Data Logging Solutions

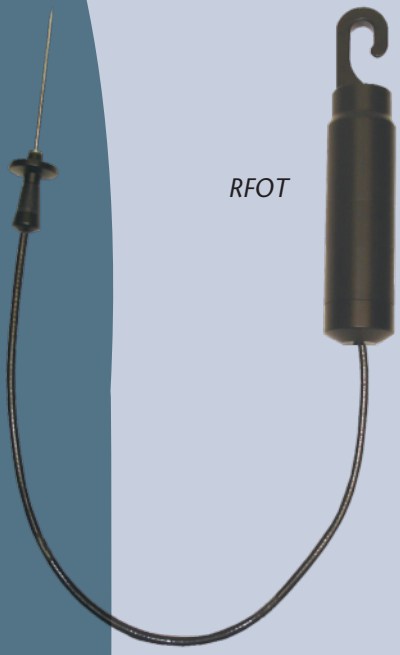
For Regulatory Compliance in

Seafood Processes

In Accordance with

- **USDA Regulations**
- **HACCP Documentation**

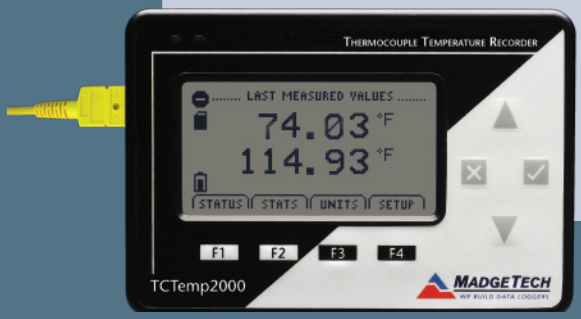
RFOT



Temp1000P

TransiTempII

TCTemp2000



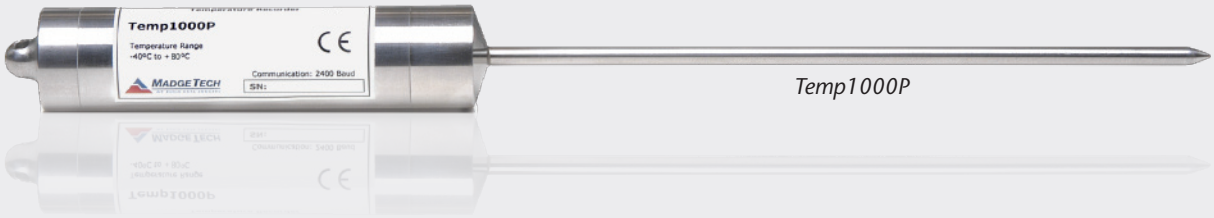
MADGETECH
WE BUILD DATA LOGGERS

MADGETECH
WE BUILD DATA LOGGERS

MadgeTech, the leader in data logger technology, offers a number of data logging solutions to assist in complying with USDA regulations and HACCP guidelines.

Seafood Processing

MadgeTech manufacture's data loggers to monitor and record temperature in all phases of production, from cooking and cooling to shipping and storage. For seafood processing, the **Temp1000P**, **RFOT**, **HiTemp150** and **HiTemp150FP** can be used. These devices can be purchased in various probe lengths to fit many applications. The probes can be inserted directly into a product to monitor the internal temperature through the entire cooking process. In addition to data recording, the **RFOT** has the ability to wirelessly transmit data back to a central computer for real-time monitoring.



Temp1000P

Seafood Storage

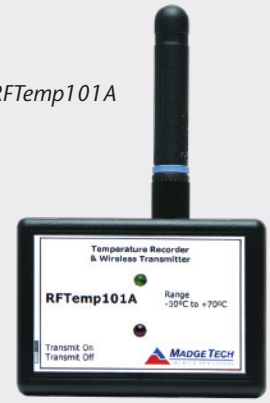
MadgeTech data loggers can monitor and record temperature in refrigerator and freezer storage units. This saves time and ensures accurate data recording and helps in complying with regulatory agencies. We offer a wide range of data logging solutions for performing this task.

The **TransiTempII** or **TransiTempII-RH** can be placed in each unit and downloaded on a weekly or monthly basis.

