

MSC-LIMS™ *Insights*

The source for news and tips of interest to users of MSC-LIMS,
an affordable laboratory information management system for small labs.

Issue No. 37

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Welcome

Welcome to **MSC-LIMS *Insights***.

This newsletter will help current MSC-LIMS users get the most out of their software, and will complement the product literature and demo that prospective users can find on our web site at www.msc-lims.com.



Join our mailing list for more information. Sign up at www.msc-lims.com/lims/maillist.html.

This newsletter is for and about MSC-LIMS users. We welcome your comments, and your suggestions for topics you would like to see addressed in upcoming issues. Please send your thoughts to newsletter@msc-lims.com. 

When to Upgrade to Version 5.0

MSC-LIMS version 5.0 and its SQL Server database mainly benefit sites with larger databases or those experiencing frequent database corruptions. Use the Compact LimsData option on the Admin tab in the LIMS then check the size of your LimsData4.mdb file. If your database is larger than 200 MB after compacting and your queries are noticeably slower or you are experiencing frequent database corruption, then a version 5.0 upgrade is a good option. Sites with many users, and workstations that crash or lose their connection to the server where LimsData resides, may encounter database corruption requiring a compact and repair to correct. Version 5.0's SQL Server databases do not experience corruption and are inherently more reliable, secure, and scalable.

If you have not yet used MSC-LIMS 4.x Archiving to archive older samples and reduce the size of your production database, updating to version 5.0 is a good solution if you want to keep all of your data in a single database. Finally, upgrading to the upcoming version 6.0 will also be easier for those already running version 5.0.

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From the Developer

Over the past 25 years, MSC-LIMS has become an invaluable data management tool for many labs in various industries. One of LIMS' main benefits is having data in a single database. MSC-LIMS makes the compiled data readily available with its integrated Excel interface. In previous issues of this newsletter we have shown how to use Excel import templates to import analysis results and Excel export templates to create custom reports and electronic data deliverables. In this issue you can explore how to log new samples from Excel workbooks, which is another powerful feature of the Excel interface.

Since we are no longer updating all-Access MSC-LIMS version 4.x, we recommend that new MSC-LIMS users begin with MSC-LIMS version 5.0 for SQL Server. Existing MSC-LIMS 4.x sites that are not experiencing any performance or database corruption issues may continue to run version 4.x. But if you are debating the move to version 5.0 this issue has more information to help you make that decision.



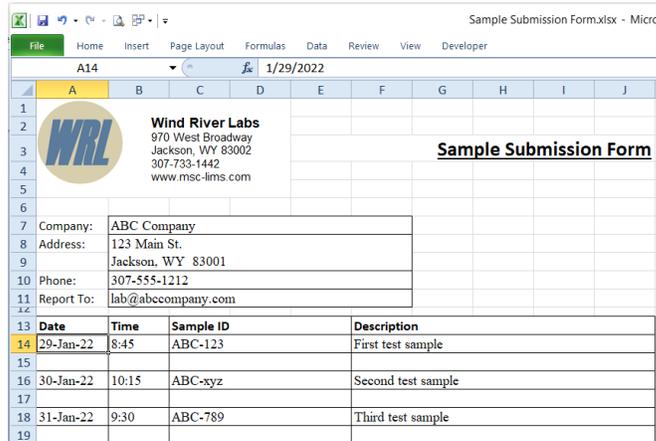
Rick Collard is the founder of Mountain States Consulting, LLC and the principal developer of the MSC-LIMS software. You can reach Rick by email at rcollard@msc-lims.com.

Log Samples with Excel Data

MSC-LIMS' integrated Excel interface is widely used to import analysis results from Excel workbooks and instrument data files and to export any LIMS report's data for analysis, reporting, and graphing.

To speed sample login and eliminate data entry where electronic data is already available, you can also use the Excel interface to log samples with Excel data. For example, if you are a commercial lab, consider giving your customers an Excel workbook they complete with their sample data then email to your lab. Let's look at a couple of simple examples to understand this powerful and efficient capability.

Begin by creating an Excel workbook with data for each of the sample fields you plan to import. This may include all of the sample fields you normally complete manually or just a subset. In the example workbook below, the lab's customers enter their sample's collected date and time, sample identification, and description. Enter data for a few test samples.



Date	Time	Sample ID	Description
29-Jan-22	8:45	ABC-123	First test sample
30-Jan-22	10:15	ABC-xyz	Second test sample
31-Jan-22	9:30	ABC-789	Third test sample

Next, add a two-column table to an unused area in the worksheet. Enter the LIMS field name in the first column and the range of cells containing the field's data in the second column. To get a list of the available LIMS field names, open the Batch Login screen with at least one sample in the batch then use Spreadsheet | Import Sample Data to open the Excel Data Import screen where the field names are listed in the Import Field picklist.

