

**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 095  
Issue: 2014 III-001**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Report - Emergency Action Plan (EAP) Committee

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

At the 2012 Biennial Meeting, the Conference created the Emergency Action Plan Committee with the following charges:

(1) Review and update the *CFP Emergency Action Plan for Retail Food Establishments* and that the committee be charged to:

1. review and update the *CFP Emergency Action Plan for Retail Food Establishments* where appropriate;
2. incorporate the criteria from Issue 2012 III-021 into the *CFP Emergency Action Plan for Retail Food Establishments*;
3. report back to the CFP at the 2014 Biennial Meeting with a recommendation to accept the revised plan; and
4. recommend that FDA include reference to the *CFP Emergency Action Plan for Retail Food Establishments* in Annex 2 of the Food Code.

(2) Include a review and recommendations for situations such as catastrophic natural or man-made disasters, and provisions for handwashing in accordance with emergency guidance documents.

The Committee has taken the following actions on the charges given to it and will be making the following recommendations:

1. The Committee has reviewed the *CFP Emergency Action Plan for Retail Food Establishments* document and is recommending replacement with the attached *Emergency Action Plan for Retail Food Establishments, Second Edition*;
2. The Committee has reviewed and incorporated the criteria from Issue 2012 III-021 regarding time and temperature control during a power outage into the new *Emergency Action Plan for Retail Food Establishments, Second Edition*;
3. The Committee has created a report to the CFP for the 2014 Biennial Meeting with a recommendation to accept the new guidance document in a separate issue;
4. The Committee is making a recommendation that FDA include a reference to the *CFP Emergency Action Plan for Retail Food Establishments, Second Edition* in Annex 2 of the 2013 Food Code in a separate issue.
5. Emergency hand washing provisions have been created and standardized throughout the guidance document.

## References:

The previous guidance document accepted at the 2008 CFP biennial meeting (*Emergency Action Plan for Retail Food Establishments*) is available for comparison on the CFP web site at [www.foodprotect.org](http://www.foodprotect.org) under the Conference-Developed Guides and Documents tab: <http://www.foodprotect.org/media/guide/EmergencyActionPlanforRetailFoodEstablishments2008.pdf>

## Public Health Significance:

During disasters or emergency events, it may be necessary to provide food to those affected by the emergency event even though establishments providing food may not meet all FDA Food Code requirements. The *Emergency Action Plan for Retail Food Establishments, Second Edition* document provides guidance to ensure food served at these times is done in a safe and sanitary manner.

The *Emergency Action Plan for Retail Food Establishments, Second Edition* document provides minimum requirements that must be met to ensure the service and sale of safe food during these emergency events. In order to get widest availability of this information to the industry and regulatory communities the Committee is recommending that the Guidance document be both posted on the CFP website and included in Annex 2 of the FDA Food Code.

Regarding the request to develop an alternative emergency hand washing procedure, we initially decided to defer to the Hand Hygiene Committee which was working on this issue. We felt it would be best to let them create the procedure and then we would incorporate it into our guidance document. Since the Hand Hygiene Committee was unable to reach consensus on this issue we created our own procedure for emergency hand washing and included it into the guidance document. Our procedure does require the use of soap and water and discusses when and where hand washing facilities are needed and should be located. We did not develop or include a non-water based hand washing alternative.

## Recommended Solution: The Conference recommends...:

1. That the report of the Committee be acknowledged and the Committee members be given a vote of thanks for their committee service and their diligent efforts and dedication to the review and creation of the new *Emergency Action Plan for Retail Food Establishments, Second Edition* document; and
2. That the Committee be disbanded.

## Submitter Information:

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## Attachments:

- α "EAP Committee Report 2012-2014"
- α "EAP Committee Roster 2012-2014"

α "EAP Draft Guidance - Second Edition"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 042  
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<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

EAP 2 - Emergency Action Plan for Retail Food Establishments

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

The Emergency Action Plan Committee was formed under CFP issue 2012 III-021 at the 2012 biennial meeting. Four of its charges included:

1. Reviewing and updating the *CFP Emergency Action Plan for Retail Food Establishments* where appropriate;
2. Incorporating proposed criteria on acceptable time and temperature combinations that would allow for safe holding of food without impacting existing shelf life and incorporating that information into the *CFP Emergency Action Plan for Retail Food Establishments*;
3. Recommending that FDA include reference to the *CFP Emergency Action Plan for Retail Food Establishments* in Annex 2 of the Food Code; and
4. Developing alternative hand wash procedures for emergency events and crises.

The committee has reviewed the *CFP Emergency Action Plan for Retail Food Establishments* document and updated it as deemed appropriate by committee membership. Although the vast majority of content from the *CFP Emergency Action Plan for Retail Food Establishments* document was carried over into the new *Emergency Action Plan for Retail Food Establishments, Second Edition* document, formatting was extensive and several sections were removed from the new document. The committee felt submitting a revised document showing track changes would be meaningless since the vast majority of the document would show revisions due to movement of text. Therefore, we are considering this a 2nd edition. The original document is available for comparison on the CFP web site at [www.foodprotect.org](http://www.foodprotect.org) under the Conference-Developed Guides and Documents tab:

<http://www.foodprotect.org/media/guide/EmergencyActionPlanforRetailFoodEstablishments2008.pdf>.

The time temperature combinations that allow for safe holding of food without impacting existing shelf life were extensively reviewed and incorporated into the new guidance document entitled *Emergency Action Plan for Retail Food Establishments, Second Edition*. The committee also gave consideration of where this document should be housed and referenced. This information is included in our recommendations below.

A number of other changes were made to the 2008 *CFP Emergency Action Plan for Retail Food Establishments* document. Although most of the verbiage was carried over into the

new *Emergency Action Plan for Retail Food Establishments, Second Edition* document, we did extensively reformat the document for a smoother and more logical flow. As a result of this, we did not create a redlined document showing changes made. Furthermore, we have included a list of significant changes made to the 2008 guidance document in our Committee report.

**Public Health Significance:**

During times of natural disasters, crises and other events which interrupt the normal distribution and production of food, it may be necessary to have temporary alternative processes in place to provide food for the affected population. Many times when these adverse events occur food can be safely prepared and distributed utilizing procedures that differ from what is normally required in the Food Code.

The *Emergency Action Plan for Retail Food Establishments, Second Edition* document attached to the CFP issue entitled *Report - Emergency Action Plan (EAP) Committee* addresses items to consider in order to prepare for an emergency as well as to respond to and recover from an emergency. Often times, even if food cannot be prepared, food establishments can still safely sell some items with no risk to the public. Examples of items which could possibly be sold by food establishments during an emergency situation include canned foods, batteries, ice chests, flashlights and many other non-food items.

The *Emergency Action Plan for Retail Food Establishments, Second Edition* document provides assistance to industry and regulators by providing information that will help guide them when determining when a food establishment can remain open as well as what items may be prepared, sold and salvaged.

Regarding the request to develop an alternative emergency handwashing procedure, we initially decided to defer to the Hand Hygiene Committee which was working on this issue. We felt it would be best to let them create the procedure and then we would incorporate it into our guidance document. Since the Hand Hygiene Committee was unable to reach consensus on this issue we created our own procedure for emergency hand washing and included it into the guidance document. Our procedure does require the use of soap and water and discusses when and where handwashing facilities are needed and should be located.

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

1. The new *Emergency Action Plan for Retail Food Establishments, Second Edition* document be accepted by the Conference for posting in both PDF and Word formats on the CFP website.

For actual document, see Issue titled: *Report-Emergency Action Plan (EAP) Committee*; attachment titled "*Emergency Action Plan for Retail Food Establishments, Second Edition*." and

2. That a letter be sent to the FDA recommending the 2013 Food Code be amended to include reference in Annex 2 to the approved *Emergency Action Plan for Retail Food Establishments, Second Edition*.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 059  
Issue: 2014 III-003**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

EAP 3 - Time/Temperature Chart for Emergency Situations

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

At the 2012 Biennial Meeting, Issue III 2012-021 created the Emergency Action Plan Committee and charged it to incorporate a new chart which would lengthen the amount of time a food product could remain out of temperature during an emergency situation and still retain its original shelf life as long as it was back to 41°F within the specified time frame for that maximum temperature.

This Issue addresses specifically the time temperature combinations recommended along with guidance for their use and three examples of how the table is to be used.

This Issue is being submitted in case the Emergency Action Plan Committee's Issue entitled EAP 2-Emergency Action Plan for Retail Food Establishments, Second Edition is not accepted. This will enable the time and temperature recommendations developed by the committee to be inserted into the existing CFP document entitled *Emergency Action Plan for Retail Food Establishments*.

**Public Health Significance:**

During times of natural disasters, crises and other events which interrupt the normal distribution and production of food, it may be necessary to have temporary alternative processes in place to provide food for the affected population. Many times when these adverse events occur food can be safely prepared and distributed utilizing procedures that differ from what is normally required in the Food Code.

The *Emergency Action Plan for Retail Food Establishments, Second Edition* document, where this chart and examples are included, provides assistance to industry and regulators by providing information that will help guide them when determining when a food establishment can continue to sell foods with their original sell by date even though those foods have been out of temperature for a limited amount of time.

These time and temperature combinations have been validated by Don Schaffner of Rutgers University using ComBase predictor model predictions for *Listeria monocytogenes* and a variety of conservative assumptions. See pages 15-20 (Starting with the cold holding section on page 15) of the *Emergency Action Plan for Retail Food Establishments, Second Edition* document attached to the Emergency Action Plan Committee's Issue entitled

Emergency Action Plan Committee Report for more information, and the specific recommendations and language.

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

that the guidance in the '*Cold Holding of TCS Food*' section of the '*Interruption of Electrical Service*' chapter in the guidance document entitled *Emergency Action Plan for Retail Food Establishments, Second Edition (pages 15-20)*, be accepted by the conference and placed in the CFP's existing document entitled *Emergency Action Plan for Retail Food Establishments* (currently posted on the CFP web site) replacing the '*Refrigerated Food Safety Guide*' section on pages 10 and 11.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 075  
Issue: 2014 III-004**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Report - Time as a Public Health Control (TPHC) Committee

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

During the 2012 Conference for Food Protection Biennial Meeting in Indianapolis, Indiana the conference recommended that a Time as a Public Health Control Committee be created and given the following charge as an outcome of Issue 2012 III-026:

That a committee be formed to identify safe times at which foods can be held without temperature control and without cooling to 41°F, supported by scientific information (e.g., challenge studies, modeling tools).

The committee's charge shall include, but not be limited to, the following foods and food categories:

- α Cut tomatoes
- α Cut cantaloupe
- α Chopped leafy greens
- α Chopped garlic and oil
- α Opened canned tuna
- α Opened canned beans (e.g., green beans, chickpeas, black beans)
- α Hummus
- α Opened canned product used as sole item
- α Opened canned product used as an ingredient in a formulation

The committee may wish to consider a document published by Institute of Food Technologists (IFT) in 2001 and a National Advisory Committee for the Microbiological Criteria for Foods (NACMCF) challenge study document.

The committee is also charged to report recommendations back to the 2014 CFP biennial meeting.

This Issue presents the Time as a Public Health Control Committee's final report along with committee roster and requests acknowledgement of the attached report.

**Public Health Significance:**

The relationship between time and temperature is recognized as an effective means to control the growth of many food borne pathogens. FDA Model Food Code (hereafter Food Code) provides science based requirements for safe food preparation, cooking, cooling,

reheating, and implementation of Time as a Public Health Control (TPHC) where time/temperature control for safety (TCS) food will be exposed to temperatures above 5°C (41°F) and below 57°C (135°F).

