U.S. FOOD & DRUG ADMINISTRATION

The Next Chapter in Retail Food Safety: Deli Data Insights

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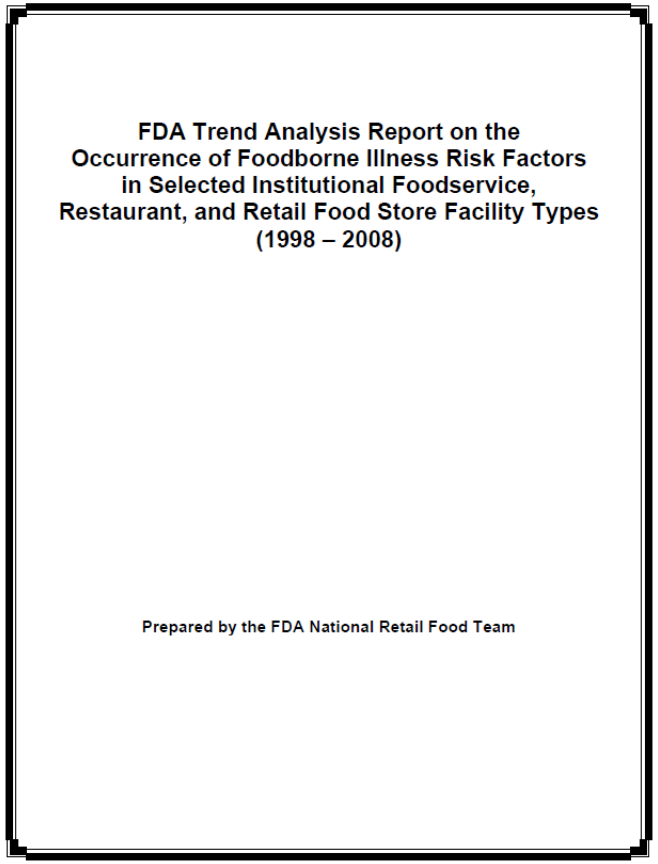
2026 AFDO AEC, Columbus, OH

June 9, 2026

History of the National Retail Risk Factor Study



FDA Trend Analysis Report on the
Occurrence of Foodborne Illness Risk Factors
in Selected Institutional Foodservice,
Restaurant, and Retail Food Store Facility Types
(1998 – 2008)

Prepared by the FDA National Retail Food Team

Background for the Retail Food Store Deli Study

- Collected data in 2019 - 2022
- Retail Food Store Deli
- Objectives
- Intent
- Communications, Outreach, and Education

2019-2022 Deli Data Collection to Assess Trends During 10-Year Study Period

Industry Segment	Facility Type	Initial Data Collection Period (Baseline Measurement)	2ND Data Collection Period	3RD Data Collection Period
Retail Food Store	Deli Department	Oct 1, 2015 to Dec 31, 2016	Oct 1, 2019 to Dec 31, 2022	Oct 1, 2026 to Sep 30, 2027

Facility Type, Risk Category, & Sample Size

Department Type	Description
Deli Department	Areas in a retail food store where foods, such as luncheon meats and cheeses, are sliced for the customers and where sandwiches and salads are prepared on-site or received from a commissary in bulk containers, portioned, and displayed. Parts of the deli department/operation may include: 1. Salad bars, pizza stations, and other food bars managed by the deli department manager, 2. Areas where meat and poultry products are cooked and offered for sale as ready-to-eat and are managed by the deli department manager.

Sample Size

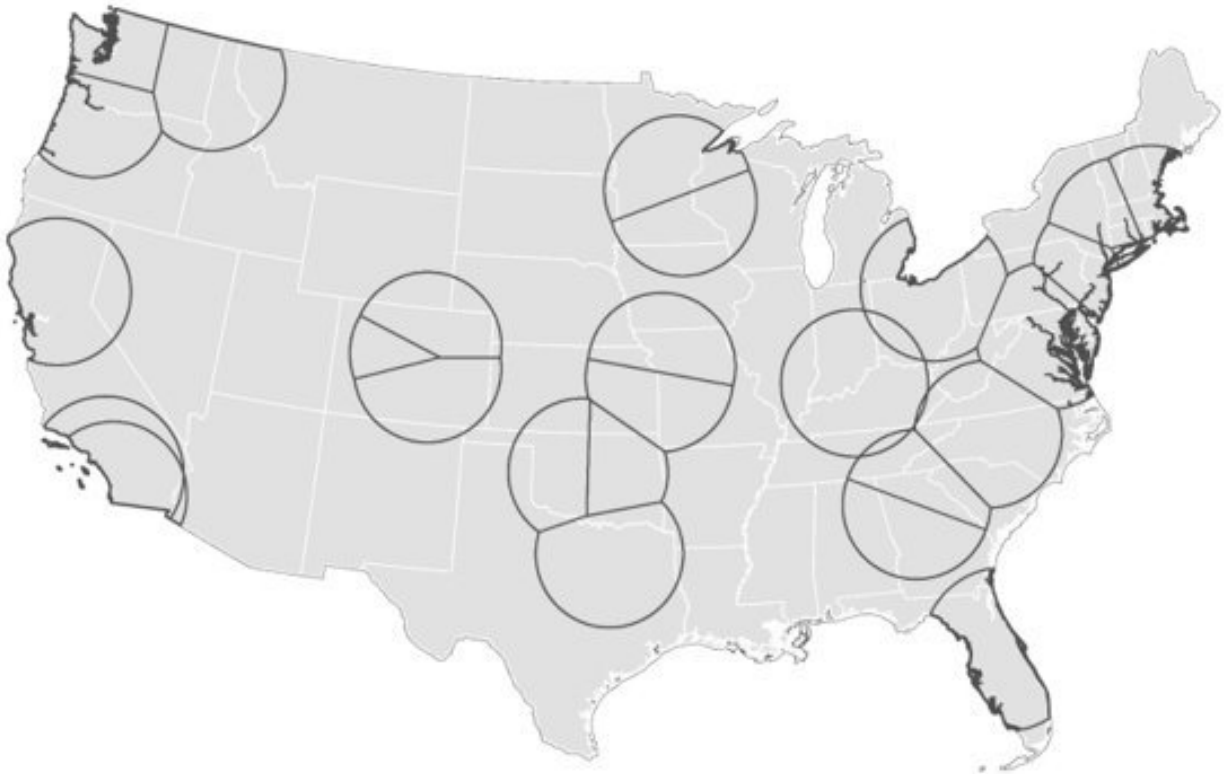
- 438 Delis

95% Confidence (+ or - 5%)

- Minimum of 384 data collections needed

Deli Sampling

- Data collectors – 26 Standardized FDA Retail Food Specialists
- Restaurants randomly selected within 175-mile radius of the Specialist's home location



Study Protocol & Methodology

- Verified eligibility of randomly selected retail food stores
- Contacted regulatory authorities of selected facilities
- Encouraged regulatory authority representative to accompany the Specialist
- Data collections – unannounced, non-regulatory visits
  - ➢ Introductory letter – explained purpose of visit
  - ➢ Industry participation is voluntary participation

Foodborne Illness Risk Factors and the Associated Primary Data Items Examined in the Study

Foodborne Illness Risk Factor	Associated Primary Data Item Numbers and Description
Poor Personal Hygiene	• Data Item #1 – Employees practice proper handwashing. • Data Item #2 – Employees do not contact ready-to-eat foods with bare hands.
Contaminated Equipment/Protection from Contamination	• Data Item #3 – Food is protected from cross contamination during storage, preparation, and display. • Data Item #4 – Food contact surfaces are properly cleaned and sanitized.
Improper Holding Time/Temperature	• Data Item #5 – Foods requiring refrigeration are held at the proper temperature. • Data Item #6 – Foods displayed or stored hot are held at the proper temperature. • Data Item #7 – Foods are cooled properly. • Data Item #8 – Refrigerated, ready-to-eat foods are properly date marked and discarded within 7 days of preparation or opening.
Inadequate Cooking	• Data Item #9 – Raw animal foods are cooked to required temperatures. • Data Item #10 – Cooked foods are reheated to required temperatures.

