

Dairy Food Safety: Available Resources

Alex O'Brien: Food Safety / Quality Coordinator



CDR – YOUR TRUSTED PARTNER

INNOVATION, SUPPORT & TRAINING



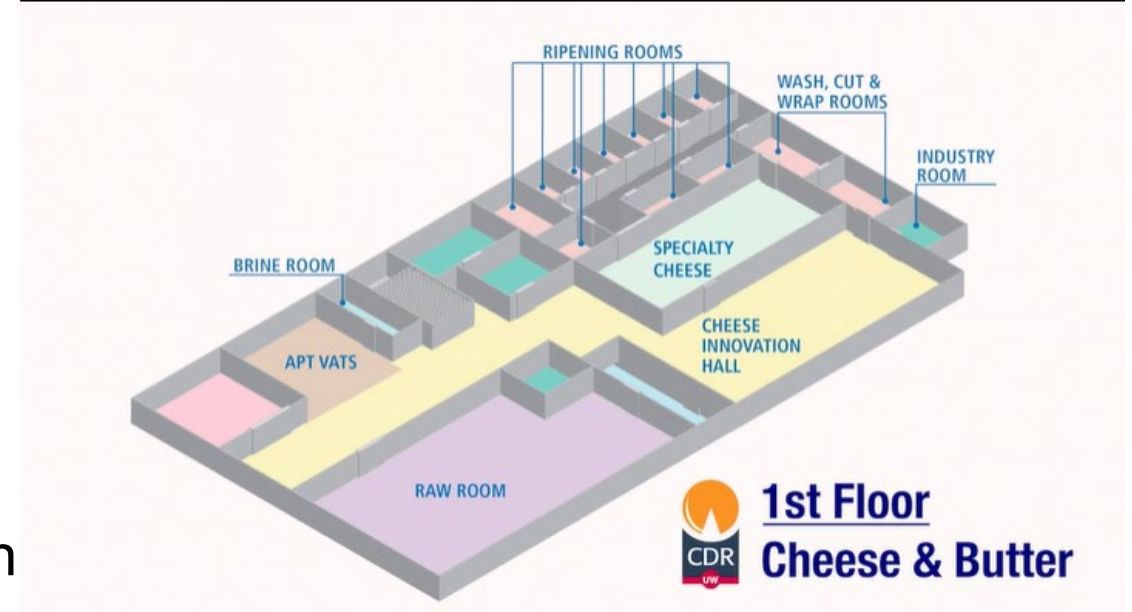
Center for Dairy Research

- 53 full time staff
- Analytical
 - WGS Capabilities
- Dairy Product and Processing Technology
 - Spray drying, Evaporation, (Coming Soon)
 - Aseptic processing
- Cheese Group
- Troubleshooting
 - 4 Mentors
 - 1 Food Safety / Quality Coordinator



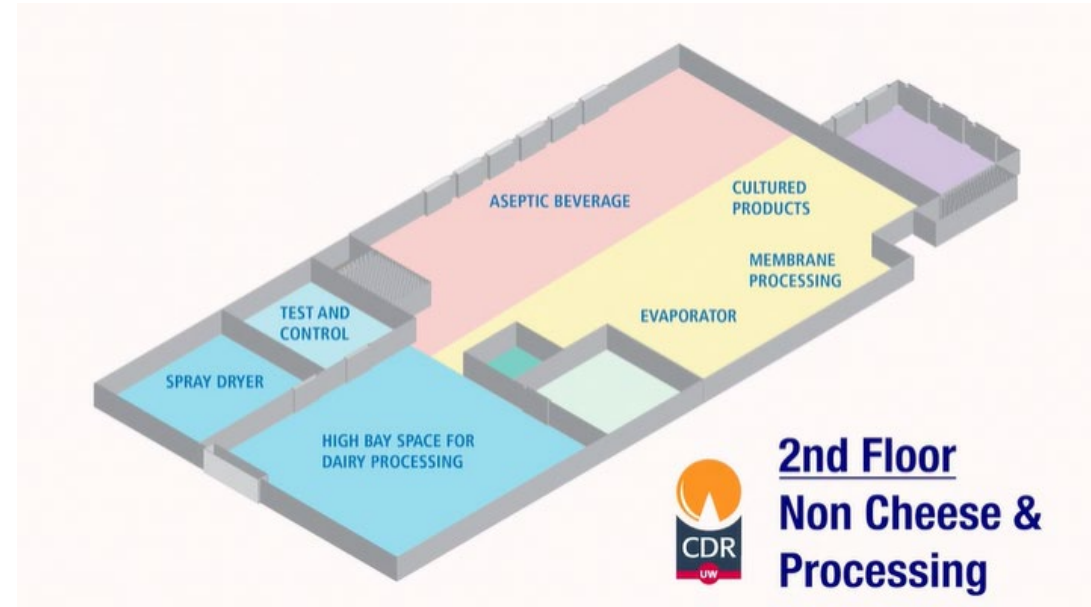
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Resources



Safe Cheesemaking Hub

<https://guides.cheesesociety.org/safecheesemakinghub>

Powered by



- Regional Resources

Search - Cheese Guild Contacts

Online Education

Regional Support

Government Resources

Templates

FAQ

Spanish/Español

- FAQ

- Government Resources

▶ Getting Started - Food Safety plan builder template

Food Safety Publications

Most Frequently Used Resources

- Search Resources

▶ Search Resources - ACS Library

Search ACS - Combase Access

- Open Access Journals

▶ Online Education - Search Food Science Commons

Online Education - Online Education

Instructional Videos

▶ Map of Dairy Food Safety Resources in - Food Safety Online Courses

- American Cheese Society Webinars

Safe Cheesemaking Hub

Welcome to the Safe Cheesemaking Hub! This is a compendium of food safety resources selected and organized to help cheesemakers easily find the information they need.

Webinar: Food Safety Plans for

ACS Best Practices Guide for Cheesemakers

American Cheese Society Best Practices Guide for Cheesemakers

An easy reference for busy cheesemakers-especially small- to mid-size producers. This guide highlights the key requirements, suggestions, and practices. Condensed into an easily digestible format, and written in accessible language.

