Module 1: Regulatory Affairs

Learning Outcomes

- ✓ To develop a good understanding of the Canadian regulatory labelling requirements for food.
- ✓ To familiarize with accessing reference material to assist with the development of a compliant label.
- ✓ To confirm that all marketing and advertising information provided by the manufacturing facility is accurate and compliant.

Module Content

1. General labelling requirements
2. Common name: Grade names
3. Net Quantity Declaration
4. Use of photos, images and illustrations
5. Ingredient List
6. Nutrition Facts Panel (NFP): The Nutrition Labeling Toolkit
7. Claims:
    - 7.1 Nutrient Content Claims
    - 7.2 Comparative Claims
    - 7.3 Disease Reduction Claims/ Functional Claims / Biological Role Claims / Canada Food Guide Claims
    - 7.4 Packaging Claims
    - 7.5 Method of Production Claims
    - 7.6 Product of Canada Claims
    - 7.7 Other claims
8. Domicile
9. Preparation, Handling and Storage Instructions
10. Durable Life Date
11. Temporary Market Authorization (TMA)
12. Labeling of Organic Products
13. Labeling of Kosher Products

Module 2: Risk Analysis and Incident Management

Learning Outcomes

- ✓ To apply the principles of risk analysis in the day-to-day operations, so the production of safe food is assured.
- ✓ To understand the principles and implementation steps of an effective Incident Management System.
- ✓ To provide specific knowledge for different product safety issues/complaints.
- ✓ To provide specific knowledge about the design and maintenance of a product recall system.
- ✓ To learn about the tactics available for Food Defense and Mitigation Strategies.

Module Content

1. Risk Analysis
    - 1.1 Risk Management : Food Safety Management Systems
    - 1.2 Risk Assessment
        - 1.2.1 Hazard Identification

- 1.2.2 Hazard Characterization
- 1.2.3 Exposure Assessment
- 1.2.4 Risk Characterization
- 1.2.5 Risk Assessment and HACCP

1.3 Risk Communication

- 1.3.1 Who should do Risk Communication
- 1.3.2 Risk Communication Activities
- 1.3.3 Risk Communication and Uncertainty

2. Incident Management
   - 2.1 Incident Management Policy
   - 2.2 Incident Management Team
   - 2.3 Procedures and Supporting Documentation
     - 2.3.1 Supportive systems
     - 2.3.2 Resources
     - 2.3.3 Training
   - 2.4 Incident Management Process
     - 2.4.1 First Contact
     - 2.4.2 Initial Action
     - 2.4.3 Risk Assessment: Sampling and Testing, Records & Tools
     - 2.4.4 Risk Management: Management of Stock, Crises Management, Assessing Crisis Preparedness, Product Recall & Corrective Actions
     - 2.4.5 Internal & External Risk Communication
     - 2.4.6 Social Media and Incident Management: Development of a Crisis Communication Plan
     - 2.4.7 Use of Media for Public Apologies
     - 2.4.8 Final Review
3. Food Security
   - 3.1 Assessment of your Company's Vulnerability: The CARVER Method

Module 3: Raw Materials, Product Specification and Allergen Management

Learning Outcomes

- ✓ To learn how to identify risks associated with biological, chemical and physical hazards and priority food allergens.
- ✓ To learn how to design strategies to manage suppliers and specific food allergens.
- ✓ To describe specific requirements for various food products, and to understand the sub-components of Product Specifications.
- ✓ To learn how to conduct risk assessment of foods associated with food allergens;
- ✓ To familiarize with allergen preventive measures applied throughout all steps of food manufacturing processing.

Module Content

1. Hazards in Raw Materials
   - 1.1 Biological , Chemical and Physical Hazards
   - 1.2 Handling & 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:
  - 1.1.1 Selection of Suppliers
  - 1.1.2 Working with Suppliers
  - 1.1.3 Approved Supplier List
  - 1.1.4 Management of Issues and On-going Problems
  - 1.1.5 Auditing the Suppliers
  - 1.1.6 Management Review & Reporting
  - 1.1.7 Raw Material Specification
  - 1.1.8 Certificates of Analysis (COA)
  - 1.1.9 Certificate of Conformity & Letter of Continuing Guarantee

2. Product Specifications:
   - 2.1 Chemical, Physical and Microbial Attributes
   - 2.2 Nutritional Analysis
   - 2.3 Critical Control Point Targets & Critical Limits
   - 2.4 Organoleptic Quality
   - 2.5 Product Description
   - 2.6 Ingredient List: Allergens
   - 2.7 Storage Conditions
   - 2.8 Shelf Life & Best Before Coding
   - 2.9 End Use
   - 2.10 Packaging Material, Shipper
   - 2.11 Certification Requirements
3. Allergens
   - 3.1 Allergen Risk Assessment
   - 3.2 Allergen Risk Management
   - 3.3 Allergen Risk Communication
   - 3.4 Allergen Control
     - 3.4.1 Identification & Control of Allergens in Incoming Ingredients, Packaging Materials and Labels
     - 3.4.2 Packaging and Labeling 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 & Sanitation
     - 3.4.7 Equipment & Layout Design
     - 3.4.8 Training in Allergen Management
     - 3.4.9 Personal Hygiene
     - 3.4.10 Testing Food Allergens
     - 3.4.11 Effective Labeling Messages

Module 4: Plant Layout

Learning Outcomes

- ✓ To expand the participant's knowledge regarding appropriate physical design principles and standards that promote food safety.
- ✓ To learn how to identify risks and control measures.
- ✓ To learn how to identify good equipment design and proper placement.

