Cold Chain Monitoring

Transporting products such as vaccines, insulin, and blood products from manufacturing plants to end-users requires careful planning, monitoring, and supervision. Research and medical laboratories need to monitor both the temperature and relative humidity of products during the entire cold-chain process to help ensure product integrity and to meet stringent regulations. The ability to accurately track events across multiple time zones and to have easy access to vital information about conditions during storage and transportation is vital in order to ensure both safety and fiscal responsibility.

- Warehouse Monitoring
- Transportation Monitoring
- Distribution Channel

Challenge:

Shippers of pharmaceuticals need to know and understand the cold chain process as fully as possible to guarantee the safe delivery of high quality goods.

Important factors to consider when choosing data loggers to monitor cold chain process:

- Ability to monitor temp/RH with accuracy
- Large memory capacity for long trips or extended storage
- Rugged design which allows logger to withstand harsh environments and changing environmental conditions
- Capability to measure and record the containers' interior temp/RH and conditions in the area where container is stored
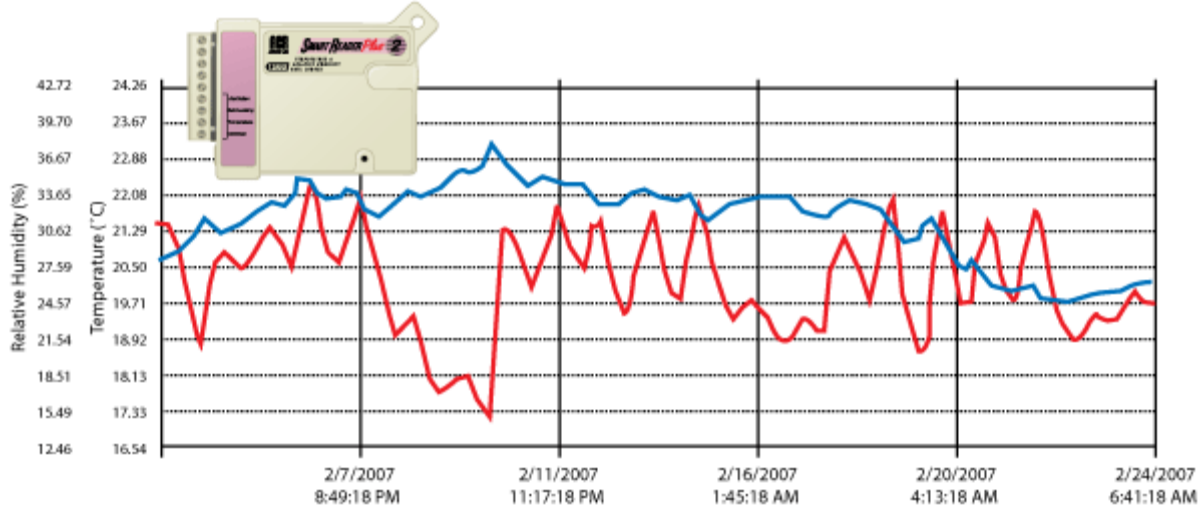- Ability to track time and events across multiple time zones

Solution:

ACR's SmartReader Plus 2 data logger is the ideal choice for cold chain monitoring. The logger is self-contained and can monitor and record temperature and relative humidity - right out of the box. The on-board RH sensor is temperature compensated, permitting reliable, worry-free RH readings. For remote sensing of temperature and RH, simply attach ACR's temp/RH probe, or for remote temperature sensing, attach ACR's thermistor probe.

ACR's SmarReader Data Loggers feature:

- 10-year battery life
- Conformal coated board for added robustness
- Largest memory in industry (87,000 readings)
- High degree of accuracy (± 0.2°C and ± 3% RH)
- Wide temp range (-40 to 70°C)
- Industry leading TrendReader 2 software
- Software displays local time based on UTC absolute time base
- Remotely download data via the Internet or modem
- NIST Traceable Calibrations
- Quality system (ISO: 9001:2000)

Deploying the data logger and downloading the information is easy...

1. Simply place the ACR SmartReader Plus 2 data logger in area to be monitored (the logger has a magnetic backing for convenient placement).
2. When you're ready to view the logged data, remove the logger and connect it to your PC with ACR's IC-102 USB communications cable.
3. With TrendReader 2 software installed on your computer, simply download the information collected by the data logger to view in either tabular or graphical format.

Specifications for SmartReader Plus 2:

Accuracy:	± 3% RH from 10 to 90% RH (-20 to 40° C [-4 to 104° F])
Range:	0 to 95% RH (non-condensing)
Battery:	3.6 volt Lithium (10-year warranty)
Number of Channels:	4, 1 for ambient temp., 1 for RH (internal sensor), 1 for RH (external sensor), 1 for temp., resistance or switch status
Memory:	128 KB

Recommended Product:

Recommended Equipment	Description	Catalog #
SmartReader Plus 2	4 channel temperature and relative humidity data logger.	01-0113
TrendReader 2 Interface Pkg. (IC-102)	Software on CD & USB Interface Cable	01-0226

Optional Equipment:

Optional Equipment	Description	Catalog #
SmartReader 2	4 channel temperature and relative humidity data logger.	01-0025
TrendReader 2 Interface Pkg. (IC-102)	Software on CD & USB Interface Cable	01-0226
TRH-1000 (includes TrendReader Express Software)	2 channel, 64 KB, temperature and relative humidity data logger.	01-0194
USB - Serial Port Converter Cable	Converts a USB port to a 9 pin serial port	01-0075