



# Analytical Instrument Software Suite

Modern software for spectroscopic analysis, connectivity, compliance, and control

## Symbion-LX can set you free!

- Free from obsolete methodologies and legacy code
- Free from the straight jacket of file and directory based storage
- Free to network all of your instruments and store the data in a common SQL database
- Free to use the multivariate analysis software of your choice
- Free to seamlessly hand off data to your company's data historian
- Free to move easily from the laboratory to real-time process monitoring
- Free to incorporate your own or third party code and software libraries
- Free to rapidly create locked-down

methods for compliant operation

Symbion-LX embodies a new approach to analytical instrument operation and data management. By taking advantage of recent advances in data processing technology and software methodology, it provides logical straightforward operation combined with the power to conquer virtually any task. Its secure yet open architecture provides ready communication with diverse instruments, I/O devices, software packages, and enterprise-wide data systems. And, its standardized SQL database structure provides multiple links between data, analysis methods, predictions, and user information, establishing the basis for secure retrieval and regulatory compliance.

You'll be amazed at the speed with which you can develop custom applications and compare diverse approaches to a given task. With a simple mouse click, you can switch between different instruments, analytical methods, or multivariate programs. Turn on data logging and all of your data will be automatically stored in the SQL data base along with time and date stamps and all user analysis method attributes.

Symbion-LX is essentially three programs in one. First, it paves the way for streamlining laboratory and process development activities by

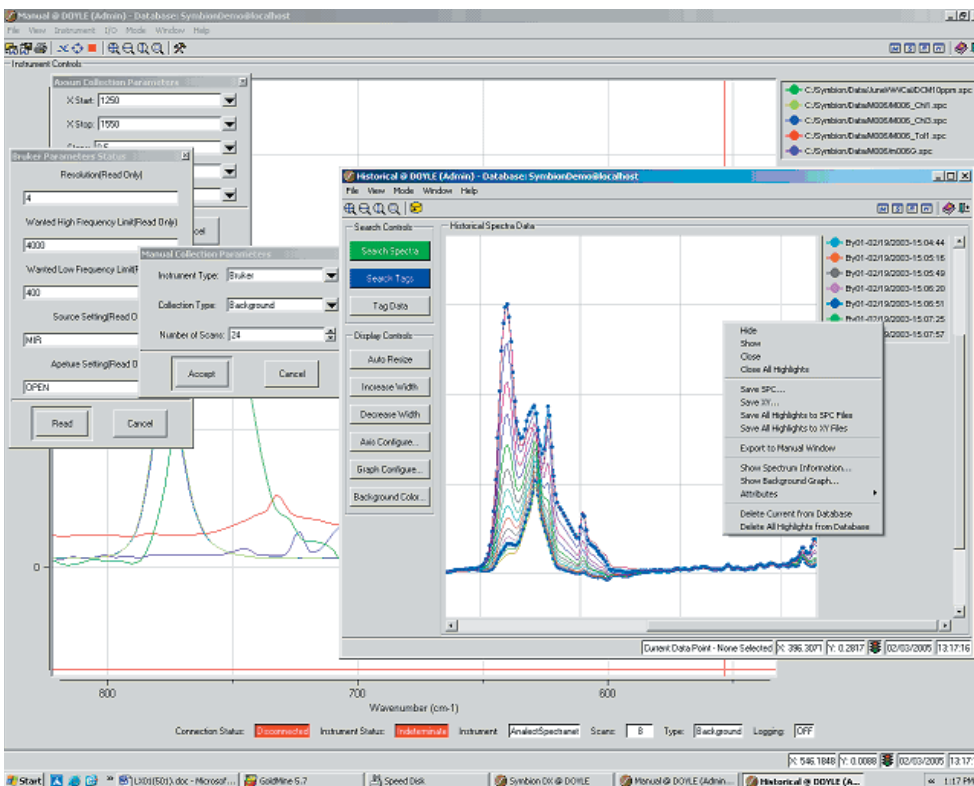


Figure 1: The Symbion-LX user interface showing multiple spectral windows, pop-ups, and pull downs.

