence can even trigger email notifications and mobile phone messages in the event that a notification condition is encountered.

Special EZChrom Single Instrument Version

Users working with one Hitachi HPLC instrument who do not require the full feature set of regular EZChrom Elite will want to consider the EZChrom SI (Single Instrument) version. This variant provides basic EZChrom functionality along with Hitachi HPLC control at an extremely attractive price.

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 Hitachi HPLC instruments. "Smart" electronic filters specific for the Hitachi HPLC 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 Hitachi HPLC 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 Hitachi LaChrom and LaChrom Elite HPLC 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.

Minimum Firmware Requirements

Model	Version
L-2100/2130 Pump	890-8110-02 or later
L-2200 Autosampler	890-8120-03 or later
L-2300 Column Oven	890-8130-02 or later
L-2350 Column Oven	890-8150-00 or later
L-2400 UV Detector	890-8140-02 or later
L-2420 UV-VIS Detector	890-8142-00 or later
L-2450 Diode Array Detector	890-8145-00 or later
L-2455 Diode Array Detector	890-8146-00 or later
L-2480 FL Detector	890-8148-00 or later
L-2485 FL Detector	890-8149-00 or later
L-2490 RI Detector	1.01 or later
Analog Input Device	890-8165-00 or later
USB Interface Board	890-8190-01 or later
L-7100A Pump	810-7810-00
L-7200 Autosampler	810-8300-04
L-7300 Column Oven	810-7760-03
L-7400 UV Detector	810-8200-04
L-7405 UV Detector	810-8200-04
L-7420 UV-VIS Detector	810-8250-02
L-7455 Diode Array Detector	810-4853-01
L-7480 FL Detector	810-8100-02
L-7485 FL Detector	810-7064-01
D-7000 A/D	810-7014-00

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Printed in U.S.A. November 3, 2006
5989-4296EN

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