

Freezer alarms, refrigerator alarms, temperature alarms

Freezer Alarms – an overview

Freezer alarms have become essential to the laboratory and hospital industries. JCAHO the largest player in the certification field recently issued a new standard for monitoring tissue storage. They now require that freezers, used for tissue storage, be monitored twenty-four hours a day, seven days a week. They must be monitored, documented and alarmed.

How can freezers be monitored?

Manual method.

Most freezers were, until fairly recently, monitored manually. An employee would jot down the temperature once a day or once a shift on a piece of paper stuck to the side of the freezer. This does not fulfill the requirement to constantly monitor and there is no way to alarm a freezer. Only looking at the temperature once or twice a day is not adequate for monitoring temperature or catching a problem that can compromise the contents of the freezer.

Mechanical Method

Chart Recorders have been around a long time. They use a paper chart that turns at a set speed while a pen draws a line of the current temperature. Although the paper charts are easily stored they have the disadvantage of having to be replaced every 7 or 31 days. Also because of the mechanical nature of the chart recorder it must be maintained and will eventually wear out and have to be replaced. Many chart recorders now come with a relay, which can trigger an alarm if temperature becomes unsafe.

Electronic Method.

Data loggers are an obvious improvement over both the manual and the mechanical method of monitoring temperature. They will collect large amounts of data that can be downloaded into a computer to generate a paper record and they are usually less expensive than the chart recorders. They do however have two serious drawbacks. They are a relatively sophisticated piece of equipment that have to be programmed before they can be used and secondly there is no way to see what the temperature has been until it is downloaded into a computer. They can fulfill the

requirement of an alarm if they have an external relay, which some of them do.

A better solution?

There is a much better freezer alarm now on the market that combines the best features of chart recorders and data loggers.

This freezer alarm does not need paper charts, pens or computers. It is a stand-alone freezer alarm that monitors and documents freezer temperatures using several remote temperature sensors.

- It draws an electronic chart on its LCD display so that the user sees the last several hours, days, weeks, or even months of temperature history.
- It doesn't require a computer to program although its collected data can be downloaded to a computer to print out a paper chart.
- A built-in buzzer gives an audible warning if temperature limits are exceeded.
- A visual alert also occurs on alarm conditions and an external relay triggers either a local alarm (strobe/siren) or an auto dialer so that the user gets a phone call if the power fails or unsafe temperatures occur.

It is being used in many hospitals and laboratories to protect refrigerated inventory and satisfy JCAHO and CDC requirements.