Data Item Supported by Information Statements

Data Item

IN	OUT	NO	NA	
☐	☐	☐	☐	9. Raw animal foods are cooked to required temperatures

Information Statements

IN	OUT	NO	NA	
☐	☐	☐	☐	9. Raw animal foods are cooked to required temperatures
IN	OUT	NO	NA	Description of Cooking Temperature OBSERVATIONS
☐	☐	☐	☐	A. Raw shell eggs broken for immediate service are cooked to 145°F (63°C) for 15 seconds. Raw shell eggs broken but not prepared for immediate service cooked to 155°F (68°C) for 17 seconds
☐	☐	☐	☐	B. Pork; Fish; Beef; Commercially-raised Game Animals are cooked to 145°F (63°C) for 15 seconds
☐	☐	☐	☐	C. Comminuted Fish, Meats, Commercially-raised Game Animals are cooked to 155°F (68°C) for 17 seconds
☐	☐	☐	☐	D. Poultry; stuffed fish; stuffed meat; stuffed pasta; stuffed poultry; stuffed ratite; or stuffing containing fish, meat, poultry, or ratites; wild game animals are cooked to 165°F (74°C) or above < 1 second (instantaneous).
☐	☐	☐	☐	E. Roasts, including formed roasts, are cooked to 130°F (54°C) for 112 minutes or as Chart specifies and according to oven parameters per Chart *(NOTE: This data item includes beef roasts, corned beef roasts, pork roasts, and cured pork roasts such as ham).*
☐	☐	☐	☐	F. Other Cooking Observations (describe in the Comment Section and Temperature Chart below)

RETAIL FOOD STORE DELI RESULTS 2022

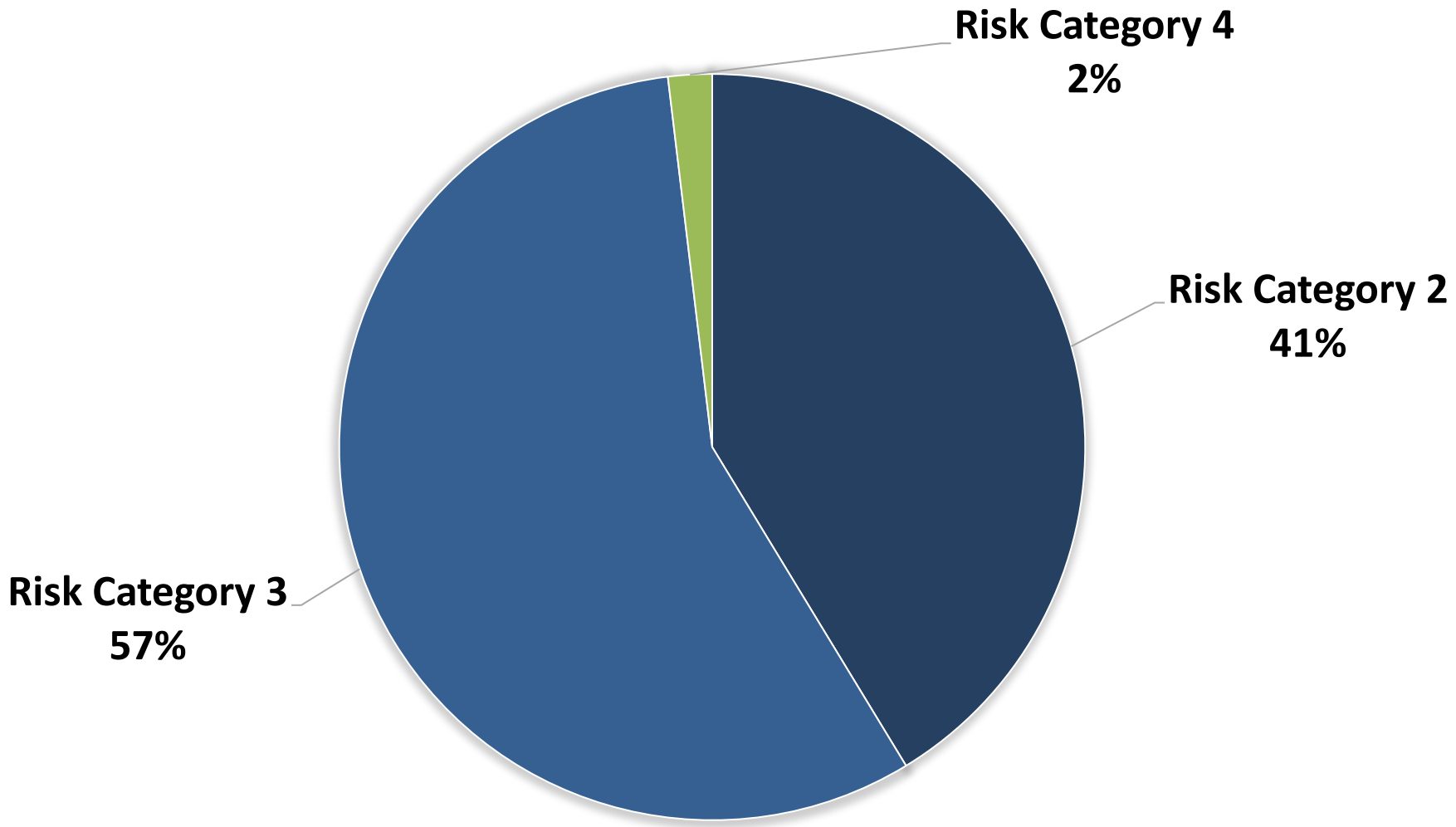
BLUF (Bottom Line Up Front)

- **Best control over**
  - No bare-hand contact with Ready-to-eat (RTE)
  - Raw animal foods cooked to required temps

