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Evaluation of the Antimicrobial Effect of Glycolic Extract of *Zingiber officinale*

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Introduction: Ginger (*Zingiber officinale*) is a Brazilian herbaceous plant that may have pharmaceutical and food applications due to its antimicrobial activity. **Objective:** This study aimed to evaluate the antimicrobial effect of the glycolic extract of ginger rhizome. **Methods:** The juice of peeled ginger rhizomes was obtained using a centrifuge. The juice was diluted with propylene glycol and filtered through a nylon filter. The antimicrobial effect of ginger extract was determined by the microdilution method using four bacterial strains (*Escherichia coli*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Pseudomonas aeruginosa*), which were diluted separately in saline to a concentration equivalent to a 0.5 MacFarland standard (about 10^8 CFU/ml). Then, 180µl of each dilution of the glycolic extract of ginger and 20µl of inoculum were added to Elisa plates. The following concentrations of the glycolic extract of ginger were tested: 20%, 30%, 40%, and 50%. The plates were then incubated for 24h at 35°C and readings were performed using reactive triphenyltetrazolium chloride. **Results:** The lowest concentration tested was effective in inhibiting the growth of microorganisms. **Conclusion:** The ginger extract showed bactericidal activity against the tested microorganisms, and its use in food preservation, medications and cosmetic products, as a substitute for other antimicrobials, is very promising.

Keywords: antimicrobial, cosmetic, food, medication, *Zingiber officinale*.

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