



Food Safety Core Program

Module 1: Introduction to Food Safety

Learning Outcomes

- ✓ Identify and describe key core concepts of food safety
- ✓ Identify food safety hazards and their impact on public health
- ✓ Identify roles and responsibilities of stakeholders
- ✓ Identify potential risks and issues of concern to your facility

Module Content

1. Food Safety Core Concepts
 - 1.1. Safe Food vs. Suitable Food
 - 1.1.1. Biological Hazards
 - 1.1.2. Chemical Hazards
 - 1.1.3. Physical Hazards
 - 1.2. Risk vs. Hazard
 - 1.3. Food Safety Hazards & Risk Mitigation
 - 1.4. What is Risk Mitigation
 - 1.5. Food Processing Stages and Flow Diagrams
 - 1.6. Emerging Food Safety Issues
 - 1.7. Traceability
 - 1.8. Food Safety Management Systems and Risk Based Approaches
 - 1.9. Role of Inspection in Food Control – Municipal, Provincial, Federal, and Global Oversight
 - 1.10. From Product-Based Inspection to Risk-Based Inspection
 - 1.11. You and Your Company – Understanding Your Process – The First Step

Module 2: Risk Analysis and Incident Management

Learning Outcomes

- ✓ Identify and apply the principles of risk analysis to specific hazards within your company/facility
- ✓ Identify the processes of risk analysis and apply them to your facility to ensure production of safe food
- ✓ Describe the principles and approaches to implementation of an effective Incident Management system
- ✓ Discuss techniques to resolve product safety issues/complaints within your company/facility
- ✓ Examine the design and maintenance of your product recall system and identify gaps requiring improvement
- ✓ Review the tactics available for Food Defense and Mitigation Strategies and discuss their applicability in your facility

Module Content

1. Risk Analysis
 - 1.1. Risk Assessment
 - 1.1.1. Hazard Identification
 - 1.1.2. Hazard Characterization
 - 1.1.3. Exposure Assessment
 - 1.1.4. Risk Characterization
 - 1.2. Risk Management
 - 1.3. Risk Management – Food Safety Management Systems
 - 1.4. Risk Communication
 - 1.4.1. Who Should Do Risk Communication?
 - 1.4.2. Risk Communication Activities and Uncertainty
2. Incident Management
 - 2.1. Incident Management
 - 2.1.1. Incident Management Policy
 - 2.1.2. Incident Management Team
 - 2.1.3. Procedures and Supporting Documentation
 - 2.1.4. Supporting Systems
 - 2.1.5. Resources
 - 2.1.6. Training
 - 2.2. Incident Management Process - Assessment
 - 2.2.1. First Contact
 - 2.2.2. Initial Action
 - 2.2.3. Risk Assessment
 - 2.2.4. Sampling and Testing
 - 2.2.5. Records
 - 2.2.6. Risk Assessment Tools for Incident Management

- 2.3. The Incident Management Process – Risk Management
 - 2.3.1. Manage Stock
- 2.4. Crisis Management
 - 2.4.1. Preparation: Including Planning, Simulations and Training
 - 2.4.2. Management
 - 2.4.3. Evaluation and Learning
 - 2.4.4. Assessing Crisis Preparedness
- 2.5. Product Recall
 - 2.5.1. Traceability
 - 2.5.2. Corrective Actions
- 2.6. The Incident Management Process – Risk Communication
 - 2.6.1. Internal and External Communications
 - 2.6.2. Use of Social Media
 - 2.6.3. Crisis Communication Plan
 - 2.6.4. Use of Media for Public Apologies
- 2.7. The Incident Management process – Final Review
- 2.8. Food Security
 - 2.8.1. Assessment of Your Company's Vulnerability

Module 3: Raw Materials, Finished Product Specifications and Allergen Management

Learning Outcomes

- ✓ Identify ingredient and product risks associated with biological, chemical and physical hazards
- ✓ Design strategies to manage suppliers
- ✓ Identify the sub-components and requirements of product specification
- ✓ Identify priority food allergens for your facility and products
- ✓ Discuss techniques to resolve ingredient and product allergen issues within your company/facility
- ✓ Describe the principles and approaches to the implementation of an effective Allergen Management system
- ✓ Review available tools for Product Specifications and Allergen Management strategies and, discuss their applicability in your facility
- ✓ Describe specific requirements for your food products
- ✓ Conduct a risk assessment of products that are associated with food allergens
- ✓ Design and assess strategies to manage food allergens
- ✓ Identify and use various allergen preventive measures used throughout food manufacturing processing