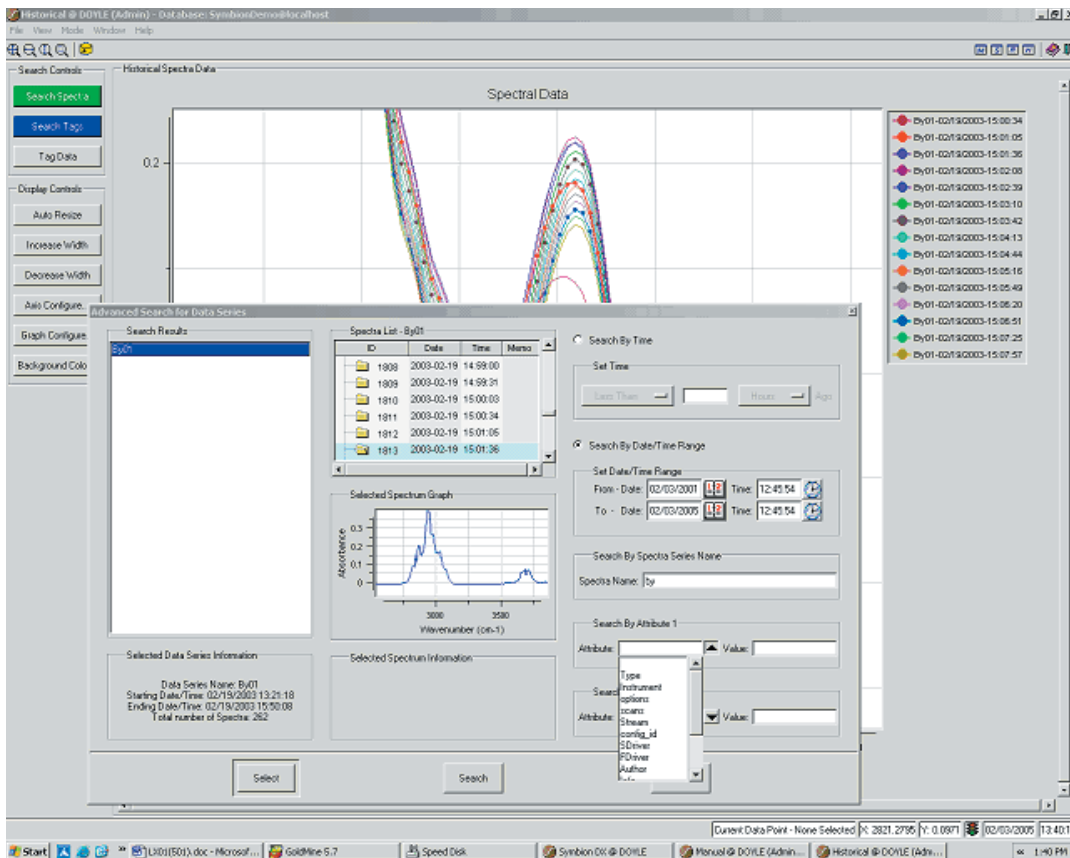


Figure 2: Database search window showing search criteria and preview display

providing a common operational and data management format for diverse instruments. Second, it provides an easy migration path from development to on-line process monitoring through its compatibility with Symbion-DX and RX. Third, it provides an economical means for viewing and analyzing both spectroscopic and time-dependent data collected by means of Symbion-DX/RX process analysis programs.

### Intuitive User Interface:

Symbion's user interface is designed to be simple yet comprehensive, with a minimum number of steps for the execution of any operation. For example, click on the information block for a displayed trace and you'll see a menu of operations that can be performed on that trace. Highlight a series of traces and you can automatically perform the same operations on all of them.

### Transparent Instrument Control:

To specify a particular instrument to be run, simply click on the appropriate name in the "instrument" pull-down. Symbion will immediately load the driver for that instrument and make available the appropriate instrument-specific menus for setting the operating parameters.

### The Power of a SQL Database:

Symbion stores all data, analysis methods, processes results, and user information in a SQL relational database structure which provides multiple links between various categories of information. Thus, you no longer have to remember where you stored a given item. All information is instantly available by using Symbion's multidimensional search capability. You can search by any combination of attributed and retrieve exactly the information needed.

### Networking, Data Mining,

### and More:

Symbion's well thought out database structure is fundamental to interfacing Symbion to a wide variety of other programs and data systems. For example, enterprise wide data historians such as ASpen Tech, Pi Systems, and Oracle can drill directly into Symbion's database to obtain exactly the information needed for a given situation. In addition, Symbion itself can provide the networking capability needed to coordinated data from a large number of instruments and systems.

### Simple to Use yet Powerful Scripting Language:

The Symbion scripting utility is easy to use and yet powerful enough to provide unlimited potential for capability expansion. Ease of use is abetted by a series of scripting assistants which enable you to write procedures by simply filling in the blanks in the appropriate pop-ups windows. (See Figure 3, below) At the same time, the syntax itself is quite intuitive, enabling you to quickly learn to add new capabilities of your own design. To help you get started, the Script Composer is provided with a number of example scripts. In addition, the Programmers Guide provides comprehensive scripting instructions.

