CAS DATALOGGERS

Shipment Temperature Monitoring for Milk Crate Transport

Low-Cost Transit Loggers Meet Food Safety Transportation Standards

CAS DataLoggers provided the shipment temperature monitoring solution for a milk supply company. During deliveries to distant receivers, including farmers' markets and supermarket chains, the milk's temperature needs to remain at a constant 2-3°C (36-37°F) throughout transit. Otherwise, the milk will be rejected by receivers as unsafe for sale due to health risks. Naturally, milk is an extremely temperature-sensitive product, which begins to spoil if its temperature changes more than a few degrees, curdling at the bottom of the jug. If this occurs, the milk will be returned by receivers as unsafe for sale due to health risk and is thrown out.

The company's product is often shipped where proprietary software is unavailable, and on average it takes about four days for the fresh milk to reach store shelves. With this risk in mind, the company wanted to find an accurate temperature measuring and alarm solution that would continually monitor their product and provide onsite proof of quality to receivers.

Installation

Now, the milk company uses I-Plug Temperature Data Loggers in the back of their trailers to closely monitor milk temperature. Drivers enclose the loggers into their self-adhesive pouches and place them directly onto the crates, four per truck. During deliveries, the internal sensor in each unit accurately monitors the product across a temperature range of -22°F to 158°F (-30°C to +70°C) at a high 0.5°C accuracy. Their lightweight and compact design makes for an easy fit among the gallon containers, each powered by a 1-yr battery. Installed this way, the temperature data loggers provide good coverage of the shipment and continually monitor the product throughout transit.

Usage

The data loggers start up with the push of a button and also have a stop button which sets them to bookmark readings but keep monitoring until reaching the end of their journey. They also offer advanced alarm capabilities to warn drivers when the product temperature becomes too high. Users set the sampling frequency to take a product reading once every 15 minutes, and it only takes 90 seconds for the sensor to register an alarm. The data loggers turn on on their alarm LEDs when they take a sample and find that the product is outside the safe temperature range set before the trip. Drivers simply check the loggers during routine stops and look at the status lights indicating that temperatures are OK, Over, or Under.

When delivering the crates to receivers, drivers use each data logger to transfer its temperature data via the USB port to a PC allowing a pdf report to be printed directly. The free software download for I-Plug data loggers also sends their temperature data online to a database where receivers can view it in graph format, in this case using the driver's Android tablet with a free app. This is faster than having to send the data by email, and the readings support different time zones. All parties can also view logger settings online. The data loggers also offer an optional online Calibration Certificate specifically for the food industry, aiding in compliance with electronic documentation regulations.

Benefits

The milk company saves both time and product by using the portable I-Plug data loggers in the back of their milk trucks, which provide effective and reliable monitoring for their temperature-sensitive product during transit. The compact data loggers also included the free software and traceability portal which generate online reports to receivers proving that the milk's temperature has been successfully maintained throughout the trip. With this simple solution it's much less common for drivers to find spoiled product.

The ability of the I-Plug logger to provide an immediate printed .pdf report when the shipment is delivered simplifies the process of providing both the shipper and the receiver with the required documentation of the safe transport of the milk. This allows the producer to comply with FDA regulations and satisfy the customer that they are getting a safe product.

For more information on I-Plug temperature data loggers, or to discuss your specific application with our specialists, give CAS dataloggers a call at 800-956-4437 or visit us at www.DataLoggerInc.com.