

# SieveMaster™

## Sieving Automation Software

SieveMaster is an easy-to-use program that has the power to automate any application where particle size distribution is determined by sieving. SieveMaster assists users by automating data collection, providing software control of instruments and automating calculations and reporting. Improving the documentation and recording of sieving results improves production monitoring, Quality Assurance and the validation and documentation of test procedures.

With one touch, SieveMaster collects, processes, and displays data from any balance with an RS232 port. Fully integrated with Microsoft Excel®, SieveMaster eliminates repetitive and time-consuming processes from your laboratory.

- Improve documentation and recording of sieving results
- Eliminate manual transcription errors
- Eliminate calculation errors
- Full integration with Microsoft Excel®

## SieveMaster and Microsoft® Excel®

Microsoft Excel® has become an industry standard tool for managing laboratory data, whether it is being collected manually or electronically. SieveMaster builds on that standard by providing sieving automation that is controlled from within the Excel® application.

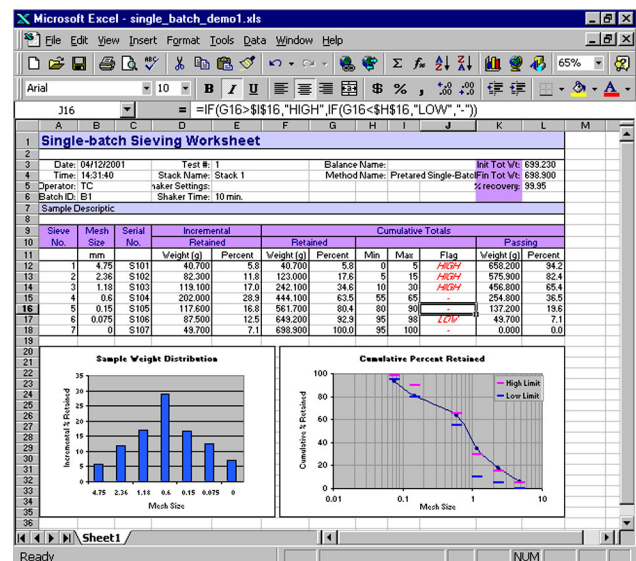
Starting a SieveMaster method automatically launches an associated Excel® workbook. Data that is collected from the balance is placed directly into the Excel® spreadsheet cells, as defined in the setup for the worksheet. Excel® carries out all calculations and processing of the instrument data.

The Excel® workbook can be configured to include either single or multiple batches per spreadsheet. Averages and statistics can be calculated across multiple batches. The power of the Excel® application provides for extensive computation of statistical values, the addition of custom calculations, the reporting of non-sieving parameters and extensive customization of reports.



## SieveMaster Instrument Interface

SieveMaster communicates directly with balances from all of the major balance manufacturers, using setup information and default parsers from the Labtronics Instrument Library. To configure your balance for SieveMaster, simply select it from the drop down list, specify the COM port that it is connected to and you are ready to start weighing. If your balance is not already defined in the SieveMaster Instrument Library, a series of dialogue boxes will walk you through configuration of your own instrument.



Communication between the software and the balance is bi-directional; any control command that the balance understands can be sent from the software. SieveMaster's automated weighing process uses a Run Time Message box to control the interaction between the software and the balance. By guiding the operator through the process with dialogue boxes and audible prompts, SieveMaster provides the ultimate in sieving automation.

## SieveMaster Methods

A SieveMaster Method is a complete set of instructions for a particular sieving analysis. Each Method contains information about the balance that is being used, the individual sieves being used, the sieve stack that is associated with the test, the sieving procedure for that test and the layout of the Excel® Spreadsheet template for that test.

Running a SieveMaster Method automatically opens Excel® and the Excel® file associated with that method. Once the workbook is opened, the communication port is automatically opened and the instrument can be turned on for data collection.