Food Code [section 3-501.14(B)] allows for food taken from ambient temperature (such as foods in hermetically sealed containers) to be cooled to 5°C (41°F) within 4 hours. These foods are considered Ready-to-Eat and safe for consumption as long as they comply with date marking provisions contained in Food Code (section 3-501.17).

There is currently no provision in Food Code (section 3-501.19) to allow foods taken from ambient temperature that become Potentially Hazardous Food/Time Temperature for Safety (PHF/TCS) ( defined as TCS in the 2013 Food Code) during preparation to be held under TPHC without first cooling to 5°C (41°F) or below. However, there are scenarios (e.g., opening a hermetically sealed container, cutting time/temperature control for safety produce) in the flow of food preparation wherein time/temperature control for safety, foods may be taken from ambient temperature and served to the public within the time frame allowed for proper cooling. The following foods serve as examples of such scenarios: cut tomatoes, cut cantaloupe, chopped leafy greens, chopped garlic and oil, opened canned tuna, and opened canned beans.

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

1. acknowledgement of the 2012-2014 Time as a Public Health Control Committee report and the completion of all assigned charges; and
2. acknowledgement of the 2012-2014 committee members for their diligent work in gathering the required scientific and outbreak information on each of the food and food categories, faithful attendance at our web meetings, productive discussions, and consensus decisions.

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**Attachments:**

- α "2012-14 TPHC Committee Roster"
- α "TPHC Committee Final Report 2012-14"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 060  
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<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

TPHC 2 - Foods Starting at Room Temperature and Held Using TPHC

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

FDA Model Food Code (hereafter Food Code) Section 3-501.19 requires ready-to-eat, time/temperature control for safety food (TCS) to be at 5°C (41°F) or less before it is removed from temperature control for the purpose of using time alone as a public health control to hold or display the food. Food Code does not exclude cut tomatoes, cut cantaloupe, chopped leafy greens, opened canned tuna, and opened canned product used as a sole item when originating from ambient air temperature from the requirement of cooling to 5°C (41°F) prior to using Time As A Public Health Control (TPHC), although these foods commonly originate from ambient temperatures. As a result, this requires the aforesaid ambient temperature foods that become TCS during preparation (i.e. via cutting, chopping, or opening a hermetically sealed container) to undergo cooling to 5°C (41°F) or less before TPHC is allowed. Expanding the Food Code provision would allow for use of TPHC immediately after preparation of these foods at ambient temperature.

**Public Health Significance:**

Tomatoes, cantaloupe, leafy greens, canned tuna, and other canned products used as a sole item are commonly held at room temperature prior to food preparation that renders them TCS. Broadening the TPHC provision in Food Code to incorporate a starting temperature of room temperature for these foods would eliminate the requirement to first cool the food items to 5°C (41°F) or below. In the absence of cooling to 5°C (41°F) or below, the bacterial lag phase may be affected as the food items would no longer require warming to reach equilibrium with room temperature.

In June 2010, FDA issued a guidance document regarding TPHC for cut tomatoes. The document referenced FDA's in-house studies wherein data suggested that the product temperature at the time of cutting did not significantly affect the growth of representative bacteria in the cut, inoculated tomatoes when they are subsequently displayed or held at room temperature. Furthermore, laboratory data and available growth models suggested that the lag time combined with the likely rate of growth would result in only limited concern about pathogen growth during a 4-hour period of room temperature storage immediately after slicing. The guidance document concluded that TPHC can be used to sufficiently limit

the growth of pathogens in cut tomatoes, even if the tomatoes have been stored at room temperature prior to being sliced or cut.

When ComBase pathogen growth modeling is used to evaluate growth of pathogens of concern during a 4-hour period at room temperature for cut cantaloupe, chopped leafy greens, and opened canned tuna, the predicted growth rates suggest that TPHC can be used for these foods, similar to cut tomatoes.

References:

See TPHC Committee Final Report (attached to Issue titled: *"Report-Time as a Public Health Control (TPHC) Committee"*) for documents and references reviewed by the committee.

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

that a letter be sent to the FDA requesting that the 2013 Food Code be amended as follows (new language in underline format):

Section 3-501.19 (B)

(1) The FOOD shall have an initial temperature of 5°C (41°F) or less when removed from cold holding temperature control, or 57°C (135°F) or greater when removed from hot holding temperature control.<sup>P</sup> Tomatoes, cantaloupe, leafy greens, canned tuna, and shelf-stable canned product used as a sole item shall have an initial temperature of 22°C (72°F) or less when rendered time/temperature control for safety by way of cutting, chopping, or opening of a hermetically sealed container.

(2) The FOOD shall be marked or otherwise identified to indicate the time that is 4 hours past the point in time when the FOOD is removed from temperature control <sup>Pf</sup>, or rendered time/temperature control for safety food by way of cutting, chopping, or opening of a hermetically sealed container;

(3) The FOOD shall be cooked and served, served at any temperature if READY-TO-EAT, or discarded, within 4 hours from the point in time when the FOOD is removed from temperature control<sup>P</sup> or rendered time/temperature control for safety food by way of cutting, chopping, or opening of a hermetically sealed container; and

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 071  
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<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

TPHC 3 - Foods Needing More Research for Using TPHC

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

FDA Model Food Code (hereafter Food Code) Section 3-501.19 requires ready-to-eat ambient temperature FOODS that become time/temperature control for safety food (TCS) during preparation to undergo cooling before Time As A Public Health Control (TPHC) is allowed. To determine if TPHC can be used safely for certain foods at ambient temperatures (without initially cooling to 5°C (41°F) the Time as a Public Health Control Committee reviewed the following products: retail prepared chopped garlic and oil mixtures, hummus made from non-commercially prepared ingredients, and opened canned products used as an ingredient in a formulation.

**Public Health Significance:**

The relationship between time and temperature is recognized as an effective means to control the growth of many foodborne pathogens. Food Code provides science based requirements for safe food preparation, cooking, cooling, reheating, and implementation of time as a public health control (TPHC) where Potentially Hazardous Food/ Time/Temperature Control For Safety (PHF/TCS) food will be exposed to temperatures above 5°C (41°F) and below 57°C (135°F).

Food Code (section 3-501.14(B)) allows for food taken from ambient temperatures (such as foods in hermetically sealed containers) to be cooled to 5°C (41°F) within 4 hours. These products are considered Ready-to-Eat and safe for consumption as long as they comply with date marking provisions contained in Food Code (section 3-501.17).

There is currently no provision in Section 3-501.19 to allow for ambient temperature foods that become PHF/TCS during preparation to be held under TPHC without first cooling to 5°C (41°F). However, there are scenarios (e.g. opening a hermetically sealed container, and mixing chopped produce with oil) in the flow of food preparation wherein PHF/TCS foods may be taken from ambient temperatures and served to the public within the time frame allowed for proper cooling. Further evaluation and research is needed to determine if these products can be held without cooling to 5°C (41°F).

Retail prepared chopped garlic and oil mixtures may support the growth of *C. botulinum* bacteria. Typically this type of product is held near the cooking area and there is a lack of awareness that it is a PHF/TCS food. Outcomes from ComBase pathogen growth modeling

and research suggest that this food item can be stored for 10 hours at ambient temperature before a 1 log growth of *Clostridium botulinum* and toxin formation. However, although this time period is longer than the 4 hours allowed by TPHC requirements, many food handlers may not perceive the product as PHF/TCS which may lead to prolonged periods of storage at ambient temperatures, beyond what ComBase modeling suggests is safe.

Similar to chopped garlic and oil mixtures, ComBase modeling outcomes for freshly prepared hummus made from non-commercially prepared ingredients suggest that this food item can be stored up to 9 hours at ambient temperature before 1 log growth is expected for salmonella. Although this time period is longer than 4 hours allowed by TPHC, there is concern regarding documented food borne illness outbreaks involving hummus that trace back to ingredients used in its preparation, specifically sesame seed paste/tahini.

Opened canned products used as ingredients in a formulation create multiple product variables such as changes in pH, microbial load, and other environmental risk factors. Recognizing these factors, the need for additional research is necessary to gain a more holistic understanding of the risks associated with these products.

References:

See TPHC Committee Final Report (attached to Issue titled: "*Report-Time as a Public Health Control (TPHC) Committee*") for documents and references reviewed by the committee.

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

that a letter be sent to the FDA recommending further evaluation and research to determine if the following products can be held without cooling to 5°C (41°F) prior to using time as a public health control (TPHC):

1. Retail prepared chopped garlic and oil mixtures
2. Hummus made from non-commercially prepared ingredients
3. Opened canned product used as an ingredient in a formulation

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**Conference for Food Protection  
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**Internal Number: 043  
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<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Report - Listeria Retail Guidelines Committee

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

At the 2012 Biennial Meeting of the Conference for Food Protection, a committee was formed to revise the 2006 Voluntary Guidelines of Sanitation Practices Standard Operating Procedures and Good Retail Practices to Minimize Contamination and Growth of *Listeria monocytogenes* (*Lm*) Within Food Establishments. The committee was charged (Issue # 2012 III-022) with revising the 2006 guidelines to include:

1. Sanitation guidance for slicers,
2. Information on cross contamination and harborage points for *Lm*,
3. More detailed information about how sampling for *Lm* can be conducted as part of a strategy for preventing *Lm* contamination at retail,
4. Updating outdated links to other documents, and
5. Other relevant information identified by the Committee.

The Conference also asked the Committee to report its recommendations back to the 2014 Biennial Meeting with Issues to address the above charges and include recommendations that a letter be sent to FDA requesting that Annex 2 (References, Part 3-Supporting Documents) be amended by adding a reference to the revised voluntary guidelines.

The Listeria Retail Guidelines Committee requests acknowledgement of their final report and acknowledgement of the committee members for their hard work.

**Public Health Significance:**

*Listeria* contamination at retail continues to be a significant public health issue. Although the 2006 CFP *Listeria* retail guidelines provided useful general information about cleaning, sanitizing and sampling in the retail environment, newer and more detailed information regarding sanitation guidelines for complex equipment such as slicers, and harborage points for *Lm*, as well as updated references and links, will make the 2006 guidelines more useful for the retail and food service industries. Updates to the 2006 document that were developed by a committee whose membership included a wide variety of viewpoints will help ensure that the guidelines provide the best possible information to help food establishments protect public health.

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

1. Acknowledgment of the 2012-14 *Listeria* Retail Guidelines Committee Report, and
2. Thanking the members of the 2012-14 *Listeria* Retail Guidelines Committee for their work.

**Submitter Information:**

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**Attachments:**

- a "Report - 2012-14 Listeria Retail Guidelines Committee.docx"
- a "2012-14 Listeria Committee Roster"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 044  
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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Re-Create - Listeria Retail Guidelines Committee

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

At the 2012 Biennial Meeting, a committee was formed to revise the 2006 Voluntary Guidelines of Sanitation Practices Standard Operating Procedures and Good Retail Practices to Minimize Contamination and Growth of *Listeria monocytogenes (Lm)* Within Food Establishments (Issue 2012 III-022). The committee was charged with revising the 2006 guidelines to include:

1. Sanitation guidance for slicers,
2. Information on cross contamination and harborage points for *Lm*,
3. More detailed information about how sampling for *Lm* can be conducted as part of a strategy for preventing *Lm* contamination at retail,
4. Updating outdated links to other documents, and
5. Other relevant information identified by the Committee.

The Conference also asked the Committee to report its recommendations back to the 2014 Biennial Meeting with Issues to address the above charges and include recommendations that a letter be sent to FDA requesting that Annex 2 (References, Part 3-Supporting Documents) be amended by adding a reference to the revised voluntary guidelines.

