TITLE: ANTIMICROBIAL ACTIVITY OF PEQUI ESSENTIAL OIL (*CARYOCAR BRASILIENSE*) IN FRONT OF *STREPTOCOCCUS EQUI* SUBSP. *ZOOEPIDEMICUS*

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ABSTRACT:

Streptococcus equi subsp. *zooepidemicus* (*S. zooepidemicus*) is a morphological coconut type, Gram-positive, β-hemolytic, being an opportunistic microorganism that affects several animal species, including humans. *S. zooepidemicus* is considered an opportunistic commensal microorganism of the upper respiratory tract of mammals capable of causing secondary infections in immunodebilitated organisms, such as respiratory problems and pneumonia. This bacterium inhabits the upper respiratory tract mucosa and lower reproductive tract of healthy horses, but in the depression of the immune system, the animals may present endometritis (acute and chronic). In humans, they can cause a variety of infections, most common of the exocrine system, such as post-streptococcal glomerulonephritis (GNPE), which is autoimmune in nature and is difficult to treat due to non-differential diagnoses. The objective of this work was to describe the action of the essential oil of pequi (*Caryocar brasiliense*) extracted by steam drag facing *S. equi* subsp. *zooepidemicus* (INCQS 00677 from the National Institute of Health Quality Control - INCQS) isolated from bovine mastitis. The tested oil concentrations were 1, 25, 50, 75 and 100%. The agar-diffusion technique was used according to the methodology described by the National Committee for Clinical Laboratory Standards. The determination of the oil inhibition potential was evaluated by the size of the halos formed, obtained in two steps, after 24 and 48 hours of incubation. For the positive control a sterile disk impregnated with 10mg of tetracycline antibiotic was assigned. For the negative control, sterile disc impregnated with 10μL of absolute methyl alcohol was used. *S. zooepidemicus* showed sensitivity at all tested concentrations of *C. brasiliense* essential oil diluted in absolute methyl alcohol. This microorganism is responsible for some bacterial mastitis and humans are contaminated by drinking contaminated milk without proper treatment. The results obtained demonstrate the inhibitory action of the essential oil of *Caryocar brasiliense* tested on the microbial activity of *S. equi* subsp. *zooepidemicus* isolated from bovine mastitis.

Keywords: alternative medicine, disc-diffusion, essential oil, herbal medicines, medicinal plants