



WHY HAS *LimsLink* BECOME THE STANDARD FOR INSTRUMENT INTERFACING?

1 **Rapid Deployment**

Creating new instrument interfaces with *LimsLink* is quick and easy. Once you understand your requirements, a new interface can be created in under 2 hours.

2 **Excellent Support**

Customer support has always been one of our main priorities. Our staff is trained to provide solutions to your problems.

3 **A Standard Interface Platform**

LimsLink provides a common platform for all interfaces, so that anyone familiar with *LimsLink* will understand a new interface setup in just a couple of minutes. Any required modifications are quick and easy to make.

4 **Cost-Effective**

Typical payback periods for *LimsLink* are less than 4 months, translating into savings during your first year. Can you afford not to automate data collection at your facility?

5 **No Programming Required**

LimsLink eliminates the need for custom programming, which is costly to develop and difficult to maintain.

6 **An Interface Specialist on Your Team**

Labtronics specializes in developing software to interface laboratory instruments. With more than 13 years of experience interfacing instruments, we are leaders in this field.

“LimsLink is saving our laboratory 8 to 10 minutes for each sample we process! We have increased the workload in the laboratory by over 1000 samples per month with no added manpower.”

—Enterprise Products

**Major LIMS manufacturers around the world
recommend *LimsLink* — ask yours today.**

INSTRUMENT INTERFACING SOLUTIONS

LimsLink is a Windows®-based software package that links your instruments and LIMS into a seamless, automated solution. It manages the flow of data to and from many sources, including the LIMS. At the same time, *LimsLink* allows you to manipulate and display the data so that you are always in full control.

LimsLink Connects Any Instrument to Any LIMS

Labtronics has 13 years of experience developing software interface solutions. *LimsLink* is the third generation of software designed specifically for this task, and we are now very confident of our claim that “*LimsLink* will connect any instrument to any LIMS.”

LimsLink does more than just interface instruments. It provides 2-way communication with your LIMS and is able to carry out true host-query operations. *LimsLink* combines data from multiple instruments and is able to use many common analytical techniques such as standard curves, QC analysis, and limit checks.

Benefits

- Increase turn around time by automating the collection, calculation and reporting of your laboratory data.
- Save time and money through reduced analyst involvement.
- Eliminate transcription errors introduced by tedious manual data entry.
- Meet ISO 9000 and regulatory guidelines easily through improved data security.
- Reduce implementation and training time by using a standard platform for all instruments in your laboratory.

LimsLink has been developed to meet the needs and regulatory guidelines of every major industry, including:

**Petrochemical
Pharmaceutical
Industrial
Environmental
Food/Beverage
Biotech**

“LimsLink software... has had a significant positive impact on our testing capacity, quality of laboratory data, and turn around time.”

—University of Guelph

“Support was readily available and we are pleased with our purchase.”

—Inchcape Testing Services

MANY PROCESSING OPTIONS

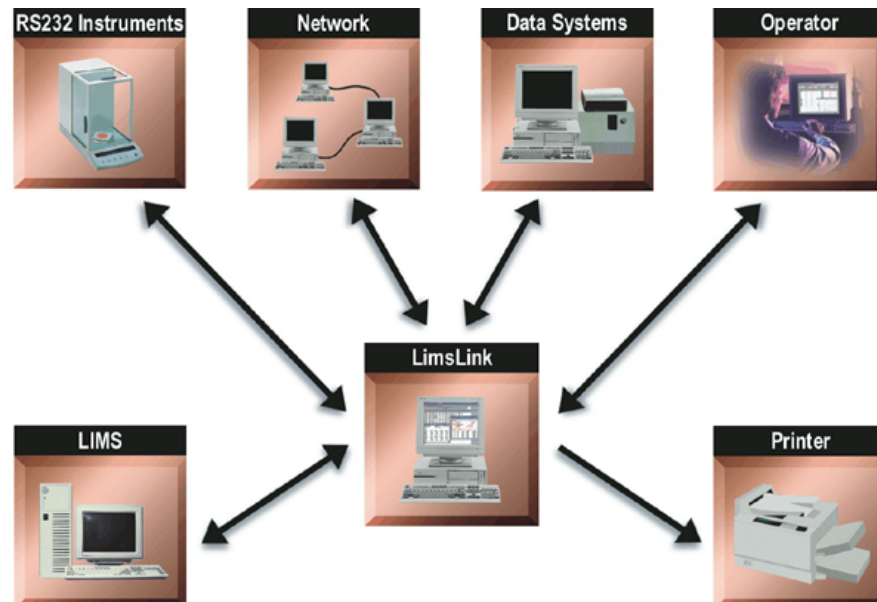
LimsLink lets you configure “Methods” (or interfaces) to control all of the data processing, as well as the program’s displays. You have full control over the way data is manipulated and how it is displayed to the user. These Method configurations are based on familiar spreadsheet designs, making them easy to understand. Methods are created with simple-to-use graphical interfaces, which only require you to fill in blanks, highlight data or click on spreadsheet cells.

