

Food Safety @ the Last Mile:

Food Safety and Sanitation
Challenges and Solutions
for Food Retail

The webinar will begin shortly.
Thank you for your attendance!

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Food Safety @ the Last Mile:

Food Safety and Sanitation Challenges and Solutions for Food Retail

Alec Kyriakides

Independent Food Safety Consultant

Amit M. Kheradia - Remco

Education and Technical Support Manager

Tara Dryer - Remco

National Food Retail Market Specialist

Remco
a Vikan company



Webinar Housekeeping

- ❑ The presentation will last about 45 minutes.
- ❑ After the presentation, there will be a 10-15 minute Q&A session. You are invited to send your questions via the Q&A box provided.
- ❑ We will reach out after the webinar to answer any questions we do not address during the session.
- ❑ This webinar is being recorded and we will send you the recording a few days after the live event.

zoom

About our presenters



Alec Kyriakides

Independent Food Safety
Consultant



Amit M. Kheradia

Education and Technical
Support Manager, Remco



Tara Dryer

National Food Retail Market
Specialist, Remco

About Vikan and Remco



Leading provider of advanced hygiene and cleaning products and solutions for key sectors, with a global presence in over 90 countries.



Supplies color-coded sanitation and material handling tools for the food industry in North America.

Remco is Vikan's dedicated presence in North America (U.S. and Canada).

For more information, visit us at:

- <https://remcoproducts.com/us/about-remco/who-we-are>
- <https://www.vikan.com/int/about-vikan/who-we-are>



Food Safety @ the Last Mile: Food Safety and Sanitation Challenges and Solutions for Food Retail

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Retail Food Safety

Alec Kyriakides

Independent Food Safety Consultant



Synopsis



Starts with a moan

Ends with a phone



Starts with a Moan



COVID-19 What did we learn?

Food Safety Management Philosophy

- People
- Systems
- Tools

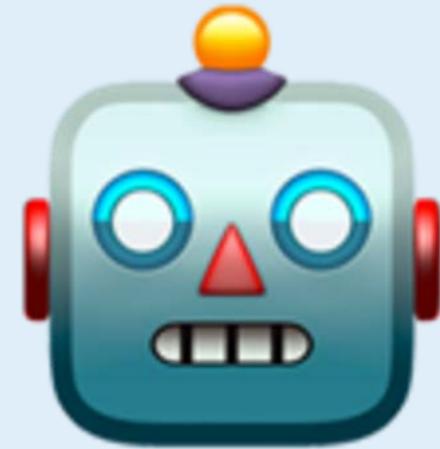


Psst!

Food Safety Management in Retail Stores

ChatGPT

- Proper storage: Temperature control 40°F (4.4°C) or below
- Regular cleaning: Cleaning and sanitising to prevent spread of harmful bacteria
- Safe handling: Employees washing hands, using separate cutting boards to prevent cross contamination
- Accurate labelling: Allergens, nutritional information, and expiration dates
- Quality control: Regular QC checks for signs of spoilage, discolouration, bad odours, and proper cooking temperature



Food Safety Management in Retail Stores

Hazards & Controls

- The H's

- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
- Contamination
- Cooking
- Chilling
- Customer information
- Checking

Food Safety Management in Retail Stores

Process Flow - 6 stages

- Sourcing
- Distribution and storage - logistics and retail
- In-store preparation
- Retail display
- Home delivery
- Customer usage

Food Safety Management in Retail Stores

Sourcing

- The H's

- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
- Contamination
- Cooking
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- Customer information
- Checking

Supplier and Product Management

GFSI-recognised food safety management certification

Food Safety Management in Retail Stores

Distribution & Storage

- The H's

- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
- Contamination
- Cooking
- Chilling
- Customer information
- Checking

Food Safety Management in Retail Stores

In-store preparation (incl. open food display)

- The H's

- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
- Contamination
- Cooking
- Chilling
- Customer information
- Checking

Food Safety Management in Retail Stores

Retail display excl. open food

- The H's

- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
- Contamination
- Cooking
- Chilling
- Customer information
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Food Safety Management in Retail Stores

Home delivery

- The H's

- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
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Food Safety Management in Retail Stores

