**Conference for Food Protection**

**2012 Issue Form**

**Internal Number: 104**

**Issue: 2012 III-011**

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

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

**Title:**

ROP 3: Sous Vide - Cook Chill Time and Temperature Control

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

The Reduced Oxygen Packaging (ROP) Committee reviewed the cook chill/sous vide time temperature parameters listed in Section 3-502.12 (D) of the 2009 Food Code relating to conducting ROP for these processes without a variance. The Committee recommends stating that Section 3-502.12 (D) pertains to only 'POTENTIALLY HAZARDOUS FOOD (TIME/TEMPERATURE CONTROLLED FOR SAFETY FOOD).' This would help align it with Sections 3-502.12 (A) and (B)

The Committee also recommends requiring that food be cooked to a temperature listed in Section 3-401.11 (A) and (B) of the 2009 Food Code. Right now Subparagraph 3-502.11 (D)(2)(b) references all four paragraphs of Section 3-401.11. Since paragraphs (C) and (D) in Section 3-401.11 refer to raw or undercooked products, these would not be acceptable cook temperatures.

The main changes the Committee recommends for Cook Chill and Sous Vide fall under Subparagraph 3-502.12(e) of the 2009 Food Code. There is no recommended change to Subparagraph (i) or the current (iv). We do recommend changing Subparagraph (ii). This paragraph currently requires that product be cooled to 34o F within 48 hours and then it can be held for up to 72 hours at 41o F. The Committee recommends allowing storage for up to 7 days at 41o F for product which has been properly cooled within the 6 hour timeframe as outlined in Section 3-501.14 of the 2009 Food Code. Research by Skinner and Larkin and listed in the 'Supplemental Information' attachment to the 2012 CFP issue 'Report - ROP Committee' shows that there is no significant change in pathogen growth between these two procedures.

**Public Health Significance:**

The objective of this issue is to clarify what controls are necessary to ensure the safety of food products packaged using Sous Vide or Cook Chill technologies.

Proposed ROP Committee changes to Section 3-502.12 (D) of the 2009 Food Code limits the following subparagraphs of this section to only potentially hazardous foods (PHF) (time / temperature controlled for safety (TCS) foods). Obviously, if a food is non-PHF (non-TCS), it will not support the growth of pathogens and therefore should not be subject to either variance or ROP provisions of the Food Code.

The change to the 2009 Food Code's Subparagraph 3-502.12 (D)(2)(b) limits items which can be packaged using Sous Vide or Cook Chill technologies to only those foods which are fully cooked. Undercooked, partially cooked or raw foods cannot be safely prepared using sous vide or cook chill technologies so these paragraphs are eliminated and only the paragraphs that provide appropriate thermal lethality are included in this reference, i.e., Sections 3-401.11 (A) and (B).

The change to Subparagraph 3-502.12 (D)(2)(e)(ii) of the 2009 Food Code is driven by conservative science which shows that there is no growth of Clostridium botulinum during the first seven days of storage at 41o F or less. This change is based upon research by Skinner and Larkin which can be found in the 'Supplemental Information' attachment to the 2012 CFP issue entitled Report - ROP Committee (ROP 1). Additionally, Listeria monocytogenes growth is prevented since this pathogen would have been eliminated through the cook step during the sous vide or cook chill process. All other pathogen growth is controlled by storage at temperatures at or below 41o F.

The change to Subparagraph 3-502.12 (D)(2)(e)(iii) of the 2009 Food Code is driven by the original wording now being obsolete and being covered by the change which was made to Subparagraph 3-502.12 (D)(2)(e)(ii) of the 2009 Food Code. The Skinner Larkin model clearly shows that there is no C. botulinum growth during the 7 days after product is cooked and cooled.

Additional changes are recommended in 2012 CFP issue entitled ROP 6: Updates to Food Code Annexes 2 and 3, as follows:

1. Changes to the Public Health Reasons, Annex 3 of the 2009 Food Code, which will explain the rationale for these changes; and
2. References included in the 'Supplemental Information' attached to the Committee's report also be included into Annex 2 of the 2009 Food Code.

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

that a letter be sent to the FDA requesting the 2009 Food Code (as modified by the Supplement issued in 2011) be amended as follows (using underlining for additions and strike through for language elimination):

Cook-Chill or Sous Vide

Section 3-502.12 (D) Except as specified under ¶ (C) of this section, a FOOD ESTABLISHMENT that PACKAGES **POTENTIALLY HAZARDOUS FOOD (TIME/TEMPERATURE CONTROL FOR SAFETY FOOD)** FOOD using a cook-chill or sous vide process shall:

(1) Implement a HACCP PLAN that contains the information as specified under ¶ 8-201.14(D); Pf

(2) Ensure the FOOD is:

(a) Prepared and consumed on the PREMISES, or prepared and consumed off the PREMISES but within the same business entity with no distribution or sale of the PACKAGED product to another business entity or the CONSUMER, Pf

(b) Cooked to heat all parts of the FOOD to a temperature and for a time as specified under § 3-401.11 **(A and B)**, P

(c) Protected from contamination before and after cooking as specified under Parts 3-3 and 3-4, P

(d) Placed in a PACKAGE with an oxygen barrier and sealed before cooking, or placed in a PACKAGE and sealed immediately after cooking and before reaching a temperature below 57°C (135°F), P

(e) Cooled to 5°C (41°F) in the sealed PACKAGE or bag as specified under § 3- 501.14 and ~~subsequently~~: P

(i) Cooled to 1°C (34°F) within 48 hours of reaching 5°C (41°F) and held at that temperature until consumed or discarded within 30 days after the date of PACKAGING;P

(ii) ~~Cooled to 1°C (34°F) within 48 hours of reaching 5°C (41°F), removed from refrigeration equipment that maintains a 1°C (34°F) food temperature and then~~ held at 5°C (41°F) or less for no more than ~~72 hours~~ **7 days**, at which time the FOOD must be consumed or discarded; P

**This issue recommends no additional changes to remainder of Section 3-502.12 (D).**

**Submitter Information:**

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