LimsLink performs four basic functions: it receives, processes, displays and reports data. The data can originate from a variety of sources including RS232 devices, network files, manual entries and directly from LIMS (see Figure 1. below). It is then processed, calculated and combined with other data. The results can be displayed in a variety of formats, including summary worksheets, detailed spreadsheets, graphs and original unprocessed raw data. Any of the data in *LimsLink* can then be reported in customized formats to printers, other programs, LIMS, or back to an instrument.

"We are impressed with the support and professionalism of the LimsLink Team and look forward to working with them to implement the system in many of our other sites."

—Bodycote Materials Testing Ltd.

Figure 1. Data Flow in LimsLink



"Nobody parses instrument data as well as or as easily as Labtronics."

—Eli Lilly and Company

COMMONLY USED CAPABILITIES

- Worklist acquisition from LIMS
- Protocol communications with instruments
- Worklist transfer to instruments
- Combination of results from multiple instruments
- “BENCH TOP” review of results and automatically performed calculations
- Various reporting options including hardcopy, file and ODBC

AUTOMATION

LimsLink can be used in different operating modes to provide various levels of manual or automatic operation. The degree of automation in *LimsLink* is under your control.

Automatic Data Transfer

LimsLink can be configured to operate in a completely transparent or “black box” mode. Received data can be processed and reported automatically without any user intervention. During this process, most of the *LimsLink* special functions, such as calculations, limit checks, QCs and date conversions, can still be used.

Review Process

LimsLink also operates in semi-automatic mode. Data is automatically collected and calculated, but then held for review by the user before being sent to the LIMS.

Supplementary Data Entry

If desired, results can also be manually entered or commented upon in *LimsLink*. This provides flexibility for applications where the instrument does not produce all of the required information.

Multiple Reports

A further degree of automation is reached with *LimsLink's* automatic reporting options. Once results have been reviewed, a simple key press can produce a series of reports. Data could be sent to the LIMS, a lab report could be printed, a summary report could be sent to the lab manager and an archive file could be created, all automatically.

Instrument Control

With an optional control module, *LimsLink* can be used to automate many instruments such as robots, samplers, detectors, meters, pumps and dilutors through RS232 communications.

Multiple User Security

Each *LimsLink* worksheet can have a separate user, allowing multiple users to work in the program simultaneously. Individual worksheets can be entry protected, permitting only the original user access or, if the option is set, a new user may take possession of the worksheet in a controlled and monitored manner.

“LimsLink has helped to address our key business issues by increasing sample throughput, decreasing our operating costs, reducing the time required to manually enter data and reducing transcription errors.”

—Harbor Branch Oceanographic Institution

“I have been very impressed by your service and support. We are still waiting for the day when we can call for support and stump your LimsLink team.”

—Enterprise Products

DATA INTEGRITY IS THE KEY

The most important function of any interface solution is its ability to preserve the integrity of your data. Extreme care has been taken in the design and development of *LimsLink* to ensure that data is never lost. Once data is received by *LimsLink*, even a complete loss of power to the computer will not result in permanently lost data. An internal backup system will automatically retrieve data once the program comes back on-line.

LimsLink has other valuable features, such as password protection, edit control, data archival and an audit trail database, which guarantee data integrity through tracking and help laboratories meet stringent regulatory requirements.

“LimsLink software has provided the capabilities our laboratory needs today and has enough flexibility to meet our laboratories changing requirements.”

—Sunoco Refinery

Password Protection

LimsLink provides 100 levels of password protection, controlling user access to menus, setups, methods, worksheets, editing and calculations. All data in *LimsLink* can be password protected.

Edit Control

Each data value may be assigned a different password level. Then based on the password level, only selected users may be given access to manually edit specific data. All changes can be saved to the audit trail database, and it is possible to force the user to enter a reason for change whenever data is edited.

Data Archival

As a manual operation or as part of the reporting process, data is archived in both its initial unmodified raw format, as well as the final format. These files are compressed to save space and are then stored for future retrieval. At any time you can look at these files, review the original unmodified data and produce required reports.

