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ANTIBACTERIAL ACTIVITY OF THE NEW FORMULATED TOOTH PASTE "ASKALOS"

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Ripe areca nut powder and brunt areca nut powder (charcoal) were used as tooth powder traditionally especially in villages. In siddha medicine, Kalnarpaspam was used for dental diseases. The present study was conducted to formulate a tooth paste ("Askalos") by two different methods and to evaluate their antibacterial activity. The "Askalos" paste of A and B were prepared with areca nut powder and Kalnarpaspam by two different methods. Different concentrations (50ppm, 25ppm, 12.5ppm) of aqueous extracts were prepared by dilution method using sterile distilled water for each sample A and B separately. Agar well diffusion method was used to determine the antibacterial activity against Bacillus subtilis, Staphylococcus aureus, Escherichia coli and Pseudomonas aeruginosa. Streptomycin and sterile distilled water were used as standard and control respectively. Inhibition zones were measured and the results were analyzed by analysis of variance (ANOVA) ($p<0.05$) followed by turkey test. Results revealed that the antibacterial activity increased with increasing concentration of extract. Significant difference was observed in both samples A and B among concentrations in relation to bacterial growth inhibition. Growth of Bacillus subtilis, Staphylococcus aureus and Escherichia coli was significantly inhibited by the sample A rather than B at high concentrations tested. Growth of Pseudomonas aeruginosa was not inhibited by sample B except for 50ppm concentration. Standard showed the highest inhibition against Bacillus subtilis and Pseudomonas aeruginosa. This study concluded that the sample A had more significant antibacterial activity than B among the tested bacteria.

Keywords Tooth paste "Askalos", Antibacterial activity, Areca catcheu, Kalnar,