Customer usage

- The H's

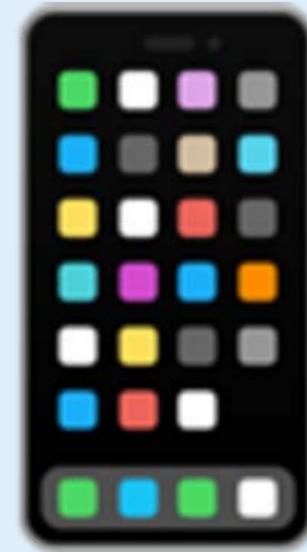
- Microbiological
- Chemical
- Physical
- Allergen

- The C's

- Cleaning
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Ends with a phone

- Next Generation Sequencing Metagenomics Study
- 46% use mobile phone in toilet / bathroom
- 100 – 1000 organism genes per mobile phone
- 2000 antibiotic / virulence genes
- 1307 different bacterial strains
- *S. aureus*, *B. cereus*, etc.



Olsen, M., Nassar, R., Senok, A. *et al.* Mobile phones are hazardous microbial platforms warranting robust public health and biosecurity protocols. *Sci Rep* **12**, 10009 (2022). <https://doi.org/10.1038/s41598-022-14118-9>

Importance of the Food Retail Sector

(Zippia, 2021)

- *Global food retail and grocery market was worth \$11.32 trillion*
- *Compound annual growth rate (CAGR) of the market = 3% through 2030*
- *U.S. consumers spend an estimated \$1.77 trillion on food and beverages each year*



Food Safety Challenges

CDC top 5 foodborne illness contributing factors:

1. Food from unsafe supplier sources
2. Inadequate cooking temperatures
3. Improper hot or cold holding for Time-Temperature Controlled for Safety (TCS) foods
4. Poor employee health and hygiene
5. Cross-contamination incidences from unclean equipment, utensils, etc.

KEY FOOD SAFETY HAZARDS:

