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# **LABWORKS LIMS v6.9**

Labworks Development History

Last Updated: May 2019



# LABWORKS 6.9 May 2019

- Support has been added for electronically submitting CMDP compliance reports.
- Sample Login date/time fields have enhanced usability
- Added ability to group Prelogin group records in LABWORKS database
- Multi Sample Login has been enhanced to provide copy-paste support
- CRGEN has been enhanced to allow more control over which folder to store the report in, including support for nested folders.
- DataViewer application has been enhanced to display Sample Turn-Around Time
- LABWORKS has been enhanced to support LDAP authentication for LDAP User IDs upto 256 characters
- DataViewer application usability has been enhanced by displaying the sample comments and by providing enhanced result sorting functionality
- SQC application has been enhanced to display Raw Result in NWA chart based on the configuration
- Process Scheduler now allows you to right click on a "ready to collect" sample and sort the spreadsheet used to edit sample fields.
- Process Scheduler has been enhanced to request username and password for data entry
- Added new SHOW\_MCSELECT = YES to Process\_Scheduler
- Process Scheduler has been enhanced to display scheduled groups as per the order of location codes
- It is now possible to set Process Scheduler initial status from LWSampleLogin. System Manager SHOW\_STATUS needs to be checked.
- An improvement has been made to implement "PS Sample Edit" privilege for restricting PS Sample Edit to privileged users
- Performance of Process Scheduler Edit Schedule functionality has been improved to support large number of items
- In Process Scheduler, the collection date is maintained as it is upon right-click on the samples to login.
- Inventory Management application has been enhanced to allow the user to enter the actual quantity used during Mixture creation.
- A new feature is added to support receive batch of inventory item.
- In LWInventoryManagement application, "OVRD\_EXP\_DATE" privilege has been changed to "CINV\_OVRD\_EXP\_DATE"
- Application has been enhanced to support filtering by Department in Sample Selection dialog for 'Analyses Awaiting Validation' option.
- Result Entry application has been enhanced so that user can select the Sample Object Attachments from any folder available in the network.
- In Result Entry application, Analysis Start Date > Analysis End Date message prompt is now displayed on click of "Save" button
- Result Entry application has been enhanced to navigate to next Sample/Analysis Code directly from Component Result Entry screen for Multi-Component Analysis
- UX improvements have been implemented for Result Entry, Multi-Sample Login applications
- Sample Selection Dialog used across LABWORKS application has been enhanced so that the fields displayed in the dialog can be selected via configuration.
- QA QC Batch Builder has been enhanced to display the Update Batch button if a change is made to a previously created batch and a value in one of the Special Info Form fields is changed
- "My Templates" tab has been added in QA QC Batch Builder to provide a filtered view of templates for batch creation
- Improvement has been made in Explorer .NET History form to resize contents after resizing the form



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- Sample Modify application has been enhanced to support configuration of the default update due date option e.g. "Always", "Never", "Prompt" SystemManager SAMPMODIFY\_DUEDATE\_RECALC
- Instrument Maintenance and Calibration application has been enhanced to support sending automatic warning email messages and disabling instruments for which maintenance/calibration due dates are elapsed.
- LABOBJSPECINFO, LABOBJMAILLIST performance has been optimized
- eWorksheet application has been enhanced to allow the user to change the status from Completed back to InProgress
- eWorksheet application has been enhanced to support Excel Macros, pick up Sample List from QA QC Batch, import Sample Header information, prompt Audit Reason and eSignature
- eWorksheet has been enhanced to configure in the template and validate the cells that must have values before being posted
- An improvement has been made for the user to select the Y axis label as Raw Result for the Trend Plot
- Replicate Management forms have been enhanced to capture more audit trail data.
- LABWORKS application has been enhanced to support SPECINFO table from previous versions
- Analysis Maintenance Load from Analysis button size is enhanced to be consistent with other buttons
- Design guidelines have been applied to LABWORKS Explorer application to improve the usability
- LWExplorer has been enhanced to display date as well as time for user fields of datetime type