Module Content

1. Hygienic Plant Design: Definition of Levels 1, 2 , 3, and 4
    - 1.1 Receiving Areas
    - 1.2 Process & Product Flows
    - 1.3 Internal Physical Barriers for Separation
    - 1.4 Employee Facilities
    - 1.5 High Care or Risk Areas
    - 1.6 Structure
2. Heat Treated Product
3. Product Decontamination
4. Other Product and Packaging Transfer
5. Liquid and Solid Waste
6. Sewage
7. Air
8. Utensils
9. Ventilation systems
10. Sanitation facilities

Module 5: Foreign Material Contamination

Learning Outcomes

- ✓ To learn how to properly characterize foreign materials and identify potential sources of contamination.
- ✓ To clearly understand and describe the potential consequences of foreign material contamination.
- ✓ To learn about foreign material management techniques and identify implementation strategies.

Module Content

1. Intrinsic and Extrinsic Foreign Materials
2. Managing Risk
    - 2.1 Risk Assessment
    - 2.2 Preventive and Corrective Measures
    - 2.3 Policy and Monitoring
    - 2.4 Detection & Removal of Foreign Material
    - 2.5 Corrective Actions
    - 2.6 Validation & Verification of Detection Equipment
    - 2.7 Training
3. Methods for Detection of Foreign Materials
    - 3.1 Sifters & Screeners for Free-flowing Dry Products

- 3.2 Gravity Separators
- 3.3 Air Classifiers
- 3.4 Separation of Contaminants from Wet Products
- 3.5 Magnetic Separation: Evaluating Magnet Performance
- 3.6 Metal Detection: Pulse Technology, Balanced Coil system, Ferrous-in-foil Detection System, Aperture Size
- 3.7 Optical Sorting System
- 3.8 X ray
- 3.9 Calibration of Foreign Materials Detection Equipment

4. Glass
5. Rejected Product Handling

Module 6: Shelf Life and Challenge Studies

Learning Outcomes

- ✓ To identify the factors that can affect a product's shelf life.
- ✓ To learn what needs to be considered when conducting a shelf life study.
- ✓ To identify the requirements for conducting an effective microbial challenge study and the factors to be considered for selecting the best scientific approach.

Module Content

1. Microbial Challenge Study
    - 1.1. When to Perform Challenge Studies
    - 1.2. Parameters and Factors to be Considered when Designing a Microbial Challenge Study
        - 1.2.1 Obtaining Expert Advice & Identifying a Qualified Laboratory
        - 1.2.2 Types of Challenge Studies
        - 1.2.3 Factors related to the Product being Tested: Product Preparation, Variability and Competitive Microflora
        - 1.2.4 Target Microorganism(s): Use of surrogate microorganisms
        - 1.2.5 Inoculum levels
        - 1.2.6 Storage Conditions
        - 1.2.7 Sample Considerations
        - 1.2.8 Duration of the Study and Sampling Intervals
        - 1.2.9 Interpretation of the Test Results
    - 1.3. Challenge Studies Examples
2. Shelf Life Studies
    - 2.1. When to Perform Shelf Life Studies
    - 2.2. Determining Product Shelf Life by the Direct Method
        - 2.2.1 Identifying what may Cause the Product to Spoil and Become Unsafe
        - 2.2.2 Determining what Tests should be Used
        - 2.2.3 Planning the Shelf Life Study
        - 2.2.4 Frequency of Testing
        - 2.2.5 Assessing Product Variability
        - 2.2.6 Sample replicates
        - 2.2.7 Microbiological Tests

Module 7: The BIG Picture

Learning Outcomes

This final module has for objectives:

- ✓ Put in practice the knowledge and skills gained throughout the *Food Safety Training Program*
- ✓ Become familiar with Food Safety and Risk Analysis materials resources (governmental websites, scientific journals, forums, etc.) that can help you solve your own Company's future issues.
- ✓ Learn to integrate the different areas involved in Risk Analysis/Food Safety and provide you with a general view to identify the best approach and potential solutions to food safety issues.

Module Content

Module 7 offers an opportunity to explore and learn about the core areas and many issues related to Food Safety and Risk Analysis & Management. For this Module, participants will be challenged to apply ALL the food safety material they have learned throughout the program. With this purpose, we have developed six (06) Case Studies/Assignments that will require participants to draw on the concepts and material from more than one module.