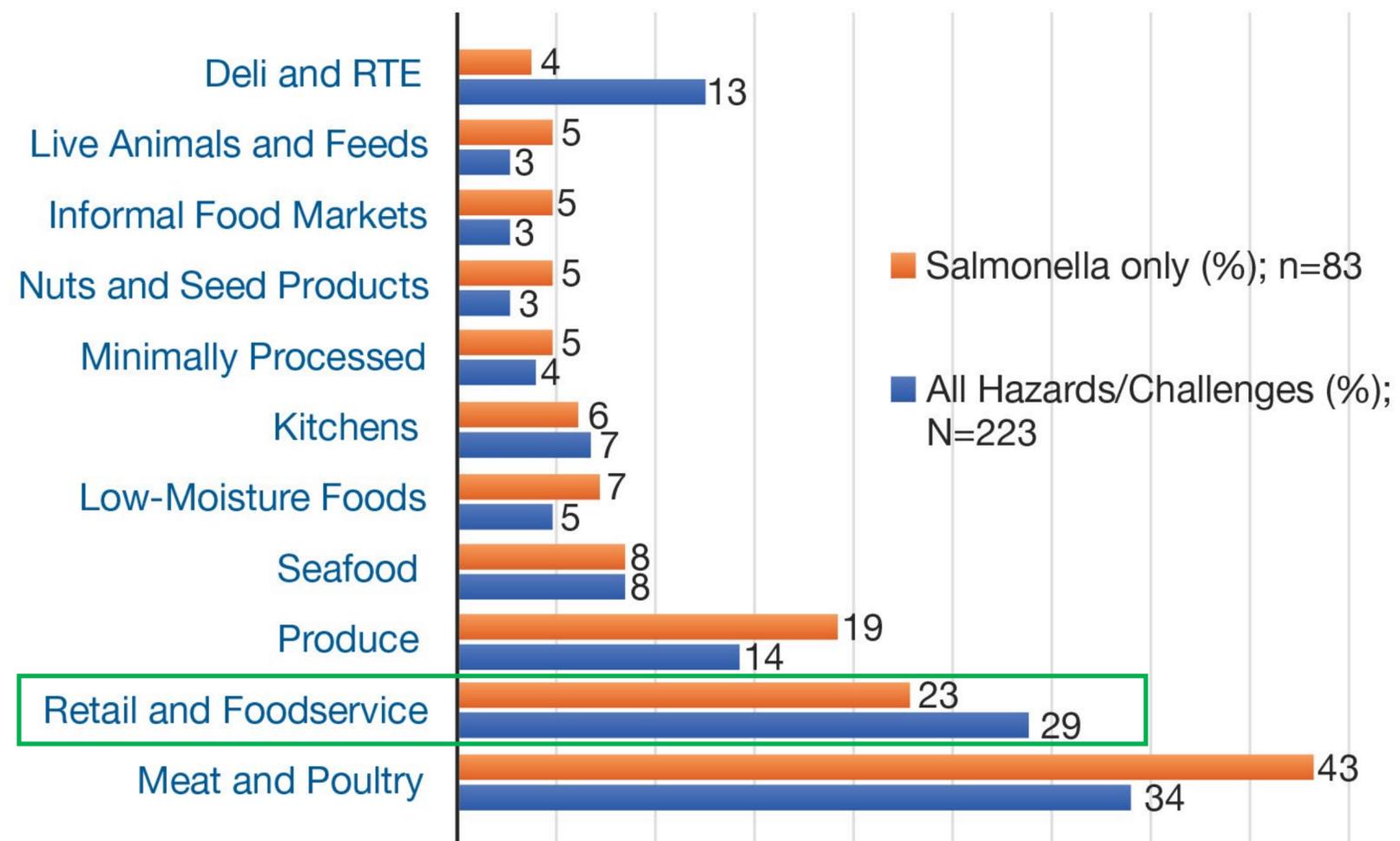
Pathogens

Allergens

Hygiene Issues

Food Hygiene and Sanitation Matters

Sanitation Related Articles from Journal of Food Protection
(2017-2021)



International Association for Food Protection (IAFP) **Journal of Food Protection** (JFP) Publication Open Access Link:

[Journal of Food Protection | ScienceDirect.com by Elsevier](https://www.sciencedirect.com/journal/journal-of-food-protection)

The Consumer Expectations

Customer shopping experience

The Supermarket Report Card: Core Experience Factors



Source: [Retail Feedback Group Study \(2019\)](#)

Why Retail Cleanliness Matters



According to the 2021 ISSA Report by Worldwide Cleaning Industry Association:

66% “... of shoppers would reduce their shopping time to avoid unacceptable hygiene”

65% “... of consumers [in China] indicated they expect to care more about product safety after COVID-19 than prior [to the pandemic]. Retailers must implement policies and processes to enable safe distances, sanitize surfaces ...”

79% “... of EU Citizens feel less inclined to shop when the store’s environment is dirty”

https://www.issa.com/wp-content/uploads/2021-ISSA_Value-of-Clean-1.pdf

Regulatory and Market Expectations

Public Health Regulations

- Local jurisdiction
- In the U.S., the Food Code is a Regulatory framework model

Global Food Retail Standards

- GFSI Industry Scope H: Food Retailing
- Common Voluntary programs: BRCGS, SQF, FSSC22000 Retail Standards