The Safe Cheesemaking Hub

Food Safety Resources for Cheesemakers

Powered by



- Search
- Getting Started
- Search Resources
- Online Education
- Regional Support
- Government Resources
- Templates
- FAQ
- Spanish/Español

What's In This Guide

- ▶ **Getting Started**
 - Food Safety Publications
 - Most Frequently Used Resources
 - Learn more about FSMA
- ▶ **Search Resources**
 - Search ACS Virtual Library
- ▶ **Online Education**
 - Online Courses
 - Instructional Videos
- ▶ **Map of Dairy Food Safety Resources in the USA**

Welcome to the Safe Cheesemaking Hub

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Learn More About: Food Safety Plans for

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Online Education

Use this page to access online education opportunities, courses, workshops and webinars.

New Online Course: Food Safety Basics for Artisan Cheesemakers

- [Food Safety Basics for Artisan Cheesemakers](#)

This online course was developed by a collaborative group of food safety and cheese experts from the University of Wisconsin-Madison, University of Connecticut, Cornell University, and NC State University. The course consists of five sections:

- (1) Importance of Food Safety
- (2) Regulations and Standards
- (3) Food Safety Hazards
- (4) Good Manufacturing Practices and Process Controls
- (5) Environmental Pathogen Monitoring and Testing




As a new benefit for ACS members, this \$140 course is available FREE of charge.

ACS Member? You can find the discount code on the [Member Benefits: Quick Access](#) page. **Not a member? Consider [Joining Today!](#)**

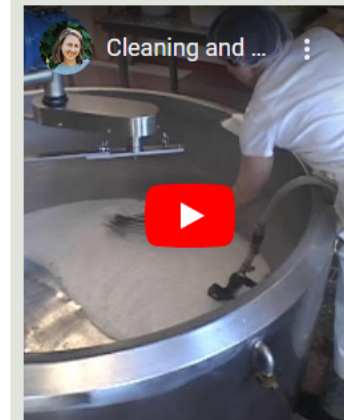
Online Education

- [Food Safety Preventive Controls Alliance](#)

The Food Safety Preventive Controls Alliance (FSPCA) is a broad-based public/ private alliance consisting of key industry, academic and government stakeholders whose mission is to support safe food production by developing a nationwide core curriculum, training, and outreach programs to assist companies producing human and animal food in complying with the preventive controls regulations that will be part of the Food Safety Modernization Act (FSMA).

- [ACS Webinars](#)  ACS Webinar Archive of webinars available exclusively to ACS members.

Deep Dive: Instructional Videos



This video from the Cornell University Food Science Department, Cornell Small Farms Program, and the New York State Department of Agriculture and Markets demonstrates cleaning and sanitizing procedures.

More Instructional Videos:

- [Food Safety and Preventive Controls Alliance Technical Assistance Network](#)

A series of videos that provide technical support, and aid in FSMA compliance.

Dairy Management Inc

<https://www.usdairy.com/about-us/innovation-center/food-safety>

- Training
- Guidance Documents
- Webinars
- Collaboration of Academia and Industry



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<https://www.usdairy.com/about-us/innovation-center/food-safety/dairy-plant>

Dairy Plant Food Safety Resources (materials used or referenced in the class)

[Control of Pathogens: Guidance for the U.S. Dairy Industry](#)

Comprehensive guidance document on pathogen controls which follows the 'Pathogen Equation'

[Dairy Equipment Design Checklist](#)

This is the list you will need for evaluating equipment designs for dairy equipment designs.

[Dairy Facility Design Check list](#)

This is the list you will need for evaluating facility designs for a dairy facility.

[Dairy Pathogen Control Program Assessment](#)

This is the list you will need for evaluating a pathogen control program for the dairy industry.

[Seven steps of effective wet sanitation | \(En Español\)](#)

This list will walk you through the Good, Bad and Ugly.

[Seven steps of effective dry sanitation](#)

This list will walk you through the Good, Bad and Ugly.

[Powder Sanitizer Validation for LM RTE Plants](#)

This document helps meat and poultry processors to identify and share best practices for control.



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<https://www.usdairy.com/about-us/innovation-center/food-safety/dairy-plant>

Controlling Pathogens in Dairy Processing Environments

CONTROLLING PATHOGENS IN DAIRY PROCESSING ENVIRONMENTS GUIDANCE FOR THE U.S. DAIRY INDUSTRY



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<https://www.usdairy.com/about-us/innovation-center/food-safety/dairy-plant>

Controlling Pathogens in Dairy Processing Environments

To the Reader

This environmental Pathogen Control Guidance Document has been prepared for the food industry by subject matter experts who work daily in the dairy industry. This document is not intended to be a "How To", but rather to be informative. It is intended to build knowledge and communicate best practices for a wide spectrum of food safety practitioners: hourly employees, engineers, quality professionals, senior staff, contractors, suppliers, and more.

Furthermore, this document is designed to provide guidance to better control pathogens in both wet and dry processing environments. Specific considerations for wet and dry products and processing will be included for each principle. It is crucial in all environs to understand the necessity to control water, moisture, and humidity.

With the diverse information needs of this group, and the obligation to present scientific principles and best practices, the document employs a simple graphic to guide the reader. The graphic symbolizes the basic programs that are recommended to be employed in concert to establish effective pathogen control in a dairy manufacturing facility. This is the **Pathogen Control Equation¹**:



Core principles of the Pathogen Control Equation will be discussed in depth to help identify focused practices which are essential to effective pathogen control. The maturity of a firm's food safety culture impacts how effectively the principles of the equation are implemented and followed. Years of experience and science-based best practices from multiple food categories have been summarized as the following core principles:

Principle #1

Separate Raw from Ready-to-Eat

History has shown that there is a greater likelihood of finding pathogens or spoilage organisms in uncontrolled or raw manufacturing areas than in controlled production or Ready-to-Eat (RTE) areas. Managing the flow of personnel, supplies, air movement and equipment significantly reduces the potential for cross-contamination. Additional measures may be necessary in the manufacturing of dry RTE products including added controls for high hygiene areas.