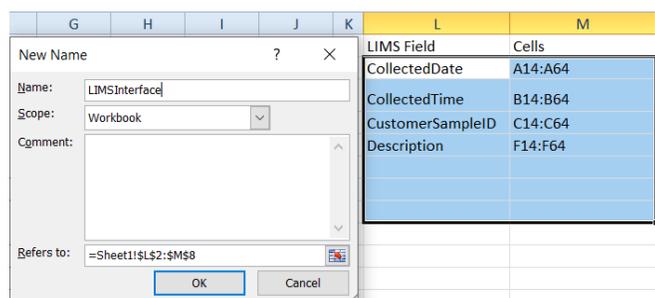
Add column labels to the table then select the table's data including a few additional blank rows for possible future expansion and name the table LIMSInterface.

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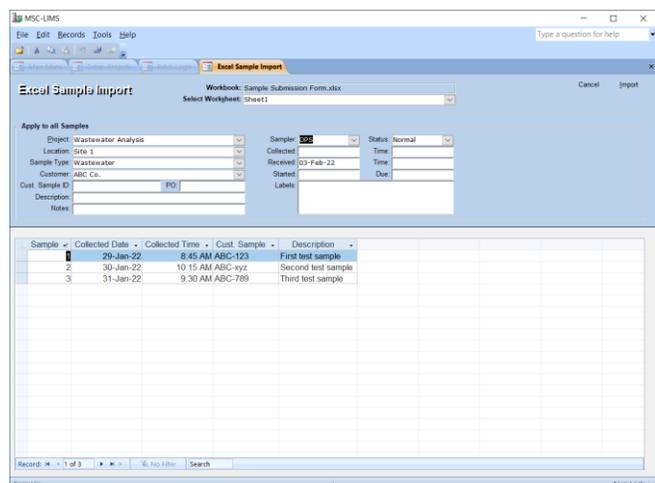
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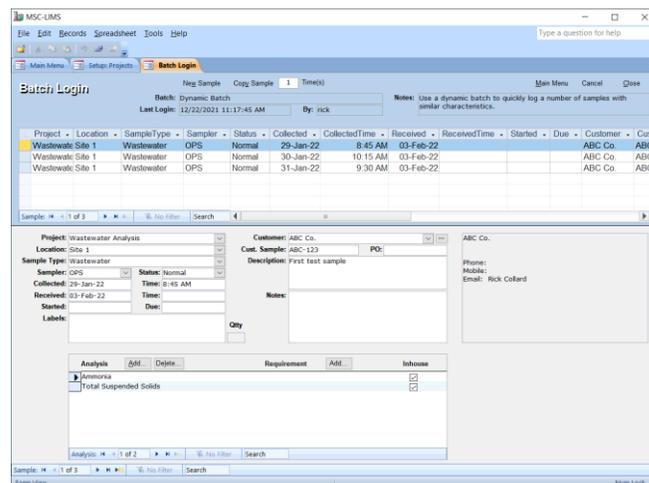
Name the table by selecting the Name Manager on the Formulas tab then click the New button as shown below. Note that you can also name the table by entering the name in the Name Box, which is located directly above the intersection of row and column labels. Once you have successfully tested your Excel workbook you can hide the columns or rows containing the LIMSInterface table to prevent user tampering.



Logging samples with Excel data is a feature of the Batch Login screen. To test the workbook you created, open the Batch Login screen with an empty batch. Note that if you haven't already done so, we suggest creating an empty login batch named 'Dynamic Batch' to use for this purpose. In the Batch Login screen, use Spreadsheet | Import Samples to open the Excel Sample Import screen. The name of your open workbook will be listed. Use the Worksheet pick list to select your workbook's worksheet containing the sample data. Note that only worksheets with a LIMSInterface named range will appear in the pick list. After selecting the worksheet, the data imported from Excel will automatically appear in the lower half of the screen as shown below.

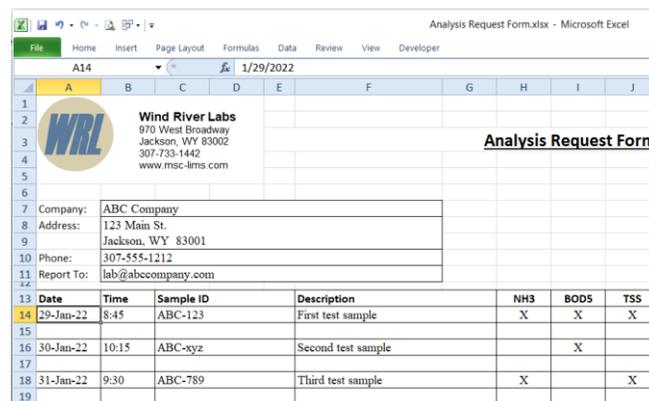


Use the fields in the 'Apply to all Samples' section of the screen to enter any additional sample characteristics that are the same for all samples. Next, click the Import button to add the samples to the Batch Login screen.



