Summary of publication No. (6)

Title: Cocktail Phage Therapy for Bacteria Contaminating Meat in Egypt

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Abstract

Bacteriophages have crucial advantages over conventional methods of controlling pathogenic bacteria in which they have a high ability to self-reproduce, host specificity, and develop with their bacterial hosts. The most common pathogenic bacteria were isolated from fresh meat and identified using the VITEK II automated system. Phages specific to *Escherichia coli, Staphylococcus aureus,* and *Klebsiella pneumoniae* were isolated and mixed in a cocktail, then applied for the treatment of the collected meat samples. At room temperature (24°C), the number falls over time until reaching 72 hours for all bacterial species. The results obtained showed a significant reduction in the bacterial count of *E. coli*, *Staphylococcus aureus*, *and Klebsiella pneumonia,* indicating that the cocktail phage therapy has a potential application for replacing antibiotics and other means used for meat sterilization.

Keywords:

Meat, *E. coli*, *K. pneumonia*, *S. aureus*, Cocktail, Phage therapy