The Hazard Analysis and Critical Control Point (HACCP) system, a science-based approach defined by the Codex Alimentarius Commission (CAC, 1993), identifies and controls manufacturing process hazards, prioritizing prevention over end-product testing. Applicable throughout the food chain, its implementation is guided by scientific risk assessment, enhancing food safety and benefiting regulatory inspections and international trade. Successful HACCP necessitates total management and workforce commitment, a multidisciplinary team (agronomy, veterinary health, food processing, microbiology, medicine, public/environmental health, chemistry, engineering), and a robust Quality Management System (e.g., ISO 9000). Originating in the late 1960s when Pillsbury, contracted by NASA, sought astronaut food safety, HACCP shifted from end-product testing to a preventative system, drawing inspiration from the engineering industry's Zero Defect Programme and the Army's Failure Mode and Effect Analysis (FMEA). Pillsbury's HACCP comprised hazard identification and risk assessment, critical control point (CCP) determination for hazard elimination, and CCP monitoring. A HACCP plan, a product- and process-specific written document based on seven principles, requires six preliminary tasks: assembling a multidisciplinary HACCP team; describing the product (composition, structure, processing, packaging, distribution); identifying intended use and high-risk consumer groups; constructing and verifying an on-site flow diagram; and evaluating prerequisite programs (GMPs). The seven HACCP principles are: conducting a hazard analysis (hazard identification and evaluation); identifying CCPs; establishing critical limits (maximum and minimum values for biological, chemical, or physical parameters); establishing CCP monitoring procedures (tracking system operation, detecting deviations, providing documentation); establishing corrective actions for deviations; establishing verification procedures to ensure system effectiveness; and establishing documentation procedures for all aspects of the HACCP system. Each principle details specific procedures and considerations, including the use of decision trees for CCP identification, the importance of continuous monitoring (preferably physical and chemical, rather than microbiological due to time constraints), corrective action plans for deviations, comprehensive annual verification by an independent expert and plant manager, and detailed record-keeping requirements encompassing the entire HACCP plan and its operational .data

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