

LABWARE ELN™



Results Count

An Electronic Laboratory Notebook that is seamlessly integrated with the world's most popular Laboratory Information Management System (LIMS)

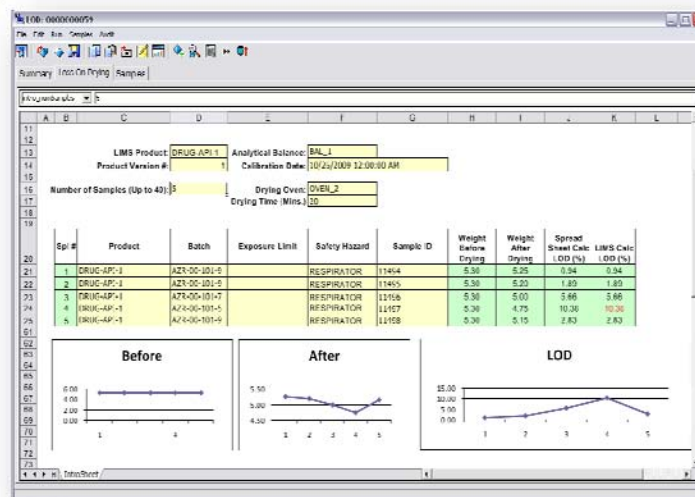
PRODUCT OVERVIEW

LabWare ELN is an experiment and workflow driven software application designed to give the laboratory scientist the ultimate platform to electronically document their experiments including relevant scientific content and observations, instrument results, and attachments such as spectra, chromatograms and, if appropriate, chemical structures. LabWare ELN works seamlessly with LabWare's flagship product, LabWare LIMS, allowing any data within LIMS to be accessible by ELN and vice versa. Integrating ELN products from different suppliers has significant practical challenges and limitations, and very often requires the creation of a customized interface to achieve even simple data exchange between ELN and LIMS. The benefit of LabWare ELN is the inherently elegant interface that exists between the two systems and the simplicity by which both LIMS data and LIMS functionality can easily be shared and leveraged from within LabWare ELN.

Whether you are doing research work, process development, or performing a validated method in the Quality Control laboratory, LabWare ELN has purpose-built functionality to satisfy your unique requirements. At the heart of LabWare ELN is a powerful and compliant spreadsheet environment that visually presents the experiment forms and worksheets to the user. Laboratory scientists will be instantly familiar and comfortable working in the LabWare ELN environment, due to its similarity with Microsoft Excel®, which is ubiquitous and extremely popular among the scientific community. Even though LabWare ELN does *not* require Excel or any of the Microsoft Office components to be installed, it nevertheless leverages all of a user's knowledge and experience because it supports Excel formulas and charting functions in the ELN worksheets that the scientist interacts with.

FEATURES AT A GLANCE

- Spreadsheet-based user interface
- Seamless integration with LabWare LIMS and LabStation™ for instrument interfacing
- Supports formulas, custom calculations, charting and the insertion of attachments
- Works well in GxP laboratories as well as in non-GxP environments.
- Guided test method execution



SEAMLESS INTEGRATION WITH LABWARE LIMS

The unique power of LabWare ELN comes from its ability to seamlessly interact with LabWare LIMS and to utilize any data or content stored in the LabWare relational database including customer-defined fields, tables, or record types. As the user works in LabWare ELN, they have the ability to select relevant records from LIMS to document their experiment, such as instrumentation, standards or reagents and, of course, samples and tests. Adding samples or tests to an ELN experiment is facilitated by simple-to-use mechanisms such as “Drag and Drop”, Barcode scanning the samples into ELN, or selecting the samples from a list. How much easier can it be!

Buttons and other user interface elements can be placed onto the experiment template forms and can execute macro commands in LabWare ELN to perform more advanced operations, such as browsing for various types of records in

LIMS or selecting instrument files from which to retrieve result data. This capability provides virtually an endless number of ways that ELN experiments can be configured, in order to make it easy for the user to complete their work. When a user browses and selects a record, all of the important meta-data related to the record is automatically brought over to the ELN worksheet without further interaction by the user, as shown in the example above.

