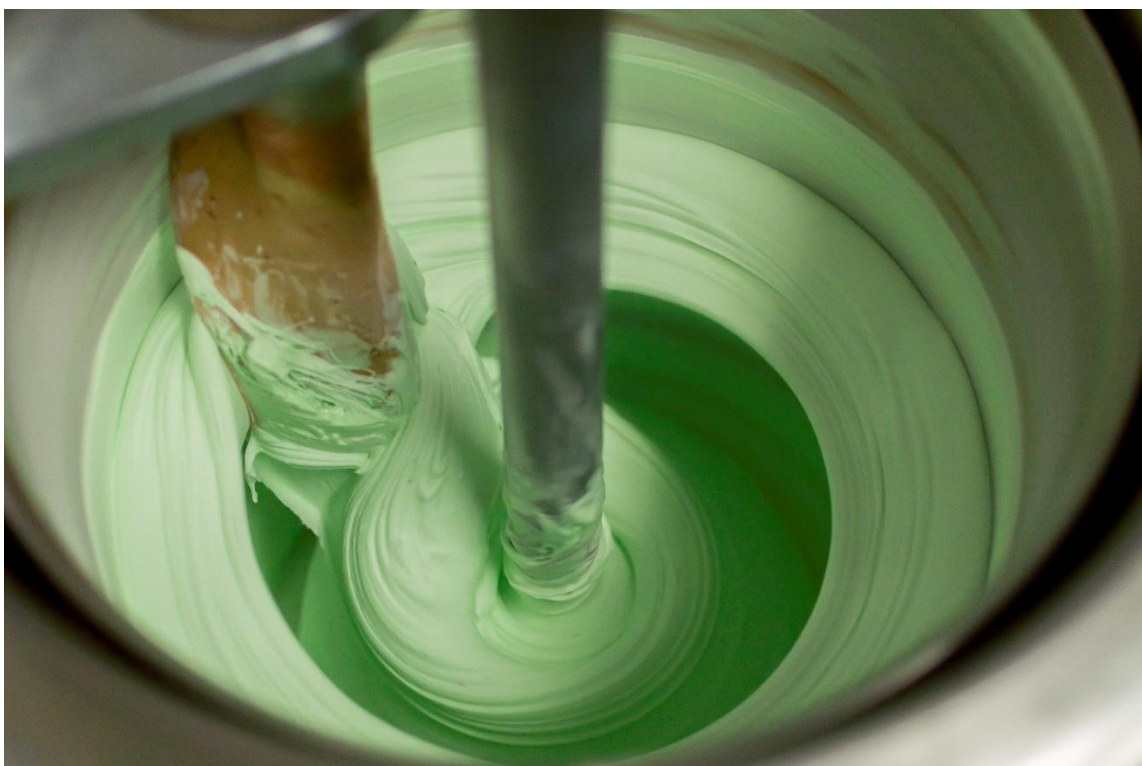




How To Grow Your Ice Cream Business Safely



Developed by a team of industry, trade association, and academic volunteers.

Version 1

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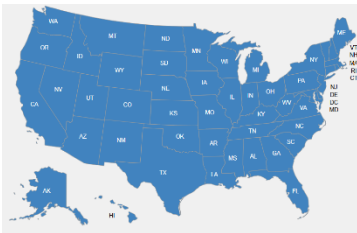
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Is This Guide For You?

Do you scoop and sell pre-made ice cream? As a shop owner or restaurant, you need to ensure the safety of your ice cream for your customers. Just because it is frozen doesn't mean that you don't need to worry about food safety. Considerations include ensuring the safety of any ingredients or toppings, keeping your products cold, and keeping equipment and utensils clean & sanitized to prevent allergen cross contamination and product spoilage. These are general practices that every shop or restaurant needs to be aware of. We recommend you obtain [Serve Safe](#) certification as you will probably be under the jurisdiction of your local Health Department. As you hire and train your employees, you may want to utilize this [poster](#) as a daily reminder of the important things to do each day while at work.



