THE USAGE OF CINNAMON ESSENTIAL OIL AS AN ALGINATE DESINFECTANT

ABSTRACT

Background: Cinnamomum (Cinnamomum burmannii) essential oil contains cinnamaldehyde as anti microorganisms by inhibiting bacterial cell wall synthesis and also tannin (proanthocyanidins) and (epi)cateehins that can damage the structure of the bacterial surface. Purpose: The purpose of this research was to examine the effectiveness of Cinnamon essential oil to inhibit the growth of oral microorganisms. Methods: 35 alginate samples were divided into 5 groups. Each group was treated by spraying the alginate samples by different concentration of Cinnamon essential oil and sterile distilled water (control). Result: Each Cinnamon essential oil with a different concentration, (0.05%; 0.07%; 0.09%; and 0.11%) can inhibit the growth of oral microorganisms attached to alginate sampels with the lowest number of microorganisms colony (p<0.05) which is a cinnamon essential oil with the concentration 0.11%. Conclusion: Based on limited of this researchs result, it is significantly shows that higher concentration of Cinnamomum burmannii will inhibit more microorganisms in alginate sampel.

Keyword: Cinnamon, alginate, oral microorganisms.