Module Content

1. Raw Materials
 - 1.1. Introduction to Hazards in Raw Materials
 - 1.1.1. Biological Hazards
 - 1.1.2. Chemical Hazards
 - 1.1.3. Physical Hazards
 - 1.2. Handling and Storage of Raw Materials, Ingredients and Packaging Materials
 - 1.3. Risk Assessment of Raw Materials
 - 1.4. Risk Management of Raw Materials
 - 1.5. Suppliers
 - 1.5.1. Selection of Suppliers
 - 1.5.2. Working with Suppliers
 - 1.5.3. Probationary Period
 - 1.5.4. Lines of Communication
 - 1.5.5. Approved Supplier List
 - 1.5.6. Management of Issues & On-Going Problems
 - 1.5.7. Auditing the Suppliers
 - 1.5.8. Management Review & Reporting
 - 1.5.9. Raw Material Specification
 - 1.5.10. Certificates of Analysis (COA)
 - 1.5.11. Certificate of Conformity and Letter of Continuing Guarantee (LOCG)

2. Product Specification
 - 2.1. Finished Product Specifications
 - 2.2. Chemical, Physical and Microbial Attributes
 - 2.3. Nutritional Analysis
 - 2.4. Critical Control Point (CCP) Targets and Critical Limits
 - 2.5. Organoleptic Quality
 - 2.6. Product Description
 - 2.7. Ingredient List / Allergens
 - 2.8. Storage Conditions
 - 2.9. Shelf Life & Best-Before Coding
 - 2.10. End Use
 - 2.11. Packaging Material / Shipper
 - 2.12. Certification Requirements
3. Allergen Risk Analysis
 - 3.1. Allergen Risk Assessment
 - 3.1.1. Step 1: Hazard Identification
 - 3.1.2. Step 2: Hazard Characterization
 - 3.1.3. Step 3: Exposure Assessment
 - 3.1.4. Step 4: Risk Characterization
 - 3.2. Allergen Risk Management
 - 3.2.1. Step 1: Evaluate Risks
 - 3.2.2. Step 2: Consider Alternative Risk Mitigation Strategies
 - 3.2.3. Step 3: Set Monitoring Procedures
 - 3.2.4. Step 4: Develop Corrective Actions
 - 3.2.5. Step 5: Regularly Check and Document
 - 3.2.6. Step 6: Update Protocols
 - 3.3. Allergen Risk Communication
 - 3.4. Allergen Control – Step by Step
 - 3.4.1. Identification and Control of Allergens in Incoming Ingredients, Packaging Materials and Labels
 - 3.4.2. Packaging and Labelling of Finished Products
 - 3.4.3. Control of Allergens during Weighing Blending Mixing Formulation
 - 3.4.4. Allergen Control in Rework
 - 3.4.5. Control of Cross-Contamination
 - 3.4.6. Cleaning and Sanitation
 - 3.4.7. Equipment and Layout Design
 - 3.4.8. Training in Allergen Management
 - 3.4.9. Personal Hygiene
 - 3.5. Testing Food Allergens
 - 3.5.1. Sampling
 - 3.5.2. Methods of Analysis for Food Allergens
 - 3.6. Effective Labelling Messages

Module 4: Plant Layout

Learning Outcomes

- ✓ Identify food safety risks associated with facility design, construction and maintenance
- ✓ Identify appropriate physical facility design principles and standards that promote food safety
- ✓ Identify and use various facility specific sources relating to governmental rules, regulations and criteria
- ✓ Discuss techniques to resolve facility food safety issues
- ✓ Conduct a risk assessment of your facility
- ✓ Develop a strategy to address your facility associated food safety risks
- ✓ Identify risks and preventative control measures associated with facility functioning
- ✓ Identify good equipment design and placement