Reagents and Standards

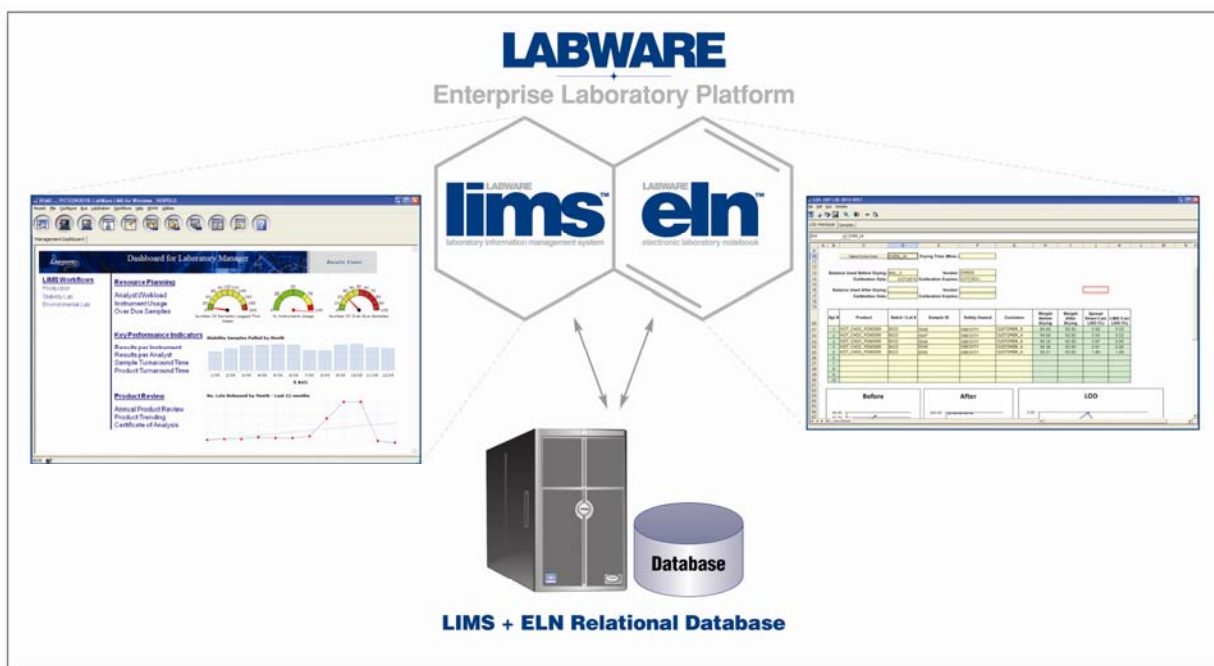
Phosphate Buffered Saline solution ph 7.0 ± 0.2 with no visible particulates or sediments

PBS Reagent	PBS_0001_2009	Vendor:	JT_BAKER
Vendor Lot #:	JTB091011-1	Expiration Date:	12/31/2009
Buffer pH:	7.05	Meets Spec:	Yes

Protein Reference Standard aliquot (e.g. Purified Bovine Serum Albumin)

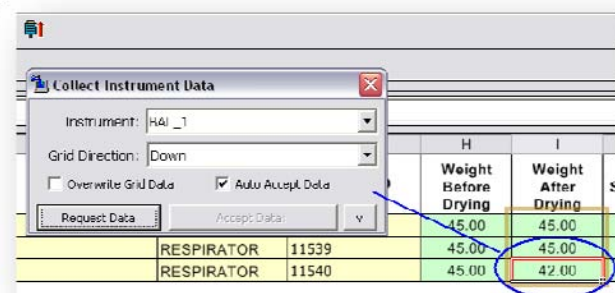
BSA Ref. Standard		Vendor:	
Vendor Lot #:		Purified BSA Standard: Browse and select the BSA Reference Standard from LIMS that will be used in the experiment.	
BSA Std UV Absorb:			

The architectural schematic below shows the relationship between LabWare LIMS and LabWare ELN.



INTERFACING WITH LABORATORY INSTRUMENTS

LabWare ELN provides built-in, out of the box capability to capture data from laboratory instruments. ELN can directly connect to instruments such as analytical balances, pH meters, and titration instruments



Direct Data Capture from a Balance into ELN

using an RS-232 communications link over a network (LAN or WAN). For instruments that use a computerized data system, LabWare ELN provides the ability to parse the data contained in reports produced by the data system and to directly enter that data into an ELN worksheet.

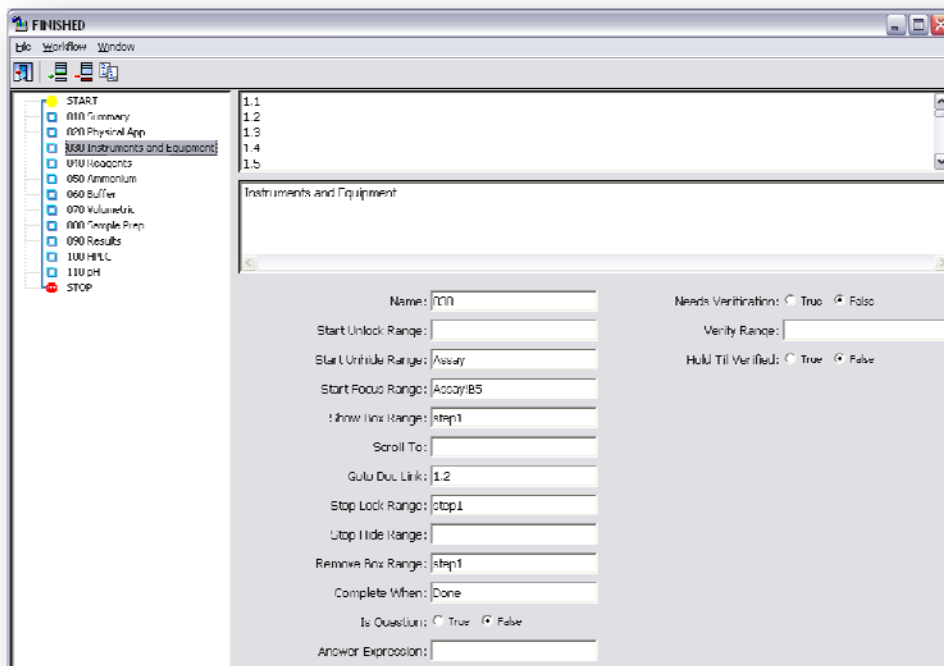
In addition to directly connected instruments and file based instrument data systems, LabWare also offers advanced integration

