APPLICATION OF BACTERIOPHAGE PREPARATION BAFASAL® IN BROILER CHICKENS EXPERIMENTALLY EXPOSED TO SALMONELLA SPP.

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The results of our study showed statistically significant differences in Salmonella presence between BAFASAL® treated and control group of broilers exposed to the same level of Salmonella contaminated bedding. This data suggest that the BAFASAL® feed additive is very efficient in preventing and reduction of Salmonella occurrence in gastrointestinal tract of chickens and may be applied against Salmonella infections in poultry.

The feed additive BAFASAL® developed by the company is a bacteriophage preparation with high specificity towards Salmonella serovars, including Enteritidis, Typhi, Paratyphi, Typhimurium, Branderburg, Hadar. It is intended for use as a feed additive for broiler chickens.

A carefully selected mixture of three bacteriophages applied as feed additive for poultry specifically limits growth of pathogenic Salmonella spp. strains that cause salmonellosis in humans, the second most frequently reported zoonosis. Application of a suitable composition of bacteriophages ensures that the product meets all safety standards required by a feed additive.

This new and innovative product based on natural components of the ecosystem will not affect negatively organisms other than bacteria and will not be retained in the organism when Salmonella spp. strains are not present. BAFASAL® is an answer to the challenge of salmonellosis in poultry for the sector of livestock production. The preparation is capable of replacing antibiotics and helps to hamper the spread of Salmonella infections among farming animals.

While currently available on the market antibiotic substitutes are based on substances which, similarly to e.g. organic acids, are capable of unspecific modulation of bacterial flora and to some extent can hinder growth of undesirable microorganisms, the bacteriophage agent will guarantee selective limitation of only pathogenic Salmonella spp. strains.
The major aim of this study was to assess the efficacy of bacteriophage preparation BAFASAL® in broiler chickens experimentally infected with *Salmonella* spp. strains. We have also shown the analysis of genomic DNA sequences for all three bacteriophages contained in the additive.

**Keywords:** BACTERIOPHAGES, PREPARATION BAFASAL®, CHICKENS, SALMONELLA SPP.