Principle #2

Good Manufacturing Practices and Controlled Conditions

Following Good Manufacturing Practices (GMPs) is one of the most fundamental expectations in the food industry to prevent contamination of products. GMPs apply to both personnel and production practices. Surfaces in a dairy production facility can be wet from manufacturing conditions; this moisture can support microbial harborage and growth. Thus, floors and other similar surfaces should be dry, well maintained, and free of cracks. Harborage points are locations where pathogens may survive, and they are usually difficult to reach with routine cleaning.

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<https://www.usdairy.com/about-us/innovation-center/food-safety/dairy-plant>

Controlling Pathogens in Dairy Processing Environments

Table 1. Quick Facts on Dairy Foods Pathogens of Concern

Pathogens of Concern	Cause of Illness	General Dairy	Low a_w Dairy Foods
<i>Bacillus cereus</i>	Ingestion of toxin	Yes	Yes
<i>Cronobacter sakazakii</i>	Infection	Rare	Yes
<i>Listeria monocytogenes</i>	Infection	Yes	Rare*
Pathogenic <i>E. coli</i>	Infection followed by toxin	Yes	No
<i>Salmonella</i>	Infection	Yes	Yes
<i>Staphylococcus aureus</i>	Toxin	Yes	Yes

*Can be a risk if mishandled during intermediate steps when foods or ingredients become hydrated

Other Pathogens of Concern for Dairy

Other dairy pathogens of concern may include pathogenic *Escherichia coli* (*E. coli*), *Staphylococcus aureus* (*Staph aureus*), and spore forming organisms such as *Clostridium botulinum*, *Clostridium perfringens*, and *Bacillus cereus*. These pathogens are not typically tested for in the environment and are more associated with raw ingredients or lack of proper in-process/final product temperature control, which allows growth.

Following the Pathogen Control Equation for control of *Salmonella*, *Cs*, and *Lm* will help maintain sanitary conditions with respect to these other pathogens of concern for dairy.

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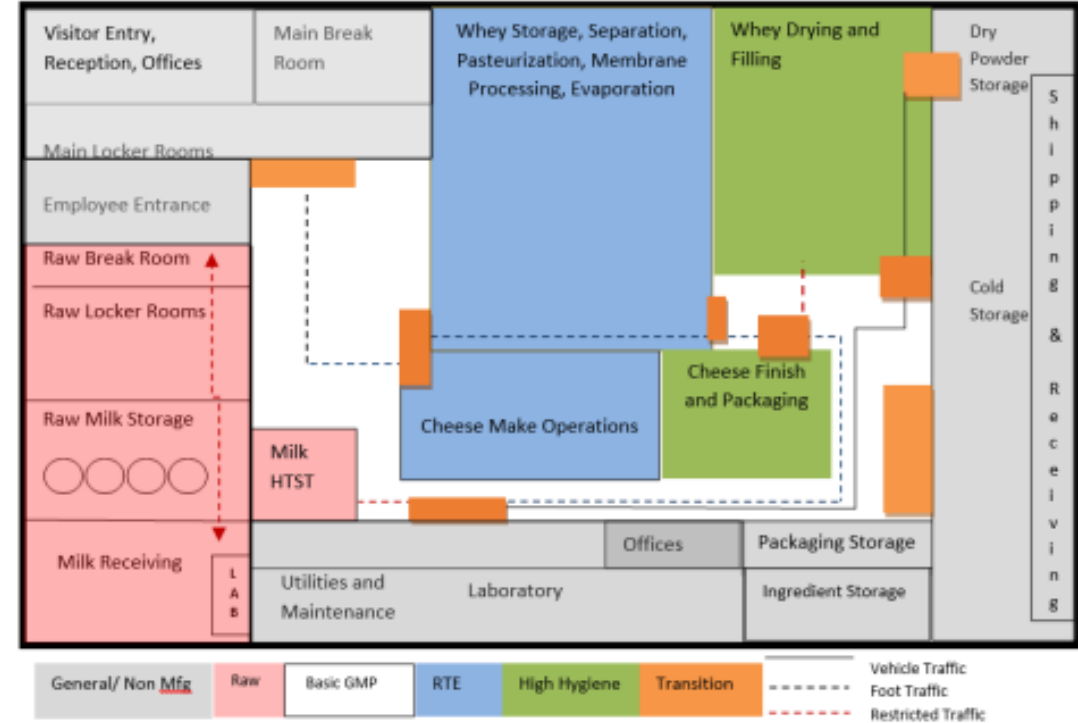
<https://www.usdairy.com/about-us/innovation-center/food-safety/dairy-plant>

Controlling Pathogens in Dairy Processing Environments

Fig. 4. An example of a Powder and Butter operation with hygiene zoning and hygiene junction rooms/airlocks



Fig. 3. An example of dairy plant floor plan with traffic patterns mapped and operations segregated by hygiene requirements



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<https://www.usdairy.com/about-us/innovation-center/food-safety/dairy-plant>

Dairy Equipment Design Checklist

To complete this checklist, place an "X" in the appropriate box;						Revised:110730			
S = Satisfactory						Supersedes:100907			
M = Marginal									
U = Unsatisfactory									
The total score will automatically calculate and can be viewed on the Summary page									
Dairy Products -- Outside of the Pipe						Review Date:			
Sanitary Design Checklist						Review Completed By:			
						Review Location:			
						Review Description:			
#	Description	S	M	U	NA	Comments	Points Deducted	Points Available	
PRINCIPLE #1 - MICROBIOLOGICALLY CLEANABLE									
1.1	Equipment is designed & constructed to be maintained in a cleanable condition.						-	20	
1.2	Surfaces can be cleaned to visually clean standard and meet pre-op inspection requirements.						-	20	
1.3	Representative surfaces can be monitored prior to start up for allergen residue or microbiological activity.						-	20	
1.4	Construction of equipment meet the GMP definition of "easily cleanable".						-	20	
1.5	A HACCP based product risk assessment was completed during the design phase to understand risks associated with the product type.						-		



