

Global Filter Provides Sterile Filtration Solutions to Beverage Industry, Protecting Products and Consumers

SOLVING CONTAMINANT ISSUE RESULTED IN RISK MITIGATION AND COST SAVINGS FOR BEVERAGE MANUFACTURER

When a beverage manufacturer experienced a process upset resulting in product recalls due to unsafe microbial levels, Global Filter set out to provide a solution that would ensure products were safe for consumption and reduce the risk of product losses.





APPLICATION OVERVIEW

The beverage industry is one of the fastest-growing markets in the world. The expansion of this market is attributed to the rising consumption of bottled water and technological advances in beverage processing equipment. Water sources and types of beverages vary, but all contain the same common goal, to meet consumer expectations. To meet required quality standards and remain competitive, systems must integrate several filtration processes to reduce particulates, remove microorganisms, and protect equipment. For a beverage manufacturer to produce a quality product, regulations require them to follow strict specifications regarding the purity of the end product.

THE CHALLENGE

A major North American beverage manufacturer faced an upset in its water feed with abnormal amounts of bacteria, causing products to be contaminated and resulting in recalls.

A national beverage manufacturing company was experiencing variability with their source water and meeting their bacteria removal requirements. The current filter system was typically sufficient, but product testing revealed levels of bacteria over FDA requirements. This resulted in a product recall, revenue loss, and consumer distrust. The cost of the recall was over 5 million dollars.

THE SOLUTION

Provide sterile filters preceding bottle filling to ensure final products are safe from microbial contaminants and minimize the risk of product recalls.

Global Filter recognized that the beverage producer was not utilizing final filters that were certified for microbial removal preceding filling to protect products from upstream process variability or failures. Contaminated sources can result in product recalls if proper filtration systems are not in place. If a UV light malfunctions and the proper filtration was in place, the cartridges would still capture all viable microbes. To ensure bacteria protection, Global Filter installed a 22-round vessel with GFPES cartridges preceding filling as the final filter stage. This provided a last line of defense and ensured against the bottling and shipping of contaminated products.

THE RESULTS

Global Filter's sterile final filter protected products from upstream process variability and failures reducing the risk of product recalls and ensuring consumers are safe.

The results were felt immediately. The next bottle batch after the installation was tested and showed no measurable levels of bacteria. The new final filtration step also met the required flow rates of the bottling line. It was later determined that a storage tank was the cause for the bacteria problem causing the product to be unsafe. Prior filtration processes should remove bacteria but in the case of an upstream failure, final filters can protect from product recalls and the associated costs.