Enter any additional data or changes to the imported samples in the Batch Login screen just as you would for any other sample batch. Note that in this example, the analyses assigned to the samples were obtained from the selected project.

Samples can also be imported from Excel data with designated analyses. To add this capability to your Excel workbook, add additional data entry cells for the required analytes. Any non-blank cell in an analyte range will add the analysis to the imported sample as shown in the example below.



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Next, update the LIMSInterface named range on your worksheet and add 'Analyte:name' values to the LIMS field column, where name is the LIMS analyte name, then add the cell range for the analyte in the second column as shown below. Make sure the LIMSInterface named range encompasses the new data you have added. If necessary, use the Name Manager to alter the cells comprising the range.

L	M
LIMS Field	Cells
CollectedDate	A14:A64
CollectedTime	B14:B64
CustomerSampleID	C14:C64
Description	F14:F64
Analyte:Ammonia	H14:H64
Analyte:BOD*5	I14:I64
Analyte:Total Suspended Solids	J14:J64

Now, test the sample import just as you did earlier. Note how the analyses assigned to the imported samples now come from the Excel workbook rather than the sample's assigned project.

Since Excel workbooks used to import sample data do not require any macros, they are easy to create and can be safely shared and emailed without generating any security warnings. Consider using Excel data to log samples wherever electronic data is available and streamline the sample login process in your lab. 

When to Upgrade to Version 5.0

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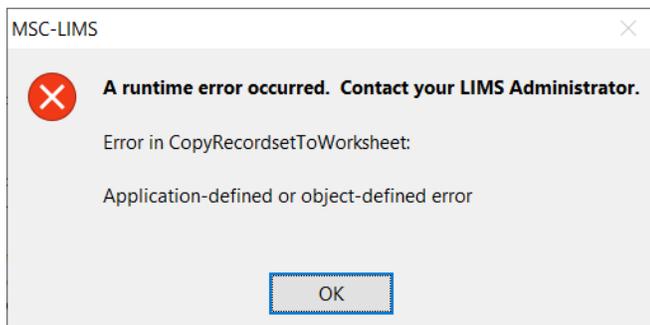
Other considerations when upgrading to version 5.0 are the increased license costs if you have an annual subscription license and your upgrade requires installing SQL Server (you can use the free Express version), migrating your 4.x database, and updating some Excel export templates to work with SQL Server. If you have a full copy of Microsoft Access 2010 or newer you can follow step-by-step instructions to

migrate the database yourself. We offer a database migration service if you prefer to offload that task. Most Excel export templates can be updated for less than an hour's billable time, and you can call us for an estimate. See the version 5.0 [Release Notes](#) for more information including system requirements, upgrade procedures, and database migration instructions. 

Notes from Technical Support

Error in CopyRecordsetToWorksheet

We frequently receive technical support emails requesting help with the runtime error shown below, which occurs when exporting an MSC-LIMS report's data to Excel.



Unfortunately, the "Application-defined or object-defined error" triggered by Excel and displayed by MSC-LIMS is a catch-all error message that does not offer much guidance on the problem. If you have a multi-user license try repeating the identical export on another LIMS workstation. If you can duplicate the error, that suggests a problem with the data being exported. Next, try exporting a smaller and different set of samples. If that succeeds, review all dates and times in each of the samples exported that cause the error. Unlikely dates and times are the most common cause of this error. For example, exporting a sample with a collected date year of 202 instead of 2022 will produce this error. 

Using Check Boxes in Excel

A user recently submitted this request:

I am building a submission form for bulk samples. I simply want to place a 'check box' in Excel. In Excel developer tab I can 'insert check box'. In this mode I can add as many check boxes as I want to a cell. It works exactly as I want in terms of functionality, but I want the cell to be one check box. I like the way 'insert check box' works in Excel and basically want the same functionality applied to the cell itself.

After adding the check box from the available form controls, right-click the check box, choose Format Control, and then link the check box to a specific cell.

The screen excerpt below shows a simple example, where the column C cells are linked to the adjacent check boxes. The linked cell will have a TRUE or FALSE value depending on the state of the check box. Hide the linked cells column to make it pretty and use the linked cells in any formulas as necessary.