The *Listeria* Retail Guidelines Committee was not able to add much of the new information on cross contamination and harborage points for *Lm* because the majority of that data has not been published in peer-reviewed journals. Also deliberation on the other points of the charge did not allow time to adequately consider what other materials could be added to the guidance that would make the guidance a more used document. In order to address this, the *Listeria* Retail Guidelines Committee recommends that the committee be re-created.

**Public Health Significance:**

*Listeria* contamination at retail continues to be a significant public health issue. Although the 2006 CFP *Listeria* retail guidelines provided useful general information about cleaning and sanitizing and sampling in the retail environment, newer and more detailed information regarding sanitation guidelines for complex equipment such as slicers, harborage points for *Lm*, as well as updated references and links will make the 2006 guidelines more useful for the retail and food service industries. Updates to the 2006 document that were developed

by a committee whose membership included a wide variety of viewpoints will help ensure that the guidelines provide the best possible information to help food establishments protect public health.

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

Re-creation of the *Listeria* Retail Guidelines Committee with the same charges as the 2012-2014 committee. The committee will be charged to revise the "2006 Voluntary Guidelines of Sanitation Practices Standard Operating Procedures and Good Retail Practices to Minimize Contamination and Growth of *Listeria monocytogenes* Within Food Establishments" to include:

1. Sanitation guidance for slicers,
2. Information on cross contamination and harborage points for *Lm*,
3. More detailed information about how sampling for *Lm* can be conducted as part of a strategy for preventing *Lm* contamination at retail,
4. Updating outdated links to other documents, and
5. Other relevant information identified by the Committee.

The Conference also recommends that the committee report its recommendations back to the 2016 Biennial Meeting with Issues to address the above charges and include recommendations that a letter be sent to FDA requesting that Annex 2 (References, Part 3- Supporting Documents) be amended by adding a reference to the revised voluntary guidelines.

**Submitter Information:**

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 047  
Issue: 2014 III-009**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Report - Hand Hygiene Committee (HHC)

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

The 2012-2014 Hand Hygiene Committee had the following charges to:

1) More closely examine the current Food Code requirements for when employees are required to wash their hands using soap and running water.

- If credible research suggests that one or more of the situations under which food employees are currently required to wash their hands does not result in meaningful risk reduction, work with FDA to explore whether those mandates could be modified, either in the Code itself or by recognizing when it is appropriate to waive the requirement (e.g., other approaches to hand hygiene are available and practiced).

- Determine if/when double gloving procedures would be acceptable without hand washing. If so, what would those acceptable procedures be?

- Determine what glove criteria or standards would need to be met for a glove to be considered a utensil and not require hand washing.

2) the report of the 2010-2012 Committee as a reference, illustrating the interactions of scientific, regulatory and behavioral considerations related to alternative hand hygiene regimes compared to handwashing. The committee should characterize what recent research tells us about:

- the extent to which the current minimum requirements for how and when employees are to wash their hands are effective in rendering food employees hands free of various soils, as well as, any pathogens of concern;

- what other regimens for cleansing employees hands, if any, may deliver outcomes that are similar to or better than handwashing so as to suggest that they could be included as acceptable methods for rendering hands free of soil and pathogens.

3) The committee report back its findings to the 2014 Biennial Meeting.

**Public Health Significance:**

The main purpose of washing hands is to cleanse the hands of soil, pathogens and chemicals that can potentially cause disease. Transmission of pathogenic bacteria, viruses and parasites to food from contaminated surfaces, raw food or ill workers by way of improperly washed hands continues to be a major factor in the spread of foodborne illnesses.

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

1. acknowledgement of the 2012-2014 Hand Hygiene Committee report, and
2. thanking the committee for the effort the members put forth in working on the charges.

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**Attachments:**

- α "Hand Contamination Event Hazard Chart"
- α "Questions for Evaluating Studies of Alternative Handwashing Approaches"
- α "Scientific, Regulatory and Behavioral Considerations of Hand Hygiene"
- α "HCC- 2014 Hand Hygiene Committee Roster"
- α "Report-Hand Hygiene Committee (HHC)"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 052  
Issue: 2014 III-010**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

HHC-3 Recommended Foodservice Glove Language Changes to the Food Code

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

The CFP Hand Hygiene Committee (HHC) was charged with determining what glove criteria or standards would need to be met for a glove to be considered a utensil and not require handwashing before donning. The HHC was also charged with determining if/when double gloving procedures would be acceptable without an additional handwash.

In the current Food Code, *single-service glove* is included under the definition of a utensil, but is not itself defined. The HHC identified various types of gloves used in retail food service (e.g., tightly fit, loose fit, loose fit mitts) as well as equipment and emerging processes that could allow for donning and removing a secondary glove(s) without contamination of the hands or previously-donned gloves. The HHC also identified there was a difference between gloves used solely as a barrier to bare-hand contact versus use as a secondary barrier to prevent contamination of hands/gloves when touching contaminated items such as raw animal foods. The HHC identified specific areas in the FDA Food Code where amendments and definitions can provide further clarity to regulators and retail food stakeholders. Prevention of cross-contamination is essential in foodservice, and explicitness in the Food Code can help reduce potential risk.

**Public Health Significance:**

The main purpose of washing hands is to cleanse the hands of soil, pathogens and chemicals that can potentially cause disease. Transmission of pathogenic bacteria, viruses and parasites to food from contaminated surfaces, raw food, or ill workers by way of improperly washed hands continues to be a major factor in the spread of foodborne illnesses.

Regulators and retail foodservice stakeholders reference the FDA Code for guidance and clarity on appropriate approaches for removal or reduction of potential pathogens from hands. Therefore, the FDA Code should be inclusive of clarifying language to assure the reader understands intent.

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

that a letter be sent to the FDA requesting the 2013 Food Code be amended as follows (using underlining for additions and strike through for language deletion):

1. Add a definition for "foodservice glove"

"Foodservice Glove" means a non-porous, SINGLE-USE covering worn over the front and back of the hand during FOOD preparation or service, with the intention of preventing cross-contamination.

2. Add a provision for a double-glove procedure to the 2013 FDA Food Code:

The use of a loose-fit FOODSERVICE GLOVE - used over or in addition to a FOODSERVICE GLOVE for the purposes of allowing a FOOD EMPLOYEE to switch tasks without a necessary FOODSERVICE GLOVE change or handwashing. The loose-fit FOODSERVICE GLOVE must be capable of being removed or disposed of without contamination to the primary FOODSERVICE GLOVE, hands or forearms.

3. Amend Section 2-301.14(G) "When to Wash" to allow for a handwashing exception during the double gloving procedure when no hand or glove contamination has occurred.

4. Replace the term "soiled equipment" in 2-301.14 (E) with "contaminated equipment" and change the food code language of "changing tasks" in 2-301.14(F) to "switching from raw to RTE foods" as follows:

2-301.14 When to Wash.

Food employees shall clean their hands and exposed portions of their arms as specified under § 2-301.12 immediately before engaging in food preparation including working with exposed food, clean equipment and utensils, and unwrapped single-service and single-use articles<sup>P</sup> and:

(E) After handling ~~soiled~~contaminated equipment or utensils; <sup>P</sup>

(F) During food preparation, as often as necessary to remove soil and contamination and to prevent cross contamination when ~~changing tasks~~ switching from RAW to READY-TO-EAT foods; <sup>P</sup>

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 049  
Issue: 2014 III-011**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Re-create - Hand Hygiene Committee (HHC)

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

The CFP Hand Hygiene Committee has identified specific issues pertaining to the hand hygiene requirements in the Food Code that require continued Conference deliberation. A 2014-2016 CFP Hand Hygiene Committee should be created by the Conference to continue the work on these initiatives.

**Public Health Significance:**

The main purpose of washing hands is to cleanse the hands of soil, pathogens and chemicals that can potentially cause disease. Transmission of pathogenic bacteria, viruses and parasites to food from contaminated surfaces, raw food or ill workers by way of improperly washed hands continues to be a major factor in the spread of foodborne illnesses. The 2012-2014 Hand Hygiene Committee believes that the necessary ground work was established during its deliberations to make informed recommendations regarding hand hygiene clarifications in the Food Code.

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

re-creating the Hand Hygiene Committee and charged with the following:

1. Work in collaboration with the FDA to:
  - a. Ascertain if additional definitions are necessary to clarify the hand hygiene procedures listed in the Food Code.
  - b. Use current research including the documents created by the Committee 2012-2014 (Hand Contamination Event Hazard Chart; Questions to Consider when Evaluating Studies of Alternative Handwashing Approaches; and Scientific, Regulatory and Behavioral Consideration of Hand Hygiene Regimes) to explore if the mandate to wash hands after touching face/hair can be modified.
  - c. Identify any recent credible research for "when to wash" moments in the Food Code, and document if this research can be used to justify modifications to the Food Code.
2. Report back the Committee's findings and outcomes to the 2016 Biennial Meeting of the Conference for Food Protection.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 053  
Issue: 2014 III-012**

**Council Recommendation:** Accepted as Submitted \_\_\_\_\_ Accepted as Amended \_\_\_\_\_ No Action \_\_\_\_\_  
**Delegate Action:** Accepted \_\_\_\_\_ Rejected \_\_\_\_\_

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**Title:**

Establish a Standard for Handwashing Effectiveness

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

Codifying a standard for a minimum pathogen removal would help operators make their handwash regimen choices based on science. It also helps researchers and local authorities search for innovative alternative products and protocols.

The minimum Food Code handwash standard, in Section 3-301.11, would then have a science-based expression of its outcome, hands clean enough to safely serve the public.

This standard would also help professionalize staff training on the "How To Wash" topic by focusing on the outcome.

**Public Health Significance:**

Better-washed hands reduce the risk of foodborne outbreaks.

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

that a letter be sent to the FDA recommending moving content from the 2013 Food Code Annex, Section 3-301.11, into an appropriate location within the main body of the Code to state: "Handwashing as specified in the Food Code will reduce microbial contamination of the hands by 2-3 logs."

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 056  
Issue: 2014 III-013**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Establish Foundational Hand Hygiene Definitions

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

Operators need to know that there are more options available in how to wash hands, beyond that covered in the Cleaning Procedure of the Food Code Section 2-301.12 (A) " ... shall clean their hands... for at least 20 seconds, using a cleaning compound in a handwashing sink that is equipped as specified under § 5-202.12 and Subpart 6-301. Cleaning procedure... Rinse under clean, running water... Apply an amount of cleaning compound... Rub vigorously for at least 10-15 seconds... Thoroughly rinse... dry using a method as specified under § 6-301.12."

Enhancements in performance of the basic handwash technique (§ 2-301.12) can be achieved by adding time, friction (as in adding a nailbrush step or the use of a paper towel to dry), and better choices from the vast array of cleaning compounds and materials available.

A final step of antiseptic application can be added as another combination option. This would open up a selection of handwashes from which the operator can choose based on documented effectiveness and risk.

A similar option would be unlocked with a simple differentiating definition of hand cleansing. The use of towelettes is an example of a process better positioned under the generic of hand cleansing.

**Public Health Significance:**

Clarity in process descriptions between handwashing and hand cleaning opens more doors to research and the development of products and processes best suited to serve the public in the many away-from-home situations in which they choose to eat and drink.

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

that a letter be sent to the FDA recommending the addition of two generic definitions to the 2013 Food Code in Section 1-201.10, as follows (new language is underlined):

1. "Handwashing" means the removal of contaminants with soap and water.
2. "Hand cleansing" means the removal of contaminants with means other than soap and water.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 062  
Issue: 2014 III-014**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Amend the water temperature requirement of handwashing sinks

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

Amend paragraph 5-202.12 of the 2013 Food Code to lower the minimum water temperature of handwashing sinks to at least 29.5°C (85°F).

**Public Health Significance:**

The temperature of the water for handwashing is not scientifically associated with a reduction in soil and microflora on hands as documented in multiple studies and review papers.

