



SCREENING TO EVALUATE THE ANTIMICROBIAL ACTIVITY OF OZONIZED OILS FROM VEGETABLE OILS.

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INTRODUCTION

It is being seen nowadays in the laboratorial samples various appearances of microorganisms in which manifest in stronger and more resistant forms, hence defying the current health system antimicrobial supply available. Currently it has been reported that ozonized oils have shown biological activities, including antimicrobial properties. Therefore, the aim of the present study was to evaluate the antimicrobial potential of different ozonized vegetable oils on pathogenic microorganisms, representatives of gram-negative and gram-positive bacteria and yeast.

MATERIAL AND METHODS

Samples of ozonated vegetable oils from almond, avocado, castor, cotton, peanut and grape seed (Philozon-Indústria e Comércio de Geradores de Ozônio) were used to evaluate their potential antimicrobial activity by determining the minimum concentration by the agar dilution method. The microorganisms used in the screening were *Candida albicans*, *Escherichia coli* and *Staphylococcus aureus*. The samples of ozonized oil, were subjected to double dilution with a 0.6% solution of Tween 80, ranging from 2.5% to

0.078% in Mueller-Hinton agar + 5% blood, followed by inoculation of microorganisms (1.5×10^5 cells/mL) and incubation at 35 °C/24 h.

RESULTS

It was shown that the ozonized oils performed best not only on *C. albicans*, but also on *S. aureus*, with the ozonized grape seed oil resulting in a MIC of 0.31-0.16% and the ozonized avocado oil with a MIC of 0.63% for both microorganisms. *E. coli*, representative of gram-negative bacteria, did not do as well as other microorganisms up to the maximum concentration tested (2.5%).

CONCLUSIONS

Therefore, it can be said that the research presented that ozonized oils have good antimicrobial capacity against fungus and gram-positive bacteria and that its properties have yet to be better explored when it comes to gram-negative bacteria.

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