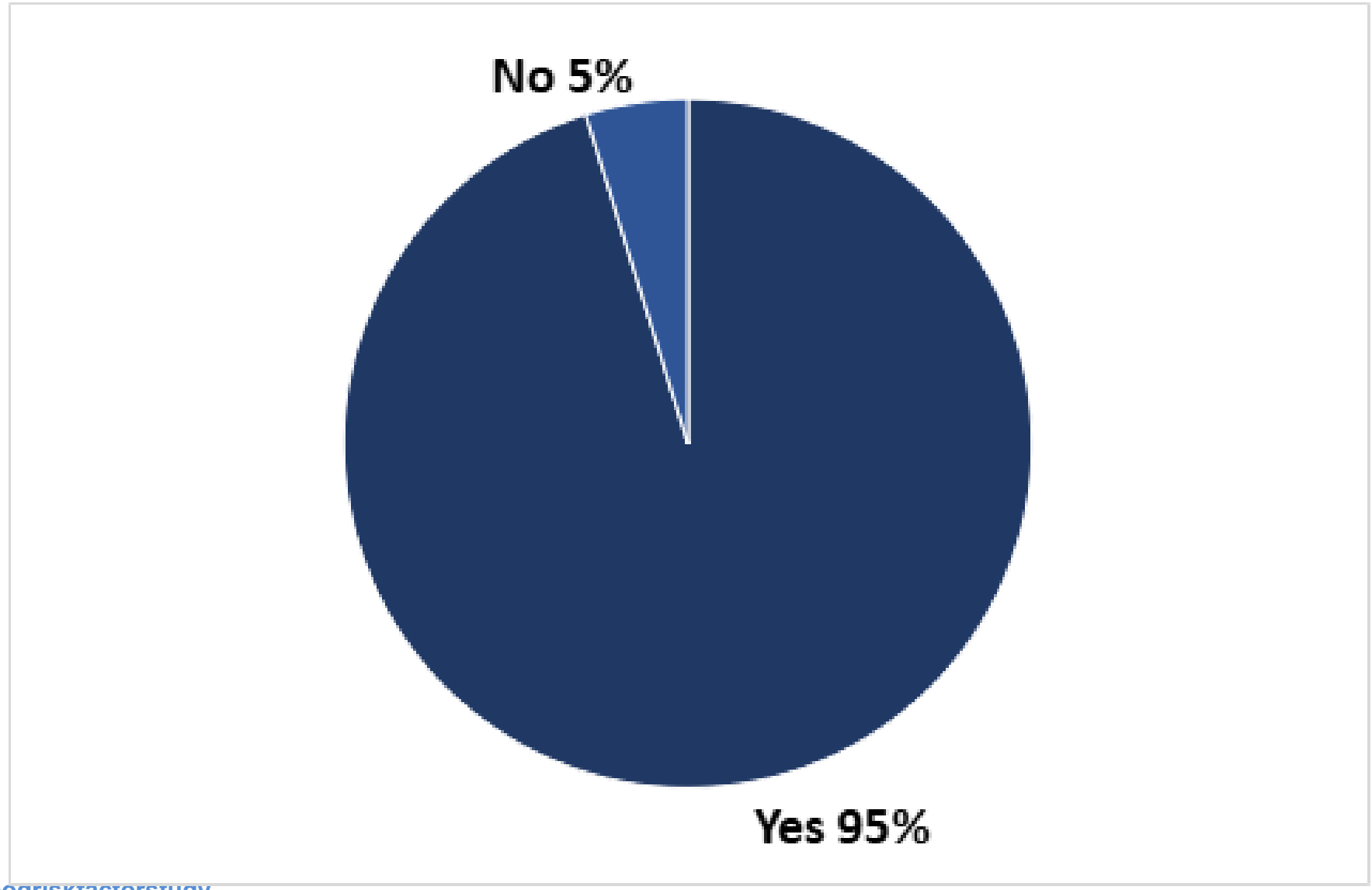
- **Need better control**
  - Employee handwashing (includes both when to wash and how to wash properly)
  - Hot holding
  - Cold holding

- Food Safety Management Systems (FSMS) strongest predictor of items being out of compliance
- Certified Food Protection Manager (CFPM)
- Handwashing (Call to Action!)

Risk Category Results – Retail Deli



Multiple-Unit Results – Retail Deli

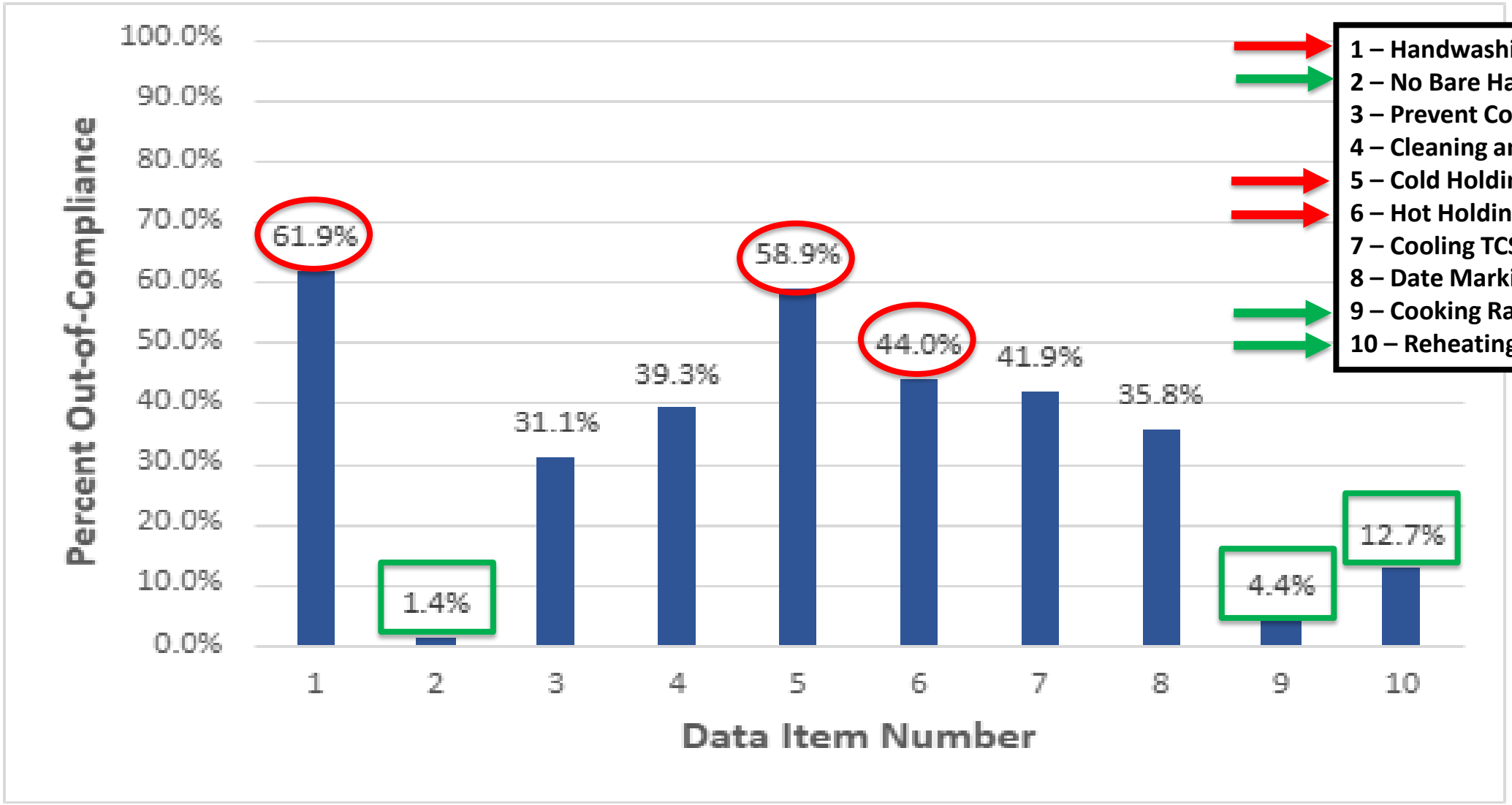


Calculation of Compliance Percentage

$$\text{Percent Out-of-compliance} = \frac{\text{Total Number of Out-of-compliance Observations for the Data Item}}{\text{Total Number of Observations (IN and OUT) for the Data Item}} \times 100$$

If, for example, the data shows **80% out-of-compliance** for the proper cooling of foods this means that there was **at least one observation** of improper cooling of foods **in eight out of 10 establishments** where cooling of TCS foods was observed. The 80% score should not be interpreted to mean that foods were not cooled properly 80% of the time.