# LABWORKS 6.8.5 December 2018

- Enhanced Chemical Inventory Application
- Replicate Support for Single and Multicomponent Instrument interfacing through Result Entry.
- Replicate Support using PR6 file through Result Entry.
- Replicate support for multiple data records for same sample/analysis in instrument file.
- Replicate Support using Multicomponent transfer
- Replicate Management Audit Trail.
- COA application NWA 6.2 Support.
- MOR Report application Macro execution in excel file.
- Analysis Reference to use Pick List instead of free form input.
- Default result support for Single Components analysis.
- Sample Collection App Collection group creation in Process Scheduler.
- Audit reason in Analysis Maintenance and LocList Maintenance Application.
- Data Viewer support for better selection/view options in analysis list.
- Result Entry Personal Training filter.
- Multicomponent multiple partial result entry without result modify privilege.
- WebTop enhancements.
- PS Sample Login enhanced to accept Collection Date as calendar input.
- OPCEXP6 ability to export non numeric results.
- eWorksheet history export to Excel.
- Support analysis validation rules for QA/QC batching custom statuses.
- QA/QC batch & Result Entry template support to order samples by BATCHSAMPS. BATCH\_NAME, BATCHSAMPS.BATCH\_INDEX.
- Enhanced Sample Login to support setting of Process Scheduler Initial Status.
- COA application enhanced to limit COA History Range.
- Support for CMDP



# LABWORKS 6.8 April 2018

- Replicates
- NGII Instrument Interfaces
- Analysis/Location Code Delete
- Report Number/Report History
- ProcessScheduler Service LogBatch Improvements, Label Printing
- ScanDaemon Service Support Optional Parameters
- PostResults6 Only update result records when modified.
- Analysis DueTime support Configurable to Calculate due time.
- QAQC Batch Edit Update Batch Sample ID

# LABWORKS 6.7

- eWorkSheets Added new electronic worksheet application
- Mobile Sample Collection Added new optional Tablet (Android/Windows/IOS) Sample Collection App.
- COA Evaluate specifications when result values include > <
- Cross Reference Search Added search for comments and results
- Exception Trail Add search for Hold Time violations
- DataViewer New Filter Saving, Comment indicators, Graphical Trend Integration, Sorting
- ProcessScheduler Service Restart from last update
- SampleModify Recalculate due dates when submit/collection date updated PostResults6 Added support for post run programs.
- Workflow Now support Retired back to Draft/Active

## Labworks 6.6

- ResultsEntry Color coding of Multi-component results
  ResultsEntry Added Support for NGII Instrument Interfacing
- ProcessScheduler Added Service option for sample creation
- DMR netDMR format
- ScanDaemon Service based ScanDaemon
- Improved specification handling in both ResultsEntry and Certificate of analysis to support evaluations when the result includes ">" or "<" sign.</li>
- Dataviewer Multi-component at top level
- Email Gateway Single security point for SMTP
- MOR report improvements for Daily Report

# LABWORKS 6.5

Graphic Trend Viewer added.

# LABWORKS 6.4.2 (Build 761) /6.5 (Build 762) - December 2015

- SFRound Improved updating of RawResult value when updating non-result data.
- PostResult6 Validation status on multiple uploads. Multiple analyte comments
- PostScr6 Work around for SQL 2012 defect.
- Bartender Interface Windows 8/10 support improved.
- SAP Interface support for SAP 4.6 Client
- ResultsEntry Excel calculation added support to Run Macro
- ResultsEntry Added support for PostResults6 format

# LABWORKS 6.4.2 (Build 749) - September 2015

- ResultsEntry Improved handling of scientific notation.
- COA Updated header field handling
- Validation Added configuration of display



## LABWORKS 6.4.2 (Build 742) - August 2015

- ResultsEntry Excel calculations Rounding of values returned from Excel
- Userfield limit increased from 50 to 99
- New QA Batching performance when using sample ownership improved
- SystemManager Audit Trail of changes

## LABWORKS 6.4.2 (Build 730) - July 2015

- Multi-Sample Login Prelogin groups moved to database
- DataViewer Added ReportAddress grouping
- New SampleLogin added Container support
- History added PQL, RawResult to display options
- ProcessScheduler Removed internal analysis length limitation.

