

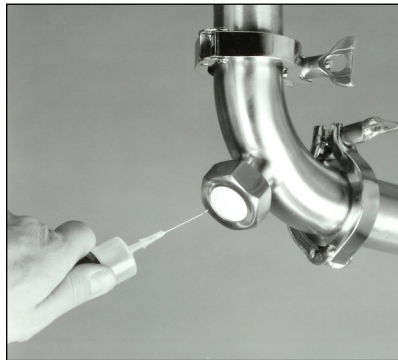
QMI® Tamper-Evident Device

QMI products have been used in a wide range of industries since 1983, including dairy processing, dairy farm, pharmaceutical, biotechnology, beverage, brewing and other industries that sample various liquid processes.

Customers often use QMI products in isolated locations such as with over-the-road tankers, isolated piping systems and other less frequently monitored areas. Under these conditions, undesirable injections or product removal could be a concern.

To reduce the risk of tampering or unwanted removal of product, QMI has developed the Tamper-Evident Device. This white cap (seen on the left below) fits over the 7 port stainless nut. The blue Security Seal is numbered for easy record keeping within a laboratory facility. The white cap cannot be removed unless the Security Seal is cut.

For more information on this product, please visit our website at www.qmisystems.com and search under Products.



**QMI Tamper Evident Device
w/Blue Security Seal on a QMI Elbow**
Part #: 310021 and Part #: 310020

QMI® Introduces New Part Numbering System

All QMI® part numbers have changed effective January 1, 2015. Now we use a simple six-digit, numeric-only system.

Please start using the new numbers as soon as practical. We expect the transition to take a few months, however, so any of your purchase orders with only the old numbers will work fine into 2015.

An index of the old and new part numbers with short descriptions is available by scanning the QR code on this page or visiting our web address at:

<http://www.qmisystems.com/products/our-products>



A Safer and More Accurate Method to Sample Milk Tanker Trucks

In previous QMI Newsletters we discussed the difficulty of obtaining an accurate raw milk sample from tanker trucks by conventional sampling methods. QMI Newsletters also have pointed out how unrepresentative samples can cause economic hardship for processing plants.

QMI is introducing an alternative method of milk truck sampling. QMI is developing a portable peristaltic pump. With the use of the QMI Aseptic Sampler and portable pump, along with a QMI Composite Sampling Bag, a sample can be obtained as the truck is unloaded. This sampling method is aseptic because the peristaltic pump utilizes sterile tubing, safe because the operator remains on the ground and accurate because it samples the entire tanker volume of milk.

QMI, in cooperation with Turkey Hill Dairy conducted a bulk milk tanker truck sampling and unloading study. Turkey Hill is a full line dairy processor located in Lancaster County, Pennsylvania.

The study compared three quality measurements. The first compared butterfat content.

The second compared apparent bacterial measurement: preliminary incubation (PI), laboratory pasteurization count (LP), and coliform and *E. coli* counts.

The third compared the remaining components of the sample: total solids, true protein, cryoscope and somatic cells. The second and third areas will be discussed in future QMI Newsletters.

The sampling locations were:

1. Farm bulk tanks sampled by the milk hauler,
2. The milk tanker sampled by the milk hauler immediately after the last producer was loaded on the tanker,
3. The milk tanker sampled by conventional dip methods at the dairy plant, and
4. The milk tanker sampled using the QMI System as the truck was unloaded at the dairy plant

There were 158 loads in the butterfat comparison study. The loads represented milk from one to seven producers. The loads were assembled over a span of one to six hours. Delivery times to the Turkey Hill plant ranged from one half hour to nineteen and a half hours after pickup. The longest delivery time was what the industry would call a hold-over load: loaded on one day but not delivered to the plant until the next day.

The overall QMI results on butterfat were the closest to the weighted average of the producers on the loads when compared to the bulk milk tanker driver or the milk plant receiver overall results.

Some loads showed higher receiver results, mainly due to loads being on the tanker for hours before delivery. Milk will stratify when it remains on the tanker, especially during hold overs.

The producer sample test results on some of the other loads were higher than the weighted average. The receiver and the QMI sample test results correlated very closely. This could be an indication of too short an agitation time at the farm bulk tank.

% Butterfat Average Study Using 158 Data Points

| QMI Peristaltic Pump Sample | Driver at Farm | | Receiver at Plant | | Weighted Bulk Tank | | | |
|-----------------------------|----------------|------|-------------------|------|--------------------|------|------|---------------|
| | F | R | F | R | F | R | L | |
| 3.55 | 3.58 | 3.58 | 3.60 | 3.62 | 3.57 | 3.56 | 3.56 | Final Average |
| 4.07 | 4.04 | 4.48 | 4.54 | 6.02 | 4.02 | 3.93 | 3.96 | Maximum Test |
| 3.16 | 3.17 | 3.17 | 3.16 | 3.16 | 3.18 | 3.18 | 3.18 | Minimum Test |

F: FRONT COMPARTMENT R: REAR COMPARTMENT L: LOAD COMPARTMENT

Regarding the hold over loads, the driver and QMI sample compared well with the weighted average. The plant receiver sample showed considerably higher butterfat, even into the 6% range.

The drug residue tests that have been approved to screen the incoming loads are only approved for a sample of 6% or below. This number is stated on most drug kits. If you are sampling hold over loads without agitating or making sure a representative sample is obtained for testing (as stated in NCIMS and PMO instructions) you will be testing the load in an unapproved manner.



QMI Portable Peristaltic Pump w/QMI Fitting & Composite Sampling Bag in Rear of Truck

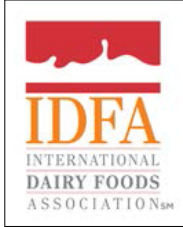


Milk Tanker Truck w/QMI Insulated Fitting and Aseptic Sampling Port Installed on the Side

Exhibiting Schedule for 2015



International Milk Haulers Association Annual Convention
Indianapolis, IN
May 3-4
Sponsoring the Monday A.M. Coffee Break



**International Dairy Foods Association
Milk and Cultured Dairy Products Conference**
Minneapolis, MN
May 19-20, 2015



International Association for Food Protection
Portland, OR
July 25-27, 2015
Booth #: 561



International Dairy Show
Chicago, IL
September 15-18, 2015

Quality Management, Inc. (QMI)
426 Hayward Avenue North
Oakdale, MN 55128



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