The CDC has recognized that hot water is not necessary for clean hands and provides the following guidance for hand washing:

Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap (<http://www.cdc.gov/handwashing/when-how-handwashing.html>)

Several studies have documented that as the water temperature increased, skin irritation also increased. Skin irritation could lead to cracks, dryness, irritation and a reduced desire to wash hands frequently.

In food establishments, handwashing is an important food safety practice and specific procedures for handwashing are included in the 2013 Food Code in Section 2-301.12. Section 2-301.12(B)(4) mentions washing hands with warm water and does not specify a temperature. In addition, details are provided about using a cleanser, vigorous rubbing, length of time, and creating friction which are all documented in the scientific literature to be important variables in effective handwashing.

Many studies have evaluated the effect of water temperature on the reduction of microflora on hands. Michaels (Michaels *et al.*, 2002, *Food Service Technology*, 2, p. 139-149) and Todd (Todd *et al.*, 2010, *Journal of Food Protection*, 73(10) p. 1937-1955) evaluated handwashing and wash water temperature and determined no significant effect of the water temperature. Most studies evaluated temperatures between 29.5°C (85°F) and 54.5°C (130°F), although some older studies went as low as 4.5°C (40°F).

It is well known that food inspectors and auditors appreciate having a temperature to measure when inspecting handwashing faucets. Given that there are several research studies supporting temperatures of 29.5°C (85°F), we request that the minimum temperature be lowered to 29.5°C (85°F) at this time.

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

That a letter be sent to the FDA requesting that Section 5-202.12 of the 2013 Food Code be amended to the following (new language is underlined; language to be removed is in strikethrough format):

5-202.12 Handwashing Sink, Installation.

(A) A handwashing sink shall be equipped to provide water at a temperature of at least 29.5°C (85°F) ~~38°C (100°F)~~ through a mixing valve or combination faucet. Pf

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**Attachments:**

- α "Michaels 2002"
- α "Todd 2010"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 065  
Issue: 2014 III-015**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Lower Handwash Water Temperature Minimum

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

The handwashing minimum water temperature in Section 5-202.12 of the Food Code, states " ... equipped to provide water at least 38°C (100°F) ..." This is interpreted by both operators and inspectors as the definitive base for effectiveness of the handwash while the goal is largely user comfort. All temperatures between a common ambient and 107°F are sufficiently comfortable. As to cleaning effectiveness, the body's 98.6°F heats the soap and initial scrub-water. Suspended contaminants are easily and comfortably rinsed away at room temperature.

Operators would then more freely specify hygienic touch-free, water saving electronic faucets as they do in Europe - saving almost a gallon of water with each handwash. Right now, the Food Code interpretations are minimizing their use and the industry is wasting huge amounts of water.

**Public Health Significance:**

More frequent handwashing protects both the public and staff. Professional kitchen and staff restroom faucet taps are easily contaminated and become a source of infecting others directly or via ready-to-eat food or drink. Visually contaminated taps clearly discourage handwashing. Electronic touch-free faucets provide an effective solution along with speed of delivery and protection against scalding. All these benefits encourage compliance.

If electronic faucets are used regularly, water temperature follows presets. If they are used rarely, the water will be delivered at ambient temperatures. An ambient temperature of 68°F is well within the comfort and effectiveness ranges.

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

that a letter be sent to the FDA recommending the 2013 Food Code be amended as follows (language to be deleted is in strikethrough format; language to be added is underlined)

Section 5-202.12 Handwashing Sink, Installation

(A) A HANDWASHING SINK shall be equipped to provide water at a temperature of at least ~~38°C (100°F)~~ 20°C (68°F) through a mixing valve or combination faucet.

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**Attachments:**

a "Quantification and Variability Analysis of Bacterial Cross-Contamination"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 087  
Issue: 2014 III-016**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Hand Drying With Disposable Paper Toweling

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

Better handwashing protocols specify disposable paper towels or continuous towel systems as they add a valuable friction factor, significantly increasing cleaning, perhaps even doubling it when measured in log reduction. This is a benefit unavailable to all styles of air dryers, warm air or air blade. For this reason the Department of the Army in Technical Bulletin (TB) MED 530 specifies either disposable paper or continuous fabric roll towels be used at all handsinks used by employees.

The effectiveness of the additional cleaning is inversely proportional to the duration of scrub times. We know by observation that few are washing their hands for 20 seconds with 10-15 second scrub times as prescribed in Section 2-301.12 of the 2013 Food Code. This makes the paper towel an important adjunct to cleaning as well as facilitating good and fast drying.

**Public Health Significance:**

Poorly rinsed food-handling hands increases the risk of transfer of loosened contaminants directly to food or frequently touched shared surfaces, thus risking the public's health. Now that we know the outbreak-leading pathogen, norovirus, is living for longer periods on both animate and inanimate surfaces, more effective protocols are in order.

Most quick-serve and casual dining restaurants have restrooms used jointly by customers and food workers. Both groups need good handwashing where norovirus is the primary concern

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

that a letter be sent to the FDA recommending the 2013 Food Code be amended as follows (language to be deleted in strikethrough format):

6-301.12 Hand Drying Provision.

Each HANDWASHING SINK or group of adjacent HANDWASHING SINKS shall be provided with:

(A) Individual, disposable towels; Pf

(B) A continuous towel system that supplies the user with a clean towel; Pf

(C) ~~A heated air hand drying device; Pf or~~

~~(D) A hand drying device that employs an air-knife system that delivers high velocity, pressurized air at ambient temperatures.~~

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**Attachments:**

- α "European Tissue Symposium; Univ. of Westminster Hygiene Study"
- α "The Hygienic Efficacy of Different Hand Drying Methods"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 091  
Issue: 2014 III-017**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Hand Cleanse-Sanitize Protocol Not Requiring Running Water

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

Food service situations with compromised potable water supply are many and growing as operators respond to the public's demand to have safe food convenient to their daily trail. This results in food being prepared and served in venues without running water for handwashing. Gloves are not the full answer as when they are damaged or contaminated or a task change is required, there is no reasonable option to clean hands between glove changes.

A range of compromised water systems were approved by jurisdictions around the country based on the presence of water rather than its effectiveness. The flow rate in these options is normally nothing close to the effective flow rate of 2.0 gallons per minute, specified in the Uniform Plumbing Code (UPC). There is no supporting effectiveness data for any of these water-compromised variations, including the \$5,000+ low-water flow portable handsink solutions.

The most common interpretation of an "approved method" for handwashing at venues without running water is a jug of water actuated by manually depressing a release button or lever, a cleaning agent, toweling and a waste receptacle to catch wastewater. Inconvenience limits use.

A cleanse-sanitize protocol was developed for the US Military in 2006 and picked up by special water-short venues in the Southern Nevada Health District, including use by Clark County Schools during water outages. Along with years of use, several independent research studies have been added, confirming the cleanse-sanitize antimicrobial effectiveness against bacteria and viruses.

Separate studies also identify three hand sanitizers effective on norovirus, the best of those three was selected by Clark County and other noro-concerned operators like the cruise ships and the world's largest 5 star resort - the Venetian and Palazzo properties. This protocol's superior convenience elevates compliance.

Under the 2013 FDA Food Code, Subparagraph 2-301.16 (A)(3) requires hand antiseptics "Be applied only to hands that are cleaned as specified under § 2-301.12.<sup>Pf</sup>"

It has been demonstrated, documented and published in credible, peer-reviewed journal (Journal of Food Protection) that effective hand cleansing, "equivalent or superior" to handwashing with soap and water as specified in Section 5-203.11, can be achieved by

applying an excess of alcohol based hand sanitizer as the cleaning agent, scrubbing for 15 seconds, wiping on a single-use towel, followed by an application of alcohol based hand sanitizer following normal label usage instructions.

The latest testing of this hand cleansing/degerming technique shows it to be effective in the presence of organic food soils. This adds an additional safety factor to support incorporation of the method into food safety practices.

This protocol is not a substitute for handwashing in stationary facilities where cleaning can be accomplished per Section 2-301.12. The same is true for the use of chemically treated disinfectant towelettes per Section 5-203.11(C).

**Public Health Significance:**

Potential contamination of ready-to-eat foods is increased in situations where access to running water is limited or unavailable. The new proposed option increases the odds of effective hand degerming in those situations, including its use between single-use glove changes at catered events.

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

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

5-203.11 Handwashing Sinks

(D) When food exposure is limited and handwashing sinks are not conveniently located, such as at outdoor events, mobile or temporary food service, and some vending machine locations, employees may use a regimen using hand antiseptic as the cleansing agent wherein this step is treated as a handwash with full scrubbing action for 15 seconds and then, while wet, wiped off with a single-use paper towel, immediately followed by a second application which is allowed to dry per standard label instruction.

(1) Said hand antiseptic shall meet requirements of Section 2-301.16.

(2) Said hand antiseptic shall have supporting test data indicating statistical equivalence to a standard handwash in hand degerming.

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**Attachments:**

- α "SaniTwice: A Novel Approach"
- α "2012 JEP Edmonds"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 045  
Issue: 2014 III-018**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Clarify hand washing requirement when donning gloves

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

The 2013 FDA Food Code section 2-301.14 (H) requires hand washing before donning disposable gloves. This requirement does not differentiate the use of disposable gloves for ready-to-eat foods from dedicated disposable gloves used for working with raw meat, poultry or fish products. Some food establishments require their food handlers to wear dedicated (and often colored) disposable gloves when working with raw products to prevent the hands from directly touching the raw food and serve as a barrier between the food and the hands. In this case, the disposable glove is acting like a utensil to prevent bare hand contact with raw foods and prevent cross contamination. The gloves are removed and discarded after completing the raw product handling task. There is no need to require hand washing immediately before donning disposable gloves that will be worn to handle raw food products.

**Public Health Significance:**

Washing hands before donning disposable gloves for working with raw meat, poultry or fish products provides no food safety benefit since the raw food products will be cooked to ensure food safety. The purpose of wearing disposable gloves when working with raw foods is to prevent the hands from getting contaminated from the raw products. However, it does make sense to require handwashing before donning disposable gloves for working with cooked or ready-to-eat foods since in this case the food will not be cooked and the washing hands will help to further reduce the risk of human contamination of the food from hands.

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

that a letter be sent to FDA requesting the 2013 Food Code be amended as follows (new language is in underline format):

2-301.14 When to Wash

(H) Before donning gloves to initiate a task that involves working with ready-to-eat FOOD and when changing tasks; <sup>P</sup> and

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 054  
Issue: 2014 III-019**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Clarify hand washing requirement switching from raw to ready-to-eat foods

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

The 2013 FDA Food Code, section 2-301.14 (G), requires hands to be washed when switching from working with raw foods to working with ready-to-eat foods. There are no exceptions to this requirement even when precautions are taken to prevent cross contamination. For example, even if bare hand contact with raw food is prevented by the use of dedicated tongs or single-use disposable gloves which can be removed without contaminating hands, employees must still wash hands when switching from working with raw foods to working with ready-to-eat foods.

A rationale for this requirement is that hands could still become contaminated when removing the glove. This will only happen, however, if the person removing the disposable gloves touches the area of the gloves that touched the raw product. This can be easily prevented by peeling the glove inside out from the back of the wrist or shaking off the glove when the glove is removed. On the other hand, if hands directly touch raw foods or contamination of the hands is not prevented when working with raw foods then the current requirement for washing hands when switching from working with raw food to working with ready-to-eat food must be followed.

It is not uncommon for food handlers to cook raw foods and also participate in other food handling tasks such as sandwich assembly. In these operations it is often impractical for hand washing to take place each time a raw food is handled and before conducting other tasks that may involve ready-to-eat foods. The most effective way to prevent cross contamination is to ensure that the hands do not directly touch the raw product thus negating the food safety need to wash hands after this task.

