PROJECT REPORT ON

"BIOTECHNOLOGICAL ORAL HEALTH CARE PRODUCT"

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ABSTRACT

Renjeer plant bark (*Mimusops elengi*) and cloves (*Syzygium aromaticum*) has been traditionally known to prevent the dental carries. Invitro studies were carried out to determine the antibacterial activities of extractive and azeotropic extracts of renjeer and clove and compared it with the antimicrobial activities of known standard antibiotics such as Penicillin-G, Gentamicin, Augmentin, Erythromycin, Fusidic acid, Chloramphenicol, Vancomycin. Effect of these extracts at various concentrations were carried out on the hydrolytic activities of the enzymes such as amylase, protease and lipase. Survival of useful probiotic normal commensals such as *Lactobacillus plantarum* were carried out at various concentrations of these extracts. Pathogenic microbes showed varied degree of sensitivity against these extracts. *Esh.coli and Pseudomonas auregenose* were more sensitive to aqueous extracts of renjeer. Compared to other extracts, *Shigella flexneri, Esh.coli* and *Staphylococcus aureus* were more sensitive to aqueous extracts of clove. Optimum pH of hydrolytic enzyme was 7, but did not lose activity at 2. These extracts did not significantly inhibit the useful normal commensals *Lactobacillus plantarum* but there was an insignificant inhibition in renjeer aqueous extract observed . Hence, extracts of renjeer and clove along with lipase, protease and amylase can effectively used as oral health care products to enhance digestion, to inhibit gastro intestinal pathogens, to prevent dental carries and to allow probiotic microbial proliferation in the gastro intestinal tract.