Do you use equipment to manufacture ice cream? As soon as you start freezing your own ice cream, whether from a mix or from scratch, there are now additional levels of food safety requirements and responsibilities for you and your business. In addition, if you ship to multiple locations, across state lines, or into retailers, you would be considered a manufacturing location which requires additional documentation. Please check with your state and/or FDA regulatory officials for proper guidance.



View this [map](#) of resources to find your state dairy regulatory group to help answer any questions related to requirements for your geography. Regardless of regulatory requirements, there are many steps you should take right now to grow your ice cream business safely.

Step One: Understanding The Basics

You and your employees should be trained in making/manufacturing safe food. One easy option is to take the full educational course on [Food Safety Basics for Ice Cream Makers Online Course](#). Sample coursework is below. Click on these links for video excerpts and training documents. Foster a culture of food safety within your business. Set aside 15 minutes each week to refresh yourself and your employees regarding food safety best practices. Take walks with your employees to observe and celebrate best practices and identify ways to improve.

Training Course Excerpts

[The Importance of Food Safety](#)

[Good Manufacturing Practices](#)

[How to Identify Potential Hazards](#)

[Best Sanitation Practices](#)

[How to Ensure Equipment is Clean](#)

[How to Control Your Process](#)

[How to Handle and Control Allergens](#)

[How to Verify Your Suppliers](#)

Training Resource Materials

[Training Poster: Employee GMPs](#)

[Hazard Identification & Food Safety Plan Templates](#)

[Training Poster: 7 Steps of Sanitation](#)

[Environmental Monitoring Guidance](#)

[Food Safety Programs Checklist & Templates](#)

[Training Poster: Allergens](#)

[Guidance for Supplier Controls](#)

Step Two: Conduct A Self Audit

Conduct a food safety self-audit of your facility to figure out if you have all the right processes, programs, controls, and documentation in place. Utilize this [Food Safety Program Checklist](#) to guide you during your assessment process. Once you gather this information, it will help you develop and/or enhance your company's Food Safety Plan, which can be required for you to operate your business.



As you grow, you may want to bring in a food safety coach or consultant to review your food safety plan and programs. If you need further assistance in writing your Food Safety Plan, your local or regional University and Extension personnel may be able to help ([See Map of Experts](#)) or contact Dairyfoodsafetycoach@cornell.edu or aobrien@cdr.wisc.edu for specific food safety support questions.

Step Three: On-Going Education & Training

On-going employee food safety education and training is critical to ensure the right steps are being taken consistently. The remainder of this document focuses on employee training and includes links to resources, videos, posters, and other tools to help you build your training program. These materials are not intended to be the only training materials that you may use, since products and processing methods vary between locations and the employee's role in the facility may dictate more in-depth training in certain aspects of your operation. These are provided to assist you with employee development to ensure the safety of your ice cream products. Doing nothing puts your business at risk. You are not alone! Additional resources to assist you are available at www.safeicecream.org.

Food Safety Basics Training

Just Starting Out	Topic Area(s)	Resources & Tools
Day 1 Fundamentals	• Food Borne Illness Awareness & Basic GMP • Company Background • Job Description/Responsibilities • Training Sign-Off Procedures • Food Safety Culture	Food Safety Basics For Ice Cream Makers Online Are You An Ice Cream Factory? (Food Safety) - YouTube Ice Cream Making Essentials (Food Safety) Ice Cream Machine 2 Step Cleaning (Food Safety) Do You Test Your Ice Cream Regularly (Food Safety) Safe Ice Cream Steps Poster Why Food Safety Culture Matters Dr Lone Jespersen
Personal GMPs	• Don't Come To Work Sick • Importance of Good Manufacturing Practices (GMPs) ✓ Clean Body, Clothes & Shoes, No Outdoor Clothes/Shoes ✓ No Jewelry, Gum, Food or Beverages in Work Areas ✓ Entry Protocol: Handwashing, Gloves, Hair &	Don't Spread Germs At Work Poster GMPs Video CDR Dairy Plant GMPs English Dairy Plant GMPs Spanish CDR Handwashing Video GMP Training NCSU