**Public Health Significance:**

Using dedicated tongs or properly removed disposable gloves to handle raw foods can prevent the hands from coming into contact with the raw product and becoming contaminated. Requiring hand washing when switching from raw to cooked foods, even if dedicated tongs or disposable gloves are used, provides no additional food safety benefit and may even serve to discourage the use of these barriers when handling raw products since hands still have to be washed anyway.

The recent study on Ground Beef Handling and Cooking Practices in Restaurants in Eight States published in the Journal of Food Protection showed that no hand washing was observed between the handling of ground beef and either ready-to-eat foods or cooked ground beef in 62% of restaurants where bare hands were used to handle ground beef. This data indicates that focus on preventing bare hand contact with raw foods through the proper use of dedicated tongs or disposable gloves would be a more effective control than hand washing after handling raw food products with bare hands. ("Ground Beef Handling and Cooking Practices in Restaurants in Eight States" study is attached).

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

that a letter be sent to FDA requesting the 2013 Food Code be amended as follows (new language is in underline format):

2-301.14 When to Wash

(G) When switching between working with raw FOOD and working with READY-TO-EAT FOOD if bare hand contact with raw food is not prevented through the use of dedicated utensils or single use disposable gloves which can be easily removed without contaminating hands;<sup>P</sup>

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**Attachments:**

- α "Ground Beef Handling and Cooking Practices in Restaurants in Eight States"

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**Conference for Food Protection  
2014 Issue Form**

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Issue: 2014 III-020**

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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Double Barrier Gloving Exception

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

Tasks such as, but not limited to, cooking burgers on a grill require handling of both raw and ready-to-eat product by the same person.

The use of an added secondary utensil, a loose-fit foodservice glove or mit over a snug foodservice glove, is for the purpose of allowing the food handler to switch tasks without a glove change and a handwash. The secondary barrier must be capable of being donned and removed without contamination to the primary foodservice gloves, hands, or forearms.

The loose fitting mit/glove can also be used on its own as a single-use foodservice glove as well as an upgrade from a tissue.

**Public Health Significance:**

Uninterrupted workflow allows the worker to keep the focus on the priority of thorough cooking and food-safe handling. It also creates time to do more thorough handwashes between glove changes. Both raise the probability of safer food being served.

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

that a letter be sent to the FDA recommending that the 2013 Food Code be amended to include an exception in Section 2-301.14 "When to Wash", to read (new language in underline format):

(J) Except when a secondary barrier, glove or mit, is donned and removed without contaminating the primary glove or hand.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 004  
Issue: 2014 III-021**

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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Reduced Minimum Temperature for Microwave Steam Cooking of Seafood

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

This is a resubmission of the issue presented at the 2012 biennial meeting of the Conference for Food Protection with the addition of supporting research to answer the questions posed by Council III members. Section 3-401.12 of the 2013 edition of the FDA Food Code requires that raw animal foods, including seafood, heated via microwave energy must attain an internal temperature of at least 165°F. However, traditional steam heating of seafood products need only attain an internal temperature of 145°F. A paper was recently published that summarized the results of a study that was conducted to evaluate the effectiveness of steam heat processing of seafood within a covered pan containing water with the energy generated via microwaves [see attachment 1]. The study demonstrated that when water was added in a ratio of 30ml per pound of seafood product and placed within a covered container in a microwave oven, microwave energy effectively converted the water to steam and thoroughly cooked the product within 4 minutes (2 minutes cooking time plus 2 minutes holding time). Internal product temperatures in excess of 145°F were consistently recorded at each of seven sites along the products. The study showed that there was no appreciable difference between the cooking of seafood in a conventional steam oven and that of cooking seafood in a covered pan containing a measured quantity of water with microwaves used as the steam generating energy source. Additional research was conducted in 2013 (publication pending in Journal of Food Protection) utilizing microwave ovens of different energy levels to evaluate the steam cooking effectiveness of each [see attachment 2]. Four microwave ovens were utilized in the evaluation including a 3200 watt commercial unit and three non-commercial units generating 1100 to 1200 watts of energy. The seafood was steam cooked for time periods of .5 to 5 minutes in each of the four microwave ovens. The results demonstrated that seafood placed within a covered container with sufficient water added to cover the bottom of the pan could be effectively and consistently steam cooked to temperatures of 145°F (without a post cook hold time). Steam cooking time was dependent upon the energy rating of the microwave oven and the amount of product placed within the covered container.

**Public Health Significance:**

The FDA Food Code permits seafood products to be safely cooked in a conventional steamer to an internal temperature of 145°F. The study referenced above demonstrated that heat transfer within seafood products via microwave generated steam in a covered pan with water added was comparable to the heat transfer within a convention steamer.

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

that a letter be sent to FDA requesting that the 2013 Food Code be amended as follows to address the steam cooking of seafood using microwaves as the energy source (new language underlined):

Section 3-401.15 Alternative Procedure for the Microwave Cooking of Seafood

Raw seafood steam cooked in a microwave oven shall be:

(A) Placed within a microwave safe covered container with the addition of a sufficient amount of water to cover the bottom of the pan and maintain a saturated steam environment; and

(B) Steam heated to a temperature of at least 62.8°C (145°F) in all parts of the food.

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**Attachments:**

α "Utilization of Steam Heat Generated via Microwave Energy"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 080  
Issue: 2014 III-022**

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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

When partial cooking is actually incubation

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

Amend FDA Food Code section 3-401.11(D) to prevent holding partially cooked foods in the temperature danger zone for more than 1 hour before service and to ensure partially cooked fish is treated for parasite destruction.

**Public Health Significance:**

To meet consumer demand many operators serve partial or under-cooked meats and fish. Through false logic some operators mistakenly believe that it is safe to undercook foods using any time or temperature providing they adhere to the Food Code section 3-401.11 (D). This false logic can result in partially cooking a food at a temperature in the danger zone for a lengthy period of time. For example cooking a fish filet to 110°F for 5 minutes is one thing; however leaving a dozen of these filets at that temperature for 2 hours would be considered incubation not cooking.

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

that a letter be sent to the FDA requesting the 2013 Food Code be amended as follows (new language is underlined; language to be removed is in strikethrough format):

3-401.11 Raw Animal Foods

*(D) A raw animal food such as raw egg, raw fish, raw-marinated fish, raw molluscan shellfish, or steak tartare; or a partially cooked food such as lightly cooked fish, soft cooked eggs, or rare meat other than whole-muscle, intact beef steaks as specified in ¶ (C) of this section, may be served or offered for sale upon consumer request or selection in a ready-to-eat form if:*

*(1) As specified under §§ 3-801.11(C)(1) and (2), the food establishment serves a population that is not a highly susceptible population;*

*(2) The food, if served or offered for service by consumer selection from a children's menu, does not contain comminuted meat; <sup>Pf</sup> and*

*(3) The consumer is informed as specified under § 3-603.11 that to ensure its safety, the food should be cooked as specified under ¶ (A) or (B) of this section; ~~or~~ and*

*(4) The FOOD, if partially cooked, is not subjected to temperatures above 41°F and below 135°F for more than 1 hour before service, and*

(5) The food, if raw fish, raw-marinated fish, partially cooked or marinated partially cooked fish, is treated for or exempt from, parasite destruction as specified in ¶¶ 3-402.11 (A and B); or

*(46) The regulatory authority grants a variance from ¶ (A) or (B) of this section as specified in § 8-103.10 based on a HACCP plan that:*

*(a) Is submitted by the permit holder and approved as specified under § 8-103.11,*

*(b) Documents scientific data or other information showing that a lesser time and temperature regimen results in a safe food, and*

*(c) Verifies that equipment and procedures for food preparation and training of food employees at the food establishment meet the conditions of the variance.*

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 112  
Issue: 2014 III-023**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Amend Food Code - Consistency with FSIS Cooking Temperatures

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

The Food Safety Inspection Service (FSIS) is proposing that the FDA 2013 Food Code § 3-401.11 *Cooking* be reorganized to identify which instructions apply to intact and non-intact meat and poultry products, revise the minimum time and temperatures for cooking meat and poultry products to reflect FSIS cooking guidance, and refer to FSIS cooking guidelines for additional appropriate time and temperature combinations. These changes would harmonize the Food Code with FSIS cooking guidelines and provide more flexibility for retail and food service institutions to use other time and temperature combinations to cook meat and poultry products.

Making the Food Code instructions consistent with FSIS regulatory framework and cooking guidance will decrease confusion and help ensure that the products are cooked properly to destroy pathogens that could cause foodborne illness.

FSIS also notes that it has proposed new requirements for labeling beef products that have been mechanically tenderized so that consumers and retailers are aware of which products are mechanically tenderized and so that validated cooking instructions will be included on the label. The proposed Food Code changes would be consistent with the proposed rule.

**Public Health Significance:**

FDA 2013 Food Code section 3-401.11(A)(1) applies to fish and meat, including game animals, and specifies that the products can be cooked to 63°C (145°F) for 15 seconds. This time and temperature combination is only appropriate for intact portion cuts of meat. Although there are exceptions in 3-401.11(A)(2) for non intact products, it is not clear that the instruction applies only to intact products. As most meat products are considered non-intact as a result of mechanical tenderization or chemical injection, clarification is needed indicating that the cooking temperature specified in this section is for intact portion cuts only.

Section 3-401.11(A)(2) applies to mechanically tenderized meats and specifies that they should be cooked at 68°C (155°F) for 15 seconds. However, according to the FSIS Guidance on Safe Cooking of Non-Intact Meat Chops, Roasts, and Steaks, non-intact products should be held at 68°C (155°F) for 17 seconds. Other time and temperature combinations in the table would also provide a 5-log reduction of *Salmonella* in these

products. Therefore, FSIS and FDA recommend that time the product is held is increased to 17 seconds to be consistent with the table, and the other time and temperature combinations from the table in the FSIS guidance are provided.

Section 3-401.11(A)(3) applies to poultry products and recommends that they are cooked at 74°C (165°F) or above for 15 seconds. According to the FSIS guidance in the Time-Temperature Tables for Cooking RTE Poultry Products, poultry products can be cooked to 74°C (165°F) instantaneous to achieve a 7-log reduction of *Salmonella*. Therefore, FSIS is recommending deleting the 15 second dwell time from the minimum criteria specified in that subparagraph. This change is also consistent with CFP Issue #2002-I-33, which recommended that USDA and FDA work together to establish instantaneous cooking temperatures for animal products that have minimum dwell time of 15 seconds. In addition, FSIS and FDA are recommending that retailers have the option of cooking poultry products using the other time and temperature combinations in the FSIS poultry tables.

Section 3-401.11(B) applies to roast beef, corned beef and other products and indicates that they should be cooked using the time and temperature combinations in the table. These time and temperature combinations are from FSIS Appendix A and achieve a 6.5-log reduction of *Salmonella*, however only some of the time and temperature options have been provided. FSIS and FDA recommend that all of the time temperature options from Appendix A are provided.

#### References

FSIS Appendix A Compliance Guidelines for Meeting Lethality Performance Standards for Certain Meat and Poultry Products, 1999. Found at:

[http://www.fsis.usda.gov/wps/portal/frame-redirect?](http://www.fsis.usda.gov/wps/portal/frame-redirect?url=http://www.fsis.usda.gov/OPPDE/rdad/FRPubs/95-033F/95-033F_Appendix_A.htm)

[url=http://www.fsis.usda.gov/OPPDE/rdad/FRPubs/95-033F/95-033F\\_Appendix\\_A.htm](http://www.fsis.usda.gov/OPPDE/rdad/FRPubs/95-033F/95-033F_Appendix_A.htm)

FSIS Time-Temperature Tables for Cooking Ready-to-Eat Poultry Products, 2005. Found at: [http://www.fsis.usda.gov/wps/wcm/connect/9ab2e062-7ac8-49b7-aea1-f070048a113a/RTE\\_Poultry\\_Tables.pdf?MOD=AJPERES](http://www.fsis.usda.gov/wps/wcm/connect/9ab2e062-7ac8-49b7-aea1-f070048a113a/RTE_Poultry_Tables.pdf?MOD=AJPERES)

FSIS Guidance on Safe Cooking of Non-Intact Meat Chops, Roasts, and Steaks, 2009.