modules that seamlessly interface to Empower and Atlas chromatography data systems, providing the laboratory analyst a functionally rich environment for interacting with chromatography data from these popular products.

GUIDED METHOD EXECUTION AND WORKFLOW AUTOMATION

Laboratories that work on GMP samples are required to follow standardized testing methods (STMs) when testing samples in the laboratory. If a laboratory technician makes a mistake in executing an analytical method, it very often leads to a substantial amount of effort to investigate the exception or deviation from procedure and to document the corrective and preventative actions taken. This leads to extensive rework and inefficiency for the laboratory and added operational costs for the company. LabWare ELN can help your organization avoid these inefficiencies and added operational costs by ensuring that laboratory technicians are performing standardized test methods according to the proper sequence of steps stipulated in the SOP. LabWare ELN can associate an SOP document with an Experiment Template and, using a very straightforward tagging scheme can then link specific steps in the SOP with sections of the experiment worksheet. Thus as the laboratory technician completes a given step in the procedure, the next section can be revealed with the appropriate SOP instructions for performing that step.

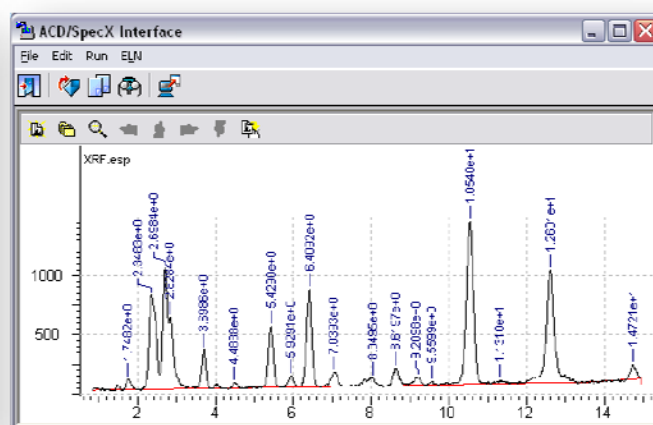
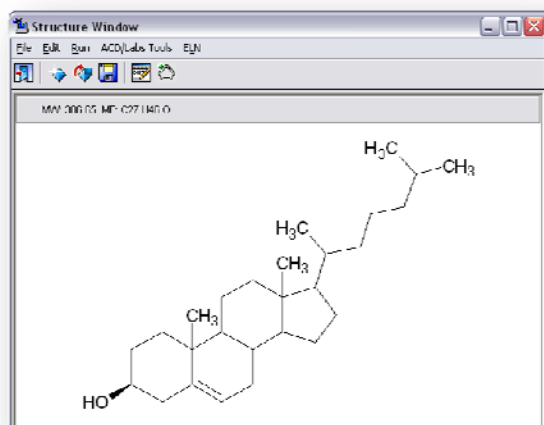
LabWare ELN incorporates our Workflow Automation Manager module that provides the ability to define a series of automation steps within an experiment that guides the user as they complete steps in an analytical method. If desired, sections of the experiment worksheet can be protected from data entry until the laboratory technician has completed all of the required prerequisite steps, according to your procedure. Additionally, the Workflow Automation Manager can hide or unhide sections of the worksheet or even entire worksheets, as well as set the user's focus to a specific cell or range of cells in the worksheet where their data must be entered.



Workflow Automation Manager – Example of Configuring a Guided Method Workflow

CHEMICAL STRUCTURE AND SPECTRA INTEGRATION

LabWare has partnered with Advanced Chemistry Development (ACD/Labs) to provide chemical structure integration in the LabWare ELN. Scientists can create or modify structures using chemical structure drawing software such as ACD/ChemSketch and then insert the structure into the experiment worksheet. The structure file is also stored in the ELN database so that the scientist can interact with the live structure in the LabWare Structure Window. Structure and sub-structure searching is provided for MDL Symyx databases as well as for ACD/Labs structure databases. The ACD/Labs integration in LabWare ELN also allows any type of spectral or chromatographic content to be displayed in the ELN worksheets.





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