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<https://www.usdairy.com/events-webinars?IncludePastEvents=true&IncludeUpcomingEvents=true&PageIndex=0&PageSize=15&Top=15&Types=45#filter-app>

Webinars

-Foreign Material Prevention In Dairy Products

Filter By Keyword

Type to search



Filter by Type

All Types

Board Meeting

Conference

Festival

Forum

Open House

Summit

Webinar

Workshop

May. 16, 2024

Webinar

Funding Opportunity
Briefing: USDA-NRCS
Regional Conservation
Partnership Program

SEE EVENT

Mar. 29, 2024

Webinar

Member Discovery Series –
Genetic Advancement of
the Dairy Cow: Health,
Profitability &
Sustainability

SEE EVENT

Jan. 31, 2024

Webinar

Foreign Material Prevention
in Dairy Products

SEE EVENT

Nov. 08, 2023

Webinar

Accelerating Action: A U.S.
Dairy Net Zero Initiative
Update

SEE EVENT

Oct. 04, 2023

Webinar

Environmental Project
Deep Dive: Dairy Feed in
Focus

SEE EVENT

Jun. 15, 2023

Webinar

2023 Cultural Shifts and
Global Food & Beverage
Trends

SEE EVENT



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<https://www.usdairy.com/events-webinars?IncludePastEvents=true&IncludeUpcomingEvents=true&PageIndex=0&PageSize=15&Top=15&Types=45#filter-app>

Workshops

- Dairy Plant Food Safety Workshop
- Dairy Supplier Food Safety Management Workshop

The screenshot displays a web interface for event filtering. On the left is a sidebar with a search bar labeled 'Filter By Keyword' and a 'Type to search' input field. Below it is a 'Filter by Type' section with buttons for 'All Types', 'Board Meeting', 'Conference', 'Festival', 'Forum', 'Open House', 'Summit', 'Webinar', and 'Workshop'. The 'Workshop' button is highlighted. The main content area shows three event cards. The first card is for 'Oct. 1-2, 2024' titled 'Dairy Plant Food Safety Workshop Batavia, New York' with a 'Workshop' tag and a 'SEE EVENT' link. The second card is for 'Oct. 29-30, 2024' titled 'Dairy Plant Food Safety Workshop Dallas, TX' with a 'Workshop' tag and a 'SEE EVENT' link. The third card is for 'Nov. 18-19, 2024' titled '2024 Dairy Sustainability Alliance® Fall Meeting' with 'Conference' and 'Summit' tags and a 'SEE EVENT' link. A fourth card is partially visible for 'Nov. 20-21, 2024' titled '2024 Sustainable Agriculture Summit' with 'Conference' and 'Summit' tags and a 'SEE EVENT' link.

Artisanal Cheese Food Safety Advisory Team



Food Safety Resources Map

<https://www.idfa.org/safeicecream/food-safety-map>

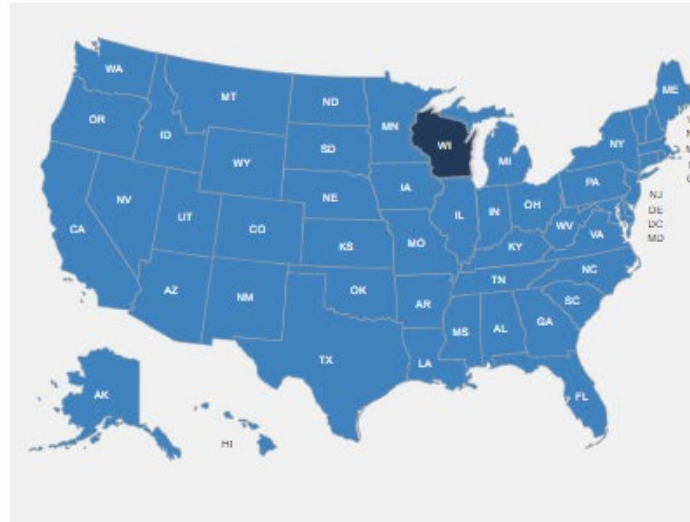
The screenshot shows the top portion of a website. At the top left is the IDFA logo (International Dairy Foods Association). To the right are 'Connect' and search icons. A blue navigation bar contains the following menu items: About Us, Programs & Campaigns, Newsroom, Knowledge Center, Event Center, Issues & Advocacy, and Professional Communities. Below the navigation bar is the title '50 States of Food Safety: An Interactive Map' and the instruction 'Click on your state to find an expert near you.' The main content area features a map of the United States with each state labeled with its two-letter abbreviation. Below the map, a text box states: 'This resource center is a collaboration between the following industry and trade associations:'. This is followed by three logos: IDFA (International Dairy Foods Association), INNOVATION CENTER FOR U.S. DAIRY (with the tagline 'HEALTHY PEOPLE + HEALTHY PRODUCTS + HEALTHY PLANET'), and NORTH AMERICAN ICE CREAM ASSOCIATION. At the bottom of the text box, it says 'Questions or suggestions? Contact us at questions@safeicecream.org'.

Food Safety Resources Map

<https://www.idfa.org/safeicecream/food-safety-map>



Click on your state to find an expert near you.