Data Items % Out-of-Compliance – Retail Delis



Elements of a Food Safety Management System

- **Procedures (P):** A defined set of actions for accomplishing a task in a way that minimizes food safety risks
- **Training (T):** The process of management's informing employees of the food safety procedures and teaching employees how to carry them out
- **Monitoring (M):** Routine observations and measurements conducted to determine if food safety procedures are being followed and maintained

FSMS Score Description

1 Nonexistent: No system in place or system haphazardly implemented (no defined structure or frequency for implementation)

2 Underdeveloped: System is in early development. Efforts are being made, but there are crucial gaps in completeness and/or consistency

3 Well-developed: System is complete, consistent, and oral or a combination of oral and written

4 Well-developed and Documented: System is complete, consistent, and primarily written

Calculating Food Safety Management System Scores

EXAMPLE – Poor Personal Hygiene Risk Factor

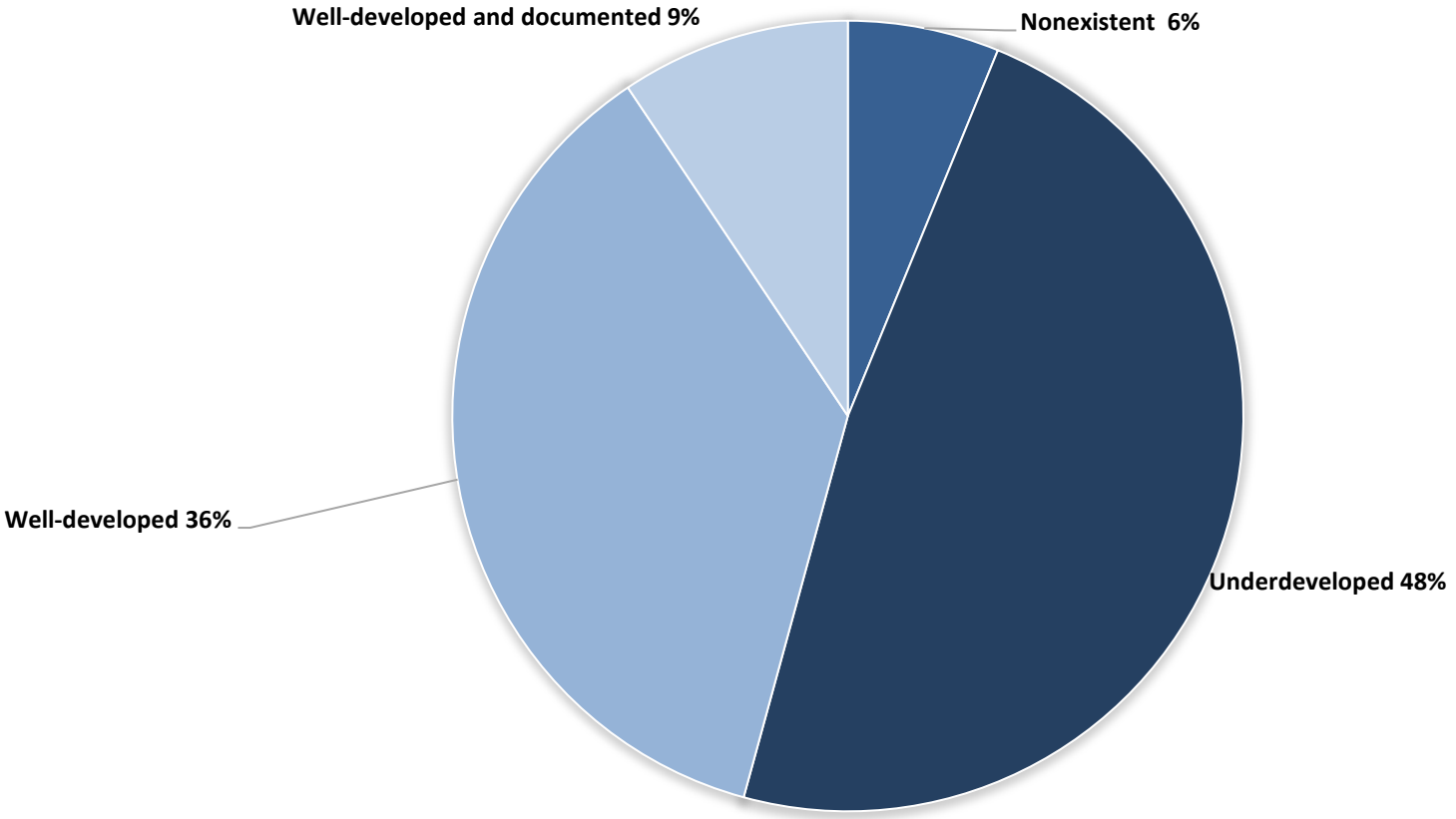
Data Item	Procedures	Training	Monitoring
#1 – Employees practice proper handwashing	*2*	*3*	*3*
#2 – Employees do not contact ready-to-eat foods with bare hands	*2*	*2*	*3*

The score is calculated as the sum of all the PTM ratings divided by the number of ratings given:

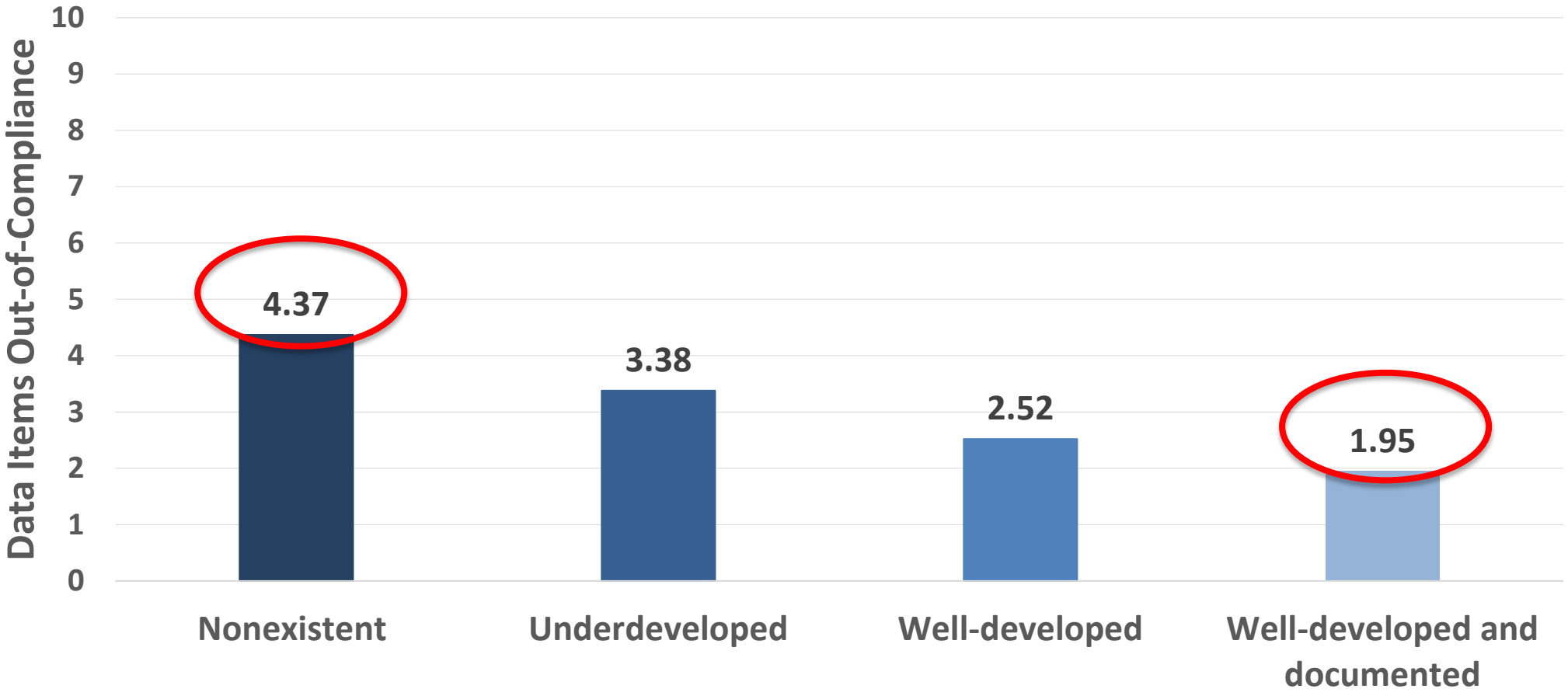
2+3+3+2+2+3 = 15/6 = **2.5**

FSMS Description	FSMS Calculated Score
Non-Existent	1.0
Underdeveloped	>1.0 and <3.0
Well Developed	≥3.0 and <4.0
Well Developed & Documented	4.0

