Publication abstract

Efficacy of bacteriophages against *Listeria* in ready-to-eat sliced pork ham

Based upon:
"Antibacterial efficacy of nisin, bacteriophage P100 and sodium lactate against Listeria monocytogenes in ready-to-eat sliced pork ham"

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Even though heat treatments in processed food can inactivate *Listeria monocytogenes*, the pathogen's persistence and capacity to form biofilms make post-processing cross-contamination from equipment and the environment possible. A study conducted by several groups of the Federal University of Bahia, Brazil, analyzed the effectiveness of Phageguard L (PGL) (also known as Listex) in inactivating *Listeria monocytogenes* on ready-to-eat (RTE) sliced pork ham.

Trial setup

Determining whether an intervention is effective for inactivating *Listeria* in industrial processes requires replicating the conditions of the specific processing environment that is being studied. Commercially available sliced pork ham was obtained and treated with Phageguard L. The phage solution was allowed to adhere to the food surface. Two *Listeria* strains were used for inoculation of the samples. The contamination was done after phage treatment to mimic the circumstances of the production process, where cross-contamination would occur post-processing (e.g., packaging). The phage treatment acts as a preventive measure to control *Listeria*.

Conclusion

The study showed the effectiveness of Phageguard L on ready-to-eat sliced pork ham. Significant reductions were observed at 0 hours and 72 hours post-application, with a maximum reduction of 3.27 log at 72 hours. At both timepoints, *Listeria monocytogenes* levels were undetectable, demonstrating the efficacy of Phageguard L its efficacy on ready-to-eat pork ham products.

Below Detection

Listeria inactivation on ready-to-eat sliced pork ham

Phageguard L treatment reduced *Listeria monocytogenes* in the ready-to-eat sliced pork ham below detection level at both 0 hours and 72 hours post-application.

Discover more about phage technology for *Listeria* control in our Phageguard Knowledge Center

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