The importance of developing a HACCP plan for a food establishment has never been greater. Food borne illnesses continue to be on the rise, prompted by consumers’ insatiable request for fresh, rapidly prepared meals. Whether you are a Restaurant, Grocer that serves prepared food, or a Contract Food provider, the need to rapidly confirm food temperatures meeting critical temperature limits is paramount.

A critical element to executing a successful Food Safety Program is to ensure that you have the right integrated food safety tools in place that guarantees all associates are following the correct procedures for food safety as well as providing documentation to prove that the tests have been successfully completed.

PAR Technology, one of the leading suppliers of Food Safety and Task Management systems to food service providers, is at the forefront of providing innovative solutions to the market. Our Temperature Measurement Device (TMD) and SureCheck Advantage all in one HACCP solution are developed from the knowledge gained from tens of thousands of installations and hundreds of thousands of temperature measurements per day.

Based upon these learnings we’ve incorporated the critical capabilities of a Temperature Probe (Pyrometer) Infrared Thermometer and RFID (temperature and location) measurements into an easy-to-use handheld food safety tool to maximize food safety measurement efficiency.
There are very strict HACCP requirements for food temperature measurements. Failure to comply with these measurement guidelines can encourage the growth of bacteria in food and subsequently expose guests to a food borne illness. When measuring these foods, it is critical that the temperature-measuring device has the ability to alert the user if the proper HACCP temperature has not been achieved. In order to conduct this measurement properly, it is important that a fast, stabilizing, NIST calibrated temperature probe be utilized that meets HACCP temperature accuracy requirements.

As a practical guideline, the temperature should be taken from the center of the food, or if the food is contained in a plastic bag, as is common with the prepared food industry, the bag should be folded over the thermometer for a proper measurement.

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**PAR Technology’s Food Safety and Task Management Systems** are optimized for conducting highly accurate HACCP temperature measurements. With a fast stabilizing temperature probe, infrared thermometer, RFID reader, and cloud-based Food Safety and Task Management software, the system has been widely accepted at Tier One Grocery, Restaurants and Contract Food Manufacturers worldwide.

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### Temperature Probe (Pyrometer) Measurements for HACCP

<table>
<thead>
<tr>
<th>Category</th>
<th>Food</th>
<th>Temperature (°F/°C)</th>
<th>Rest Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Meat &amp; Meat Mixtures</td>
<td>Beef, Pork, Veal, Lamb Turkey, Chicken</td>
<td>160/71.1, 165/73.9</td>
<td>None</td>
</tr>
<tr>
<td>Fresh Beef, Veal, Lamb</td>
<td>Steaks, roasts, chops</td>
<td>145/62.8</td>
<td>3 Minutes</td>
</tr>
<tr>
<td>Poultry</td>
<td>Chicken &amp; Turkey, whole Poultry breasts, roasts Poultry thighs, legs, wings Duck &amp; Goose Stuffing (cooked alone or in bird)</td>
<td>165/73.9, 165/73.9, 165/73.9</td>
<td>None</td>
</tr>
<tr>
<td>Pork and Ham</td>
<td>Fresh pork Fresh ham (raw) Precooked ham (to reheat)</td>
<td>145/62.8, 145/62.8, 140/60</td>
<td>3 Minutes, 3 Minutes, None</td>
</tr>
<tr>
<td>Eggs &amp; Egg Dishes</td>
<td>Eggs Egg dishes</td>
<td>Cook until yolk and white are firm</td>
<td>None</td>
</tr>
<tr>
<td>Leftovers &amp; Casseroles</td>
<td>Leftovers Casseroles</td>
<td>160/71.1, 165/73.9</td>
<td>None</td>
</tr>
<tr>
<td>Seafood</td>
<td>Fin Fish Shrimp, lobster, and crabs Clams, oysters, and mussels Scallops</td>
<td>145/62.8 or cook until flesh is opaque and separates easily with a fork Cook until flesh is pearly and opaque Cook until shells open during cooking Cook until flesh is milky white or opaque and firm</td>
<td>None</td>
</tr>
</tbody>
</table>

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*Courtesy Food Safety.gov*
ANOTHER AREA WHERE AN IR TEMPERATURE MEASUREMENT CAN PROVE INVALUABLE IS WHEN MEASURING PRODUCTS WITHIN A FREEZER OR THE ACTUAL TEMPERATURE OF A FREEZER. IN THIS APPLICATION, THE SCAN OF THE PRODUCT IS CONDUCTED ON A NON-REFLECTIVE SURFACE AFTER THE IR THERMOMETER HAS BEEN EXPOSED TO THE ENVIRONMENT.