This resource center is a collaboration between the following industry and trade associations:

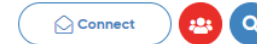


IDFA
International
Dairy Foods Association



**NORTH AMERICAN
ICE CREAM
ASSOCIATION**

Food Safety Resources Map



[About Us](#) ▾ [Programs & Campaigns](#) ▾ [Newsroom](#) ▾ [Knowledge Center](#) ▾ [Event Center](#) ▾ [Issues & Advocacy](#) ▾ [Professional Communities](#) ▾

Local Food Safety Resources

- Alex O'Brien aobrien@cdr.wisc.edu 608-598-9977 – food safety plans, FSPCA, Dairy/Food Safety Assistance
- Dean Sommer dsommer@cdr.wisc.edu, John Jaeggi jaeggi@cdr.wisc.edu – For Cheese
- Scott Rankin sarankin@wisc.edu or Rich Hartel rwhartel@wisc.edu – For Ice Cream
- John Lucey jalucey@wisc.edu – For Fluid Milk
- Gina Mode gmode@cdr.wisc.edu – For Butter
- Kathy Glass kglass@wisc.edu – Process Authority, Dairy Microbiology and challenge studies
- Kristin Marie Schill kristin.schill@wisc.edu – Process Authority, Dairy Microbiology and challenge studies
- Center for Dairy Research [link](#), Center for Dairy Research Dairy Plant, Babcock Dairy Plant
- Dairy Farmers of Wisconsin Food Safety and Quality [link](#) – For Short Courses
- Wisconsin Cheese Makers Association [link](#)
 - [Dairy Food Safety Alliance FSMA Compliance Templates](#)
- WI Department of Agriculture and Consumer Protection Dairy Services: [link](#)
- UW-River Falls Dairy Plant anfdsci@uwrff.edu, 715-425-3704

Regional Food Safety Resources

- [Dairy Business Innovation Alliance](#): Applying for grants



Supplier Controls Food Safety Packet

<https://www.usdairy.com/getmedia/6ea5dc6e-fe30-47d6-a099-dc97ebfb7f96/Supplier-Controls-Guidance-Templates-Labeling-Packet-Version-C.pdf>

Supplier Controls Food Safety Resource Packet



Innovation Center for US Dairy



Food Safety Training Packet

<https://www.usdairy.com/getmedia/329e1e26-864d-4432-9107-1b6cbba4f0c6/Training-Schedule-Resources-v1-Final-061824.pdf>



Food Safety Training Schedule & Resources

Day One

This section contains links to videos and resources geared towards new employees and to those employees and/or visitors with a limited knowledge of food safety. Control of your facility, control of the people that enter your facility, control of the items that they bring into your facility and/or use in your facility are important for minimizing risks. Good Manufacturing Practices, proper sanitation and personal safety are all important components to ensure the overall safety of your operation and your products. Whether this training takes one day or 7 days, it is vital to the success of your business.

Just Starting Out	Topic Area(s)	Resources & Tools
Day 1 Fundamentals	<ul style="list-style-type: none">• Food Borne Illness Awareness & Basic GMP• Company Background• Job Description/Responsibilities• Training Sign-Off Procedures• Food Safety Culture	New Employee Video English New Employee Video Spanish Food Safety Basics For Artisan Cheesemakers Why Food Safety Culture Matters Dr Lone Jespersen WCMA Onboarding Series

Food Safety Training Packet

<https://www.usdairy.com/getmedia/329e1e26-864d-4432-9107-1b6cbba4f0c6/Training-Schedule-Resources-v1-Final-061824.pdf>



Food Safety Training Schedule & Resources

Weeks One-Three

This section contains links to videos and resources geared to those employees that have been introduced to GMPs and are now taking a more active role in your operation. At this stage, the use of a training buddy (Supervisor or longer tenure employee) to help reinforce and train these principles is recommended. These resources focus on the use of Standard Operating Procedures, the importance of documentation, the importance of proper cleaning, sanitation, and verification that practices are being followed. Employees will also learn about hazards and the use of hygienic zoning principles to minimize the food safety risks of your finished products. A review of GMPs to test for understanding of why they are so important is also recommended.

Weeks 1-3	Topic Area(s)	Resources & Tools
Reinforce Personal GMPs	<ul style="list-style-type: none"> • Don't Come To Work Sick • Clean Body, Clothes & Shoes • No Outdoor Clothes or Footwear • No Jewelry, Gum, Food or Beverages in Work Areas • Entry Protocols: Handwashing, Foot Foamers, Gloves, Hair & Beard Net Location & Use • Door Opening & Glove Switching Protocols 	Don't Spread Germs At Work Poster New Employee Video English New Employee Video Spanish Dairy Plant GMPs English & GMPs Spanish Washing Hands: Food Safety Toolbox Talk Supervisor Monitor For Correct Wear
Facility Risks & Hazards	Hazards & Risks Awareness <ul style="list-style-type: none"> • Traffic Patterns & CCP By Area 	Food Safety Basics For Artisan Cheesemakers Hygienic Zoning CDR Foot Traffic Flow Example Product Flow Example

Food Safety Training Packet

<https://www.usdairy.com/getmedia/329e1e26-864d-4432-9107-1b6cbba4f0c6/Training-Schedule-Resources-v1-Final-061824.pdf>



Food Safety Training Schedule & Resources

<p>Facility Risks & Hazards</p>	<ul style="list-style-type: none"> • Mitigation of Risks Through Cleaning & Sanitation-Why, How and How to Verify • Importance of SSOPs • Clean & Sanitize Surfaces Before Cutting or Packaging Cheese • Prevention of Cross Contamination • Your Role in Documentation • Food Defense • When to Notify/Ask Questions 	<p>General Mills Sanitation Videos Food Manufacturing GMPs NCSU Sanitation Documentation 7 Steps To Effective Wet Sanitation Preventing Aerosolization</p> <p>Writing Sanitation Standard Operating Procedures PSU Sample SSOP</p> <p>Retail Cheese Cut & Wrap Video Satori 9 Ways to Cut the Cheese The People's Cheese</p> <p>Components Of An Effective Allergen Control Program Supervisor Remind Employee To Clean Raw Milk Tools Last</p> <p>Food Safety Toolbox Talks: Documentation Basics in Food Manufacturing FSMA Human Food Audit Checklist ISU Generic Technical Data Sheet Document Request Form</p> <p>Employees are the FIRST Line of Food Defense</p> <p>See Something Say Something Poster</p> <p>Food Safety Culture Overview IC</p>
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Food Safety Training Packet

<https://www.usdairy.com/getmedia/329e1e26-864d-4432-9107-1b6cbba4f0c6/Training-Schedule-Resources-v1-Final-061824.pdf>



Food Safety Training Schedule & Resources

Months One-Six

Depending on the level of engagement and knowledge transfer, the timing for the transition to more advanced topics should be determined by the supervisor. In this section the employee will be introduced to the concept of the Food Safety Plan, prerequisite programs and how those programs work together to ensure the safety of your finished product from cross contamination. The employee will also learn about Food Safety Culture and their individual role in prevention of recalls. The training buddy should conduct Gemba walks to test knowledge and awareness levels of the employee. Customized trainings may also be required based upon the job function of your employee.

