TITLE: ANTIMICROBIAL ACTIVITY OF THE METANOLIC EXTRACT OF *Zanthoxylum caribaeum* L. FRONT OF BACTERIALS OF POULTRY IMPORTANCE

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ABSTRACT:

According to the World Health Organization the salmonellosis, disease caused by the strain Salmonella spp. Is one of the four major diarrheal diseases, being transmitted from contaminated food, mainly meat and eggs. In this aspect, the realization of researches with native species, becomes an alternative for the discovery of new bioactive compounds with antimicrobial properties. In order to verify the biological potential of the *species Zanthoxylum caribaeum L.* belonging to the family Rutaceae, the present work had as objective to evaluate the antimicrobial activity of the methanolic extract of the leaves of *Z. caribaeum* the different serotypes of *Salmonella enteric*, isolated from aviaries in the western region of Paraná. Subsequently, the phytochemical prospection of the extract was carried out to identify the groups of secondary metabolites present in the extract. For the antimicrobial susceptibility test the following serotypes were used: *S*. Gafsa, *S*. Lexington, *S*. Risen, *S*.Albany, *S*. Gallinarum e *S*. Worthington. To obtain the extract, the leaves of the plant were dried at 40 ° C, ground in a knife mill and added to the methanol P.A. in the proportion of 1:10 (w/v). Then sterilized by vacuum filtration and roto-evaporated, for complete removal of the solvent. The minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were determined by the broth microdilution method, with serial concentrations ranging from 200-0.09 mg/mL of the extract. As a positive control, gentamicin at 200 mg/mL. Bacterial metabolism was verified with the use of triphenyltetrazolium chloride (TTC) at 0.5%. Phytochemical prospecting revealed the presence of free steroids, tannins, pentacyclic triterpenoids, flavones, flavanols and xanthones. The MIC and MBC found for all serotypes was 50 mg/mL. Therefore, it can be concluded that the extract of the leaves of *Z. caribaeum* presented antibacterial activity in the control of different serotypes of *Salmonella enteric*, being considered as an alternative in the control of these microorganisms in foods.

Keywords: *Salmonella, microdilution, natural products*.

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