### Multivariate Analysis, As You Like It:

Symbion-LX is designed to easily interface to a wide variety of other programs and command libraries. In particular, it can interface to most of the popular chemometrics routines, making it possible for you to use the routine of your choice and to run previously developed calibrations. Interfaces

to the MATLAB PLS Toolbox and GRAMS PLSplus/IQ are included standard. Other interfaces - such as Pirouette, Simca-P/QP, and CPSA - are available as options.

## Moving on to the Process Arena:

The capabilities of Symbion-LX are a subset of the full Symbion-DX set. This makes it possible, for example, develop methods in the laboratory using Symbion-LX and later apply them in on-line process applications using Symbion-DX. Symbion-LX can also be used to analyze historical data obtained with Symbion-DX. Spectra, trend plots, and statistical information can all be recalled using the standard database search tools.

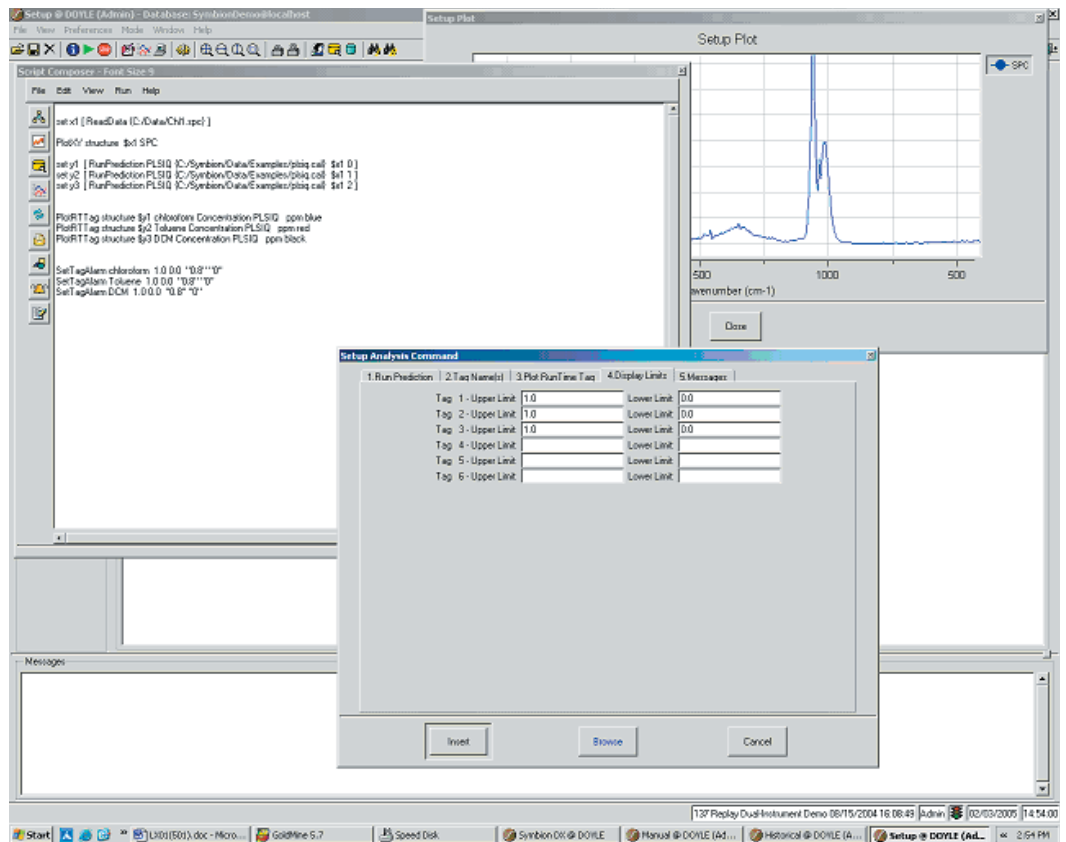


Figure 3: The script composer window with plotting screen and typical scripting assistant

## Assuring Regulatory Compliance:

Symbion-LX has been developed in accordance with the recognized requirements for software validation for use in the pharmaceutical industry. In addition, it provides all of the tools needed to assure compliance with 21 CFR, Part 11. An individual method developed within Symbion-LX can be locked down so as to simplify the validation proceed when it forms part of a critical manufacturing path. Symbion System's quality assurance procedures and 21 CFR, Part 11 capabilities have been subject of a quality audit by a major pharmaceutical manufacturer.

For further information about the Symbion™ Process Analysis Software Suites, or to request a demo disk, please do not hesitate to e-mail us at [info@gosymbion.com](mailto:info@gosymbion.com) or call 1-800-462-9466.

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