

## **ABSTRACT**

The Hazard Analysis Critical Control Point (HACCP) system is a scientific, rotational and systematic approach to identification, assessment and control of hazards during production, processing, manufacturing, preparation and use of food to ensure that food is safe when consumed and does not present an unacceptable risk to health of consumer.

Milk Industry of Lanka Company Ltd. (MILCO) is one of the largest food sector retailer in Sri Lanka, engaged in the process of manufacturing range of milk based products. The study was aimed at the development of an HACCP manual for plain milk and chocolate flavored pasteurized milk that can be established with necessary modifications. HACCP manual was developed to establish an effective hazard controlling system through the identification of critical control points with regard to the manufacturing of fluid milk based products.

As the first step all the potential hazards associated with each processing step, beginning from raw material reception to transportation of the product were identified. Then Critical Control Points (CCPs) were identified. CCP monitoring, Corrective action and verification procedures were established. Good Manufacturing Practices (GMP) manual and Supplier Quality Assurance (SQA) system were developed and documented as pre requisite programs as well as critical factors on the successful development of HACCP manual.

Milk chilling, pasteurizer-heating, finished product storage cold room and wholesaler/retailer storage cold room were identified as the points that needed to be critically monitored.

Milk chilling temperature need to be maintained below 4<sup>0</sup>C to avoid the rapid proliferation of bacterial counts. HTST program operating with 72<sup>0</sup>C for 15 second is the minimum requirement to monitor with the pasteurizer. Operational limits of the pasteurizer were 75<sup>0</sup>C-80<sup>0</sup>C. Storage temperature below 10<sup>0</sup>C is taken as the control limit after pasteurization process at finished product storage cold room and storage cold rooms at wholesaler and retail outlets to ensure a safe product reaches the consumer.