



Environmental Monitoring - A Risk Based Approach

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Abstract

Environmental monitoring provides valuable information on the hygienic conditions of a food processing facility. The purpose of an Environmental Monitoring Program (EMP) is to detect problem areas where pathogens and spoilage microorganisms may potentially flourish and be a source of contamination to products. The other reason is to verify the effectiveness of the cleaning and sanitation system as is required by law (R638 Hygiene Regulation). More often than not, facilities fail to demonstrate what informed the sampling and testing in their EMP i.e., it is not informed by evidence based on risk, which is a Global Food Safety Initiative requirement (GFSI Benchmarking Requirements v2020.1). Here I aim to shed some light on how a risk-based approach can be integrated with an EMP.

A risk-based approach is a tool that can be used to create an estimate of the possibility of microbiological contaminants that may likely be expected to pose significant risks to food in the processing environment and to implement effective surveillance and response strategies. I will be discussing how the risk-based approach in an EMP identifies the specific pathogens and their sources in and around the production environment and can inform evidence-based decisions regarding the EMP's sampling and testing requirements. The sampling "Zone Concept" is one such strategy that will form part of my discussion.

Implementation of a risk based EMP provides an early warning system when contamination levels run the risk of jeopardizing food safety in the processing environment. It gives insight on where and when to sample and what exactly to test for based on the facility's products and processes. Evaluation of the results can greatly eliminate chances of microbial cross-contamination and ensure the safety of products to consumers.

Biography: Malesele Mthenjane

Malesele is a technical specialist in quality and food safety management systems with microbiology laboratory experience in the food industry. Currently facilitates and consults on food safety management systems, also conducts food safety audits.