



Doug Baker
Chairman and CEO

The why

Alternative Solutions to Cleaning: Bringing Enzymatic and Other Cutting-edge Technologies to Successfully Manage *Listeria monocytogenes* in the Retail and Food Service World

Food safety is critical to the reputations of businesses – and to the health and well-being of people everywhere. We know the top causes of foodborne illness outbreaks can be eliminated through effective cleaning and sanitizing – and we are committed to protecting people and businesses from the risks of illness-causing pathogens.

Scientists have long identified *Listeria monocytogenes* as a problem for its high lethality rate compared to other foodborne illnesses. *Listeria* is tenacious and can also attach itself to the fryer grease that coats floors and counters. A USDA and Purdue University study confirms a growing contamination risk of *Listeria* in floors and drains. Additionally, a recent report by Restaurant Hospitality identified unclean non-food contact surfaces as the second leading cause of failed health inspections. Ecolab's own testing in 100 locations found *Listeria*, *Staphylococcus*, and *Salmonella* on 49% of floors, 46% of mops and buckets, and in 66% of floor drains. Current cleaning methods were not efficient to manage it or control the cross-contamination implications.

“Ecolab provides solutions and expertise to improve food safety throughout the world. Through GFSI, we gain additional insight into emerging trends, share information with other members and collaborate on new protocols to further enhance food safety.”

The How

A key component in the fight for food safety is consistency. Consistency is what partnership with GFSI provides. In the 12 years Ecolab has been a member, we have worked with the GFSI and its membership to provide a global perspective to food safety standardization. These aligned values have helped make people safer across the globe.

Ecolab collaborated with another GFSI member to address *Listeria monocytogenes* in a retail environment. Ecolab innovated a new product and process to address a customer need. The customer then worked closely with us, testing in several store locations to ensure consistency in the training, process and results.

There were a number of challenges to overcome including employee training, variety in test stores and conditions, management engagement, no formal food code requirement for floors or drains, process auditing, measurement of product use and concentration. How-

ever, grounded in the dedication of Ecolab and our retail partner as well as our joint commitment to improving food safety, we persevered.

Enzymatic-based cleaners are able to digest fatty and greasy soils over time ensuring a cleaner and safer environment. Formulated with enzymes that immediately work to degrade soil particles as well as with an antimicrobial agent to sanitize, the results compounded over time to lower the microbial load with each additional washing rather than microbial loads returning to previous levels between washes. Introducing an enzymatic solution also eliminated a step in the floor cleaning process. This allowed for additional time to be spent cleaning more thoroughly. We were able to show, together, a substantial decrease in the presence of *Listeria* in a retail environment thus reducing the risk of cross-contamination as well as some other unexpected benefits.

The Benefits

The positive scientific results were obvious. Floors were cleaner and the risk of cross-contamination greatly reduced in the test stores. Contamination levels dropped from 41% to 2% in test locations.

By turning the water temperature down and removing the rinse and sanitize steps from current wash, rinse and sanitize procedures, we achieved better results with 50% fewer nightly cleaning steps, 78% less water use, and 89% reduction in utility spend

Employee engagement also improved. Over 60% of employees also said the floors looked much better compared to how they look with their previous cleaning process.

They were also happy that the process was a one product solution that could be used for cleaning and sanitizing both floors and drains. It made their jobs easier and delivered superior results, consistently.

The new product and process produced some additional unintended consequences. The reduced build-up improved the floor coefficient of friction by 10% making surfaces less slippery and adding to employee safety. There was a realized labor savings of 86 hours annually per store based on the reduction of process steps. The stores also saw a significant decrease in flying insects as a result of cleaner floors and drains.



Figures