#### LABWORKS 6.4.2 (Build 724) - June 2015

- ProcessScheduler 5<sup>th</sup> week corrections
- NWA International date/number formats
- Domain Authentication on Server 2012
- ResultsEntry added CAS number to display configuration
- DataViewer Export to Excel as numbers/single spreadsheet
- Validation Search for Samples with all analyses validated
- Validation Reorder All/Scratch All...
- Sample Modify Add/Remove test from All.
- AuditTrail Apply to All...

#### LABWORKS 6.4.2 (Build 716) - May 2015

- COA Create email message with PDF Attachment
- ProcessScheduler/ResultsEntry Capture Analyst when different user for ResultsEntry
- Sample Validation Load QC results Performance
- DMR Enhancements Added eDMR output/Performance

#### LABWORKS 6.4.2 (Build 698)- March 2015

- PostResults6 Updated results proper spec violation update
- SQL 2012 Support improvements/Performance
- SQC Chart Performance
- Support for > 100K Location/Analysis Codes
- Export Data Xtab samples down/tests across direct export
- DataViewer added Relative dates.

#### LABWORKS 6.4.2 (Build 684) - January 2015

- LWLicenseManager Added ability to release all but most recent license for a user.
- Analysis List Maintenance Added Paste Component list
- PostResults6 Changed parser to handle columns with mixed numbers/strings
- New Sample Login Improvements Saving User context/Column Sizes.... Lots of stuff (fill down, copy/paste... Prelogin group selection enhanced.
- Process Scheduler Link to new Sample Login
- Domain Authentication support workstations and users in different domains/trusted domains.

## LABWORKS 6.4.2 (Build 670) - December 2014

- SMTP Configuration support alternate ports
- Refresh of Service Connections Eliminated 90% of Errors in Errorlog
- WebTop Refresh of UI for compatibility with Chrome, Firefox, IE 10...
- Diagnostic Tool added individual Service check



- Location List/Analysis List Added AuditTrail tabs to display change history
- New QA/QC Batching User configurable fields
- New QA/QC Batching Run instrument command/Crgen support/Sequence file generation.
- Crystal Report Runtime updated to Crystal 2013

## LABWORKS 6.4.1 - April 2013

- Analysis Substitution UI
- Sample Modify Assign Container
- Progress Report formats moved to database
- AuditTrail management moved to database/ Managed via UI
- Application Startup performance MSI improvement
- Increased \$Code components from 300 to 1000
- Windows located User/Temp paths
- QA Batching Delete batch
- PostResults6 Added AVALUSER/AVALDATE fields
- Citrix Mapped drive support improvement in ResultsEntry/MCXfer
- Added Printer Selection to ResultsEntry/Progress Report....
- Audit Trail of Narrative Text

# Q2 - 2012 - LABWORKS 6.4 - July 2012

- Sample Archive
- Enhance batching to allow assigning multiple QA samples, pre-assigned and ad hoc
- Sample login enhanced to allow user definable grouping
- Set location code specification without assigning test
- Lock or mark calculated result fields
- Ability to configure sample receipt, worksheets and routing reports with Crystal Reports
- Option to send sample reports to selected printers
- Webtop browser compatibility

#### Q2 – 2011 – LABWORKS 6.3 – New QA Batching Module

- Results Posting program improvements
- New License types provide more flexibility
- License management by group/location

#### Q4 2010 – LABWORKS V6.2.220 & 6.1.220 (maintenance releases)

- New SYSMGR options
- Result Entry/Result Reporting improvements

#### Q3 2010 - LABWORKS 6.2.188

New Data Viewer Module for analysis-oriented data viewing.

Discharge Monitoring Report (DMR)

- Improved consistence in behavior of result posting routines
- Special Info Forms Designer
- License Manager allows user to view their current license/usage
- User Password Management for improved security
- Performance Improvements/Diagnostic tools
- Web Top Configuration Utility

# Q2 2010 – LABWORKS 6.2

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- Redesigned DMR (Discharge Monitoring Report) Module
- Improved instrument Interfacing Capabilities
- Data Viewer 1.0 New Cross-Tab-Style Data Viewer
- Results Posting Improvements
- Data Integrity for Special Info Forms
- Platform Improvements

# Q2 2010 – LABWORKS 6.1.158 (maintenance release) –

Improved implementation of VB6 applications start up.