Personal GMPs Cont'd	Beard Net PPE Location & Use ✓ Door Opening, Shoe Sanitizing & Glove Switching Protocols	Supervisor Demo the Location and Proper Use of PPE
Facility GMPs	• Raw vs. RTE Separation • Areas/Zones • Color Coding of Tools • Traffic Patterns Control/Secure Facility • Allergen Awareness • Clean & Sanitize Surfaces • Pest Control • If Farmstead: No Entry Until Showered/Changed if in Barn • See Something Say Something	Hygiene Levels By Zone Supervisor Review Facility Map Supervisor Share Plant Color Coding Scheme Foot Traffic Flow at Howling Cow Creamery Ice Cream Product Flow at Howling Cow Creamery Allergen Poster English & Allergen Poster in Spanish Steps to Clean and Sanitize a Food Processing Facility NSF Clean and Sanitize Serv Safe Poster Pest Awareness Entry Sign Farmstead Operations See Something Say Something Poster
Personal Safety	• Chemical Safety PPE	Supervisor Discuss with Employee & Show Location of Equipment and Logs

Personal Safety Cont'd	• SDS Sheets/OSHA • Confined Spaces • Fire Safety-Emergency Exits, Locations of Fire Extinguishers, Monitoring of Expiration Dates Extinguishers • Importance of Eye Contact with Equipment Operators • LOTO Procedures • AED/First Aid/Emergency Shower & Eye Wash Stations, Ear Protection, Prevention of Slip, Trips and Falls	Safety Data Sheets Training Video By Ally Safety Confined Space Hazards Toolbox By Ally Safety (youTube.com) Free Fire Extinguisher Training Video OSHA 2023 Emergency Action Plan Training By Ally Safety Supervisor Discuss with Employee Lockout Tagout To Control Hazardous Energy OSHA First Aid Kit Requirements By Ally Safety How To Use An Emergency Eyewash Station By Ally Safety Protect Your Hearing Video Preventing Slips, Trips and Falls
Safety Training Review	• Supervisor Review Items or Create Employee Orientation Checklist	Supervisor Assess Awareness & Conduct Employee Training Sign-Off

Beyond The Basics - Food Safety Training

	Topic Area(s)	Resources & Tools
Facility Risks & Hazards	- Hazards & Risks Awareness - Traffic Patterns & CCP By Area	Food Safety Basics For Ice Cream Makers Online Hygienic Zoning CDR Product Flow Example
Allergen Control	- Allergen Awareness & Control - Prevention of Allergen Cross Contact Is Required. - Precautionary Labeling is Not Enough	Food Safety Basics Ice Cream Allergen Control Allergen Control: A Triple Check Approach Components Of An Effective Allergen Control Program FARRP UNL (See Pg. 7 Regarding Cross Contact) Food Labelling for the Food Allergic Consumer FARRP UNL Spanish Language Sanitation & Allergen Control & Hazards Importance Of Color Coding Sample Color Coded Equipment Catalog Allergen Poster In English & Allergen Poster In Spanish
Cleaning & Sanitation	Mitigation of Risks Through Cleaning & Sanitation-Why, How and How to Verify	7 Steps To Effective Wet Sanitation

Cleaning & Sanitation Cont'd		7 Steps To Effective Wet Sanitation In Spanish Steps to Clean and Sanitize a Food Facility NSF Preventing Aerosolization General Mills Sanitation Videos Food Mfg. GMPs NCSU
Ensuring Proper Documentation	• Your Role in Documentation	Sanitation Documentation Writing Sanitation Standard Operating Procedures PSU Sample SSOP Food Safety Toolbox Talks: Documentation Basics in Food Manufacturing FSMA Human Food Audit Checklist ISU Generic Technical Data Sheet Document Request Form
See Something Say Something	• When to Notify/Ask Questions	Employees are the FIRST Line of Food Defense See Something Say Something Poster Food Safety Culture Overview IC

Product Handling	• Labels & Lot Codes Awareness & Verification • Lot means the food produced during a period of time and identified by an establishment's specific code. (See Pg. 35)	Supervisor Discuss Employee Roles & Responsibilities FSMA Human Food Audit Checklist ISU
	• Warehouse/Receiving Rules and Record Keeping • Cooler Management • Inventory Management	Supervisor Discuss Employee Awareness of Risks and Logs Toolbox Talk Receiving Materials YouTube Receiving Form Review Temperature Logs & Verification Process First In, First Out (FIFO)