Valid Certification License

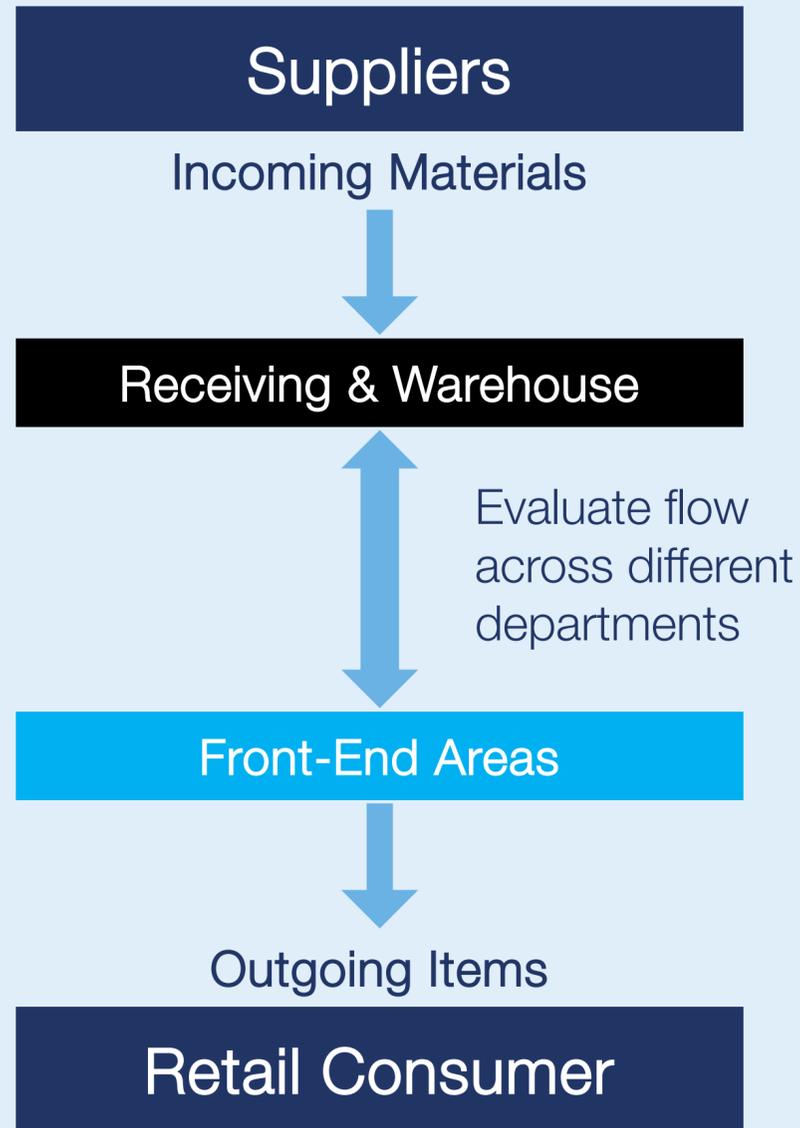
- May be required or recommended for responsible managers and food handlers working in the stores
- Common U.S. certification: ServSafe

Retail Modernization Efforts

- Address food safety concerns due to varying consumer tastes, techno-changes, supply chain disruptions, etc.
- Recent U.S. initiative: FDA's New Era of Smarter Food Safety (Core Element 3)

Bottom Line: A grocery store with a well-documented and working FSMS wins the battle!