Months 1-6	Topic Area(s)	Resources & Tools
All Employees Should Have Awareness of Food Safety Plan & Prerequisite Programs	<ul style="list-style-type: none"> Food Safety Plan & Prerequisite Programs: Sanitation Programs, Maintenance Programs, Food Defense, Pest Control 	Growing Your Cheese Business Safety Guidance English & Spanish FDA Food Defense Training & Education Pest Control Program Video
Hygiene Zones	<ul style="list-style-type: none"> Rings of Protection 	Hygienic Zones NCSU Hygienic Zoning CDR
Cross Contamination Risks & Hazards	<ul style="list-style-type: none"> Foreign Materials, Micro, Allergens, Environment Ingredient Handling Considerations 	Food Safety Webinars IC Supplier Controls Guidance Packet IC
Recall Awareness of Your Role	<ul style="list-style-type: none"> What To Do In the Event of a Recall Documentation Why It Matters Traceability Awareness 	Food Recall Training Tips ESMA Human Food Audit Checklist ISU Audit Template CDR Food Traceability Final Rule NCSU

Food Safety Training Packet

<https://www.usdairy.com/getmedia/329e1e26-864d-4432-9107-1b6cbba4f0c6/Training-Schedule-Resources-v1-Final-061824.pdf>



Food Safety Training Schedule & Resources

Senior Level

Congratulations! You now have an employee with basic knowledge of Food Safety plans and programs. Some employees may want to learn more and possibly further their career as a supervisor or specialist within the organization. In this section your senior level employee will be introduced to additional process controls, sanitary design principles, the role of audits and what to do when there is a problem. More in-depth instruction on the use of Environmental Monitoring as a management tool and how to conduct a Root Cause Analysis and Corrective Action Program is provided. Given their importance and complexities, more advanced trainings may be warranted. In addition, PCQI training is recommended for senior level employees. At the end of this document, there is a list of available workshops/courses that can be accessed to provide this advanced level of training.

Senior Level	Topic Area(s)	Resources & Tools
Programs In Action	<ul style="list-style-type: none">Consider PCQI Training	Supervisor Refer Employee to Advanced Trainings (See Specialized Trainings Below)
Role of Verification	<ul style="list-style-type: none">Environmental Monitoring & Allergens	Environmental Monitoring Videos NCSU Components Of An Effective Allergen Control Program FARRP UNL Whole Genome Sequencing: Tracking Down Outbreaks Incident Management Form RCA Problem Solving Worksheet RCA/CAPA
Role of Sanitary Design	<ul style="list-style-type: none">Facility DesignEquipment Design	Pathogen Controls Guidance Document IC Facility Design Checklist 3-A Equipment Design Knowledge Center Equipment Design Checklist

Dairy Food Safety Alliance Webpage

<https://www.wischeesemakersassn.org/food-safety>



WISCONSIN
CHEESE MAKERS
ASSOCIATION

EST. 1891

[About](#) [Events](#) [Resources](#) [Industry Careers](#) [Advocacy](#) [News](#)

Food Safety

Dairy Food Safety Alliance

Together with the Center for Dairy Research, the Wisconsin Cheese Makers Association leads the Dairy Food Safety Alliance, a group designed to deliver the latest in food safety news to dairy product manufacturers, processors, and their suppliers.

The Dairy Food Safety Alliance meets biannually and features speakers from the U.S. Department of Agriculture, the U.S. Food and Drug Administration, the Wisconsin Department of Agriculture, Trade, and Consumer Protection, and respected leaders in the field of food safety and quality assurance.

Learn more and get involved today! Contact WCMA's Kirsten Strohmenger.



Dairy Food Safety Alliance Meetings

- Twice a year In-person and Virtual Attendance
- Center for Dairy Research Partnership with Wisconsin Cheese Makers Association.



The screenshot shows the website for the Wisconsin Cheese Makers Association. The header includes the logo and name, along with navigation links for About, Events, Resources, Industry Careers, Advocacy, and News. The main content area features a banner image of various cheeses and a dark blue event card. The event card contains the following information:

DAIRY FOOD SAFETY ALLIANCE

Dairy Food Safety Alliance Tour & Hybrid Meeting

- Thursday, May 30, 2024
- 9:30 AM - 3:00 PM (CDT)
- Farm Wisconsin Discovery Center
7001 Gass Lake Road
Manitowoc, WI 54220-9556
United States

Dairy Food Safety Alliance Webpage SOP templates

Standard Operating Procedures

- Allergen Control – Milk Only
- Allergen Control – Multiple Allergens
- Brine Management Plan Template
- Calibration
- Chemical Control Program
- Correction and Corrective Action
- Customer Complaint Management
- Drug Residual (Antibiotics)
- Equipment Commissioning and Decommissioning
- Finished Product Specification Template
- Finished Product Specifications 1
- Food Safety Culture Policy
- Food Defense Flow Chart
- Food Defense
- Food Fraud
- Foreign Material Control
- Good Manufacturing Practices
- Hold and Release
- Hygienic Zoning Environmental Monitoring
- Internal Audit
- Lab Practices
- Maintenance Program
- Pasteurization Thermization
- Pest Control
- Raw Milk Receiving
- Recall and Traceability Program
- Record Control
- Retention Sample Program



Thermization Calculator

https://fri.wisc.edu/resources_thermization.php

- FRI – Food Research Institute

Food Safety Resources

[Cheese Thermization App](#)

