$3^{\text {rd }}$ International Conference and Expo on

# Natural, Traditional \& Alternative Medicine 

# An in-vitro study of the antimicrobial efficacy of personal productive herbal- maked toothpaste on oral pathogens 

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Background \& Aim: The Dental plaque is an important risk factor for the development of the dental and periodontal disease. In most cases tooth brushing only removes a limited amount of dental plaque and other chemical agents are required to reduce the microbial load. The purpose of this survey was to determine in vitro antimicrobial effects of herbal-made toothpaste containing the extracts of Artemisia dracunculus, Satureja khuzestanica and Myrtus communis against oral pathogens related to caries and oral fungal infections.

Materials and Methods: Antimicrobial effectiveness and herbal-made toothpaste were evaluated against five microorganisms: Streptococcus mutans, Lactobacilus caseie, Streptococcus sanguis, Streptococcus salivarius and Cadida albicans by agar well diffusion method. The herbal- made toothpaste was tested at four different concentrations: $1: 4(25 \%), 1: 1(50 \%), 3: 4(75 \%)$ and full strength ( $100 \%$ ) with sterile distilled water as the diluent.

Results: After 24 hours of incubation, the maximum mean diameter of inhibition zone against tested oral pathogens by Lactobacilus caseie ( 17 to 30 mm ), C. albicans ( $15-27 \mathrm{~mm}$ ) and the minimum mean diameter of inhibition zone against Streptococcus mutans (17-20mm).

Conclusions: The results indicate tested herbal toothpaste was a significant product to inhibit the growth of plaque bacteria and yeast.