Retail Store Walkthrough



Packed/Shelf Stable



Exposed/Perishable

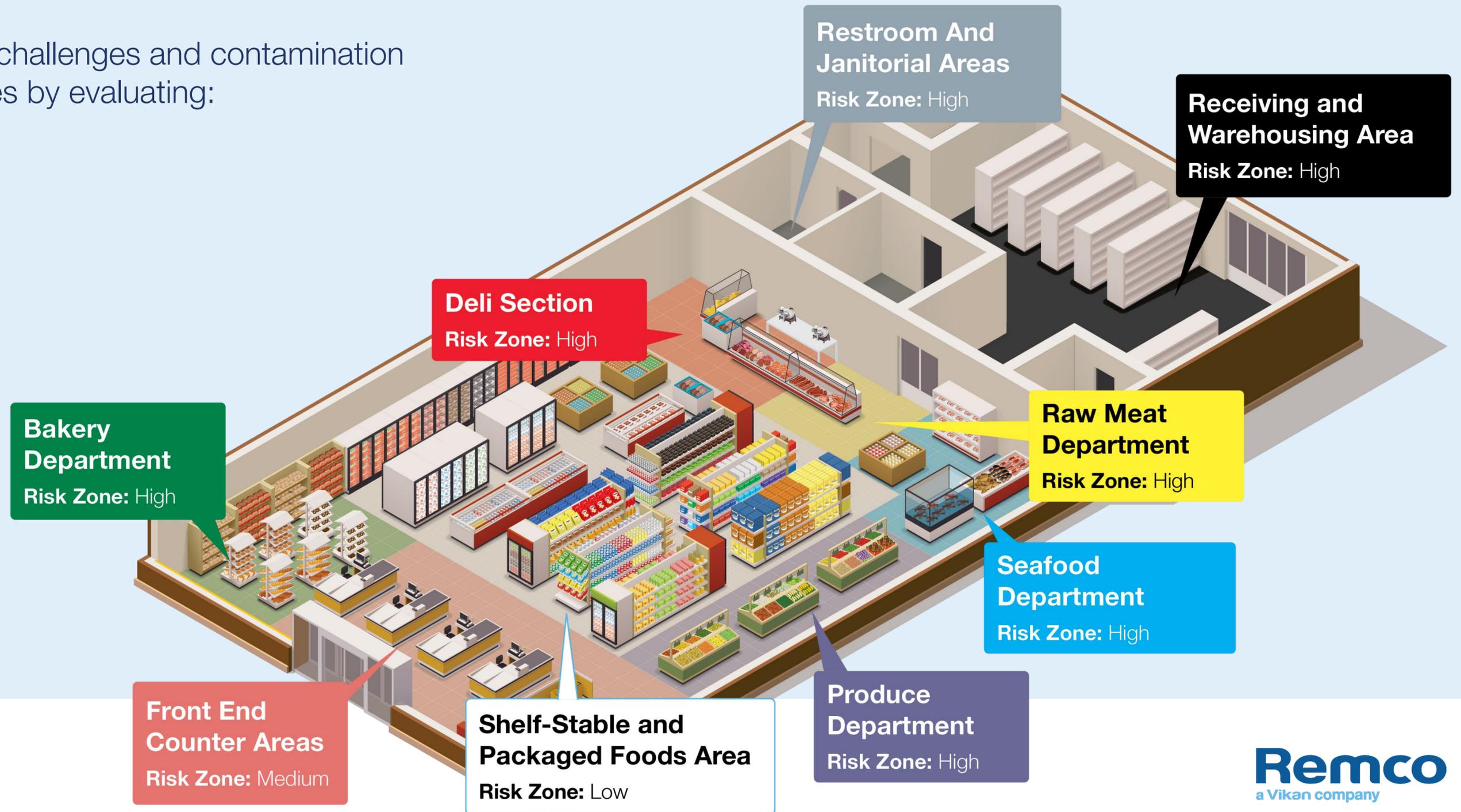


Example of a store layout

Typical Retail Store Layout and Challenges

Look for sanitation challenges and contamination prevention strategies by evaluating:

- PRODUCTS
- PLACES
- PROCESSES
- PEOPLE



Color-Coding Benefits

Zoning

- Minimizes the risk of cross-contamination
- Eliminates language barriers
- Divides store into departmental zones
- Allows for quick visual confirmation
- Helps with HACCP (Hazard Analysis Critical Control Points) compliance

Process Separation

Tool Identification

RESTROOMS	SHELF-STABLE/ PACKAGED	RECEIVING & WAREHOUSE
DELI	RAW MEAT	SEAFOOD
BAKERY	FRONT-END AREAS	PRODUCE

No Language Barrier

Easily Identified

Compliance Simplified

Retail Deli Study

Purdue University Listeria Study on Retail Delis

- 4,500 samples from 30 delis
- Food contact surfaces (meat slicers) - 4.5% positive
- Non-food contact surfaces (floors) - 14.2% positive
- Transfer points (handles, knobs) - 3.3% positive
- **Average positive rate for all samples – 9.5% positive**