Running An Ice Cream Plant: Establishing Food Safety Programs

	Topic Area(s)	Resources & Tools
All Employees Should Have Awareness of Food Safety Plan & Prerequisite Programs	Food Safety Plan & Prerequisite Programs: Sanitation Programs, Maintenance Programs, Food Defense, Pest Control	Growing Your Ice Cream Business Safety Checklist FDA Food Defense Training & Education Pest Control Program Video
Hygiene Zones	Rings of Protection	Hygienic Zones NCSU Hygienic Zoning CDR
Sanitary Design	- Facility Design - Equipment Design	Pathogen Controls Guidance Document IC Facility Design Checklist 3-A Equipment Design Knowledge Center Equipment Design Checklist
Foreign Material Risks	Foreign Materials	Foreign Material Control Webinar IC
Controlling Risks from Suppliers	Ingredient Handling Considerations	Supplier Controls Packet IC
Verify Cleanliness of Plant and Equipment	Environmental Monitoring	Environmental Monitoring Videos NCSU 3M Environmental Monitoring Guidance Document

Incident Management	• What to Do When An Issue Is Found?	Whole Genome Sequencing: Tracking Down Outbreaks Incident Management Form RCA Problem Solving Worksheet RCA/CAPA
Product Release Program	• Employee Responsibility & Authority • Employees Know They Are Empowered to Put Product On Hold • Employees Know Hold Criteria & Process • Employees Know When/How to Act	Supervisor Review Employee Responsibilities In your Employee Handbook Supervisor Discuss Product Release Procedures and Sign-Off Process Supervisor Discuss Customer Requirements, Hold Criteria and When & How to Act
Role of Auditing	• Annual Regulatory & 3rd Party Audits	Food Safety Auditing 101 SQFI Self Audit Topics Food Safety Programs Checklist Cornell FSQ Level 1 Audit FSMA Human Food Audit Checklist ISU
Recalls: Awareness of Your Role	• What To Do In the Event of a Recall	Food Recall Training Tips Audit Template CDR

	• Documentation Why It Matters • Traceability Awareness	Food Traceability Final Rule NCSU FDA Updated Food Traceability Guidance Video Traceability Guidance Document 2020 IC
Food Safety Culture: It Begins With You	• Intro to Food Safety Culture • Participate and Conduct Monthly Audits & Walk Throughs With Training Buddy • When You See Something Say Something	Food Safety Culture Lone Jespersen Gemba Walk: What Is It and How to Conduct Food Safety Culture Overview Poster IC See Something Say Something Poster Interactive Training Tool Kit Stop Food Borne Illness Game Ideas Supervisor Discuss Organizational Commitment
On-Site Retail (If Applicable)	• Separate Retail From Processing Environment	ServSafe Manager Practice Test
Programs In Action	• Consider PCQI Training for One or More Employees	Supervisor Refer Employee to Advanced Trainings

	Supervisory Resources	https://www.fspca.net/ More Specialized Trainings Listed Below Tips For in-Person Trainings Sample Employee Handbook Checklist
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Specialized Trainings

As you or your employees develop an understanding of food safety principles, more in-depth training and certifications may be useful and/or required. Some of these advanced training opportunities are listed below. There may also be additional expertise located in your state or region. Visit this [interactive map](#) of food safety resources for additional information.

Cornell University

- Introduction to Food Safety Principles in Spanish and English
<https://cals.cornell.edu/introduction-food-safety-principles-spanish-and-english>
- Dairy Science and Sanitation in Spanish and English
<https://cals.cornell.edu/education/degrees-programs/dairy-science-and-sanitation>
- Accredited HACCP in Spanish and English
<https://cals.cornell.edu/education/degrees-programs/accredited-haccp>
- 3-Day Milk Pasteurization Course
<https://cals.cornell.edu/education/degrees-programs/high-temperature-short-time-htst-pasteurizer-workshop>
- Certificate Programs & Courses
<https://cals.cornell.edu/dairy-extension/small-processors/certificate-program-courses>

