

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 downloadable 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 In The News

Three new MSC-LIMS articles are featured in respected publications serving diverse sectors of the analytical lab industry. The variety of our customers' applications illustrates the built-in flexibility of MSC-LIMS:

### Meeting the Need for Speed

"One lab combined the newest testing and data tracking technologies: They upgraded their testing methods to the latest automated DNA-based technology and then imported those test results directly into their MSC-LIMS database."

Users of Dupont Qualicon's BAX testing system will benefit from *Food Quality* magazine's April-May issue, featuring "[Meeting the Need for Speed - A Food Testing Lab Integrates BAX and LIMS Technologies](#)." The innovation featured in the article virtually eliminates duplicate data entry and its accompanying waste of manpower and risk of error.

### Off-the-Shelf System Tackles Monitoring, Reporting Needs

"A facility operations management company selected inexpensive off-the-shelf hardware and software, and tied it all together with a simple Excel interface. Water and wastewater facilities operators will appreciate the fresh approach to integrating field-collected data with office-based LIMS. "

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## From the Developer

As we noted in the previous issue of MSC-LIMS Insights, this is the year in which we celebrate the [Tenth Anniversary](#) of the first installation of MSC-LIMS. It is hard to believe it has already been ten years! However, considering that MSC-LIMS 1.0 was a 16-bit Access 2.0 application first installed on a 486 33MHz PC running Windows 3.1, that does seem like a long time ago in technology terms. We are justifiably proud of the evolution of MSC-LIMS over the last ten years and we hope the next ten will be equally productive.

Our many new Annual Subscription licensees have proven that MSC-LIMS 3.0 is capable of meeting the requirements of many small labs “out of the box” in a cost effective manner. But there is always room for improvement and we appreciate both the suggestions for new features and the discussions that have spawned new ideas.

And speaking of new features ... we expect to release MSC-LIMS 3.1 in the first half of 2006. We will have more information on what to expect in version 3.1 in the next issue of MSC-LIMS Insights. Stay tuned.

Finally, if you haven't visited our website recently, you'll find we've been overhauling. Visit us at [MSC-LIMS.com](http://MSC-LIMS.com).



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## Feature Article

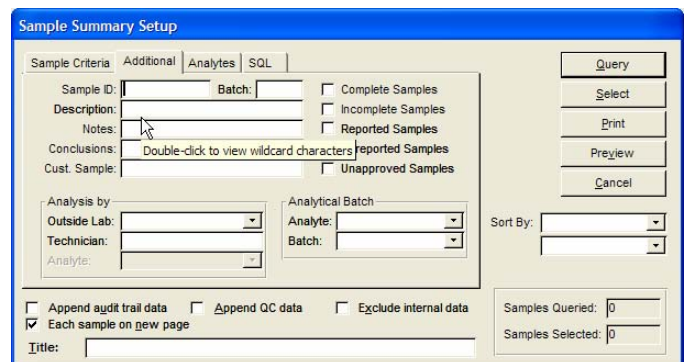
### Using Wildcard Pattern Matching in Queries

The MSC-LIMS' query-by-example (QBE) controls provide a powerful method to retrieve sample data for viewing, editing or report generation. The QBE controls appear throughout the system wherever sample querying is supported.

The “Additional” tab of the query controls includes several QBE controls used to query data in sample text fields such as Sample ID, Description, Notes, Conclusions, and Customer Sample ID.

These controls support partial string searches using wildcard pattern matching. Pattern matching uses special wildcard characters as placeholders for other characters to find values when you either know only part of the value you want to find or you want to find values that start or end with specific characters or match a specific pattern.

QBE controls that support wildcard pattern matching normally indicate the feature is available when you hold the mouse over the control (see the figure, below).