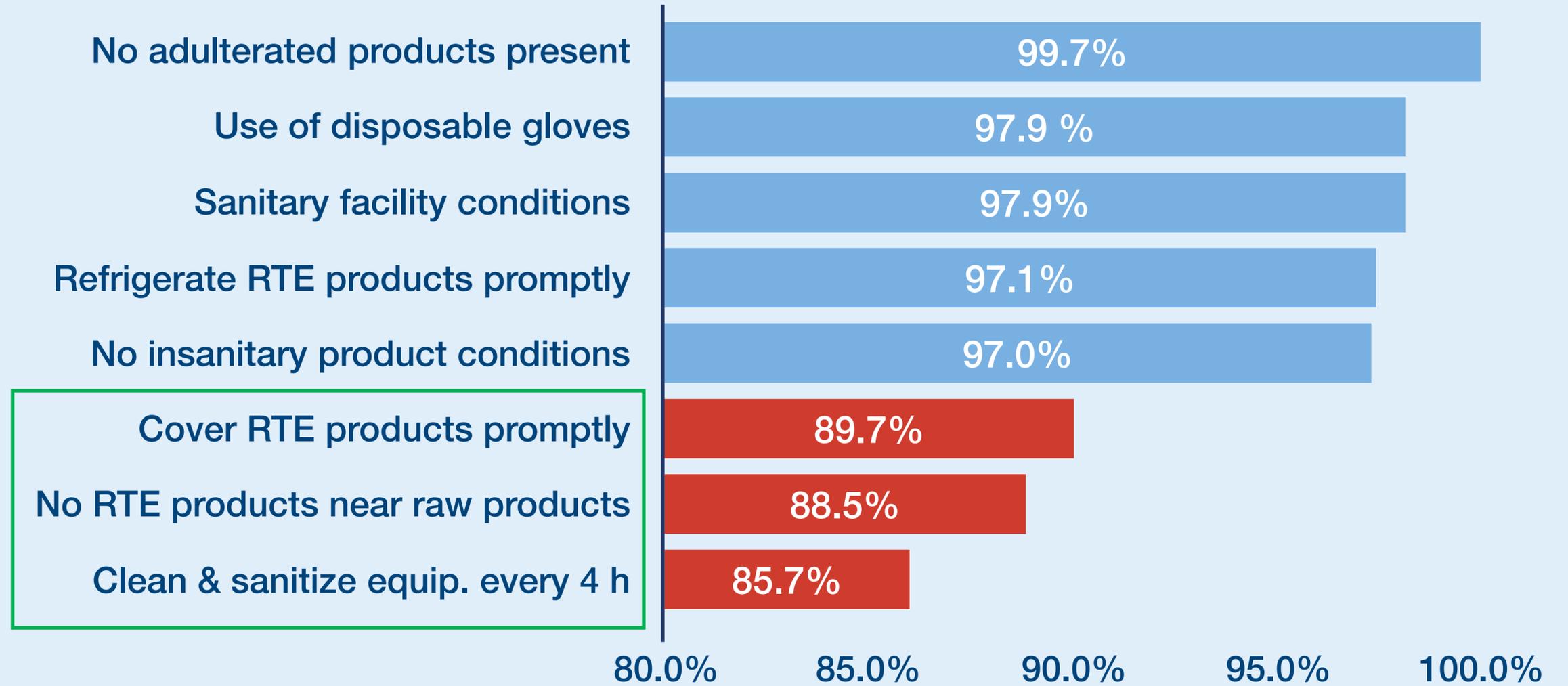
[Study Finds Persistent Rates of Listeria in Retail Delis | Food Safety News](#)



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Recent Violations in Retail Delis

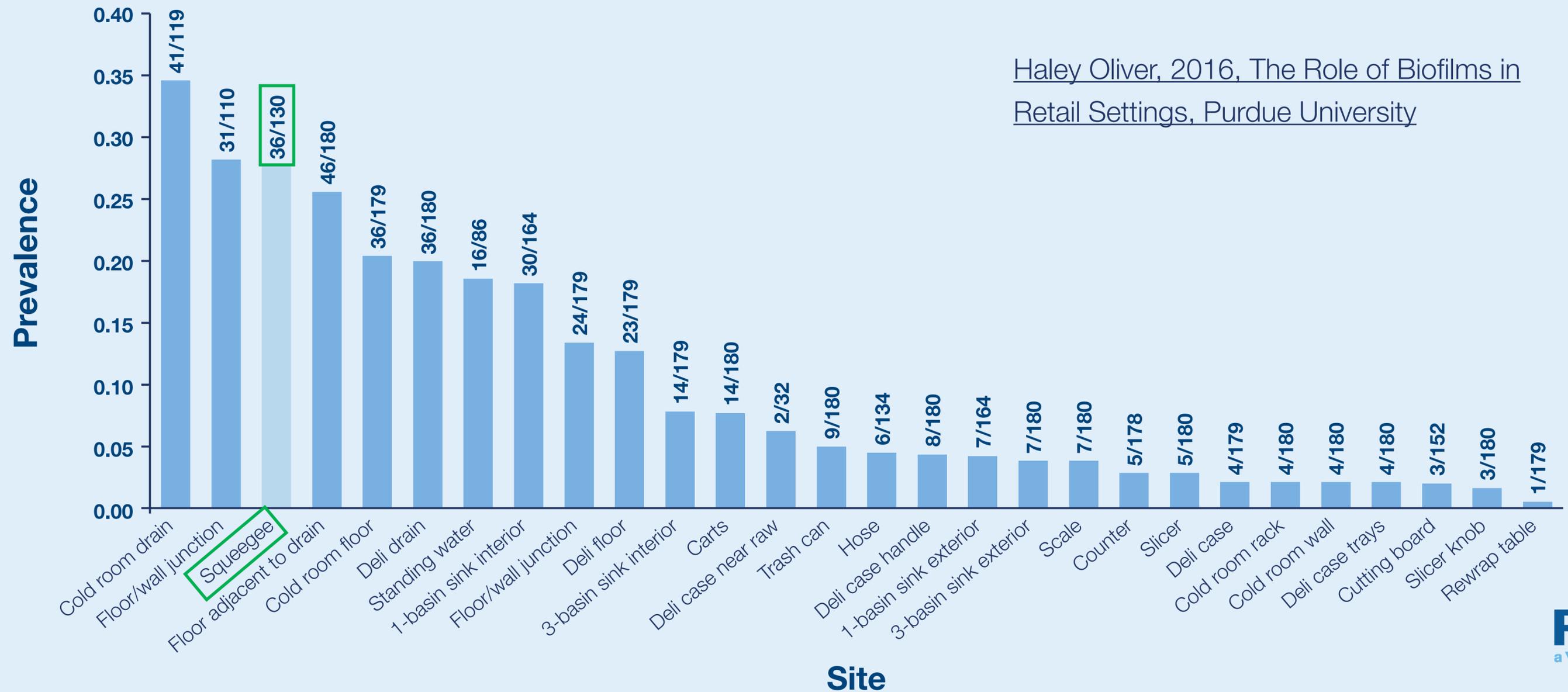
Based on a 2016-2021 FSIS study, the following compliance levels were observed at retail delis:



