

# 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.

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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](http://www.msc-lims.com).



Join our mailing list for more information. Sign up at [www.msc-lims.com/lims/maillist.html](http://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](mailto:newsletter@msc-lims.com). 

## MSC-LIMS and QuickBooks

We have helped many users interface MSC-LIMS with QuickBooks. Since we don't use QuickBooks at MSC, we cannot provide detailed step-by-step instructions and screen captures of the entire process. However, this article offers a good overview as guidance for those who want to integrate LIMS data with QuickBooks. Note that similar procedures may be used when integrating MSC-LIMS with other accounting software.

First, you will need to decide whether you will create your invoices in MSC-LIMS or in QuickBooks. Each approach has its advantages. We have users doing it both ways, but the majority create their invoices with MSC-LIMS and an Excel template then import the receivables into QuickBooks. In either case, LIMS data is queried into an Excel workbook then imported into QuickBooks using a third-party utility (see below).

If you create your invoices with MSC-LIMS and a modified copy of one of our example Excel invoice templates, you can update each invoiced LIMS sample with its invoice number and invoice date. This allows you to easily find invoiced and un-invoiced samples in the LIMS using options on the Additional tab of the query controls as seen below. You can then use invoice numbers or dates to query data to import into QuickBooks.

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## From the Developer

While we don't use QuickBooks at MSC, we know that many of our customers rely on this widely used accounting software to run their businesses. For these MSC-LIMS users, integrating MSC-LIMS data with QuickBooks is an important task. If you are new to MSC-LIMS or to QuickBooks, see "MSC-LIMS and QuickBooks" in this issue for a good overview.

Did you know that you can reorder the columns on the Select Samples screen? Many users are unaware of this capability. This issue's "Using the Select Samples Screen" shows this and other useful features of the Select Samples screen.

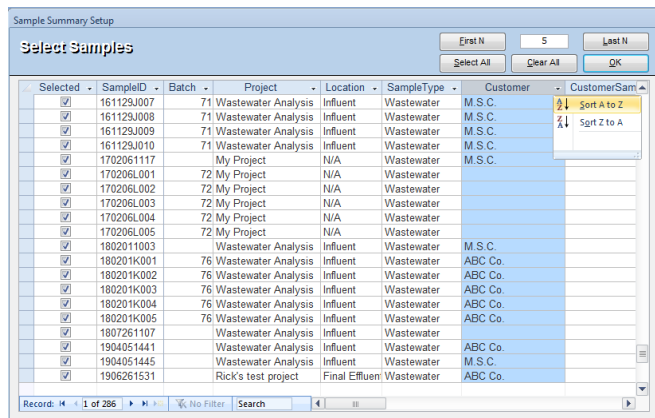



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## Using the Select Samples Screen

Wherever sample querying is available using the common query controls, you can refine your query by enabling or disabling individual samples. After using the [Query] button to query samples, use the [Select] button to open the Select Samples screen. Use the Selected column to enable or disable individual samples.

example, to ensure that samples remain in login order when sorting by another column, drag the LoginOrder column to the right of the primary sort column then select both columns and right-click above the columns then select either ascending or descending order. Column arrangements are automatically saved for members of the Technicians and Admins security roles.



Use the [Select All] and [Clear All] buttons to select all or clear all selections, respectively. Sort the sample selection list as necessary then use the [First N] or [Last N] buttons to select the first N or last N samples, where N is the number specified in the field adjacent to the button. Use this option, for example, to select the N most recent samples in the list of queried samples. Use the [OK] button to close the Select Samples screen and return to the previous screen. 

The Selected and SampleID columns are locked on the left side of the Select Samples screen and the remaining columns can be viewed by scrolling. The columns can be rearranged by clicking to select then clicking a second time and dragging.

Right-click within any column then select either Sort Ascending or Sort Descending to sort the list. Multiple column sorts are available by selecting the columns then right-clicking above the column headers. For

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## MSC-LIMS and QuickBooks

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If you use an Excel invoice template, make sure the 'Save Invoice# in LIMS' option is enabled on the Settings worksheet in the template then generate an invoice by exporting an Invoice report to your template. Next, use the [Print and Update Last Invoice#] button and the invoice number and date will be saved to the LIMS for each sample on the invoice.

Batch	Received	Analysis	Samples	Amount
25	64	Ammonia	4	\$36.00
26		Biochemical Oxygen Demand	4	\$91.20
27		Volatile Suspended Solids	4	\$41.16
Total Due:				\$168.36

The easiest way to get LIMS data for QuickBooks into Excel is to query the data directly from Excel using the MSC-LIMS Data Query workbook. See "Updated MSC-LIMS Data Query Workbook Now Available" in [MSC-LIMS Insights Issue 23](#) for more information. We can provide assistance to help you create an appropriate Structured Query Language (SQL) statement for the MSC-LIMS Data Query workbook to query invoice data. We can also provide a modified version of the workbook with a simpler user interface for querying the LIMS data as shown below.

Once the LIMS invoice data exists in Excel a simple third-party tool can be used to import the data into QuickBooks. We have learned that the \$250 [Transaction Pro Importer](#) is widely used to import data into QuickBooks for many different types of transactions including invoices. The screen below shows the one-time mapping of Excel columns to QuickBooks fields in Transaction Pro Importer. After the mapping is configured and saved you simply use the map file each time you import LIMS invoice data into QuickBooks.

