

ABSTRACT

As food organizations which thrive in competitive market context, product quality is one of the most important factor to be considered at strategic decision making process. Thus the food safety management system has become necessary rather than the quality management system which is widely implemented in all sectors but does not itself specifically address food safety. ISO 22000:2005 is therefore designed to allow all types of organizations within the food chain to implement a food safety management system.

The present study was focused on the setting up of preliminary requirements for the implementation of food safety management system (ISO 22000:2005) to the carbonated beverage process at Shaa cola beverages (Pvt) Ltd.

As the first step; scope, food safety policy and related objectives were defined and Prerequisite Programs (PRPs) were developed by studying the carbonated beverage production flow beginning from raw material reception to transportation of the finished product. Critical Points (CPs) and Critical Control Points (CCPs) were determined by identifying all the food safety hazards associated with production process and assessing those hazards using risk assessment matrix and decision tree. Then Operational Prerequisite Programs (OPRPs) and Hazard Analysis Critical Control Point (HACCP) plan were established and documented. Process capability analysis was done for validation of food safety management system. Verification and continuous improvement procedures of food safety management system were also developed.

PRPs were developed for calibrations, cleaning and sanitizing, personal hygiene, pest control, supplier assessment, waste and sewage disposal and water, air and energy supply. Raw material receiving, ingredient weighing, sugar dissolving, sugar filtration, water filtration, carbonation and finished product storage were identified as CPs and raw material receiving and inspection, syrup room management, carbonated process management, filtration process management and finished product inspection were established as OPRPs to monitor the CPs. UV sterilization and bottle capping were identified as points that need to be critically controlled and HACCP plan was developed. Addressing those according to the process capability analysis; cola, mandarin and cream soda production processes were identified as barely acceptable processes and soda as well as lemonade production processes should be improved according to their specifications. Food safety plan and internal audit plan were developed as verification procedures of food safety management system

It is further expected to conduct a gap analysis to evaluate the successful implementation of ISO 22000:2005 to the carbonated beverage process.