## SieveMaster Database

SieveMaster manages a database of information on individual sieves and stack configurations. For each sieve, the database records a sieve name and description, the serial number, mesh size and tare weights. The tare weights are automatically recalled and used in calculations that use the weight of the empty sieve, e.g. Pre-tared weighing. This saves having to constantly reweigh the sieve.

Individual sieves can be saved in stack configurations that include the name of the stack, the sieves in the stack and a Stack Tare Frequency for the stack, if required.

If the sieving process requires that the sieves in a stack be tared, the stack configuration will also include a Stack Tare Frequency. This allows you to specify the number of days between taring the sieves in a stack. If the specified number of days pass, a user prompt will appear to remind you that the stack is due for taring.

## Sieving Procedures

SieveMaster allows you to select from three sieving procedures, allowing you to work with the process that best resembles your own laboratory method.

**Pretared** Each sieve and its contents are weighed. Using the SieveMaster database, the weight of the empty sieve is subtracted from the current weight of the sieve and its contents.

**Cumulative** The contents of each sieve are added successively to an empty pan. In order to obtain the weight of the contents, the previous weight is subtracted from the current weight.

**Incremental** The contents of each sieve are added successively to an empty pan. In order to obtain the weight of the contents, the balance is tared between readings.

However, SieveMaster also offers independence as well as simplicity. If you have a very specific laboratory procedure, SieveMaster allows you to reconfigure the settings to suit your SOP. You can specify every detail, from the time lapses during Stable Reading processes right down to the cell location of every piece of data collected; there are very few limitations to the SieveMaster design.

Calibrate Stack

Instrument Name:

Calibration Message: Please enter calibration weights for the Sieves...

Sieve

Stack name: Stack 1

Mesh size units: Micrometer (um)

Sieves:

	Serial Number	Name	Mesh Size	Current Weight	New Weight	% Difference
1	No. 4	1	4.75	0.000	0.000	0.0
2	No. 8	2	2.36	0.000	0.000	0.0
3	No. 16	3	1.18	0.000	0.000	0.0
4	No. 30	4	0.6	0.000	0.000	0.0
5	No. 50	5	0.03	0.000	0.000	0.0
6	No. 100	6	0.15	0.000	0.000	0.0
7	No. 200	7	0.075	0.000	0.000	0.0

# SieveMaster Features

General	Automation	Calculations
<ul style="list-style-type: none"><li>• Pre-configured for automatic data collection from most balances and scales</li><li>• Database maintains a record of individual sieves and sieve stacks.</li><li>• Includes three defined sieving procedures</li><li>• Integrated with Excel® providing macro and reporting capabilities</li><li>• Unlimited customization for displays including calculations, graphics, and addition of other sample information</li><li>• Extensive customization of reports</li><li>• Display of any number of comparison curves</li><li>• DDE and/or OLE compatible data display</li><li>• Compatible with any type of mesh identification numbers (ASTM, Tyler etc.)</li></ul>	<ul style="list-style-type: none"><li>• Provides software control of most balances and scales</li><li>• Compatible with any sieve shaker</li><li>• Automatic prompting for next sieve</li><li>• Audible signals for end of taring process and next sieve notification</li><li>• Easy selection between multiple balances, and manual data entry</li><li>• Control process notifies users when a stack is due to be tared</li><li>• Method manager allows user defined templates to be stored and used for repetitive operations</li><li>• Multiple balances can be used with one system</li></ul>	<ul style="list-style-type: none"><li>• Weigh in cumulative, incremental, and direct (tared) weighing modes</li><li>• Plot options include weight, %, cumulative, incremental, passing, retained</li><li>• Graphs include X-Y, log X-Y, bar and histogram</li><li>• Samples are flagged if outside of acceptable limits</li><li>• Precision test automatically checks that total recovered weight is within specifications</li><li>• Conversion to operator's own particle size ranges</li><li>• Entry of theoretical curves</li><li>• Able to average multiple results into one file</li></ul>

## LABTRONICS INC.