QuickBooks Fields	Import File Columns	Static Value/Formula
Customer	Client	
Transaction Date	Invoice Date	2/22/2018
PO Number	Invoice Number	


See [Transaction Pro Importer for QuickBooks Mapping Screen Tutorial](#) for more information on how to map Excel data to QuickBooks fields.

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You may find two LIMS fields helpful when integrating with QuickBooks. For example, the QuickBooks customer number or name can be maintained in the Account# field on the Customers setup screen and the QuickBooks item can be entered in the Account# field on the Analyses setup screen. Simply include the

Account# fields in the data queried in Excel then map them to the QuickBooks field.

With an appropriately configured MSC-LIMS Data Query workbook and Transaction Pro Importer it is easy to import LIMS invoice data into QuickBooks and integrate these vital applications. 


## Notes from Technical Support

### Internal Data Analytes

A user recently asked:

*Is it possible to add "internal" analytes to projects that we have to maintain records for (e.g., pH of a sample) but not have it reported during export to Excel?*

Yes, there is an Internal Data option on the Specifications tab of the Analyses setup screen that you can use for this purpose.

<input checked="" type="checkbox"/> Performed Inhouse	Any analytes marked as Internal Data will be excluded from an Excel final report if you enable the template's 'Exclude Internal Data Analyses' option on the Settings worksheet. Internal Data analytes are also commonly used to add additional costs to a sample such as pickup fees and consulting charges. 
<input checked="" type="checkbox"/> Internal Data	
<input type="checkbox"/> Inactive	

### Reporting Specific Analytes for Multiple Samples


A user recently submitted this request:

*I wanted to use the ['Final Report - Samples in Rows' example Excel template] to show multiple samples for a certain project but do not want to show all analytes. You suggested using the single-sample ['CofA Example - Specific Analytes' template] but I want all the samples on the same page. Is that possible? How would I be able to manipulate either template to configure that? As well as adding our own Customer Sample ID and the notes from the sample login?*

The 'Final Report - Samples in Rows' template will list all of the sample's analyses with the option to exclude analyses marked as internal data. There is no way to list only specific analyses with that template and the other templates with names beginning 'Final Report'.

However, the 'EDD Example - Specific Analytes' template is another option. With that template you are limited to listing data for each sample on a single row. But you can list any sample characteristics and any analytes.

While the template was designed to create electronic data deliverables, you can turn it into a report. Initially, columns A:T list sample characteristics for the field names in row one. Beginning at column U, the formulas list results for the analyte names in the row one cell. Note that the sample characteristic formulas differ from the analysis results formulas. So, delete all of the sample characteristic columns you don't need, then add all your analyte names in row one, labels in row two, and copy an analysis result row three formula to all of your analyte columns. Hide row one when you are done.

Next you can insert rows above row one and add your own report header information or use Excel's page headers and footers. 

### Microsoft Access vs SQL Server

A prospective customer recently submitted the following pre-sales support question:

*Can you detail the keys points for deciding between these two subscription services please?*

We have successfully used a Microsoft Access back end database with MSC-LIMS for over 25 years. An Access back end database works very well in small workgroup environments of up to 20 concurrent users. You can experience performance degradation with large Access databases. However, with a three-user license it would take many years for your database to experience performance issues.

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Although uncommon, an Access database can become corrupted if a workstation loses its connection to the server/workstation where the database resides. A simple database compact and repair available from the MSC-LIMS main menu will repair the database and data loss is very rare.

A SQL Server database offers improved scalability, security, and reliability. MSC-LIMS sites with many concurrent users and large databases benefit from the performance of a SQL Server database. And some companies have policies that prefer SQL Server over Access because of their past experiences with improperly designed homegrown Access databases. Database installation, maintenance and administration are more involved with SQL Server than Access.

Unless you have an IT department that prefers SQL Server over Access, I suggest starting with MSC-LIMS 4.1 for Access. Installation is simpler and it costs less. You can always upgrade to MSC-LIMS 5.x for SQL Server at any time and all of your existing data can be migrated from Access to SQL Server. ▲

## 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

[MSC-LIMS Programmers Guide.pdf](#)

Full System licensees will find the MSC-LIMS Version 5.0 Programmer's Guide in the File Library as well as in the MDB folder within the Setup folder containing the MSC-LIMS 5.0 installation software. Version 5.0 of the Programmer's Guide has been updated for SQL Server.



### When to First Archive

A new user asked this question:

*I have briefly gone over the document for archiving, but I want to get some clarification on [installing MSC-LIMS Archiving]. Does it need to be set up prior to actual use of the LIMS? Or once we need to begin archiving?*

You can install and begin using MSC-LIMS 4.x Archiving at any time. However, it would likely be years before you would have the need. The main reason to archive, which moves older samples from the production to archive database, is to improve performance with a large Access database.

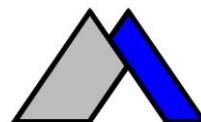
You should use the 'Compact LimsData' option on the Admin menu to compact your database weekly if you can or at least monthly. Even though your database will not reduce in size very much when compacting, the compacting process rewrites the database tables in primary key order, recreates all indexes, and updates database statistics, all of which can improve performance.

After you compact your database, take a look at its size. The name and location of your database is listed on the lower left of the main menu in the LIMS. There is no need to worry about archiving until your database exceeds about 150 MB. ▲

### Contact Us

Questions, comments, suggestions?

Reach us at:



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