Audit Trail

The audit trail tracks user operations within the program, including such things as changes to setups, reporting, data collection, and more. It will also record previous and new values for all edited entries. All of this information is saved to a database for easy retrieval.

“LimsLink software has helped our business to grow by permitting us to increase our sample throughput and process more samples per day.”

—DNV Petroleum Services Inc.

DATA MANAGEMENT

LimsLink is much more than a data conversion and transfer program. It will perform calculations, combine data from multiple instruments, control instruments, perform limit checks, plot QC charts, automatically validate results and much more. It is a true bench-top data management system. *LimsLink* controls and manages the data going to your LIMS.

LIMS Worklists

LimsLink can get worklists from your LIMS and match instrument data to it. *LimsLink* can also receive test lists and sequence files, and transfer these to the instrument.

Data Matching

Matching features allow *LimsLink* to properly combine data from multiple instruments. For example, weights can be matched up with AA data to produce weight-corrected results.

Calculations

Data is stored within *LimsLink* in a spreadsheet format. Adding calculations or formulas is the same as working with common office spreadsheets. Features such as standard math functions and conditional IF statements can all be used to calculate and manipulate data.

SPECIAL FUNCTIONS

LimsLink was designed so that new functionality could be added at any time without modification to the basic program. This is accomplished by using a library of Special Functions. If you need a Special Function that is not in our library, we would be pleased to create it for you. Most Special Functions can be created in a matter of hours.



"Your product has improved the efficiency of our lab by eliminating manual data entry. We are also pleased with the technical support that has been provided."

—PGS Canada Inc.

CONSIDER LABTRONICS YOUR INSTRUMENT INTERFACING PARTNER

Since 1986, *Labtronics Inc.* has been providing flexible software programs for laboratory automation. We are recognized as an industry leader in instrument interfacing. Around the world, customers are discovering that **LimsLink** is a cost-effective way to update their instruments and make their laboratory more efficient. *Labtronics* is also a reputable software supplier to some of the largest instrument manufacturers and LIMS vendors in the world. This expertise goes into every *Labtronics* package that you purchase.

APPLICATIONS ASSISTANCE

Labtronics provides comprehensive customer assistance for all its products. **LimsLink** has been designed as an off-the-shelf program that anyone can use to interface instruments. Since it requires no programming, you can create your own interfaces. If you prefer, *Labtronics* would be happy to create the interfaces for you at a nominal charge. Our Application Specialists are available to provide immediate support by telephone, MODEM, Internet and on-site service.

TRAINING

A comprehensive manual is provided with your **LimsLink** purchase and our implementation group is always ready to assist you during installation. Additional **LimsLink** training is offered in the form of on-site visits and quarterly User Groups. Please call our **LimsLink** Applications department for more information and pricing.

UNCONDITIONAL GUARANTEE

Try **LimsLink** for 30 days and if you are not completely satisfied with the program or the service offered by *Labtronics*, return it for a full refund, less the cost of shipping. Our goal is complete customer satisfaction.

FREE DEMO

Call us for more information and a free demo.



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Features Listing

GENERAL

- ✓ Graphical User Interface - Windows® 95, Windows® 98 and Windows® NT 4.0
- ✓ Supports unidirectional and bi-directional instrument interfaces
- ✓ Provides a standard instrument interface system between any instrument and any database
- ✓ Supports simultaneous data processing from multiple sources on a single PC
- ✓ Independent control of each instrument interface
- ✓ Instrument interface import/export utility for easy management of multiple systems
- ✓ Configure an unlimited number of instrument interfaces

RS232 COMMUNICATION

- ✓ Adjust individual communications parameters for each RS232 port
- ✓ High speed data collection from multiple sources
- ✓ Long distance serial communication solutions available using RS422 & RS485
- ✓ Low Level Communication Protocols
- ✓ Intelligent control of RS232 instruments
- ✓ Intelligent two-way communications, e.g. ASTM
- ✓ Up to 9 serial ports on a single PC

FILE AND NETWORK FUNCTIONS

- ✓ Capture data from any source available on a local or network disk drive
- ✓ Query multiple file sources simultaneously
- ✓ Receive data, such as runlists & instrument setup parameters, from host
- ✓ Reformat data received from host
- ✓ Configurable to send data to host in any format
- ✓ Network File Transfer
- ✓ ODBC compatible for queries and reporting

DISPLAY OPTIONS

- ✓ Display system status (Collecting ON/OFF, Reporting ON/OFF, etc.)
- ✓ Original unparsed raw data can be displayed
- ✓ Display can be configured differently for each LimsLink method
- ✓ Configurable summary worksheet display
- ✓ Detailed spreadsheet display for each sample - completely configurable
- ✓ Display processed data in real time