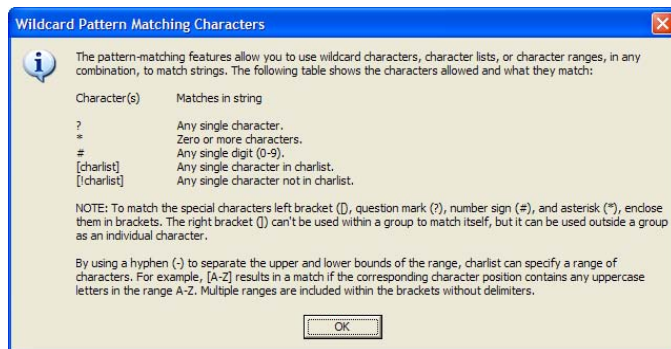


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## Using Wildcard Pattern Matching in Queries

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Double-clicking within a QBE control that supports pattern matching will normally display a popup showing the wildcard characters (see below). Pattern matching is available in most controls used to enter alphanumeric text. That is, QBE controls other than pick lists, check boxes, and those used to enter dates, times and numbers only will typically support pattern matching. If you have a Full System license with added custom text fields, pattern matching will also be available in these fields on the “Custom” tab of the query controls.




The table below shows the available wildcard characters and examples of their use.

Char.	Description	Example
*	Matches any number of characters. It can be used as the first or last character in a string.	<b>wh*</b> finds what, white, and why
?	Matches any single alphabetic character.	<b>B?ll</b> finds ball, bell, and bill
[ ]	Matches any single character within the brackets.	<b>B[ae]ll</b> finds ball and bell but not bill
!	Matches any character not in the brackets.	<b>b[!ae]ll</b> finds bill and bull but not bell
-	Matches any one of a range of characters. You must specify the range in ascending order (A to Z, not Z to A).	<b>b[a-c]d</b> finds bad, bbd, and bcd
#	Matches any single numeric character.	<b>1#3</b> finds 103, 113, 123

Note that you can use any combination of the wildcard characters to create your own partial string searches.

The table below provides additional examples.

Example Pattern	Description
*beef	Finds beef at the end of the field
beef*	Finds beef at the beginning of the field
*beef*	Finds beef anywhere in the field
*composite*sample*	Finds 'This was a composite sample', 'Composite of last four grab samples'
#####[a-z]###	Finds any MSC-LIMS sample ID for batch login samples. That is, six digits followed by a single letter followed by three digits.
*PO*12345*	Finds PO12345, PO 12345, PO # 12345 anywhere in the field.
*PO123###*	Finds PO12300, PO12301, ..., PO12399 anywhere in the field.

Although queries using wildcard pattern matching will not be particularly fast with some fields in large databases, they are often very useful when searching for specific data. If you have a full copy of Microsoft Access, you can learn more about pattern matching by searching for “wildcard” in the Help system’s index. 

## Notes from Technical Support

### SQL for Unique Queries

In any lab, there is a lot of useful information lying within the MSC-LIMS database. For example, one commercial lab wanted to glean some important information about their customers from LimsData. For a given date range they wanted a count of either the number of samples or the number of batches logged. While an invoice report could be used to get the sample counts, the report can not provide a batch count and they wanted a more concise listing.


Appropriate Structured Query Language (SQL) statements and the MSC-LIMS Data Query workbook available in the File Library provided a simple solution. Adding the following SQL statement to a copy of the MSC-LIMS Data Query workbook produced a list of customers with the total number of batches logged during a given date range.

```
SELECT Customer.Name, Count(Batch) AS
BatchesLogged
FROM (SELECT DISTINCT Customer.Name,
Batch
FROM Customer LEFT JOIN Sample ON
Customer.CustomerID = Sample.CustomerID
WHERE (Sample.AddedDate BETWEEN
#1/1/2005 00:00:00# AND #12/31/2005
23:59:59#))
GROUP BY Customer.Name HAVING
Count(Batch) > 0;
```

The MSC-LIMS Data Query workbook was also the solution in another request to extract specific data from the MSC-LIMS database. A user with a large number of projects needed to find all project analyses where at least one specification (i.e. results entry or warning minimum or maximum) differed from the analysis' default specifications. While the Projects report will list all project analysis specifications, it would be a daunting task to manually compare each value to those on the Analyses report.