RFTemp101A or **RFTC4000A** or **RFOT** can be downloaded on a weekly or monthly basis and can wirelessly transmit temperature readings back to one central computer for storage and real time monitoring.

TransiTempII

RFTemp101A



Seafood Shipping

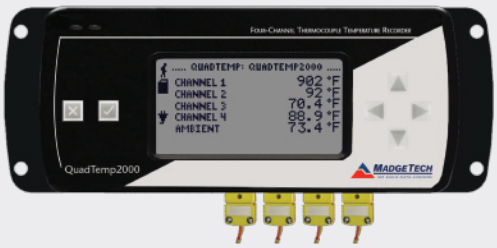
MadgeTech's Shipping series of data loggers are ideal for validating that product quality is being maintained as it is shipped from Point A to Point B.

The **TransiTempII** and **TransiTempII-RH** are ideal for recording temperature during shipping. In addition, they are splash proof and are extremely durable. The devices are equipped with LED alarm indicators that the customer can view providing out of range indication as well as a warning that an out of range problem is imminent.

Seafood Smoke Houses

MadgeTech offers a wide range of data loggers to support monitoring and recording of temperature and humidity in smoke houses. The **TCTemp2000** is a single channel thermocouple based temperature recorder. The **QuadTemp2000** monitors and records up to four thermocouple channels, and displays temperature readings in real-time.

TCTemp2000



QuadTemp2000

HACCP (Hazard Analysis and Critical Control Points): Seven Principal Steps

1. Conduct a hazard analysis
Identify the potential hazard(s) associated with food production at all stages, from primary production, processing, manufacture and distribution until the point of consumption. Assess the likelihood of occurrence of the hazard(s) and identify the measures for their control.

2. Identify the critical control points(CCPs)
Determine the points, procedures or operational steps that can be controlled to eliminate the hazard(s) or minimize its (their) likelihood of occurrence. A "step" means any stage in food production and/or manufacture including the receipt and/or production of raw materials, harvesting, transport, formulation, processing, storage, etc.

3. Establish critical limit(s)
Establish critical limit(s) which must be met to ensure the CCP is under control.

MadgeTech offers data loggers to enable the user to monitor and record temperature and humidity and other parameters to establish critical limits such as temperature and humidity.

4. Establish Procedures to Monitor control of the CCP

a. What will be monitored
b. How will it be monitored
c. How often will it be monitored
d. Who will perform the monitoring

MadgeTech Data Loggers help to ensure critical control limits are being met. They can be used to validate ovens, freezers, refrigerators or be used to monitor the internal temperature of product in process.

5. Establish Corrective Action Procedures
Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.

6. Establish a Record Keeping System
Establish documentation concerning all procedures and records appropriate to these principles and their application.

The MadgeTech Software makes record keeping a simple task. Easily tailor graphs and create custom reports for the product being processed to help comply with federal guidelines and regulations.

7. Establish Verification Procedures
Establish procedures for verification to confirm that the HACCP system is working effectively.