Found at: <http://www.fsis.usda.gov/wps/wcm/connect/bb25d746-dcb0-4d1b-8833-c4bf1ceb1140/5-log-Temperature-Time-Table-Salmonella.pdf?MOD=AJPERES>

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

that a letter be sent to FDA recommending that the 2013 Food Code, Section 3-401.11 *Cooking*, be amended as follows:

- 1) Reorganize the section to identify which instructions apply to intact meat and poultry products and non-intact meat and poultry products;
- 2) Revise the minimum time and temperature requirements for mechanically tenderized meat, poultry, and roast beef to reflect USDA Food Safety Inspection Services (FSIS) regulations and cooking guidance for these products; and
- 3) Refer to appropriate FSIS Guidance Documents for additional appropriate time and temperature combinations not currently specified in the Food Code.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 105  
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<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Create Committee for Raw and Undercooked Meat and Poultry Products

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

The Food Safety and Inspection Service (FSIS) is recommending that a committee be formed to evaluate the effectiveness of consumer warning messaging for raw and undercooked meat and poultry products, develop recommendations for the FDA Food Code Annex, and suggest changes to the Food Code language. Although the Food Code recommends cooking meat and poultry products thoroughly, they may be served raw or undercooked with a consumer warning (section 3-603.11). FSIS and the Centers for Disease Control and Prevention (CDC) recommend that consumers do not eat raw or under cooked meat or poultry, however these products continue to be associated with food borne illness outbreaks.

**Public Health Significance:**

Pathogenic (illness-causing) bacteria such as *Salmonella*, Shiga-toxin producing *Escherichia coli* (STECs), *Campylobacter jejuni*, *Listeria monocytogenes* and *Staphylococcus aureus* are found in foods of animal origin.

*E. coli* O157:H7 is of particular concern in ground beef and is the most well known STECs. STECs produce a toxin in the intestine that severely damages the lining of the intestine causing the disease, hemorrhagic colitis, and may also cause Hemolytic Uremic Syndrome particularly in children.

*E. coli* O157:H7 bacteria survive in both refrigerator and freezer temperatures. Temperatures between 40°F and 140°F (4.4° and 60°C) are conducive for bacterial growth. In order to keep bacteria levels low, ground beef should be stored at 40°F (4.4°C). It is important to thoroughly cook ground beef to an internal temperature of 160°F (71.1°C) to kill bacteria. Illnesses caused by *E. coli* O157:H7 have been linked to the consumption of undercooked ground beef.

In January 2013, two Michigan retail establishments recalled a combined 1,050 pounds of ground beef products. A total of 22 persons in 6 states were infected with the outbreak strain of *Salmonella* Typhimurium with the most illnesses originating in Michigan (9) followed by Wisconsin (8). No deaths were reported, but 50% of ill persons were hospitalized according to a report from the CDC. Several illnesses occurred from consuming a raw ground beef dish, Kibbe or Kibbeh, at a restaurant that acquired the raw

beef from the two Michigan retail establishments. December 2012 - January 2013, there was also an *Escherichia coli* O157:H7 outbreak associated with the seasonal consumption of Raw Ground Beef in a dish known as tiger meat in Wisconsin. CDC warns consumers to avoid eating raw ground beef in dishes such as "cannibal sandwiches" also known as "tiger meat"; a Midwest holiday tradition that continues to be associated with outbreaks. FSIS and CDC also do not recommend consumers eat other raw or undercooked beef products. The 2013 Food Code specifies that raw or lightly cooked animal foods may be served or offered for sale in a ready-to-eat (RTE) form if the consumer is informed as specified under section 3-603.11. However, consumers may disregard these warnings or not understand the risk from consuming raw or under cooked meat and poultry products, leading to foodborne illness outbreaks.

**References:**

<http://www.cdc.gov/salmonella/typhimurium-01-13/advice-consumers.html>

[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6248a4.htm?s\\_cid=mm6248a4\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6248a4.htm?s_cid=mm6248a4_w)

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

that a CFP committee be formed and charged with the following:

- 1) Review and evaluate the literature on the effectiveness of consumer warning messages including, but not limited to, raw and under cooked meat and poultry products;
- 2) Develop recommendations for the FDA Food Code Annexes that include use of technologies such as high pressure processing or irradiation for the treatment of raw or undercooked meat or poultry products; and
- 3) Report back to the 2016 Biennial Meeting with recommendations for new FDA Food Code language related to preparation of raw meat and poultry products.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 106  
Issue: 2014 III-025**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Create Committee for Safe Cooking and Preparation of Rotisserie Chicken

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

The Food Safety and Inspection Service (FSIS) is recommending the formation of a committee to develop a guideline for properly cooking rotisserie chicken to minimize the potential for *Salmonella* contamination because of undercooking or cross-contamination following the cooking step.

Although the FDA Food Code provides recommendations for cooking poultry products, rotisserie chicken is often cooked in large volumes in high-throughput areas, especially at retail (where hundreds of rotisserie chickens may be produced per day). There is a need for more guidance describing how these products can be safely cooked and handled, especially when large volumes of the product are made.

The guideline should identify steps that retailers can take to help ensure that rotisserie chicken is cooked thoroughly and handled using sanitary conditions that do not allow *Salmonella* adulteration of the product. The guideline should also provide specific actions about sanitation procedures for the equipment and utensils used to cook and handle rotisserie chicken.

**Public Health Significance:**

*Salmonella* infections are the most frequently reported cause of foodborne illness with an estimated 1 million illnesses attributed to the bacteria (Scallan et. al., 2011). FSIS has made it a priority goal to reduce public exposure to *Salmonella* from both Ready-to-Eat (RTE) and Non-RTE products (*Salmonella* Action Plan).

On October 7<sup>th</sup>, 2013, FSIS issued a Public Health Alert for chicken products produced at three facilities in California. Products were distributed to retail outlets in California, Oregon, and Washington State. On October 12<sup>th</sup>, FSIS announced that a retail store recalled 9,043 units (approximately 39,755 lbs.) of rotisserie chicken products that may be contaminated with a strain of *Salmonella* Heidelberg. This recall was initiated due to concerns about a group of *Salmonella* Heidelberg illnesses that may be associated with the consumption of rotisserie chicken products prepared in and purchased at the retail store. This group of illnesses was part of a larger cluster of *Salmonella* Heidelberg illnesses that were known to be drug resistant. According to a December 18, 2013 Centers for Disease Control and Prevention (CDC) report, a total of 416 persons infected with seven outbreak strains of

*Salmonella* Heidelberg were reported from 23 states and Puerto Rico, with 74% of ill persons reported from California. A total of 38% of ill patients were hospitalized, and no deaths were reported.

The 2013 Food Code recommends that poultry is cooked to an internal temperature of 165°F (74°C). However, further instructions are needed to ensure that all poultry is cooked thoroughly, and that rotisserie ovens are loaded properly to avoid cross contamination of cooked product from raw product. In addition, guidance is needed to avoid cross contamination of the product after it is removed from the oven, sanitation of equipment and utensils, and hot holding of the product before it is sold to consumers.

**References:**

Scallan E, Hoekstra RM, Angulo FJ, Tauxe RV, Widdowson MA, Roy SL, Jones JL, and Griffin PM. Foodborne illness acquired in the United States-major pathogens. *Emerging Infectious Diseases*, Volume 17, Number 1, pages 7-15, January 2011.

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

that a CFP Committee be formed and charged with the following:

1) Development of a new guideline for retailers to properly cook rotisserie chicken and prevent the product from becoming contaminated after the cooking step. The guideline should incorporate the following:

- a) Steps to minimize potential for contamination and cross contamination during: receiving, storage, processing, cooking, and packaging of rotisserie chicken;
- b) Steps to properly sanitize rotisserie chicken equipment and utensils;
- c) Information about *Salmonella* contamination and cross contamination;
- d) Steps to hot hold the product until it is purchased by consumers; and
- e) Other relevant information identified by the committee.

2) Reporting back to the 2016 biennial meeting with its recommendations.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 006  
Issue: 2014 III-026**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Potable Ice

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

Much of the ice produced by automatic ice making machines in retail and food service facilities is contaminated. Multiple investigations have reported this contamination and it is a well-known problem in the industry. There are two significant contributing factors to quotidian ice contamination. The first is attributable to widespread use of carbon filters that remove all disinfectants from the water supply before the water inlet to the automatic ice making EQUIPMENT. The second contributing factor is the gross inadequacy of cleaning and sanitizing frequency recommendations or requirements as stated in the ice machine EQUIPMENT manufacturers owners manuals.

**Public Health Significance:**

Section 3-202.16 of the FDA Food Code states that the use of DRINKING WATER for making ICE is a Priority item. Drinking water is commonly known as potable water per section 1-201.10, and is further defined as complying with the requirements of National Primary Drinking Water Standards (NPDWR) as found in the Code of Federal Regulations Title 40 parts 9, 141 and 142. The Federal Register Vol 63 No. 241 on page 69393 makes reference to required DRINKING WATER disinfectant levels stating: "*those requirements include: (1) requirements for a maintenance of a disinfectant residual in the distribution system...*". It goes on to state that the public health rationale for the requirement includes the control of Guardia (3 logs) and viruses (4 logs). Norovirus (NoV) is a significant risk factor for contaminated ice and has been implicated in morbidity and mortality. So too is Hepatitis A (HAV) an organism of concern for contaminated ice especially where food handlers have direct hand contact with ice or it is otherwise unprotected from cross contamination. Carbon filter manufacturers promote the sale and use of their filters by referring to disinfectant residuals in water as unwanted contaminants that adversely affect the taste of water and ice. Many beverage syrup manufacturers support this concept as they seek to ensure consistent taste quality of their beverages as dispensed. These quality objectives are contrary to consumer safety objectives unless an approved water disinfection method is introduced after the carbon filter but in advance of the ice making process.

Manufacturers of commercial ice making and dispensing equipment typically recommend cleaning of their food contact surfaces once or twice a year. This conflicts with 4-602.11 paragraph (A) (5) that requires equipment food contact surfaces to be cleaned "*At any time during the operation when contamination may have occurred*". Ice machine EQUIPMENT food contact surfaces are wet much of the time and much of their wetted surface is exposed to ambient air and whatever particulates may be carried aloft. Many operators and jurisdictions are all too familiar with the consequence of the risk doubling associated with unprotected water and inadequate food contact surface cleaning and sanitizing. It is biofilm and with it a cacophony of organisms including molds, yeasts, viruses and bacteria including *pseudomonas*, all bound together in a symbiotic matrix with inorganic precipitates that support colonial expansion. The result is an increased risk of disease transmission. Coincidentally, a review of typical epidemiological surveys finds that few surveys even consider ice as a risk factor in disease transmission. Yet freezing does not inactivate microorganisms. It preserves them leaving their virulence intact.