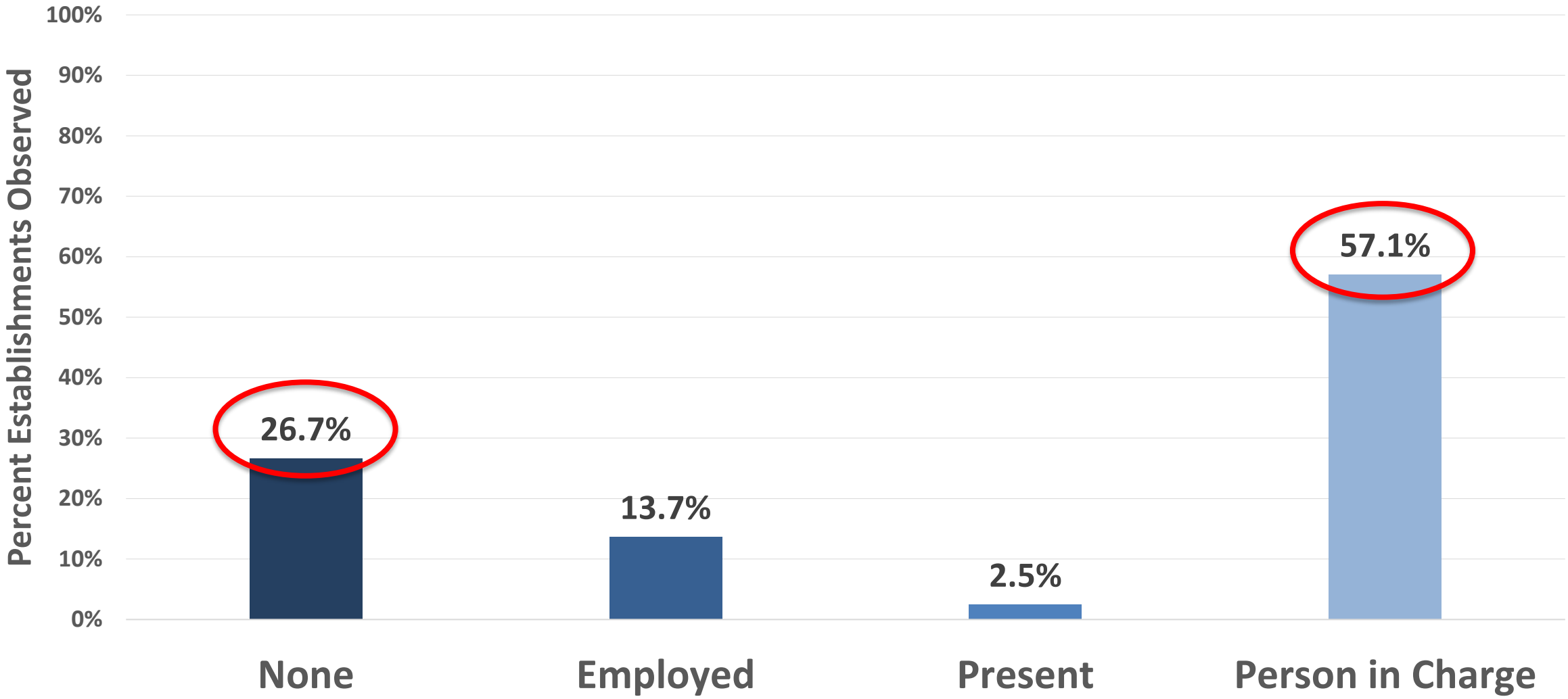
Food Safety Management System – Delis



Average Primary Data Items Out-of-Compliance by Food Safety Management System Category



Certified Food Protection Manager



Median number of primary data items out-of-compliance

Number of Primary Data Items Out-of-Compliance	Number of Delis	%	Cumulative Number of Delis	Cumulative %
0	37	8.4%	37	8.4%
1	56	12.8%	93	21.2%
2	90	20.5%	183	41.8%
3	89	20.3%	272	62.1%
4	69	15.8%	341	77.9%
5	60	13.7%	401	91.6%
6	23	5.3%	424	96.8%
7	11	2.5%	435	99.3%
8	3	0.7%	438	100.0%
9	0	0.0%	438	100.0%
10	0	0.0%	438	100.0%

Key Takeaways

- **Best control over**
  - No bare-hand contact with Ready-to-eat (RTE)
  - Raw animal foods cooked to required temps

- **Need better control**
  - Employee handwashing (includes both when to was and how to wash properly)
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- Food Safety Management Systems (FSMS) strongest predictor of items being out of compliance
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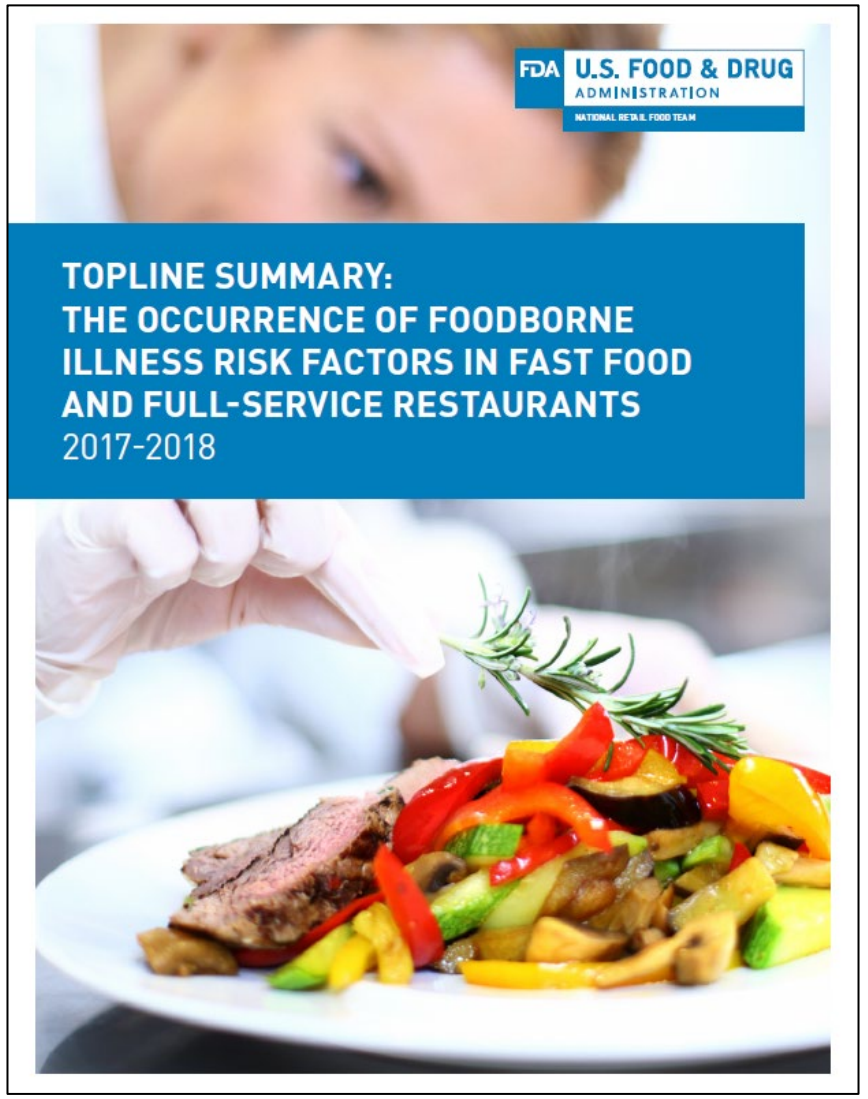
Communications, Outreach & Education

www.fda.gov/retailfoodriskfactorstudy

Topline Summary



FSMS Fact Sheet

Factsheet: The Occurrence of Foodborne Illness Risk Factors in Fast Food and Full-Service Restaurants 2017-2018

FDA U.S. FOOD & DRUG ADMINISTRATION
NATIONAL RETAIL FOOD TEAM

The 2013-2024 FDA Retail Food Risk Factor Study examines the occurrence of foodborne illness risk factors, food safety practices, and behaviors in retail food establishments. In the 2017- 2018 Restaurant Data Collection study, the agency investigated the relationship between food safety management systems (FSMS), certified food protection managers (CFPM), and the occurrence of risk factors and food safety behaviors and practices commonly associated with foodborne illness in restaurants from 2017 to 2018. Data from this study will provide valuable insights that FDA can use to develop educational resources and guidance to improve food safety practices.

