TITLE: EFFECT OF *Stevia rebaudiana* FRACTION IN THE GROWTH OF *Staphylococcus epidermidis* AND *Salmonella typhimurium*.

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ABSTRACT:

In consequence of the enlargement of antimicrobial resistance, several studies have focused in search new compounds with antimicrobial action. In particular, many natural compounds have been evaluated for their performance against pathogenic bacterial and fungal growth. Studies have determined that leaves of *Stevia rebaudiana* promotes several benefits to human health, besides interfere in bacterial and fungal growth. This study aimed to evaluate the effect of Ethyl Acetate Fraction of *S. rebaudiana* leaves (EAFSr) against of *Staphylococcus epidermidis* (ATCC 12228) and *Salmonella typhimurium* (UK-1) growth and to determine the Minimum Bactericidal Concentration (MBC) af this compound. The EAFSr was provided by the Laboratory - Nucleus of Natural Products of the State University of Maringá- PR. (UEM) Bacteria were pre-cultured in Tryptic Soy Broth (TSB) for 18 hours, after the cells were washed and its cell density adjusted to 0.5 on the Mc Farland scale. Subsequently, a volume of 100 µl of cell suspension was inoculated into 96-well polystyrene microplates and added by 100 µl of the EAFSr (at the concentrations 0.04 g/mL; 0.05g/mL; 0.06g/mL; 0.07g/mL; 0.08g/mL; 0.09/mL g and 0.1 g/mL) in TSB broth + DMSO (0.25%). Cultures in TSB + 0.25% of DMSO were used as positive control. The microplates were incubated by 24 hours at 37°C without agitation and the plating was performed in solidified TSB medium for the quantification of CFUs. The value for MBC was determined by the CFUs absence after plating. The EAFSr inhibited the growth of the two species analysed. For *S. epidermidis* the MBC of 0.06 g/mL was detected whereas for *S. typhimurium* a higer concentration (0.09 g/mL) was needed. Studies are being conducted to evaluating the effect of this fraction on the bacterial biofilm forming ability.

Keywords: Antimicrobial, Ethyl Acetate, Minimum Bactericidal Concentration.