NCSU

- Food Safety Basics for Ice Cream Makers
 - Course 1: Importance of Food Safety
 - Course 2: Food Safety Hazards
 - Course 3: Good Manufacturing Practices
 - Course 4: Allergen Controls
 - Course 5: Cleaning and Sanitation
 - Course 6: Supply Chain Controls
 - Course 7: Process Controls
 - Course 8: Environmental Monitoring
 - Course 9: Food Safety Control Strategies
 - Course 10: Roadmap to Your Food Safety System
- Preventive Controls for Dairy Processors: <https://units.cals.ncsu.edu/foodsafety/preventive-controls-for-dairy-processors/>
 - This course is appropriate for owners or managers. Participants will earn a HACCP Certificate and have one-on-one assistance with their food safety plan.
- Sanitation Controls Practitioners Program: <https://units.cals.ncsu.edu/foodsafety/sanitation-essentials-in-food-manufacturing/>
 - This course is appropriate for employees with hands-on responsibility for sanitation. Participants learn how to carry out daily operations, how to be vigilant for emerging sanitation threats and how to maintain a sanitation program.
- Environmental Monitoring in the Dairy Industry: <https://units.cals.ncsu.edu/foodsafety/environmental-monitoring-in-the-dairy-industry/>
- GMPs for New Hires & Refresher Course: <https://units.cals.ncsu.edu/foodsafety/gmps-for-new-hires-and-refresher-course/>
- GMPs for Aspiring Managers: <https://units.cals.ncsu.edu/foodsafety/gmps-for-aspiring-managers/>
- GMPs Mastery Course Bundle: This course covers all GMP topics and provides resources for managers to use with their employees in group huddles to dig deeper into the GMP topics and promote discussions about food safety: <https://units.cals.ncsu.edu/foodsafety/gmps-mastery-course-bundle/>

- Food Safety & Quality Management Program:
<https://online-distance.ncsu.edu/program/undergraduate-certificate-food-safety-quality-management/>
 - Online course providing foundational skills and knowledge about food safety, quality control, and operations management concepts essential to career advancement related to the food manufacturing supply chain. Participants will earn an undergraduate certificate.

Oregon State University

- [Dairy Foods Manufacturing Certificate and Continuing Education Series \(oregonstate.edu\)](#)

Pennsylvania State University

- [Dairy Food Safety and Sanitation | Penn State Extension \(psu.edu\)](#)

University of Wisconsin River Falls

- [Dairy Processing Workshops | University of Wisconsin River Falls \(uwrf.edu\)](#)

Wisconsin Center For Dairy Research

- [Training | Center for Dairy Research \(wisc.edu\)](#)
- [Advanced Sanitation | Center for Dairy Research \(wisc.edu\)](#)
- [HACCP Certification Workshop | Center for Dairy Research \(wisc.edu\) *International HACCP Alliance Certified*](#)
- [Environmental Monitoring](#)
- [Certificate in Dairy Processing \(CDP\) | Center for Dairy Research \(wisc.edu\)](#)
- [Safety & Quality | Center for Dairy Research \(wisc.edu\)](#)
- [Informational Short Training Videos](#)
- [Online Milk Pasteurization and Process Control Short Course with Spanish Captions](#)

Innovation Center for U.S. Dairy Food Safety Workshops

- [Upcoming Workshops from the Innovation Center for U.S. Dairy](#)

Acknowledgments

Special thanks to Bob Wills and Aaron Barnard (Cedar Grove Cheese), Steve Christensen (North American Ice Cream Association) Alex Solla, Kim Bukowski and Sam Alcaine (Cornell University), Tim Stubbs (Dairy Management Inc.), Michael Koch (Firefly Farms), Brian Kraus (Wells Enterprises, Rich and Heather Draper (The Ice Cream Club), Stephanie Cotter (North Carolina State University), Alise Sjostrom (Redhead Creamery), Hank Sweeney (Galloway Company) Mary Wilcox (Significant Outcomes LLC), John Boortz (Tillamook Cheese), Dennis D'Amico (University of Connecticut) and Alex O'Brien (University of Wisconsin Center for Dairy Research) for their contributions

Something Missing? Need Additional Assistance?

Contact innovationcenter@usdairy.com