Food Safety Management Systems Play a Major Role in Compliance

Inadequate FSMS were the strongest predictor of data items being out-of-compliance in both fast food and full-service restaurants. As shown in the tables, the average number of out of compliance items is greatly reduced when there is a well-developed FSMS. This is true for both fast food restaurants and full-service restaurants.

Restaurants with well-developed FSMS had less than half as many risk factors and food safety practices that were out of compliance than restaurants with non-existent FSMS.

Fast Food Restaurants	Non-existent FSMS	Well-developed FSMS
Average # of out of compliance items	4.5	1.5

Full-Service Restaurants	Non-existent FSMS	Well-developed FSMS
Average # of out of compliance items	5.3	2.2

Impact of a Certified Food Protection Manager

Restaurants with a CFPM present had fewer primary data items out of compliance than those without a CFPM. Restaurants that had a CFPM who was the person in charge at the time of data collection had significantly better food safety management scores than those that did not have a CFPM present or employed.

www.fda.gov/retailfoodriskfactorstudy

Calls to Action for Industry and Regulators

What did the 2017-2018 Restaurant data collection find out about Food Safety Management Systems?

The 2017-2018 restaurant data collection of the National Retail Risk Factor Study found that Food Safety Management Systems (FSMS) were the strongest predictor of the compliance status of risk factors. A FSMS refers to a specific set of actions and or procedures to help achieve active managerial control. While FSMS vary across the retail and food service industry, the consistent components include the purposeful implementation of procedures, training, and monitoring. You can find more information on FSMS here.

Prevention strategies for norovirus are centered on preventing viral contamination and transmission, however there is currently no single effective strategy for preventing foodborne norovirus in food establishments. This is why the FDA Food Code recommends the use of a combination of prevention strategies, and why the development of FSMS to systematically reduce the risk of norovirus is so important.

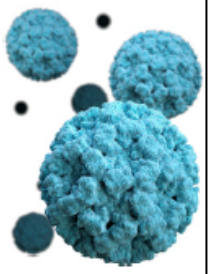
Our study observed that as FSMS development and documentation improves, personal hygiene, and protection from contamination improves. Our study also observed that employee health policies fell short in several areas that could benefit from developing FSMS to address employee health.
See www.fda.gov/retailfoodriskfactorstudy for more information and complete results of our data collection.

What is norovirus and why is controlling it important?

Norovirus is the leading cause of foodborne illness in the United States, **accounting for roughly 52%** of all foodborne illness cases. The CDC estimates 19-21 million cases of gastroenteritis are caused by norovirus each year. These cases in turn cause 109,000 hospitalizations and 900 deaths.

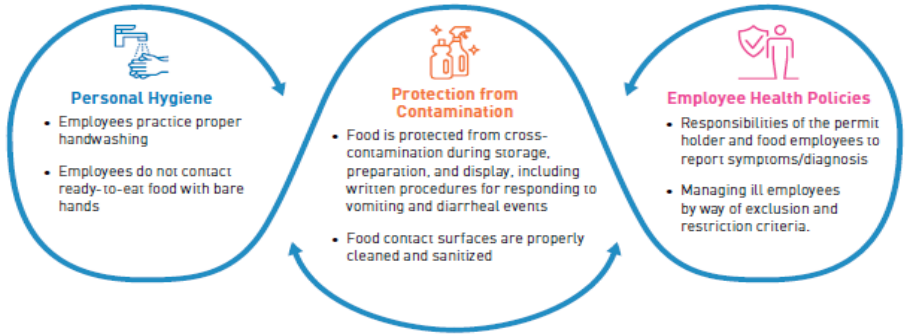
Norovirus infections spread very rapidly. Those infected are contagious from the moment they begin feeling ill through the beginning of recovery. Norovirus can spread by:

- having direct contact with an infected person,
- eating or drinking foods or liquids contaminated with the virus,
- touching objects with norovirus particles on them and then putting contaminated fingers into the mouth,
- or sharing utensils with infected persons.



What does the FDA Food Code outline as norovirus prevention strategies?

The National Retail Food Risk Factor Study is based on the intervention strategies to reduce foodborne illness risk factors outlined in the Food Code. The Food Code targets prevention of norovirus by addressing the following:



What can the retail food industry do to improve FSMS and reduce norovirus?

FSMS are a promising practice to reduce foodborne illness risk factors. The National Retail Risk Factor Study categorized FSMS into four categories: non-existent, underdeveloped, well-developed, and well-developed and documented. Well-developed and documented systems have the greatest impact on compliance. These FSMS are complete, consistent, and primarily written. Maintaining documentation of the FSMS can be vital to its success.

Restaurants should develop, implement, and strengthen their procedures, training, and monitoring within their establishment to create well-developed and documented FSMS to address norovirus. The three focus areas for these FSMS should include: personal hygiene, protection from contamination, and employee health.

A well-developed and documented FSMS for the three major focus areas should result in employees and management being able to complete the actions below. Resources on how to develop procedures, training, and monitoring are in the resources section of this document.

Procedures

- Management should be able to:
  - Describe critical steps in the food preparation process where the three focus areas are addressed.
  - Identify how and when steps/tasks are performed to ensure that the identified critical steps or points in the food preparation process are achieved

Questions?