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

that a letter be sent to FDA amending the 2013 Food Code Section 3-202.16 ANNEX 3 Public Health Reasons as follows (using underline format for new language):

Freezing does not invariably inactivate virus or kill Microorganisms. When microorganisms are in water that is made into ice, their virulence is almost always preserved until the ice melts thereby releasing them in a virulent form. Accordingly, ice that is used as food or ice that comes in contact with food to cool it must be produced from DRINKING WATER as defined in the National Primary Drinking water Regulations. Activated carbon filters remove disinfectants from water rendering the water vulnerable to cross contamination from many microorganisms including virus, molds, yeast and bacteria. When activated carbon filters are installed on the inlet water line to ice making equipment, there must be a further approved treatment to the water before it is made into ice to ensure that the ice produced is potable

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**Attachments:**

- a "Microbiology of Ice from Retail Stores and Self-Service Vending Machines"

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 058  
Issue: 2014 III-027**

<b>Council Recommendation:</b>	Accepted as Submitted _____	Accepted as Amended _____	No Action _____
<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Chemicals for Treating Fruits and Vegetables

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

An update to the language of the 2013 Food Code, Section 7-204.12, to clarify the jurisdiction between the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) with respect to the use of antimicrobials to treat fruit and vegetables. Chemicals used for washing, treatment, storage and processing fruits and vegetables have a very complex regulatory jurisdiction. The way the food code is currently written does not accurately depict this complex jurisdiction and has the potential to mislead industry into using unregulated chemicals on fruits and vegetables. This update would also help minimize confusion with field inspectors and all other regulators who work in this field and help ensure that a safer food product exists in the marketplace.

**Public Health Significance:**

Some chemicals may be poisonous or toxic if not used properly and in accordance with the appropriate regulations and/or in accordance with the appropriate label instructions as dictated by the appropriate regulatory authority based upon the specific use. The lack of clear and explicit guidance surrounding chemicals used for treating fruits and vegetables not only creates confusion, but allows for misinterpretation. This can also lead to the improper use of chemicals and may subsequently cause public health issues such as food adulteration, or potentially acute and chronic health effects to both the consumer and the employees within the food facilities.

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

that a letter be sent to the FDA requesting Section 7-204.12 of the 2013 FDA Food Code be amended as follows (new language is in underline format):

1) Amend Paragraph (A).

(A) Chemicals, including those generated onsite, used to wash, peel or treat raw, whole or processed fruits and vegetables shall:

(1) Be an approved food additive listed for this intended use in 21 CFR 173, <sup>P</sup> or

(2) Be generally recognized as safe (GRAS) for this intended use, <sup>P</sup> or

(3) Be the subject of an effective food contact notification for this intended use (only effective for the manufacturer

or supplier identified in the notification), <sup>P</sup> and  
(4) Meet the EPA requirements in 40 CFR 156 Labeling  
Requirements for Pesticide and Devices. <sup>P</sup>

(B) No changes.

2) Amend to Add New Paragraphs (C), (D), and (E).

(C) Chemicals used as antimicrobials for treating processed fruits and vegetables shall only have FDA clearance (no EPA registration needed) as specified in 7-204.12 (A).

(D) Chemicals used as antimicrobials for treating fruits and vegetables that are raw agricultural commodities (RACs) shall have EPA registration only (no FDA clearance needed) if the:

(1) Treatment of a RAC occurs when either applied in the field, at a facility that is not a food processing facility, or applied during transportation between the field and a food processing facility.

(E) Chemicals used as antimicrobials for treating fruits and vegetables that are raw agricultural commodities (RACs) shall have an EPA registration and an FDA clearance if the:

(1) Treatment of a raw agricultural commodity occurs in a food processing facility

(2) Treatment of the process water contacts the RAC or processed fruit and vegetable.

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**Conference for Food Protection  
2014 Issue Form**

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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Salmonella as a reportable illness (as opposed to Salmonella Typhi and NTS)

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

Amend paragraph 2-201.11 (A) (2) of the 2013 Food Code to combine *Salmonella* Typhi and nontyphoidal *Salmonella* (NTS) into one category as *Salmonella* as a reportable illness for action by the Person in Charge. Guidance for *Salmonella* illnesses would include the most restrictive criteria unless the employee can provide documentation from a health practitioner demonstrating the diagnosis is NTS and providing a release to return to work.

**Public Health Significance:**

Nontyphoidal *Salmonella enterica* serotypes are the *Salmonella* serotypes most commonly associated with foodborne illnesses and most frequently isolated in CDC clinical samples. For this reason, NTS was added to the 2013 food code as a reportable illness in addition to the "Big 5". *Salmonella* Typhi has been a reportable illness in previous editions of the Food Code; however, it is much less frequently associated with foodborne illness than NTS. Alternatively, infections from *Salmonella* Typhi can be more severe than that of NTS. *Salmonella* Typhi and *Salmonella* Paratyphi cause Typhoid fever (FDA Bad Bug Book, 2ed. pg. 9-13

<http://www.fda.gov/downloads/Food/FoodborneIllnessContaminants/UCM297627.pdf>,  
[http://www.cdc.gov/foodborneburden/PDFs/FACTSHEET\\_A\\_FINDINGS\\_updated4-13.pdf](http://www.cdc.gov/foodborneburden/PDFs/FACTSHEET_A_FINDINGS_updated4-13.pdf))

In the 2011 FoodNet report (*Salmonella* Typhi was ranked number 18 out of the top 20 laboratory confirmed *Salmonella* serotypes and accounted for 0.8% of the cases ([http://www.cdc.gov/foodnet/PDFs/2011\\_annual\\_report\\_508c.pdf](http://www.cdc.gov/foodnet/PDFs/2011_annual_report_508c.pdf)). The other nineteen serotypes were nontyphoidal *Salmonella* serotypes with *S. Enteritidis*, *S. Typhimurium* and *S. Newport* leading the list. In the FoodNet reports for 2009 and 2010, *Salmonella* Typhi accounted for less than 1% with a total of 0.9% of the cases both years. *Salmonella* Paratyphi did not appear on any of the lists of the top 20 clinical isolates ([http://www.cdc.gov/foodnet/PDFs/FoodNetAR2009\\_FINAL.pdf](http://www.cdc.gov/foodnet/PDFs/FoodNetAR2009_FINAL.pdf),  
[http://www.cdc.gov/foodnet/PDFs/2010\\_annual\\_report\\_508c.pdf](http://www.cdc.gov/foodnet/PDFs/2010_annual_report_508c.pdf)).

The CDC estimates that approximately 5,700 cases of Typhoid Fever occur annually in the US. Most cases, up to 75% are acquired while traveling internationally ([http://www.cdc.gov/nczved/divisions/dfbmd/diseases/typhoid\\_fever/](http://www.cdc.gov/nczved/divisions/dfbmd/diseases/typhoid_fever/)). An estimated 1.2

million cases of Salmonellosis (NTS) occur annually in the US. Efforts to prevent foodborne illness should focus on the prevention of illnesses caused by NTS.

The goal is to identify the illnesses that present the highest risk of contamination of food during handling and to exclude workers if they have the symptoms or are diagnosed with these illnesses. NTS are significant foodborne pathogens and adding NTS to the list of reportable illnesses in the 2013 Food Code was appropriate. Listing *Salmonella* Typhi and Nontyphoidal *Salmonella* as separate illnesses in a list of six could lead to confusion among the intended audience and challenges during training. The goal is to encourage reporting of symptoms and illness diagnosis so that employees can be excluded or restricted and reassigned if appropriate. Having numerous criteria for restrictions and exclusions depending on exposures and diagnosis is also counterproductive. Restriction and exclusion criteria should be simple so that it can be followed universally by all food establishments. Restriction and exclusion criteria should be based on sound science and based on guidelines from the CDC.

The CDC in the List of "Pathogens Transmitted by Food Contaminated by Infected Persons Who Handle Food, and Modes of Transmission of Such Pathogens"

(<http://www.cdc.gov/foodsafety/pdfs/pathogens-by-food-handlers-508c.pdf>) listed NTS and *Salmonella* Typhi separately and in a footnote under *Salmonella* Typhi referred to the Kauffmann-White scheme for designation of Salmonella serotypes. While the CDC may list them as separate pathogens, they both are Salmonella serotypes. In addition, the list contains over 20 pathogens and not all of them are listed exactly as they are in the Food Code, e.g. *E. Coli*.

In the case of employee illness with Salmonellosis, since the exclusion and restriction criteria is different for *Salmonella* Typhi and NTS, the most restrictive criteria can be used unless the *Salmonella* has been serotyped and the employee can provide documentation from a health practitioner that the diagnosis is NTS and provide a release to return to work. Listing *Salmonella* Typhi and NTS in paragraph 2-201.11 (A)(2) of the Food Code as *Salmonella* is recommended for several reasons.

1. Big 5 is easy to remember and widely used in training materials
2. Target audience is not familiar with microbiology or the nomenclature of microorganisms
3. The goal is to have employees report the symptoms
4. Most of the time, the diagnosis stops with *Salmonella* and the serotype is not identified
5. Most foodborne illnesses caused by *Salmonella* are NTS
6. *Salmonella* Typhi is rare with less than 1% incidence according to CDC FoodNet surveillance
7. Using two different types of *Salmonella* illnesses as reportable may cause confusing with nomenclature and other serotypes and could lead to incorrect reporting and actions taken.
8. Simple is better with food establishment workers and with training

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

That a letter be sent to the FDA requesting the 2013 Food code be amended as follows (language to be removed is in strikethrough format):

1. 2-201.11 (A)  
(2) Has an illness diagnosed by a HEALTH PRACTITIONER due to:
  - (a) Norovirus, P
  - (b) Hepatitis A virus, P

- (c) Shigella spp., P
- (d) SHIGA TOXIN-PRODUCING ESCHERICHIA COLI,
- (e) Salmonella Typhi; ~~or~~
- (f) nontyphoidal Salmonella; ~~P~~

2. Also, the FDA should work with the CDC to simplify the restriction and exclusion criteria to be easily understood by food establishment management staff and base criteria on sound science.

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**Conference for Food Protection  
2014 Issue Form**

**Internal Number: 074  
Issue: 2014 III-029**

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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Seasoned Cast Iron

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

Amend Food Code section 4-101.12 (Cast Iron, Use Limitation) to approve seasoned cast iron to be used for utensils or food-contact surfaces of equipment whether or not the surface is heated or used for cooking.

A local regulatory authority food facility received a violation from a Maricopa County, AZ Health Inspector in January 2012 for serving a cookie with ice cream on a seasoned cast iron server directly to the consumer.

The Maricopa County violation resulted in the only time that we have been contacted to clarify the use of cast iron in accordance with Food Code provision 4-101.12.

The Maricopa County violation prompted immediate research, thereby learning that the current Food Code has not kept up with technology as it was adopted from the 1976 Food Service Sanitation Manual and has remained the same for over 37 years.

The process of seasoned cast iron renders the current regulations as outdated.

Today, seasoned cast iron is not perceived to be a rough surface due to seasoned cast iron having a smoother Ra value than bare cast iron as well as an easily cleanable surface.

Seasoned cast iron can be commercially cleaned the same as all utensils. The use of low and high temperature commercial dishwashers eliminates the possible transmission of disease and food-borne illnesses such as bacteria and pathogens.

Over time, the routine use of cast iron adds oils from cooking that creates a smoother, less porous surface, while the finish on many cookware surfaces breakdown after continued usage creating a rougher and more porous surface.

**Public Health Significance:**

Equipment and utensils constructed of seasoned cast iron meet the requirements in Food Code Section 4-101.11. Seasoned cast iron cookware and utensils have a natural non-stick, durable, nonabsorbent, easily cleanable surface. Seasoning is used to protect bare cast iron from oxidation and to create a natural non-stick surface that improves with use. Without protective seasoning, cast iron can oxidize during the cleaning process.