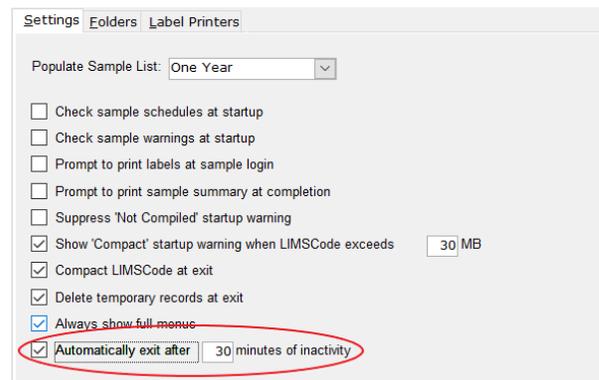
	A	B	C	D
1	Analyte 1	<input checked="" type="checkbox"/>	TRUE	
2	Analyte 2	<input type="checkbox"/>	FALSE	
3	Analyte 3	<input checked="" type="checkbox"/>	TRUE	
4				
5				

Automatically End an Inactive LIMS Session

A user recently asked:

We have a procedural question in LIMS that I am uncertain how to do. If we have a user that forgets to log out of it and leaves the site, is there a way we can gracefully log them out without just restarting the machine that we run LIMS on? We hate to hard terminate the program like that, but I am uncertain of any other way to do it.

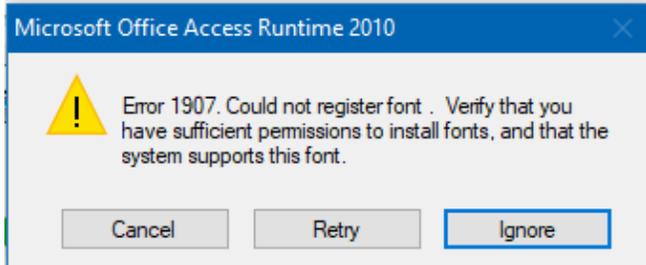
There is an option on the Workstation Configuration screen on the Admin menu that will help here. Enable the 'Automatically exit after N minutes of inactivity' option with an appropriate number of minutes and the LIMS will automatically close when no activity occurs after the specified interval.



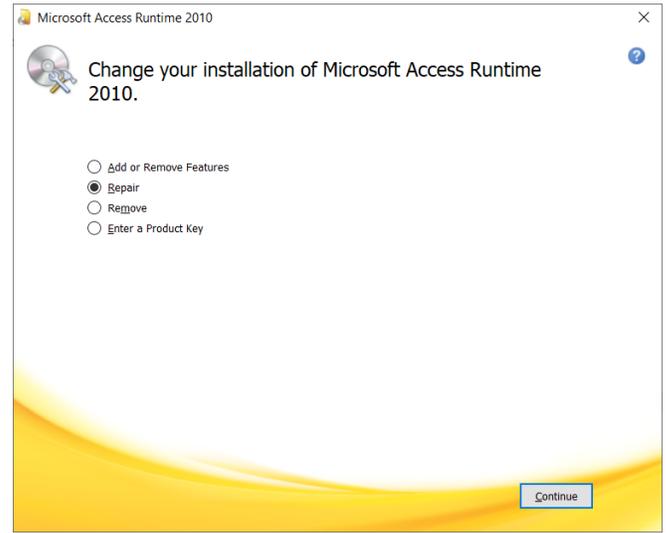
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Error 1907: Could Not Register Font

Occasionally, we receive support emails indicating that a single LIMS workstation received the following error when attempting to start the LIMS.



Although we do not know the exact cause of this error, repairing the Access 2010 Runtime used by MSC-LIMS fixes the problem. To repair, use Windows' Control Panel, select Programs and Features, select Microsoft Access Runtime 2010 from the list of installed programs, click Change then select the Repair option.



Other unexpected errors have also been corrected by repairing the Access 2010 Runtime so consider giving this a try when you encounter problems with a single workstation. 

For Customers Only

This section of *MSC-LIMS Insights* is devoted to current users of MSC-LIMS. Here we briefly introduce only the most recent additions to MSC-LIMS.com Customers Only pages. Use your login name and password to log on to the Customers Only section of our website.

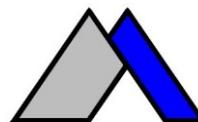
File Library

[Version 5.0 Release Notes](#)

If you are running MSC-LIMS version 4.x, see the version 5.0 release notes for detailed information on system requirements, upgrade procedures, and database migration instructions. 

Contact Us

Questions, comments, suggestions?
Reach us at:



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