www.fda.gov/retailfoodriskfactorstudy

The Next Chapter in Retail Food Safety: 2026 FDA Food Code

By

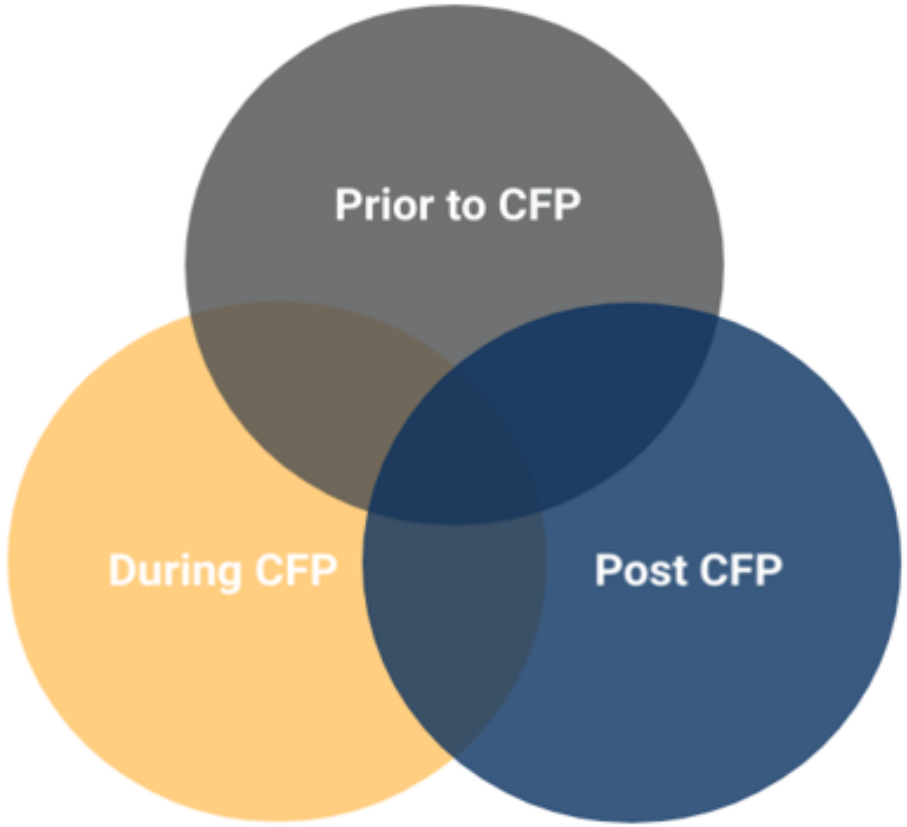
Juhi Williams and Rebecca Vought

AFDO AEC 2026

June 9th

Office of Retail Food Protection

EVALUATING RETAIL FOOD POLICY RECOMMENDATIONS



Prior to CFP

- Identify the proposition(s)
- Identify and evaluate claims and key arguments ("stock issues")
- Identify assumptions, evaluation criteria, and logical fallacies
- Identify evidence and clash points

During CFP

- Gain clarity and inform debate on the proposition(s), claims, key arguments, assumptions, evaluation criteria, and evidence.
- Inform the debate on alternative solutions
- Understand the intent and rationale of final recommendations

Post CFP

- Evaluate the final policy recommendation
- Determine if the policy recommendation is warranted.
  - If so, determine appropriate way to implement the recommendation.

Agenda

Goal:

- Review and discuss new 2026 Food Code with the Food Code Supplement 2022 language

Agenda:

- Changes will be grouped by topic
- Pre-publication Food Code language
- Rationale and background/language development

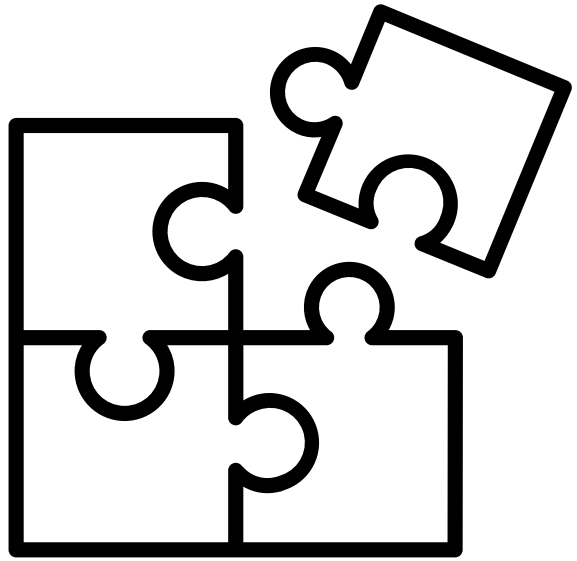
Active Managerial Control and Food Safety Management Systems


~64% of foodborne illness outbreaks in the US were attributed to foods prepared in a restaurant.

Interventions of Interest

Key Concepts

- AMC becomes a defined term and incorporated in 1st paragraph of §2-103.11 Duties of the PIC
  - Emphasize ACTIVE Managerial
- FSMS becomes a defined term and appears in §8-201.12 Contents of the Plans and Specifications
  - SOP replaced by FSMS
- New §8-201.15 When an FSMS is Required
  - Grace period
- Reserve section §8-201.16 for contents of an FSMS
  - Review tools developed by the committee and others before development



2021-2023 Committee Work Accomplishments

Identified barriers to the universal *voluntary* development and implementation of documented FSMSs consistent with Annex 4 of the Food Code

Identified solutions for overcoming the identified barriers and provide recommendations for how to promote the solutions

Conducted a pros/cons assessment of including a requirement for the development and implementation of documented FSMSs in a future edition of the Food Code

Developed recommendations on next steps to promote universal development and implementation of documented FSMSs

New §8-201.15 When a Food Safety Management System is Required

(A) Within 4 years of the REGULATORY AUTHORITY'S adoption of this Code, a written FOOD SAFETY MANAGEMENT SYSTEM shall be:

(1) Developed and maintained to ensure compliance with requirements of this Code as specified in 2-103.11.[Pf]

(2) Implemented in the FOOD ESTABLISHMENT during all hours of operation, [Pf] and

(3) Made available to the REGULATORY AUTHORITY upon request. [Pf]

(B) This section does not apply to certain types of FOOD ESTABLISHMENTS deemed by the REGULATORY AUTHORITY to pose minimal RISK of causing, or contributing to, foodborne illness based on the nature of the operation and extent of the FOOD preparation.

2025-2027 Charges

- Develop a regulatory FSMS assessment template;
- Identify industry champions that can socialize/communicate FSMS to industry;
- Develop an abstract and standard slide deck that can be used to communicate FSMS (what, why, how) at national and local meetings;
- Work on future industry templates beyond sick workers, prioritizing risk factors; and

CFP Issue 2025-I-18

Amend Date Marking Exemption

2025-I-18
Amend Date Marking Exemption List to Remove Foods Not Subject to Date Marking

- FDA agreed with a review and update to Annex 3, PHR, §3-501.17 Ready-to-Eat, Time/Temperature Control for Safety Food, Datemarking. Focusing on USDA regulated products that are shelf-stable, ready-to-eat meat and poultry, with clarifying language that aligns with USDA requirements for refrigeration after opening.

CFP Issue 2025-I-20

Manufacturer Cooking Instructions

2025-I-20
Manufacturer Cooking Instructions

- FDA agreed with the request to revisit §3-401.15 Manufacturer Cooking Instructions wording to be simplified to reduce confusion.

CFP Issue 2025-I-25

Consumer Advisory for Raw Animal Foods

2025-I-25
Clarify PHR¶ 3-401.11(D) whether Consumer Advisory for Raw Animal Foods is only for Immediate Service

FDA agreed with updating Annex 3: 3-603.11 by including information on whether a partially cooked animal food can be cooled, and then served without additional heat application, under a Consumer Advisory.

CFP Issue 2023-III-023

Reduced Oxygen Packaging

§3-501.13 Thawing (ROP of Fish)

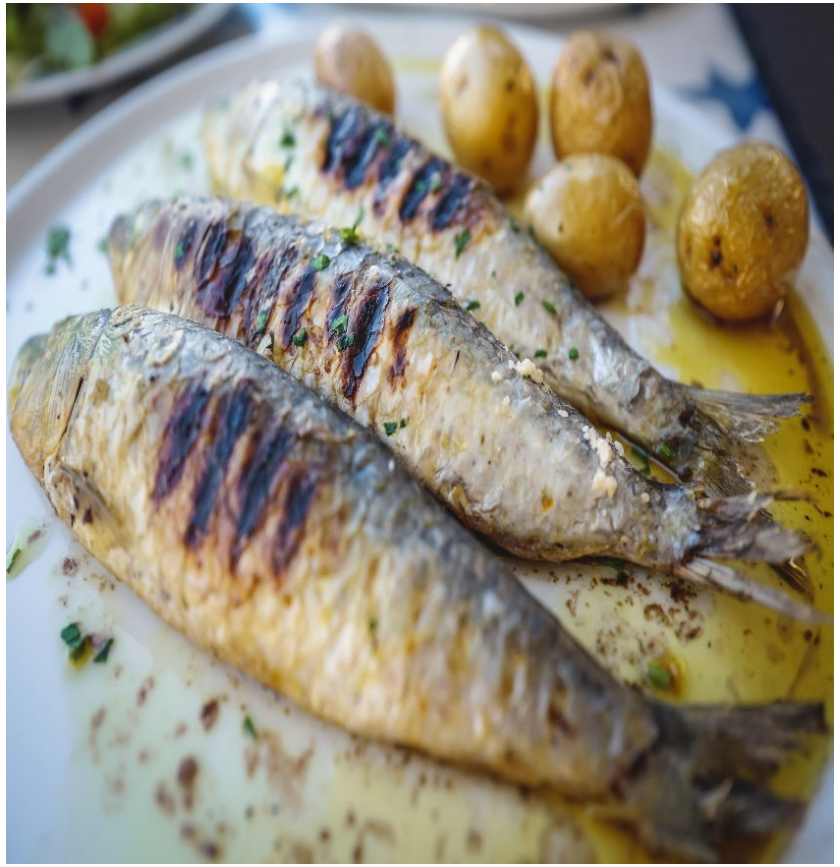
- Aligned risk designation for ¶3-501.13(E) with other ¶'s in the section

