



## Case Study: The Economics of Net Weight Control

### Real-Time Weight Control Critical in Balancing Opposing Objectives

Companies in Food and Beverage and other packaging industries are often pulled in several directions at one time, to:

- Comply with government standards
- Provide a fair value to the consumer
- Meet or improve corporate and plant profitability targets

Striking the optimal balance between the push and pull of meeting guaranteed minimums while avoiding overfill and overweight conditions is not an easy task.

### The Challenge

A case study of an ASI DATAMYTE customer in the bottling business illustrates the challenge. The company fills 250 ml containers at an average line speed of 1000 per minute. In order to ensure compliance with regulations and consumer expectations, it sets the upward overfill limit at .25%. This equates to an average giveaway amount of a little more than .5 ml per container.

The company must then determine whether the .5 ml overfill can be reduced, and what the resulting cost saving should be. Given their three-shift, seven-day production schedule, the company estimates that if it could recover the total overfill amount it would be able to fill more than 21,000 additional containers per week, or more than 85,000 containers per month. At an average cost of \$0.35 per container, the savings, or *unrealized revenue*, approaches \$30,000 per month.

It becomes easy to see why recovery of even a small percentage of this overfill is in the company's best interest.

## The DataMetrics Net Weight Solution



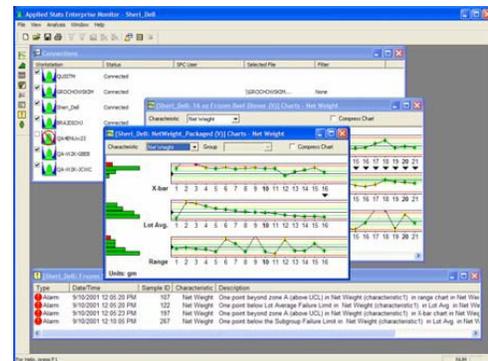
Implementing an SPC and Net Weight control system using DataMetrics software is the first step in recovering some of this overfill. By collecting data from weigh scales and other instrumentation at the point of production, the company can see changes in the process as they occur and take action immediately to resolve the problem.

In addition to standard SPC tools, DataMetrics provides a unique set of features that help meet Net Weight requirements. These features ensure compliance with regulatory requirements for Net Contents of packaged goods, while helping to maximize revenue potential.

Management and operators are kept up to date with real-time information on Lot status during actual production runs. Operators minimize giveaway by closely monitoring and controlling performance to meet release requirements. At the same time they receive crucial percent of overfill data. Management sets triggers in the DataMetrics Production Monitor application that notifies key personnel at their remote desktops when a process is not meeting lot release requirements.

Real-time Net Weight statistics and summary information compiled in DataMetrics include:

- Lot average
- % below MAV
- % at or above label
- % below label
- % over declared weight
- % overweight (target)



Alarms can be sent to managers and supervisors at remote stations any time the Lot Average falls below a pre-defined level.

Remote linking to the operator station provides management with real-time feedback on the same Lot release information presented to the operator.



DataMetrics software has been successfully used to address Net Weight concerns with a high degree of success in many operations:

- One meat producer in the fast food industry reduces the overage weight of their product by 0.1g. The estimated cost savings from this change were approximately \$1,000,000 annually.
- A liquid fill operation reduced the fill volume per container an average of .02 ounce. Based on the production parameters of this process, this change allowed the company to produce an additional 720,000 units from one production line. With the solution implemented across several production lines and facilities, the saving was substantial.
- A packaging facility applied DataMetrics Data Collection over a six month period to determine their targeted overfill budget. They then incorporated DataMetrics Net Weight software into their continuous improvement methodology to monitor and improve processes, resulting in an average monthly savings of \$35,000.

## Benefits

The benefits of implementing the DataMetrics Net Weight control features include:

- Significant reduction in running limits
- Closer relation to label weights
- Compliance with FDA regulations
- Reduction in cost savings associated with overfill



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