Module Content

1. Hygienic Plant Design
2. Levels of Segregation for Food Plants
 - 2.1. Level 1
 - 2.2. Level 2
 - 2.3. Level 3
 - 2.4. Level 4
3. Receiving Areas
4. Process and Product Flows
5. Internal Physical Barriers for Separation of Food Processing from Other Areas
6. Employee Facilities
7. High Care / Risk Areas
8. Structure
9. Heat Treated Product
10. Product Decontamination
11. Other Product and Packaging Transfer
12. Liquid and Solid Wastes
13. Sewage
14. Air
15. Utensils
16. Ventilation Systems
17. Sanitation Facilities

Module 5: Foreign Matter Prevention and Detection

Learning Outcomes

- ✓ Characterize foreign material hazards
- ✓ Describe the potential consequences of foreign material contamination
- ✓ Describe foreign material management strategies and techniques
- ✓ Identify potential sources of foreign matter contamination in your facility / products
- ✓ Conduct a foreign matter risk assessment of your facility
- ✓ Develop a strategy to address your facility associated foreign matter food safety risks
- ✓ Identify implementation strategies and training for your facility / product
- ✓ Identify and use various sources relating to foreign matter contamination
- ✓ Identify good foreign matter detection equipment, costs, calibration and placement in processing

Module Content

1. Preventive and Corrective Measures
 - 1.1. Overview of Preventive and Corrective Measures
 - 1.2. Raw Materials Contamination
 - 1.3. Maintenance Procedures
 - 1.4. Policy and Monitoring
 - 1.5. Validation and Verification of Detection Equipment
 - 1.6. Corrective Actions
 - 1.7. Training
 - 1.8. Detection and Removal Foreign Material
2. Methods for Detection of Foreign Materials
 - 2.1. Sifters and Screeners for Free-Flowing Dry Products
 - 2.2. Gravity Separators
 - 2.3. Air Classifiers
 - 2.4. Separation of Contaminants from Wet Products
 - 2.5. Magnetic Separation
 - 2.6. Evaluating Magnet Performance
 - 2.7. Metal Detection
 - 2.7.1. Pulse Technology
 - 2.7.2. Balanced Coil System
 - 2.7.3. Ferrous-in-Foil Detection System
 - 2.7.4. Factors that can Affect the Sensitivity of the Detector
 - 2.7.4.1. Type of Metal Contaminant to be Detected
 - 2.7.4.2. Detector Design and Aperture Size
 - 2.7.4.3. Product Effects
 - 2.7.4.4. Orientation Effect
 - 2.7.4.5. Aperture Size
 - 2.8. Optical Sorting System

2.9. X-Ray Inspection

2.9.1. How X-Ray Inspection Systems Work

2.9.2. X-Ray Inspection System Design

2.10. Calibration of Foreign Materials Detection Equipment

2.10.1. Test Pieces and Test Samples

2.11. Glass

2.12. Rejected Product Handling

Module 6: Regulatory Affairs

Learning Outcomes

- ✓ Identify and describe the various government (Canadian) regulations that apply to your food products
- ✓ Identify and describe all the applicable government (Canadian) regulations that apply to your products with respect to formulation, packaging and labeling
- ✓ Access reference material to assist with the development of a compliant label
- ✓ Evaluate that all your marketing and advertising information provided in the labels (e.g., claims) is accurate and compliant

Module Content

1. General Labelling Requirements
 - 1.1. Common Name
 - 1.2. Grade Names
 - 1.3. Net Quantity Declaration
 - 1.4. Photos / Images / Illustrations
 - 1.5. Ingredient List
 - 1.6. Available Display Surface (ADS)
 - 1.7. Nutrition Facts Table (NFT)
 - 1.8. Domicile
 - 1.9. Preparation / Handling / Dotage Instructions
 - 1.10. Durable Life Date
2. Claims
 - 2.1. Nutrient Content Claims / Comparative Claims
 - 2.2. Health Claims (Function Claims / Disease Reduction & Therapeutic Claims)
 - 2.3. Packaging Claims / Requirements
 - 2.4. Method of Production Claims
 - 2.5. Product of Canada Claim
 - 2.6. Other Claims
3. Government Approval
 - 3.1. Temporary Market Authorization (TMA)
 - 3.2. Organic Certification
 - 3.3. Kosher Certification
 - 3.4. Halal Certification