

Mothwash Formulation of Moringa Leaf (*Moringa Oleifera*) and Its Activity as an Antibacterial for Streptococcus Mutans

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Abstract : Streptococcus mutants bacteria are bacteria that are believed to be the cause of the growth of dental plaque which can further adversely affect dental caries if left unchecked. Previous research has shown that Moringa leaf extract can slow down the growth rate of this bacterium. This study aims to make the best formulation of mouthwash with the active ingredient of Moringa leaf extract based on its antibacterial and organoleptic test results. Nine mouthwash variations were carried out with two factors and three levels, namely a comparison of the concentration of sorbitol (A) with three levels namely 15% (A1), 20% (A2), and 25% (A3), and peppermint added (B) with three levels, namely 0.2% (B1), 0.25% (B2), and 0.3% (B3). The test parameters performed as the determination of the best mouthwash are based on physicochemical properties which include pH and viscosity as well as organoleptic test results which include color, viscosity, aroma, taste, sensation in the mouth, and general appearance. The results showed that the bright zone as a test for the antibacterial activity of Streptococcus mutants began to be seen at a concentration of 5%. Moringa leaf mouthwash formulation has a pH value between 6 - 7, with a control of 6. Whereas the mucosa leaf mouthwash viscosity produced between 1.1 - 1.7 cP with a control of 1.1 cP. Moringa leaf mouthwash and control have the same total number of microbes, namely 0 colonies / mL. Based on organoleptic tests performed with 20 panelists, it was shown that the best mouthwash formulation was formulation A1B3 with sorbitol composition 15% and peppermint 0.3%.

Keywords : antibacteria, formula, moringa leaf, mouthwash

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