The following SQL statement added to a copy of the MSC-LIMS Data Query workbook produced a sorted list of analyses with their default specifications and the project name and project analysis specifications where at least one specification differed.

```
SELECT Analysis.Analyte,
Analysis.ResultMax, Analysis.WarningMax,
Analysis.WarningMin, Analysis.ResultMin,
Project.Name AS Project,
ProjectAnalysis.ResultMax,
ProjectAnalysis.WarningMax,
ProjectAnalysis.WarningMin,
ProjectAnalysis.ResultMin
FROM Analysis INNER JOIN (Project INNER
JOIN ProjectAnalysis ON Project.ProjectID
= ProjectAnalysis.ProjectID) ON
Analysis.AnalysisID =
ProjectAnalysis.AnalysisID
WHERE
(((Analysis.ResultMax)<>[ProjectAnalysis]
.ResultMax)) OR
(((Analysis.WarningMax)<>[ProjectAnalysis]
.WarningMax)) OR
(((Analysis.WarningMin)<>[ProjectAnalysis]
.WarningMin)) OR
(((Analysis.ResultMin)<>[ProjectAnalysis]
.ResultMin))
ORDER BY Analysis.Analyte, Project.Name;
```

When you cannot retrieve the necessary data using an existing MSC-LIMS report, a more general-purpose tool such as the MSC-LIMS Data Query workbook is a perfect solution. Keep this valuable tool in mind when you need to extract information from the MSC-LIMS database. 

## 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 additional to MSC-LIMS.com Customers Only pages. Use your login name and password to log on to the Customers Only section of our website. While you are there, visit these features:

### Bookmark “Customers Only What’s New” for quick updates

Customers wishing to streamline their visits while keeping abreast of MSC-LIMS developments may go directly to the new Customers Only [What’s New](#) page. There we have assembled links to all items of interest to MSC-LIMS users (knowledge base articles, discussion topics, pertinent downloads) in reverse chronological order. Keep informed while saving time.

### Archived *MSC-LIMS Insights*


Access the [MSC-LIMS Insights](#) page to download PDFs of past issues of our informative newsletter, *MSC-LIMS Insights*. Past articles include Notes from Technical Support, “Compacting and Repairing in Version 3.0”, “Simplify Queries with SQL Expressions”, “How Reliable Are Your Backups?”, “Compact Routinely” and more.

### Knowledge Base

#### [Creating an MSC-LIMS 3.x Edit LimsCode Shortcut](#)

Summary: With an MSC-LIMS Full System license, a full copy of Access 2002, and file LimsCode3.mdb from the MSC-LIMS CD, you can customize the MSC-LIMS software. This article provides step-by-step instructions to create an “Edit LimsCode” shortcut.

#### [Moving LimsData to a New Location](#)

Summary: This update of an existing KB article now applies to MSC-LIMS 3.x, as well as to previous versions. The article describes the procedures required to move LimsData, the MSC-LIMS back end database, to a new disk drive and/or folder. 


## Off-the-Shelf System Tackles Monitoring, Reporting Needs

(Continued from page 1)

*Water World's* March 2005 article documents MSC-LIMS user Ecotone Services, Inc.'s innovative use of hand-held PCs for field data collection and their unique Excel-facilitated integration with MSC-LIMS' Annual Subscription version. Read [Off-The-Shelf System Tackles Monitoring, Reporting Needs](#) on our website.

## LIMS Fits Labs

Improving its information management system was the primary goal for a contract microbiology lab. To meet customer expectations, they had invested considerable resources creating and maintaining a vast collection of Microsoft Excel templates for each client. Using MSC-LIMS' unique Excel interface, they leveraged their existing reports and streamlined their operation.

*Food Quality* magazine's (Feb-March 2005) feature, [“LIMS Fits Labs - A Complex Problem Meets a Simple Solution”](#), profiles a food lab, but any lab that juggles Excel reports will benefit from the illustrated techniques. 

## Contact Us

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