

Application of a virulent bacteriophage cocktail leads to reduction of *Salmonella enterica* serovar Enteritidis counts in processed meat products

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Resumen

Salmonella enterica serotype Enteritidis (SE) is a major cause of foodborne disease outbreaks worldwide. We evaluated the effectiveness of five lytic bacteriophages applied as a cocktail to reduce the counts of SE in two types of processed meat products: cooked (turkey ham (TB) and chicken sausage (CS)) and cured sausage (Italian salami (IS) and barbecue sausage (BS)). Groups of 25 samples each were contaminated with SE, treated with a phage cocktail using a multiplicity of infection of 10(5) and then incubated for ten days at 18 degrees C and 4 degrees C. A significant reduction in bacteria was obtained on days 3, 6 and 10 in all matrices incubated at 18 degrees C (from 0.48 to 2.12 log Colony Forming Units (CFU) g(-1)) and at 4 degrees C (from 0.23 to 2.06 log CFU g(-1)), with the exception of BS at day 3 at 4 degrees C, and IS at both incubation temperatures throughout the trial. The viral titre remained stable in all matrices analysed except in BS. These results show the effectiveness of this bacteriophage cocktail against *S. enterica* serovar Enteritidis in some processed meat products such as CS, BS and TB.

Palabras clave

Palabras clave de autor: [Salmonella](#); [bacteriophage](#); [biocontrol](#); [processed meat products](#); [sausages](#)

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