

# Improved Quality Control Check Weighing Applications with Collect

## RS232, TCP/IP Data Acquisition and Control Software

Check weighing raw materials or packaged goods is usually one of the last analytical quality control checks to occur before many products are shipped out to the consumer for countless companies. While there are various flavors of check weighing across different products and industries, the applications are usually very similar. Verify the product is within tolerances and still legal.

As an example, any company that creates a consumable product such as beverages or packaged food would likely over-fill the package as under-filling is against the law. The problem with this is that by using too much product, over-filling is extremely costly. Something as simple as marginally reducing over-fill, while being at or slightly above the advertised weight can save some companies anywhere from a few thousand to multiple millions of dollars each year.

In this application note we examine a simple, low cost, yet very effective solution that many companies have used for years to reduce product waste and improve overall testing efficiency while eliminating errors. The net result is increased operation efficiency and cost savings.

There are numerous examples of companies currently using Excel® spreadsheets as an easy way to verify their products fall within specifications. Excel® from Microsoft is a powerful tool when configured properly that can perform 'IF' statement limit checking, calculations, graphing and statistics.

Collect, from Labtronics, adds to that power with a power of its own, the ability to automatically capture weight readings, parse out required information, add date and time stamps and send directly to the appropriate Excel® spreadsheet for each quality control test through a simple to setup interface. The software can be used in a quality control lab for batch testing or on the manufacturing/production floors to capture weights of product off the lines in real-time. Moreover, with Collect's advanced features, users can combine other instrument and device data with the weight readings and perform automated decision-making and device control.

## QC Method Automation

Collect displays any number of user-defined methods and includes a number of pre-configured methods that are ready for immediate use. The interface method can have a user-defined name mapped to the specific Excel® spreadsheet template for the test. Within a single interface method, connect multiple balances and scales simultaneously as well as other instruments that have an RS232, RS485 or TCP/IP Ethernet ports to the same workbook sheet or different sheets within the same Excel® Workbook file.

Multiple interface methods are also supported be run at the same time allowing users to perform different QC checks from different stations. The resultant data will always be transferred directly to the proper spreadsheet location for each instrument reading through Collect's direct integration with Excel®.

## Flexibility Meets Any Unique Application Need

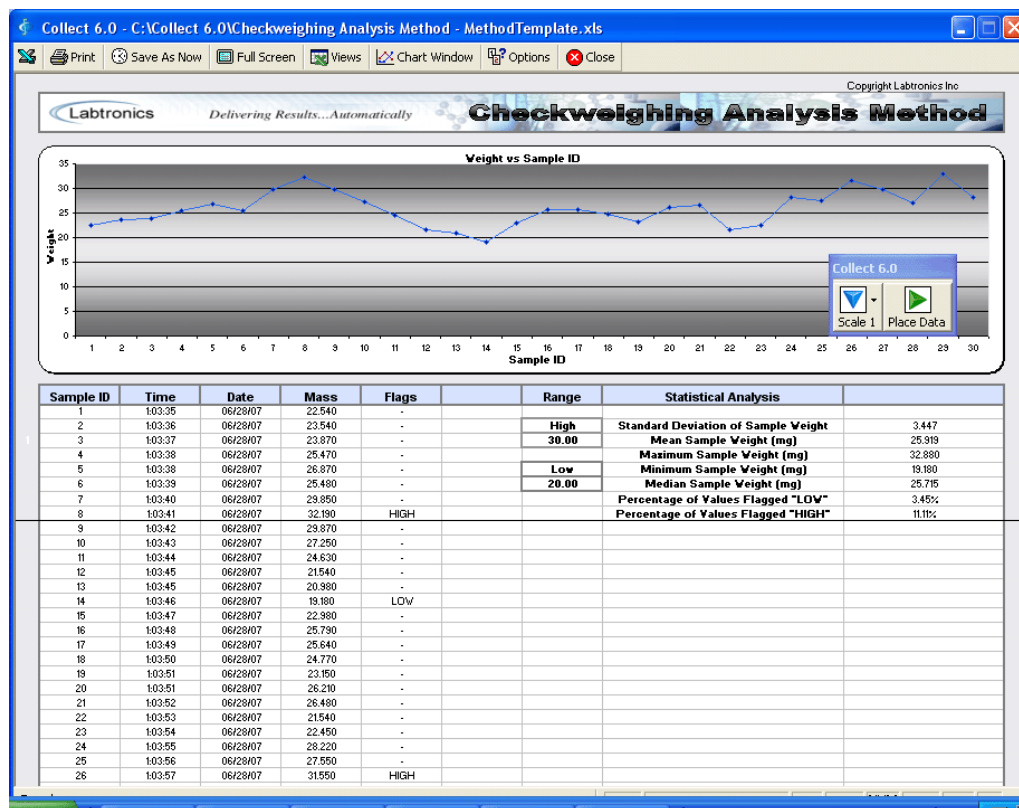
Interface methods are easily added to the list of available methods in Collect to make use of any existing Excel® workbook file already being used in product testing and adds a direct RS232 or TCP/IP integration and instrument / device control to the application. The software consists of numerous out-of-the-box features that are pre-set to simplify RS232 / TCPIP integration to Excel® such as the ability to auto-start interfaces and instrument commands, date and time stamp incoming data or use data within Excel® as an argument within an instrument command.

