

Antibacterial Effect of Plant Aqueous Extracts against Cariogenic and Biofilm Forming Microorganisms

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ABSTRACT

Dental caries is an infectious biofilm-forming disease which can be prevented. It is a main source of concern worldwide. The main biofilm forming cariogenic microorganisms are *Streptococcus mutans*, *Lactobacillus casei* and *Actinomyces viscosus*. The dried powders of *Acacia Arabica* (bark), *Terminalia Chebula* (fruits), *Terminalia bellerica* (fruits) and *Embllica officinalis* (fruits) have the potential to cure oral diseases and these four plant powders have been used in traditional tooth powder formulas in India for more than 100 years. The objective of the present study was to investigate the antimicrobial effect of an aqueous extract of these four plant materials against the cariogenic microorganisms. The Minimum Inhibitory Concentration, Minimum Bactericidal Concentration, kinetics of killing, and adherence assay of the aqueous plant extracts against the different microbes were determined. The results showed that the combined decoction of plant extracts had a high bactericidal activity against all the biofilm forming cariogenic microorganisms. Further studies in this regard would lead to the formulation of a mouth wash having anti caries property.