Source: <http://www.foodprotect.org/media/biennialmeeting/usda-fsis-update.pdf>

Prevalence of *Listeria monocytogenes* by Site

Cleaning Tools as Vectors of Contamination



Recommended Sanitation Solutions

PEOPLE



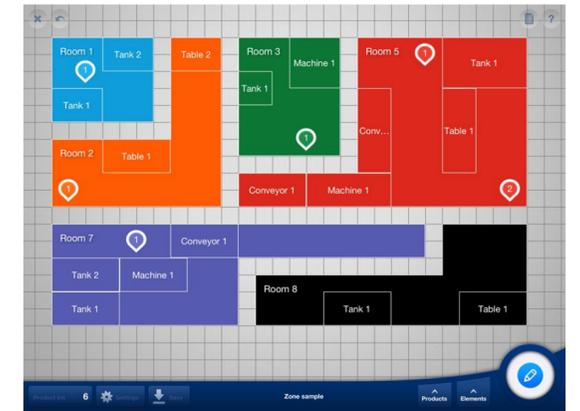
Hygienic Practices

- People hygiene management

PLACE

Hygienic Zoning

- Pathogen control
- Store traffic management



PROCESSES = PRODUCT SAFETY



Adequate sanitation of equipment and facility

- Allergen control
- Biofilm prevention through cleaning methods and frequency

TOOL MANAGEMENT PROGRAM

1. Tool selection
2. Tool use
3. Tool maintenance:
 - Cleaning
 - Inspection
 - Replacement
 - Storage



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What We Do in Food Retail

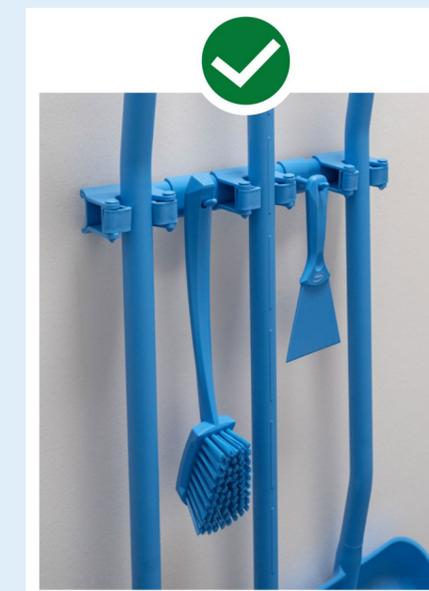
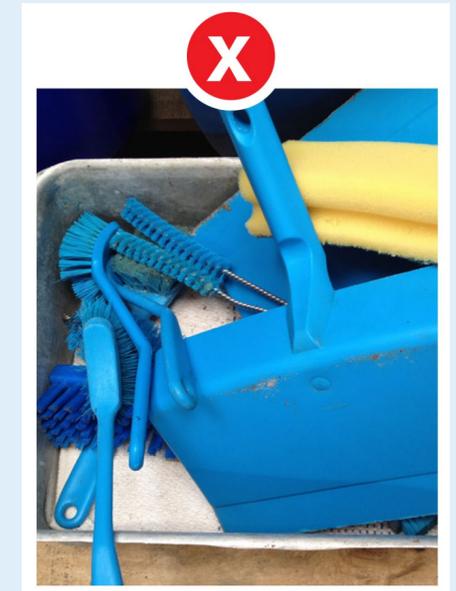
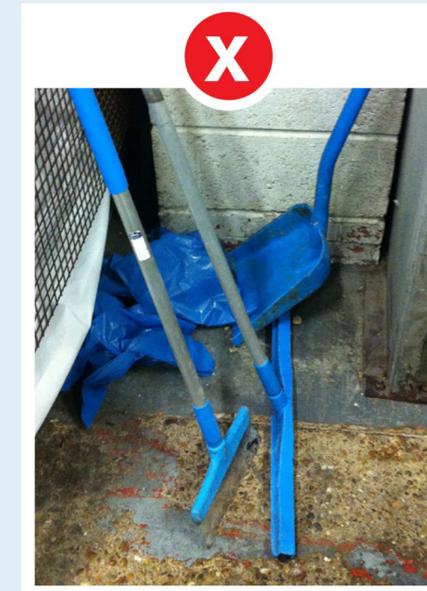
Full tool standardization program rollout for food retail chains