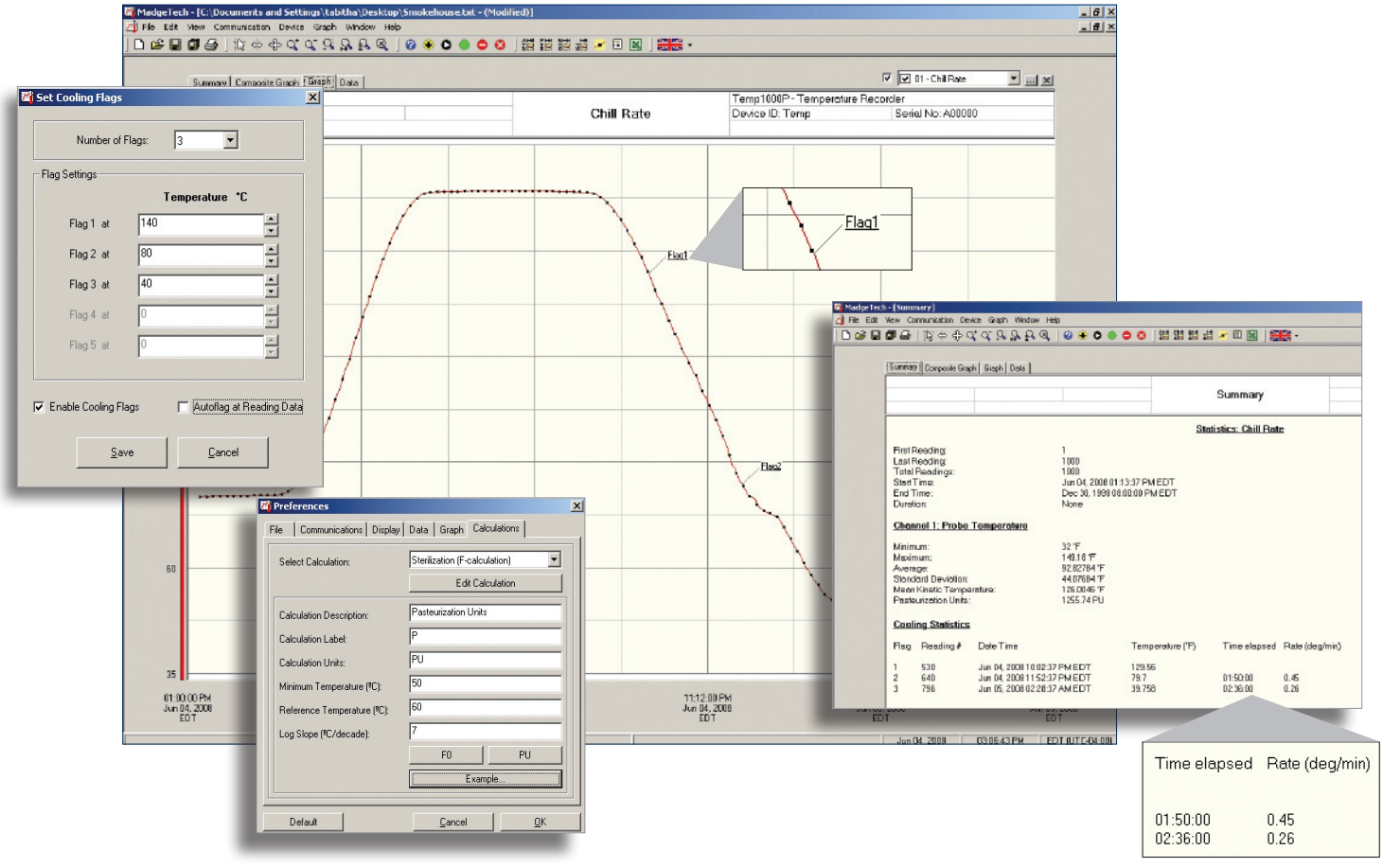
MadgeTech data loggers play a key role in the HACCP plan. MadgeTech offers SOP's (Standard Operating Procedure's) to aid the user to ensure the data loggers are installed correctly, operating properly and performing as they should.

Below is an example of a portion of a HACCP plan for Salmon Jerky.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Critical Control Point (CCP)	**Significant Hazard**	**Critical Limits for each Preventive Measure**	**Monitoring**				**Corrective Action(s)**	**Records**	**Verification**
Drying (forced convection oven)	Pathogen growth and toxin formation	Max. product thickness 1/4"	**What**	**How**	**Frequency**	**Who**	Readjust slicer	Processing log	Document of drying process
		Min. drying time 5 hours	Product thickness	Preset slicer to just less than 1/4"	Once per day before operations	Slicer operator	Continue drying	**Data logger printout**	Review corrective action records within 1 week of prep.
		Minimum oven temperature 140°F	**Drying time**	**Digital time/ temperature data logger**	Continuous, with visual check each batch	Oven operator	Extend drying process Segregate and hold for evaluation by water activity analysis.	**Data logger printout**	Check accuracy of the data logger daily. Analyze finished sample every 3 months for water activity
			Oven air input temperature	**Digital time/ temperature data logger**	Continuous, with visual check each batch	Oven operator			

MadgeTech Data Logger Software

This simple, easy-to-use, Windows-based software enables the user to effortlessly collect, display, and analyze data. A variety of powerful tools can be used to examine, export, and print professional looking reports with just a click of the mouse. This software can be downloaded for free from the MadgeTech web site.



Phone: (603) 456-2011 • Fax: (603) 456-2012 • info@MadgeTech.com
www.MadgeTech.com