- Revised from Core to Priority Foundation

(E) REDUCED OXYGEN PACKAGED FISH that bears a label indicating that it is to be kept frozen until time of use shall be removed from the reduced oxygen environment:

(1) Prior to its thawing under refrigeration as specified in ¶(A) of this section Pf; or

(2) Prior to, or Immediately upon completion of, its thawing using procedures specified in ¶ (B) of this section. Pf



CFP Issues 2023-III-023
ROP Definition in ¶1-201.10(B)

Recommended FDA revise ROP definition to replace the term “bags” to clarify intent

- **Revised definition in sub¶ (2)(d)**

(a)-(c)…NO CHANGE

(d) Cook chill PACKAGING, in which cooked FOOD is hot filled

into impermeable PACKAGING (such as a bag or film on trays) that is then sealed or crimped closed. The PACKAGED FOOD is rapidly chilled and refrigerated at temperatures that inhibit the growth of psychrotrophic pathogens: or

2025-III-29/30

Shallow pan cooling and cooling methods

2025-III-29/30
Define shallow pan cooling and include an alternative time and temperature provision.

FDA agreed with the recommendations for both Issues III-29 and III-30 combined for the following:

- Add an allowance for food to be cooled by filling to no more than 2’ depth, uncovered in a refrigeration unit that is equipped with a continuous electronic temperature monitoring system

- Add a cooling method option for filling a container with food at a depth of 2” or less

2025-I-28

Allowance for loose-fitting gloves as a utensil

2025-I-28
Allowance for loose-fitting gloves as a utensil

- FDA agreed with the recommendation to update the FC to include a pre-approved procedure that allows the removal of a loose-fitting exterior glove from the hands of food employees without a subsequent handwashing requirement, when the hands and/ or interior glove is protected from potential contamination during the removal process.

2025-I-30

Prohibition-Jewelry

2025-I-30
Prohibition-Jewelry

- FDA agreed with amending Food Code § 2-303.11 Prohibition, with an exemption for the use of medically monitoring devices

2025-I-31

Amend Food Code – Clarify Employee Illness Policy

2025-I-31
Amend Food Code – Clarify Employee Illness Policy

FDA agreed with a Food Code update requiring a written employee illness policy that implements the provisions of the Subpart 2-201 be added to the Food Code.

Updated Criteria for Reinstatement of Diagnosed Ill Food Employees with illness from STEC, Shigella spp., or Nontyphoidal Salmonella:

Shigella spp. Diagnosis - Removing Exclusion or Restriction

2-201.13 (E) Reinstate a FOOD EMPLOYEE who was EXCLUDED as specified under Subparagraphs 2-201.12(A)(2) or (E)(1) or who was RESTRICTED under Subparagraph 2-201.12(E)(2) if the PERSON IN CHARGE obtains APPROVAL from the REGULATORY AUTHORITY and one of the following conditions is met:

(1) The EXCLUDED or RESTRICTED FOOD EMPLOYEE provides to the PERSON IN CHARGE written medical documentation from a HEALTH PRACTITIONER stating that the FOOD EMPLOYEE is free of a *Shigella* spp. infection based on 2 consecutive negative laboratory test results from a validated test, using a laboratory accredited or certified to handle clinical specimens and obtained from stool specimens that are taken:

(a) Not earlier than 48 hours after discontinuance of antibiotics, P and

(b) At least 24 hours apart; P

2025-III-09

Amend Food Code Language to include Following Manufacturer's Instructions for Rehydration

2025-III-09
Amend Food Code Language to include Following Manufacturer's Instructions for Rehydration

FDA agreed with updating Food Code language regarding rehydration of dehydrated foods following manufacture instructions

CFP Issue 2023-III-015

Disinfectants

Key Concepts

- Defined the term “Disinfection”
- Created a NEW Part, Subpart and Section series to address disinfection
- Amended certain provisions in Ch4 and Ch7 and corresponding Annexes to include disinfection where appropriate

New Annex 3 Public Health Reasons

Double handwashing

- CFP recommended language in Annex 3, Public Health Reasons, § 3-301.11 describing a double handwash procedure and the use of nail brushes

Annex 3, PHR, ¶3-301.11(E), Prior Approval for Food Employees to Touch Ready-to-Eat Food with Bare Hands:

- "**Double handwashing**, as listed in ¶3-301.11(E)(6)(a), means handwashing 2 times (subsequentially) and at the same location immediately before handling RTE food with bare hands. This is in addition to other required handwashing events for food employees, such as after using the restroom. The double handwash technique involves washing and drying the hands at the handwashing sink as described in §2-301.12, and immediately repeating the handwash procedure (including rinsing, applying a hand cleanser, scrubbing, rinsing, and drying the hands with an approved hand drying device) at the same handwashing sink."

2025-II-30
Allergen Committee: Amend Annex 3 – Revise “Cross Contact” Description

FDA agreed to amend the definition of cross-contact within Annex 3, PHR, §4-602.11 Equipment Food-Contact Surfaces and Utensils

2025-III-27
Using Time as a Public Health Control

FDA agreed with the need to update the Annex 3, PHR, §3-501.19 Using Time as a Public Health Control with current science and pathogen modeling.

CFP Issue 2023-III-017

Annex 6 Food Processing Criteria

2025-III-26
Guidance on Dehydration and Freeze-Drying as Methods of Preserving Foods

- FDA agreed with recommendation to include guidance within Annex 6 Food Processing Criteria on process hazards and controls around dehydrating and freeze-drying methods for preservation.

Sushi rice acidification

- **CFP recommended** Annex 6 guidance for rice acidification that are consistent with the committee generated guidance document entitled "Guidance Document for Retail Sushi HACCP Standardization“

- **Added new Section 4 titled: Acidification (Sushi Rice)**
  - Gives background and narrative around critical limits

- **CFP New Supporting Document-** "Guidance Document for Retail Sushi HACCP Standardization“
  - https://www.foodprotect.org/guides-documents/guidance-document-for-retail-sushi-haccp-standardization/

The **FDA is in the process of working on these** following 10 recommendations

- **2025-I-10**
- **2025-I-11**
- **2025-I-12**
- **2025-I-14**
- **2025-III-02**
- **2025-III-04**
- **2025-III-06**
- **2025-III-11**
- **2025-III-25**
- **2025-III-32**

- **The TCS Strategy**
  - FDA has decided to revisit the definition of TCS (Time/Temperature Control for Safety) foods and the steps by which a retail operator can determine whether a food requires such controls for safety.

Join us in Sept for more 2026 Food Code updates

2026 FDA Retail Food Protection Seminar

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- Industry/Academic/other Partners- contact FCIC