Re-engineered data export/reporting engine – performance improvements 50%-200%

# Q4 2009 – LABWORKS 6.1.128 (maintenance release)

- Workflow Architect modify state of multiple items in a single transaction
- Process Scheduler Updates
- PDA/PDET output template improvements
- PAM increased maximum number of analytes
- MOR support for Excel workbooks
- Access reports improvements
- New key controls correction of PQL's by dilution factor.

# March 2009 – LABWORKS 6.1

- Web Top Environment
- AJAX technology
- Zero Client Footprint

# January 2008 – LABWORKS 6.0 –

WebEdition

Graphical Workflow Designer

# June 2006 - LABWORKS VS 5.8 BLD 405

- Sample Selection Enhancements
- LABWORKS Explorer 2 Split Screen Viewer
- Process Scheduler 3 Expanded Column Displays
- Crystal Reporting with Invoicing

# March 2005 – LABWORKS Enhanced Security VS 5.8 BLD 311

- Dynamic Control Limits. (Optional Program)
- LABWORKS Online Administrator, which allows creation of Web-based access to laboratory test results and reports. (Optional Program)
- A maximum of 512 analyses can be assigned to a location code.
- Gateway administrator enhancements

# May 2004 – LABWORKS Enhanced Security VS 5.8 BLD 258

- Creation of update tool to assist clients in updating their systems to the latest database

#### February 2004 – LABWORKS Enhanced Security VS 5.8 BLD 256

- Multi-language capabilities for English, French, German, Spanish, Italian, Chinese and Russian utilizing a new LABWORKS internationalization tool
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- Microsoft Outlook® styled interface and new calendar view in Process Scheduler
- Web enablement (automated e-mail and web reporting using the Crystal Enterprise® tool
- Domain password authentication allows three options for LABWORKS logon
- Query Engine linked to LABWORKS Cross Reference Search function

## June 2003 – LABWORKS Enhanced Security VS 5.0 BLD 255

- Tool creation to enable customers to comply with 21 CFR Part 11 regulations.
- E-mailing capability
- Citrix® security features
- Fully-integrated report tool using Crystal Reports® technology
- Hand-held computer integration to Process Scheduler®

## April 2001 – LABWORKS Enterprise Version 4.6 Build 253 – Industrial

Pretreatment Program.

- History List for Multi-Sample login fields that require same data is entered more than once.

## February 2000 – LABWORKS Enterprise VS 4.6 BLD 252

- 2000 compliant
- Ownership groups allow the system manager to assign certain groups to sample points.
- Introduce Exception Report Setup/Generator Allows user to select a report run for a specified time, analysis, sample, etc. Once the report is run, it can be sent to a directory path or via e-mail.

#### November 2000 – LABWORKS Enterprise VS 4.6 BLD 252

- A user program can be run automatically after saving new or changed sample results.
- Monthly Operating Report program
- Introduce Picklist Setup program

#### July 1999 – LABWORKS Enterprise VS 4.1 BLD 251

All 32 bit LABWORKS new multi-sample login

# April 1999 – LABWORKS Enterprise VS 4.1 BLD 250

- LABWORKS servers in Visual Basic 6.0,
- New Setup

#### March 1999 - LABWORKS Enterprise VS 4.1 BLD 174

- Sample log list, after multi-sample login, can now be printed.

#### September 1998 - LABWORKS Enterprise VS 4.1 BLD 174

– Most upgraded and new modules are related to instrument interfacing.

#### March 1998 - LABWORKS Enterprise VS 4.1 BLD 172 - Field

Data Entry Terminal with GPS.

Added Sybase to list of supported ODBC databases.

#### September 1997 - LABWORKS Enterprise VS 4.1 BLD 160

- Instrument Maintenance and Calibration Module
- Personnel Training Module



# March 1997 - LABWORKS Enterprise VS 4.1 BLD 154

- Intranet/Internet LABWORKS Explorer Module

September 1996 - LABWORKS Enterprise VS 4.1 BLD 149

Integration of Analyst and Instrument Databases

March 1996 - LABWORKS™ Enterprise VS 4.1 BLD 75

1995-98 Version 4.0 – 4.10 LABWORKS Desktop Windows

## 1985-94 Version 2.0 – 3.20 LABWORKS DOS

In 1985, the first operational installation of the LABWORKS LIMS was accomplished for the New Orleans Water Board.