Seasoned cast iron utensils and food-contact surfaces are acceptable as surfaces for cooking, preparation and serving. The seasoning layer allows for the cookware to be commercially cleaned by providing a barrier from oxidation. Thus, pathogens and bacteria

will be eradicated. The continued use of cast iron adds oils from cooking that darken the cast iron to a black patina, maintaining the seasoning of the cast iron and creating a lasting non-stick finish.

In 2002, a new innovation in cast iron cookware manufacturing introduced foundry-seasoned cast iron cookware. To achieve this, during the manufacturing process, vegetable oil is sprayed onto the cookware then baked at +600°F to create a natural carbonized, non-stick cooking surface for items such as skillets, grill pans, Dutch ovens and restaurant-quality serving pieces.

Foundry Seasoned cast iron is pre-seasoned in a foundry and mass produced for consumer availability.

A seasoned piece of cast iron cookware is very durable. Modern commercial dishwashers will not harm seasoned cast iron. Commercial dishwashers use primarily chemicals and a sanitization cycle that lasts for approximately 2-4 minutes.

Cast iron is cleaned the same as all other utensils in the food service industry by means of pre-soaking/pre-spraying, mild scrub as necessary, commercial dishwasher (low or high temperature), and air dried.

Low temperature dishwashing kills bacteria and viruses during the final sanitizing rinse when using approved sanitizing chemicals consisting of bleach (chlorine) or quats (quaternary ammonium compounds). High temperature dishwashing kills bacteria and viruses with hot water temperature of 180°F - 190°F as per FDA Food Code provisions 4-501.110 and 4-501.112.

Liquid dye penetrant has been utilized by independent metallurgists from a certified Level 1 and 3 Non Destructive Examination testing labs to demonstrate the porosity of cast iron and stainless steel using a fluorescent dye penetrant and color contrast penetrant.

Liquid dye penetrant is a Non Destructive Examination (NDE). It is a water washable solvent that may be used to test ferrous and non-ferrous components to evaluate surface flaws in any non-porous material. Cast Iron and stainless steel are non-porous materials.

Liquid dye penetrant examinations are used with equal success on such metals as aluminum, brass, copper, cast iron, stainless steel and titanium.

Liquid penetrant industry standard for evaluating rounded indications denote maximum dimension of rounded indications shall be considered as its size. Indications are rejectable as defects if individual indications > 1/8" (3.17mm).

Liquid dye penetrant examinations show that cast iron and stainless steel have a level of porosity. On a microscopic level, all metals have a level of porosity.

Samples of cast iron and stainless steel were tested and documented by 3rd party metallurgists and NDE Testing labs using liquid penetrant examinations. Data documented by these labs show all cast iron indications to be < 1/8" (3.17mm); rejectable flaws in accordance with liquid penetrant industry standards.

The seasoned cast iron examined by means of liquid penetrant, using a dye penetrant standard dwell time of 30 minutes, did not oxidize from the examination and did not oxidize after commercial cleaning. The Seasoning remained on cast iron throughout this examination process.

Porosity is not a factor in the cleanability of cast iron as shown from liquid penetrant examination and ability to withstand commercial cleaning.

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17. NDT Resource Center.  
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## **Recommended Solution: The Conference recommends...:**

That a letter be sent to FDA requesting the 2013 Food Code be amended as follows (new language is underlined/language; language to be deleted is in strikethrough format):

1. Amend Section 4-101.12 Cast Iron, Use Limitation  
Delete existing paragraph (A)

~~(A) Except as specified in 4-101.10 (B) and (C) of this section, cast iron may not be used for UTENSILS or FOOD CONTACT SURFACES of EQUIPMENT.~~

Amend and renumber existing paragraphs (B) and (C)

~~(B) (A) Unseasoned (bare) cast iron may be used as a surface for cooking.~~

~~(C) (B) Unseasoned (bare) cast iron may be used in UTENSILS for serving FOOD if the UTENSILS are used only as part of an uninterrupted process from cooking through service.~~

Add new paragraphs (C), (D) and (E)

(C) Seasoned cast iron may be used for utensils or food-contact surfaces of equipment and may be washed in a warewashing machine.

(D) Seasoned cast iron from which the seasoning has been removed shall be re-seasoned.

(E) Seasoned cast iron utensils or food-contact surfaces of equipment shall be cleaned with nonscratching cleaning aids.

2. Add a new definition to paragraph 1-201.10(B):

"Seasoned Cast Iron" means the treatment of a cast iron utensil or food contact surface with a stick-resistant coating formed from fat and oil, creating a polymerized coating on surface of cookware.

3. Amend Annex 3, 4-101.12

Equipment and utensils constructed of cast iron meet the requirements of section 4-101.11. Seasoned cast iron utensils and food-contact surfaces are acceptable as surfaces for cooking, preparation and serving. The seasoning layer protects the cookware from oxidation and provides a non-stick surface for cooking. Seasoning is desirable on cast iron cookware and carbon steel cookware to prevent sticking and oxidation. This base coat is initially created by a process of layering a very thin coat of oil on the pan. The oil is carbonized to the metal's surface with high heat. The base coat will eventually develop a more refined coating.

Seasoning may be done by the equipment manufacturer or on-site at the food establishment. To re-season:

1. Use commercial dishwasher clean cycle.
2. Rinse and dry completely.
3. Apply a very thin, even coating of MELTED solid vegetable shortening (or cooking oil of choice) to the cookware inside and out. Too much oil will result in a sticky finish.
4. Place aluminum foil on the bottom rack of the oven (not directly on bottom) to catch any drips.
5. Set oven temperature to 350 - 400 degrees F.
6. Place cookware upside down on the top rack of the oven to prevent pooling.
7. Bake the cookware for at least one hour. After the hour, turn the oven off and let the cookware cool in the oven.
8. Store the cookware uncovered, in a dry place when cooled.
9. Repeat as necessary.

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**Attachments:**

- α "Attachment #2: Porosity PT Level 3 Fluorescent Dye Cast Iron Examination"
- α "Attachment #3: Porosity PT Level 3 Cast Iron After wash Examination"
- α "Attachment #4: Porosity PT Level 3 Stainless Steel Examination"
- α "Attachment #5: Supporting statement - Seasoned Cast Iron cleaning"
- α "Attachment #6: Supporting statement - Seasoned Cast Iron Cleaning"
- α "Attachment #7: Supporting statement - Seasoned Cast Iron Cleaning"
- α "Attachment #8: Supporting statement - Seasoned Cast Iron Cleaning"
- α "Attachment #9: Department of Health and Human Services / Letter dated 9/27"
- α "Attachment #10: 1976 Food Service Sanitation Excerpts"
- α "Attachment #11: PT Examination measurements"
- α "Attachment #12: Official documentation"
- α "Attachment #1: Porosity Analysis Level 1 Contrast Dye Examination"

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**Conference for Food Protection  
2014 Issue Form**

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<b>Delegate Action:</b>	Accepted _____	Rejected _____	

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**Title:**

Designating certain cheeses non-time/temperature control for safety foods

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

Many natural cheeses have pH and water activity ( $a_w$ ) that result in their being classified as time/temperature control for safety (TCS) foods when evaluated using Table B in the definition of "time/temperature control for safety food" in Subpart 1-201.10 (B) of the 2013 FDA Food Code. Retailers would like to store and display these cheeses under non-refrigerated conditions to enhance the cheese flavor and aroma, but are not allowed to do so. The Food Code allows a product assessment to conclusively determine TCS status for any food product. Product assessment studies were done at the University of Wisconsin-Madison using 67 cheeses inoculated with *Staphylococcus aureus*, *Salmonella* spp., *Listeria monocytogenes*, and *Escherichia coli* O157:H7 and stored for up to 15 days at 25°C (77°F). The results of these studies, along with the results of earlier published studies, support the designation of cheeses with specific pH and % salt-in-moisture phase (% SMP) values as non-TCS foods.

A peer-reviewed published survey of the scientific literature (presented at the 2008 CFP Biennial Meeting) suggested that certain types of cheese are non-TCS foods. Many of these recommended cheeses, because they do not support growth of *Listeria monocytogenes*, are already exempted from date-marking requirements (see Table in Annex 3 under Section 3-501.18, based on the FDA/USDA/CDC *Listeria monocytogenes* Risk Assessment). A series of targeted product assessments, done at the University of Wisconsin-Madison according to laboratory methods specified by the FDA (<http://www.fda.gov/Food/FoodScienceResearch/SafePracticesforFoodProcesses/ucm094141.htm>), tested cheeses of many types, including those exempted from date-marking, for their ability to support room-temperature growth of *L. monocytogenes* and other relevant pathogenic bacteria (*Staphylococcus aureus*, *Salmonella* spp., and *Escherichia coli* O157:H7). The results of the product assessments, along with those of relevant product assessments published previously, are described in a paper which has been submitted to the *Journal of Food Protection* for peer review (Non-TCS Cheeses, Supporting Document #1). The product assessment results indicate that cheeses with certain pH and % SMP levels do not support growth of any of the tested pathogens under non-refrigerated conditions. Separate lots of the same cheese type, e.g. Provolone, with different pH and % SMP, may vary in their ability to support pathogen growth. For this reason, we propose that the exemption of certain natural cheeses from being classified as TCS status should be

based on pH and %SMP, not cheese type designation. Critical combination of pH and %SMP for preventing pathogen growth are listed in Non-TCS Cheeses, Supporting Document #2.

### **Public Health Significance:**

Extensive laboratory research at the University of Wisconsin-Madison (Non-TCS Cheeses, Supporting Document #1) has shown that natural cheeses with certain pH and % salt-in-moisture phase (% SMP) values will not support the growth of relevant food-borne pathogenic bacteria (*Listeria monocytogenes*, *Staphylococcus aureus*, *Salmonella* spp., and *Escherichia coli* O157:H7) during storage at 25°C (77°F) for up to 15 days. These storage conditions were intentionally longer and warmer than typical room-temperature storage of cheese in order to be sure that pathogen growth would not occur under slightly abusive temperature conditions. Previous studies (cited in Non-TCS Cheeses, Supporting Document #1) used storage temperatures ranging from 20 to 30°C (68 - 86°F) and yielded results that were consistent with the UW-Madison findings. Data analysis has determined critical combinations of cheese pH and %SMP for preventing pathogen growth under non-refrigerated conditions. Natural cheeses with pH and %SMP at least as restrictive as these critical combinations can be stored under non-refrigerated conditions without increasing the risk of foodborne illness. These critical combinations are listed in Non-TCS Cheeses, Supporting Document #2.

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

That a letter be sent to FDA requesting the 2013 Food Code be amended to add 3(f) under the definition of "Time/temperature control for safety food" in subpart 1-201.10 (B) as follows (new language is underlined):

3 (f) Natural cheeses made from pasteurized cow's milk, that are not ripened with mold, that are not surface-ripened with bacteria, that are not Swiss, emmentaler and related cheeses produced using propionic acid-producing bacterial cultures, and that have pH and % salt- in-moisture phase (SMP) levels meeting one of the following requirements:

pH not greater than 4.60 and % SMP not less than 0.24

pH not greater than 4.70 and % SMP not less than 0.91

pH not greater than 4.80 and % SMP not less than 1.58

pH not greater than 4.90 and % SMP not less than 2.24

pH not greater than 5.00 and % SMP not less than 2.91

pH not greater than 5.10 and % SMP not less than 3.58

pH not greater than 5.20 and % SMP not less than 4.25

pH not greater than 5.30 and % SMP not less than 4.92

pH not greater than 5.40 and % SMP not less than 5.59

pH not greater than 5.50 and % SMP not less than 6.26

pH not greater than 5.60 and % SMP not less than 6.93

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**Attachments:**

- α "Non\_TCS Cheeses, Supporting Document #1.pdf"
- α "Non\_TCS Cheeses, Supporting Document #2.pdf"

*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.*