**Conference for Food Protection**

**2016 Issue Form**

**Issue: 2016 III-021**

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| **Council Recommendation:** | Accepted asSubmitted |  | Accepted as Amended |  | No Action |  |
| **Delegate Action:** | Accepted |  | Rejected |  |  |  |

*All information above the line is for conference use only.*

**Issue History:**

This is a brand new Issue.

**Title:**

Cooking by food temperature

**Issue you would like the Conference to consider:**

Establishing criteria for a heat transfer medium such as "still dry", "convection" and "high humidity", for various weights of a meat product lacks correlation with the actual temperature of the meat. This code artifact does not accommodate either existing or new and novel cooking technologies. There are many examples of this. Steamers are one example of this misfit. Neither ovens nor steamers are defined in section 1-201.10 (B) of the FDA 2013 Food Code so whatever characteristics you choose to define and differentiate one from the other is a figment of imagination. As it stands, convection steamers do not comply with the 250ºF "air" temperature requirement and arguably - do not cook with air (an insulator) anyway. The maximum temperature attained in a pressureless steamer is that of boiling water at whatever elevation you are at (eg., 212ºF at sea level). Is this to say that you cannot cook a whole meat item to a safe temperature in a steamer? Of course not, as even chicken has a minimum core cooking temperature of 165ºF, well below the temperature of steam and well below the 250ºF minimum established in section 3-401.11 (B)(1).

New, highly advanced food equipment is here and more is on the horizon. They thermally treat meats and other foods from raw to ready to eat by controlling the enthalpy of heat ("H") within their cooking zones. They control the rate of energy transfer into the thermal mass (the food). Many if not all of these new cooking technology equipment provide continuous logging and/or event notification enabling food pasteurization - without the pouch and the water bath. This new equipment embraces all of the elements associated with the destruction of pathogenic organisms by controlling energy/mass-flow rates to provide positive control of boundary layer and inertia effects.

Another novel cooking technology uses long-wave length infrared radiation (900nm-1mm) and can bring a WHOLE meat core temperature to required minimums for required times without ever getting the air temperature anywhere near those shown in the table of Section 3-401.11 (B)(1) of the 2013 FDA FOOD CODE titled "Oven Temperatures Based on Roast Weight". The same can be said of microwave ovens and new hybrid equipment where microwave is but one of the energy transfer methods. Defining specific criteria for things other than internal food temperatures are short sighted, excessive and limits innovation without adding anything to food safety.

Technology has accelerated dramatically in the past twenty years, and it has now caught up to food equipment, food equipment/processes and ancillary systems. It may be wise for the Conference for Food Protection, the FDA and for licensed operators and their associations to seek liaison with domestic and international food equipment and safety system innovators to ensure that the criteria in the FDA Food Code is relevant to current mainstream equipment systems if not emerging state of the art food equipment processes.

**Public Health Significance:**

The FDA Food Code should stick with establishing reasonable **science based** safety of foods using food criteria such as food temperatures, rather than establishing temperatures for heat transfer mediums that have no direct correlation to the safety characteristics of food. By establishing criteria for one heat transfer medium (air) the code inadvertently restricts innovation. Rather, the code's food based criteria should be specific enough to ensure food safety, but broad enough to encourage investment in innovative food preparation and safety technology.

Like any effective HACCP plan, review is required to reassess the environment in which we operate and changes in technology can have significant impacts on safety and costs.

**Recommended Solution: The Conference recommends...:**

a letter be sent to the FDA requesting the 2013 Food Code be amended as follows (language to be added is underlined):

**Section 3-401.11**

Remove all of (B) (1) and the corresponding table titled "Oven Temperatures Based on Roast Weight" from Section 3-401.11, and amend the language to read

(B) Whole MEAT roasts including beef, corned beef, lamb, pork, and cured pork roasts such as ham shall be cooked as specified in the following chart, to heat all parts of the FOOD to a temperature and for the holding time that corresponds to that temperature: P

**Submitter Information:**

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It is the policy of the Conference for Food Protection to not accept Issues that would endorse a brand name or a commercial proprietary process.