[Food Safety Reviews](#)

[Applied Food Safety Lab](#)

[Find a Food Safety Expert](#)

Cheese Thermization

Calculate:

Hold Time from Temperature and Log Reduction

Bacteria

Reduction:

Temperature (°F)



Hold Time (s) for 3-log reduction *Listeria monocytogenes* at 140°F:

445 s

Provides: >6.5 log reduction Shiga-toxin producing E. coli



Center for Dairy Research – Pipeline

<https://www.cdr.wisc.edu/pipeline>



CENTER FOR DAIRY RESEARCH

INNOVATION

SUPPORT

TRAINING



Contact Us

Support CDR

CDR Insider (Account)



Dairy Pipeline Newsletter

The **Dairy Pipeline**, CDR's quarterly newsletter, features in-depth, technical articles on dairy products and processing and provides updates on important topics in the dairy industry. Stay up-to-date on new research and



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Center for Dairy Research – Pipeline

<https://www.cdr.wisc.edu/pipeline>

DAIRY FOOD SAFETY RECALLS IN THE UNITED STATES AND CANADA: 2022 IN REVIEW

Technical Contributor: Alex O'Brien, CDR

Compared to other food and beverage products, dairy foods have a good track record of food safety. Along with pasteurization, the fermentation process, water activity, acidity and salt levels in many dairy foods can help protect against pathogens. In addition, the dairy industry works hard to maintain the quality and integrity of its products. Of course, the industry needs to stay alert and continue to get better.

The purpose of this article is to give insight to the dairy industry on what we need to better prepare for the future from a food safety perspective. Recall review is an important and routine task to complete on annual basis with your food safety team when conducting HACCP/ food safety plan validations.

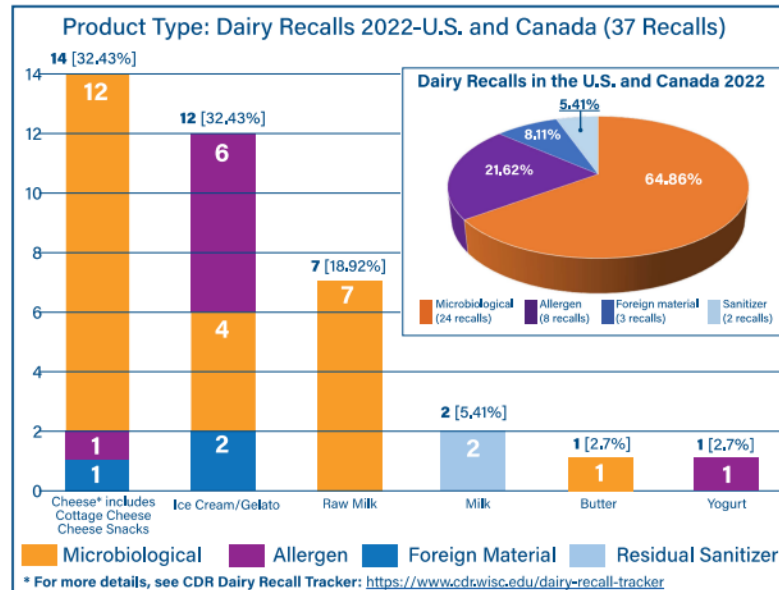
A Look at the 2022 Dairy Processing Recalls

There were approximately 37 recalls in dairy for the United States and Canada last year. The top dairy products recalled were cheese and ice cream.

Out of the approximate 37 recalls in 2022 for dairy in the United States and Canada, ~65% (24) of the recalls were caused by a microbiological contaminant. For cheese (Cheese, Cottage Cheese, and Cheese Snacks), ~86% (12) of recalls were caused by a microbiological contaminant. Over half (7 out of 12) of these microbiological recalls were due to *Listeria monocytogenes*.

Improper Labeling/Undeclared Allergens

For ice cream and gelato, half of the recalls (6) were due to undeclared allergens. Four of these 6 recalls occurred due to issues with the packaging process, specifically, packaging ice cream in the incorrect containers. The other 2 ice cream and gelato recalls were due to not declaring the item on the packaging. ➔



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Resources, Articles, Videos and Helpful Tools

Foreign Material Prevention

CDR Safety & Quality Coordinator Alex O'Brien covers important topics like detecting and separating equipment. [Read Article \(PDF\)](#)

Also, check out the webinar given by the Innovation Center for U.S. Dairy. [Foreign Material Control Webinar](#)

Controlling the Risk of Allergens in Dairy Processing

CDR Safety & Quality Coordinator Alex O'Brien writes about tips and strategies to control allergens in the dairy plant. [Read Article \(PDF\)](#)

Wisconsin Pasteurizer Broken Seal Process

This article includes links to key documents and contacts to assist with the process of properly reporting a pasteurizer broken seal. [Read Article \(PDF\)](#)

Dairy Food Safety Recalls in the United States and Canada: 2022 in Review

This article reviews the top reasons for recalls in the dairy industry in the U.S. and Canada in 2022, and discusses the suggested areas of improvement to reduce the instance of these recalls. [Read Article \(PDF\)](#)
[Dairy Food Safety Recalls in the US and Canada 2022 in Review](#)

Dairy Food Fraud Primer

Food Fraud has been around for centuries. Not only is

Cheese Thermization App

Developed by the Food Research Institute, the Cheese



Center for Dairy Research

Dairy Recall Tracker

<https://www.cdr.wisc.edu/dairy-recall-tracker>



The screenshot shows the top navigation bar of the Dairy Recall Tracker website. It includes the Center for Dairy Research logo, a menu icon, and navigation links for INNOVATION, SUPPORT, TRAINING, and a search icon. Below the navigation bar, the main heading reads "Dairy Recall Tracker" with a sub-heading: "Below is a list of Dairy recalls in the United States and Canada". To the right of the text is a large graphic featuring a circular seal with "PRODUCT RECALL" and three stars, overlaid with a red banner that also says "PRODUCT RECALL".

