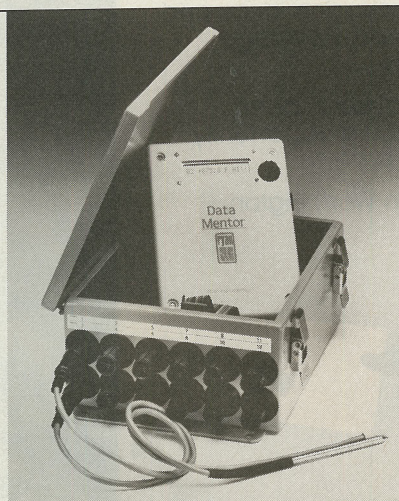




Temperature Monitors For Meat



Time-temperature monitors come in various shapes, sizes, and abilities. The Model K recorder plots temperature over an 180-day period on a graph. On the other end of the sophistication scale, the Datamentor™ contains an on-board microprocessor which collects data from as many as 12 independent sensors. Graphs can be produced by downloading the device to a PC

Shipping meat products is easy over short distances, but long hauls pose formidable quality control problems. Besides spoilage, suppliers and buyers must worry about quality degradation if temperature abuse occurs.

In the past, temperature control was a less serious concern because most shipping was local. But today, more product is traveling across an ocean or two, or farther across a continent. Only top-grade products will sell in tough markets such as Japan, the U.S., and Europe.

"Traditionally, meat companies did not have a need for time-temperature

monitoring because of the short distances for most deliveries," says Pat Vaché, president of Ryan Instruments. "That's changing now.

"We are seeing longer distances for domestic meat shipments, and meat producers are seeking to reach worldwide markets," says Vaché. "Longer shipping distances could affect the temperature fluctuations and the quality of the meat.

"When that happens, the meat exporter is the one that's hurt. Of course, one way to protect yourself is to monitor your shipments with time-temperature monitors," says Vaché.

Time-temperature monitors, or TTMs, are instruments every food plant has used in some capacity. Ryan Instruments, which claims to manufacture 75% of the TTMs used worldwide, sees more being used to accompany meat products on trips to foreign markets half a world away.

Temperature fluctuations are most likely to damage meat quality during long-haul deliveries or ocean shipments. A temperature profile from a TTM gives a very accurate picture of what happened during the trip.

One of the immediate benefits comes into play when the shipment arrives. In the past, suppliers and buyers had been concerned about whether a shipment was spoiled. With a time-temperature monitor, all parties have a record of how bad the damage was, and what condition the product is in.

In many cases, meat shippers, suppliers, and buyers specify TTMs inside the cargo of temperature-sensitive shipments, according to Ryan. Temperatures are constantly recorded in storage or transit. Temperature variations are sensed by reactive elements in the device.

Typically, readings can be downloaded into a computer or a personal computer, or simply printed on a chart. Ryan sells TTMs directly for this purpose or includes an entire service package.

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