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Safe Sustenance: Exploring the Nexus of Food Safety, HACCP, and Quality Standards

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Abstract

WHO (1984) has defined food hygiene as all Conditions and measures that are required during production, processing, storage, distribution and Preparation of food to ensure that it is safe, wholesome and fit for human consumption. Lack of requisite Food hygiene can lead to foodborne diseases and death of the consumer. Foodborne illness has been Associated with improper storage or reheating (50%), food stored inappropriately (45%) and cross-contamination (39%). The increased numbers of people eating out have caused the emergence of food Borne illness due to unhygienic preparation and lack of knowledge of personal hygiene. These contributory Factors are due to a lack of food hygiene awareness or implementation. Hazard analysis and critical control Points, or HACCP is a systematic preventive approach to food safety from biological, chemical, and Physical hazards in production processes that can cause the finished product to be unsafe and designs measures to reduce these risks to a safe level.

Introduction

Food plays a significant role in determining population productivity, nutritional status, and health. Therefore, it is crucial that the food we consume is healthy and secure. Numerous foodborne illnesses can result from eating unsafe food, as reported in the newspapers regarding health issues brought on by contaminated or adulterated foods. Foodborne diseases are a significant global public health issue.

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Food Safety:

Food safety is the absence or presence of small amounts of hazardous substances in food that do not threaten the health of consumers. These substances include microbial, chemical, and physical factors that are often not visible, such as bacteria, viruses, and chemical residues. Food safety and quality have become important global issues, not only causing health problems but also harming trade and tourism, leading to earnings loss, unemployment, and legal actions that can impede economic progress. Food safety is a scientific discipline describing the handling, preparation, and storage of food in ways that can prevent foodborne illnesses. Another related term is food security, referring to a situation where the community has sufficient and healthy food for all its members.

Hazard Analysis and Critical Control Point (HACCP):

HACCP is a systematic approach to identifying, evaluating, and controlling food safety hazards. Developed in the 1960s in the United States to ensure food safety for NASA's space missions, HACCP is essential for preventing potential problems before they happen. It may be used by food companies to ensure they do not break the law by putting consumers at risk when producing food. Critical Control Points (CCP) are identification points in the production chain where a hazard may occur, and action is taken to prevent the hazard from occurring.

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Principles of HACCP Implementation:

1. Hazard analysis
2. Determine the Critical Control Point
3. Establish critical limits
4. Establish a monitoring system
5. Establish corrective actions
6. Establish verification procedures
7. Record-keeping procedure

Scope of HACCP:

1. Aggressive competition requiring organizations to reduce costs while maintaining quality.
2. Increasing consumer awareness and legal liability to produce safe food.
3. Changes in processing technology, increased automation, complex packaging solutions, new ingredients, and improved formulations.
4. Greater emphasis on sensory evaluations and complex distribution networks leading to reduced delivery times.

Hazard:

A hazard is a biological, chemical, or physical agent that is reasonably likely to cause illness or injury in the absence of its control. In HACCP, a hazard refers to the condition or contaminants

in foods that can cause illness or injury. There are three types of hazards: biological, physical, and chemical.

Measures to Control Hazards:

1. Measures at the processing and packaging stages (raw materials, packaging materials, processing steps, plant and machinery, storage, and distribution, premises, and personnel).
2. Measures at post-processing and packaging stages (retail and food service).
3. Consumer measures (food preparation and food usage).

Conclusion:

For an HACCP program to be successful, proper implementation and management are crucial, depending largely on regularly scheduled verification activities. The HACCP plan should be updated and revised as required. Proper training of all individuals involved is essential to ensure they understand their role and can effectively fulfil their responsibilities. Today, food industry standards play a major role in assisting food businesses to achieve compliance with legislation and, in many cases, exceed legislative requirements.

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