Collect also offers its users Advanced Control or Macro Script editors embedded within the program and used to customize any actions before, during or after result data from the instrument's is received to augment the many standard features of the program.

## Easy to Operate

To start a Collect interface method, users simply double-click on it in the Method List window to automatically open its Excel® template and start the instrument interfaces. A floating toolbar over the method's Excel® template allows users to control the interface between the instruments and Excel® file selected for the method.

With Excel® and Collect being both extremely flexible, methods can be set up to meet anything from very simple to the more complex QC check weighing requirements depending on the needs of the application. The features enable users to have their applications connected in no time and start realizing the benefits immediately.



Collect default checkweighing method running with floating Control toolbar.

## Add Automatic Excel® Workbook Saving and Naming Conventions

Labtronics can also provide its Collect users and Excel® macro added to their templates that will auto-save the file to a network drive after each reading and allow other users that have rights to view that folder, the ability to review results from anywhere on the network. This is a useful tool for any supervisors, foreman or managers that want to ensure operations are running as smoothly and effectively as possible. The macro uses workbook identifiers such as a Product code, Date, Time, User name, Barcode, any ID or a combination of all that are saved within the methods Excel® sheet at run time and are used to name that file and allow users to easily find and review or compare different run results.

## Report from Excel® to Databases

At the same time as readings are received or at the end a run, Collect can report the data to other destinations such as database applications through simple write statements stored within its interface macro script.

## Application Examples

Collect is currently being used in most industries for a wide array of quality control check weighing applications in both the lab and manufacturing production.

The software has helped hundreds of users Worldwide to reduce wasted material, meet regulatory requirements, eliminate data entry, transcription errors and catch problems before they get out of hand:

- A large U.S. consumer product company measures candle weight loss over time eliminating the need to check and record readings manually.
- Mid-size bakery interfaces scales with Excel® to verify bread weight coming off the line meets guidelines in real-time.
- Dairy processing company checks carton levels with Collect method and reduces over-fill.
- Aggregate business weighs sieve particle size distribution and improves product quality for their customers.
- Chemical company integrates balances to Excel® to ensure proper mixing ratios in formulation improving quality measures and eliminating wasted batches.
- Seed packer implements Collect method to verify packet weights fall within tolerances and maintain an electronic record.
- Large meat processor monitors weights off the line to record trends and help identify problem production areas.
- Federal Mint verifies the weight of metal slugs destined to become coins and saves money while making it.

## Automation Experts on hand

Labtronics, the developer of the Collect software, is an expert in automating weighing applications and many other RS232 instrument applications. A solutions applications department is available to assist or create turnkey solutions for customers that need some additional Excel® expertise or don't have time to set up the level of automation needed due to busy schedules.



## Real Benefits, Real Fast

Collect provides an ideal, low cost solution that can be rolled out in less than a day by anyone familiar with Excel®. At only \$495 (US) for a single license of the software and lower for multi-license applications, a return on investment is typically realized in less than 1 month of going live.

**For more information on check weighing, weighing applications or RS232 interfacing automated by Collect contact Labtronics.**

*Delivering Results...*  
***Automatically***  
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