

3.2 FOOD QUALITY AND QUALITY CONTROL INCLUDING THE HACCP SYSTEM

1.Food Quality:

Food quality refers to the characteristics of a food product that meet the requirements and expectations of consumers and regulatory authorities. Key aspects of food quality include:

Safety: Free from harmful microorganisms, chemical contaminants, and physical hazards that could pose health risks.

Nutritional Value: Adequate levels of essential nutrients and absence of harmful substances.

Sensory Attributes: Appearance, aroma, flavor, texture, and overall sensory appeal.

Functional Properties: Ability to perform as expected (e.g., emulsification, foaming, gelling).

Shelf Life: Stability and maintenance of quality attributes over time under specified storage conditions.

Consistency: Uniformity in quality from batch to batch.

2.Quality Control:

Quality control (QC) involves processes and procedures used to ensure that food products consistently meet quality standards and specifications. Key elements of quality control in food production include:

Raw Material Control: Verification and inspection of incoming raw materials to ensure they meet quality and safety requirements before use in production.

Process Control: Monitoring and controlling critical points in production processes to prevent hazards, maintain product consistency, and ensure adherence to specifications.

Finished Product Inspection: Sampling and testing of finished products for sensory attributes, chemical composition, microbiological safety, and compliance with labeling and packaging requirements.

Documentation and Record-Keeping: Maintaining records of all quality control activities, including monitoring results, corrective actions, and verification procedures.

Training and Personnel Hygiene: Ensuring that personnel are trained in food safety practices, hygiene standards, and quality control procedures.

3.2.1 Hazard Analysis Critical Control Point (HACCP) System:

HACCP is a systematic approach to identifying, evaluating, and controlling food safety hazards throughout the food production process.

a.Key principles of the HACCP system include:

Hazard Analysis: Conducting a thorough analysis to identify potential biological, chemical, and physical hazards associated with each production process.

Critical Control Points (CCPs): Determining critical points in the production process where control measures are essential to prevent, eliminate, or reduce identified hazards to acceptable levels.

Establishing Critical Limits: Establishing critical limits for each CCP to define the acceptable range of parameters (e.g., temperature, pH, cooking time) to ensure control of hazards.

Monitoring: Implementing procedures to monitor CCPs regularly to ensure that critical limits are maintained.

Corrective Actions: Establishing corrective actions to be taken when monitoring indicates a deviation from critical limits, including identifying the cause of the deviation and taking corrective actions to prevent recurrence.

Verification: Validating the effectiveness of the HACCP system through periodic reviews, audits, and verification procedures to ensure that hazards are controlled effectively.

Documentation: Maintaining comprehensive documentation of the HACCP plan, including hazard analysis, CCPs, critical limits, monitoring results, corrective actions, and verification records.

b.Benefits of HACCP:

Enhanced Food Safety: Proactive approach to identifying and controlling hazards reduces the risk of foodborne illnesses and product recalls.

Compliance: Helps food businesses comply with regulatory requirements and international food safety standards.

Improved Efficiency: Streamlines production processes by focusing on critical areas that impact food safety and quality.

Consumer Confidence: Demonstrates commitment to food safety and quality, enhancing consumer trust in the brand and products.