Temperature and Time Requirements for Food

CONTROLLING GROWTH OF FOODBORNE PATHOGENS

Temperature danger zone
The temperature range at which disease-causing bacteria grow best in time/temperature control for safety food (TCS) is called the temperature danger zone.

▪ Temperature danger zone is between 41°F and 135°F.
▪ TCS food must pass through the temperature danger zone as quickly as possible.
▪ Keep hot food hot and cold food cold. Always use a thermometer to check food temperatures.

Cooling food
▪ Cool hot food from:
  ▪ 135°F to 70°F within two hours
  AND
  ▪ 135°F to 41°F or below within a total of six hours.
▪ The faster food is cooled, the better.

Cold holding food
▪ Maintain cold food at 41°F or below.
▪ Frozen food must remain frozen.

Cooking raw animal food
The table below shows minimum requirements for some common raw animal food.

<table>
<thead>
<tr>
<th>Food</th>
<th>Internal temperature and time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry</td>
<td></td>
</tr>
<tr>
<td>Whole muscle meat</td>
<td></td>
</tr>
<tr>
<td>Game animals</td>
<td></td>
</tr>
<tr>
<td>Eggs for immediate service</td>
<td>145°F for 15 seconds</td>
</tr>
<tr>
<td>Eggs for hot holding</td>
<td>158°F (immediate) OR 155°F for 15 seconds OR 150°F for 1 minute OR 145°F for 3 minutes</td>
</tr>
<tr>
<td>Ratitae</td>
<td></td>
</tr>
<tr>
<td>Chopped or ground meat, fish, and game animals</td>
<td></td>
</tr>
<tr>
<td>Injected or tenderized meats</td>
<td></td>
</tr>
<tr>
<td>Stuffed containing fish, meat or poultry</td>
<td>165°F for 15 seconds</td>
</tr>
<tr>
<td>Stuffed fish, meat, pasta or poultry</td>
<td></td>
</tr>
</tbody>
</table>
**Hot holding food**
- Maintain hot food at 135°F or above.
- Properly cooked roasts may be held at 130°F or above.

**Reheating food**
- Food made in-house and reheated for hot holding must reach an internal temperature of at least 165°F for 15 seconds.
- Food made in a food processing plant, opened in the food establishment, and reheated for hot holding must reach a temperature of 135°F.
- Reheat food rapidly, within two hours.
- Food that has been cooked and cooled properly may be served at any temperature if it is going to be served immediately.
Resources

Minnesota Department of Health Food Business Safety
(www.health.state.mn.us/foodbizsafety)

Minnesota Department of Health
Food, Pools, and Lodging Services
PO Box 64975
St. Paul, MN 55164-0975
651-201-4500
health.foodlodging@state.mn.us
www.health.state.mn.us

Minnesota Department of Agriculture
Food and Feed Safety Division
625 Robert Street N
St. Paul, MN 55155-2538
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MDA.FFSD.Info@state.mn.us
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