Edit tool program post-rollout to alleviate cleaning challenges on:

- Selecting and using the right tools
- Tool additions or changes
- Tool cleaning and maintenance
- Tool storage

Tool refresh program for current food retail end users

- Tool ordering and replacement



Time = Labor Cost



Question = **How much time do you spend daily looking for tools to clean your floors?**

This includes dustpans, brooms, squeegees, deck brushes, etc.

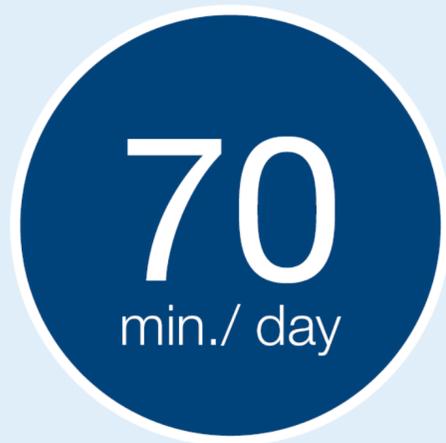
Survey results from 110 food retail participants =

- No time at all 45 participants = 41%
- About 5 minutes per day 43 participants = 39%
- > 5 minutes per day 22 participants = 20%
- Don't know 0 participants = 0%

~ 60% of survey participants spend 5 minutes a day or more looking for floor tools!

Cost of Time Spent Looking for Cleaning Tools

5 Min. Per Day?



14 associates at each store looking for tools at least 5 minutes per day



If each associate has 5 shifts per week



17,500 minutes per year per store



Cost to look for tools at \$15/hour



Estimated annual labor dollars currently lost to looking for floor tools in a 250-store chain

The time and dollars saved with easy-to-find floor tools is just a fraction of the tool program.
The overall cost savings may be much more!

More Information about Food Retail



[Vikan Food Retail](#)



[The Food Retailer's Guide to Better Hygiene](#)



[Remco Grocery Sanitation Collection](#)

Vikan Downloads: <https://www.vikan.com/int/services/download-centre>

Remco Knowledge Center: <https://remcoproducts.com/us/services/download-center>

External References

Global –

- [FMI Cleaning and Sanitation Guide for Food Retail](#)
- [FMI Listeria Action Plan for Food Retailers](#)

U.S. –

- [Retail Food Safety Collaborative](#)
- [FSIS Retail Guidance Links](#)

Canada –

- [Food Retail and Food Services Code \(2016\)](#)
- [Food Safety Laws & Legislation for Canadian Provinces & Territories | CIFS](#)

UK -

- [Safer food, better business for retailers | Food Standards Agency](#)

Europe -

- [An Overview of Retail Food Hygiene in Europe | SpringerLink](#)
- [Level 2 Food Safety for Retail - Food Hygiene - YouTube](#)

Further information and support



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Vikan Food Safety Webinar Series

What's next?



Topic:

Foreign Body Prevention Strategies

Date & Time:

25th May 2023

3 PM CEST (9 AM EST)

Presenter:

Deb Smith, Vikan



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