DATA PROCESSING

- ✓ Integrated Windows®-based spreadsheet
- ✓ Perform real-time calculations using spreadsheet formulas
- ✓ Perform real-time formatting of all displayed data
- ✓ Manually enter information
- ✓ Combine data from multiple sources using extensive matching criteria
- ✓ Invoke auxiliary data processing routines manually or automatically
- ✓ Combine data from host with data from other sources (keyboard, programs, instruments)
- ✓ Process data with external executable programs

PARSING

- ✓ Configure parsers using data driven graphical tools, no programming required
- ✓ Parse text-based data of any format
- ✓ More powerful than ordinary position- and delimiter-based parsing tools
- ✓ Navigational Parser Tree graphically displays parser steps
- ✓ Data Filter removes or converts characters
- ✓ Remove control characters
- ✓ Ideal for all types of laboratory data
- ✓ Define multiple parsers for complex and variable data

REPORTING

- ✓ Graphical Report Template Editor
- ✓ Generate multiple reports automatically
- ✓ Run time reporting - generate multiple reports simultaneously
- ✓ Manual, semi-automatic and automatic reporting
- ✓ Report data to local hard disks, network disk drive, printers or serial ports
- ✓ Flag and highlight reported samples
- ✓ Report all or just selected samples - selection can be manual or automatic
- ✓ Post report option invokes any program or batch file automatically

MULTI - LEVEL PASSWORD SYSTEM

- ✓ 100 configurable password levels
- ✓ Program functions independently controlled through password access
- ✓ Log On Procedures identify users and system
- ✓ Multiple users can access system simultaneously, using individual passwords
- ✓ Permit system administrator to change and assign passwords and user level
- ✓ Prevent unauthorized access to stored passwords
- ✓ Data editing is controlled by password level

ARCHIVE

- ✓ Store all raw data locally or to network location
- ✓ Store processed data locally or to a network location
- ✓ Store all system configuration information
- ✓ Retrieve all raw data, processed data and system configurations
- ✓ Stored data is compressed and tagged with labels for easy retrieval

AUDIT TRAIL DATABASE

- ✓ Select from three levels for recording LimsLink operations
- ✓ Sort and filter operations can be used to retrieve entries
- ✓ Record before and after values when data is edited
- ✓ Save user comments when editing data
- ✓ Set audit trail level
- ✓ Protect audit trail data from unauthorized access

SPECIAL FUNCTIONS

- ✓ Auxiliary program modules available to perform special tasks
- ✓ Special Functions library available from Labtronics
- ✓ Special Function programming service available
- ✓ Hook in your own programs to use LimsLink data and control LimsLink functions

DOCUMENTATION

- ✓ Complete with software manual
- ✓ On-line documentation of functional capabilities including examples
- ✓ Software validation tool kit available to meet your specifications



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Special Functions Library

Special Functions are additional modules that can be utilized with any LimsLink method to extend the functionality and capabilities of the core program. They can be implemented with any instrument interface to address the unique data management requirements of each analysis.

Special Functions that are included in LimsLink

NAME	DESCRIPTION
Date/Time1	Allows conversion of dates into a format recognized by a LIMS or database.
Expansion2	Automatically expands a list of samples into a sequence file or worklist by inserting QC samples and standards.
Replace1	Substitute one character string for another. Can also substitute formulae.
Report1	Reports data automatically to any location as samples are processed rather than in batch mode. Report1 facilitates using LimsLink in a "black box" environment where results are automatically and transparently transferred to the LIMS.
Sorting1	Ascending and descending sorting with up to 3 sort levels.
Units1	Automatically convert results from one unit of measurement to another.

Optional Special Functions

NAME	DESCRIPTION
AddSamples1	Provides a run-time facility for creating a Worklist of Sample ID's to be tested. The Special Function takes Samples and Groups, which you define, and expands these into the worksheet. This is an optional, but highly recommended, step for quickly creating a Worklist in the worksheet.
LabODBC3	Extract from and write to any ODBC compliant database.
Limit Check2	Check data against defined limits; Out-of-range results can be flagged and highlighted.
Program1	Provides hooks to executables that can be written in any language; Allows custom data manipulations to be accomplished.
Program2	Provides the Special Function interface with a VBA compatible scripting language interface and run-time debugging environment. This facilitates the creation of highly customizable special functions to meet specialized requirements.
Utility1	Links outside applications or objects to your LimsLink methods, allowing run-time access.



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