PHYTOCOMPLEX WITH *ZINGIBER OFFICINALE* EXTRACT, *PIPER NIGRUM* AND *PIPER CUBEBA* OIL - *IN VITRO* ANTIMICROBIAL EFFECT

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Abstract

Vegetal compounds are known for their therapeutic actions in correlation with their antioxidant activity so that in recent times the interest in their properties has greatly increased.
The phytocomplex obtained by combining the *Zingiber officinale* extract, *Piper nigrum* and *Piper cubeba* oil is distributed and recommended in European space as a multi-benefit nutritional supplement for swine, poultry, cattle, horses and others. As the individual properties of the three compounds are known, we aimed to test the antimicrobial activity of the phytocomplex on various Gram negative pathogens.
In the time-kill assay, *in vitro* inhibitory effects were visible after 15 minutes of contact and total inhibition of the species *Samonella enteritidis, Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa* was obtained after 24 hours.
The results obtained *in vitro* showed a very good antimicrobial activity which clearly contributes to the overall beneficial effects of the *Zingiber officinale* extract, *Piper nigrum* and *Piper cubeba* oil phytocomplex.

Key words: *bacteria, phytocomplex, antimicrobial activity*