2024

January 2024	+
February 2024	+
March 2024	+
April 2024	+
May 2024	+
June 2024	+
July 2024	+
August 2024	×

August 6, 2024 [Consumer Alert: Campylobacter Jejuni Contamination in Raw Milk in Montgomery County | Agriculture and Markets \(ny.gov\)](#)



Center for Dairy Research

Youtube Page

<https://www.youtube.com/@CenterforDairyResearch/playlists>

The screenshot shows the YouTube channel page for the Center for Dairy Research. The channel name is "Center for Dairy Research" with 35 subscribers and 13 videos. The bio states: "The Center for Dairy Research (CDR) offers you the expertise of more than 30 researchers...more" and includes the website "cdr.wisc.edu" and 2 more links. The "Playlists" tab is selected, showing five created playlists:

- Breve Video Sobre Seguridad Alimentaria**: 1 video
- WCMA Onboarding Series**: 4 videos
- Cheese Chemistry**: 4 videos
- New Building**: 2 videos
- Frequently Asked Questions**: 3 videos

Each playlist has a "View full playlist" link below it. The "Cheese Chemistry" playlist thumbnail includes chemical structures for $\text{C}_6\text{H}_5\text{COOH}$ (labeled "Propionic"), $\text{C}_6\text{H}_5\text{COO}^-$ (labeled "Butyric Acid"), and $\text{C}_6\text{H}_5\text{COO}^-$ (labeled "Lactic acid").



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Youtube Page

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Washing Hands: Food Safety Toolbox Talk

Center for Dairy Research - 1 / 13

- 1. **Washing Hands: Food Safety Toolbox Talk** (2:30)
- 2. **Whole Genome Sequencing: Tracking Down Outbreaks** (3:25)
- 3. **6 Considerations for a Food Safe Drains** (2:29)
- 4. **5 Things You Need to Know About Food Safe Drainage** (1:18)

Good Manufacturing Practices (GMPs) at CDR (4:30)

Food Safety Toolbox Talks: Hygienic Zoning in Food

Center for Dairy Research

Youtube Page

- https://www.youtube.com/watch?v=vBPh8OBQ-s4&list=PLB7gkTZx_4TvVrUDgq-AOn9XFFTK51blh&index=2



Center for Dairy Research

Food Safety Page

- Links to articles
- Links to other resources discussed
- Free posters
- One Point Lessons
- Links to videos
- <https://www.cdr.wisc.edu/safety-quality>



Center for Dairy Research

Available short courses

- HACCP
- PCQI
- Advanced Sanitation
- Comprehensive Environmental Monitoring



One Point Lesson Example


Food Safety Page

Visual Inspections
One Point Lesson

XX
Version 1
XX/XX/XXXX


One Point Lesson			
Location	Production Areas		
Objective	Visually Inspect for Proper Sanitation	Date: XX/XX/XXXX	Switch Out: XX/XX/XXXX
Type	Improvement Cases	Author NAME	Approved By NAME

✗

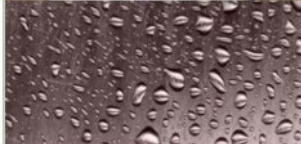


→ rainbow hues
(Protein Residue)


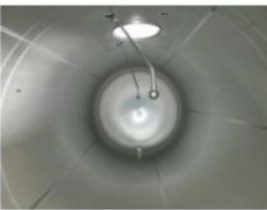
✓



→ "hanging" water droplets.
(Fat Residue)



→ White Chalky residue
(Milk Stone)
If foul odor or Visual inspection fails, equipment must be (re)washed before use. Use a flashlight or UV flashlight to assist in inspection!
Please document findings!

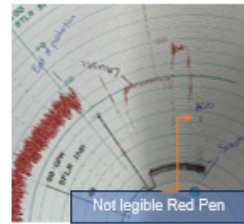
Page 1 of 2

HTST Charts
One Point Lesson

XXXX
Version 1
XXXX/XXXX

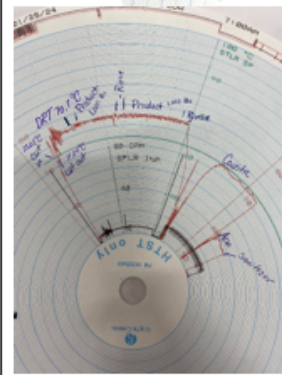
One Point Lesson			
CDR Pilot Plant Areas			
Location	Verify HTST Charts	Date: XX/XX/XXXX	Switch Out: XX/XX/XXXX
Objective	Improvement Cases	Author	Approved By

✗

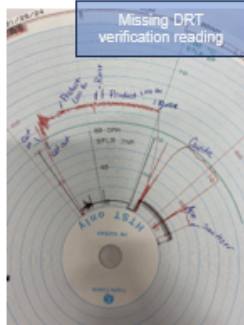


Not legible Red Pen

✓



Missing DRT verification reading



Top things to document when completing HTST paperwork:

- Proper Stamp or documentation for the intended piece of equipment
 - Plant Address
 - Plant #
 - Regulatory Seal Check
 - Initials/Signature
- Check and document that all regulatory seals are present
- Document Cut In/ Cut Out Temperature
- Date
- Document Product being run on chart
- Document DRT Verification
- Document any reasons for Divers
 - Rinse
 - Caustic
 - Rinse
 - Acid
 - Rinse
 - Sanitizer
- All sanitation cycles:
 - Rinse
 - Caustic
 - Rinse
 - Acid
 - Rinse
 - Sanitizer

BIG PICTURE:

- This chart ensures that microbial pathogens are controlled!
- Ensure red, green, black (all) pen ink is recording properly.
- Have the correct CIP chart style (Batch vs. Pasteurizer)
- Document anything unusual (Explain divers, any power outages, etc.)

Page 1 of 2

Questions?

- Phone: 608-598-9977
- Email: aobrien@cdr.wisc.edu



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Wisconsin and US Dairy Farm Families | Dairy Farmers of Wisconsin

National Dairy Council | CDR Industry Team | WCMA



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