A REFLECTIVE SURFACE HAS A VERY LOW EMISSIVITY (TRANSMITS ENERGY POORLY) AND WILL CREATE FALSE READINGS ON THE IR THERMOMETER. IT IS RECOMMENDED THAT AN IR TARGET BE UTILIZED WITHIN THE FREEZER, WHICH COULD BE A SIMPLE PIECE OF MASKING TAPE ON THE WALL OF THE FREEZER OR A PIECE OF CARDBOARD.

ANOTHER APPROACH TO VERIFY THE TEMPERATURE OF A COOKING SURFACE WITH AN IR THERMOMETER IS TO USE A HIGH EMISSIVITY RATED PAN, SUCH AS CAST IRON, TO VERIFY THAT THE SURFACE IS HEATING.

PAR’S TEMPERATURE MEASUREMENT DEVICE (TMD) AND SURECHECK ADVANTAGE PROVIDE THE USER WITH THE ABILITY TO CONDUCT BOTH INFRARED TEMPERATURE AND TEMPERATURE PROBE TYPE MEASUREMENTS IN ONE INSTRUMENT. THIS IS ESPECIALLY USEFUL FOR QUICK SPOT CHECKS OF THE PERFORMANCE OF FOOD OR APPLIANCES IN AN ESTABLISHMENT.
RFID AND FOOD SAFETY

Why is RFID capability important for Food Safety? RFID capability can be used for both temperature and location measurements. With respect to location measurements, the RFID sensors, positioned within the store, verify the employee performs a check on a checklist at a specific location.

As an example, this is useful to verify checks along employee Travel Paths, whether it is visiting a specific location within a restaurant and documenting cleanliness, ensuring opening and closing routines are being followed, or verifying that certain inventory levels have been verified, RFID location tags can prove to be invaluable.

There are numerous methods to measure temperature within a store environment ranging from IoT sensor type devices to RFID Temperature Tags. One of the benefits of the RFID tag is that it requires the employee to go to the location of the tag to interrogate the temperature data from the tag. In this case, the employee may also be required to check the condition of the freezer or cooler while there. Another benefit of utilizing the RFID Temperature Tag is that it does not require a monthly hosting fee for its use or connection to the store internet. The employee simply approaches the device with the temperature-measuring device, interrogates the tag by holding the unit close to the tag and uploads the data to the appropriate check on the checklist.

The importance of ensuring proper temperature regulation of produce has never been more important. To successfully implement a versatile food safety system, the monitoring and data capture of HACCP procedures must be taken properly in real-time.

PAR Technology’s Temperature Measurement Device (TMD) and SureCheck Advantage, ensures that procedures are executed following strict FDA and HACCP guidelines. Food service companies not adhering to a HACCP program, leave themselves susceptible to producing foodborne outbreaks, tainted brand image, and profit loss. Now, more than ever, is the time to invest in food safety technology.
PAR Technology's Food Safety offerings consist of the Temperature Measurement Device (TMD) an easy to use handheld Temperature Probe, Infrared Thermometer and RFID reader that integrates to customer supplied mobile devices, the SureCheck Advantage, an all-in-one Food Safety System that combines a Mobile Computing Device, Temperature Probe, Infrared Thermometer, Barcode Scanner, Camera, and RFID Reader in a handheld test tool and a host of Remote Temperature Monitoring Devices to remotely log freezer and cooler temperatures, 24 hours a day, 7 days a week.

To schedule a demo of our Food Safety System please visit ParTech.com/food-safety