Formulasi edible film ekstrak daun sirih (Piper betle L.)

Abstrak

Halitosis (bad breath) is the most complained problem among mouth and teeth health. The source of halitosis are volatile sulfur compounds produced by Streptococcus mutatn from degradation of food debris. Sirih leaves (Piper betle L.) are trditionally used as mouth antiseptic for its volatile oil. The aim of this research was to formulate sirih extract into an extract with minimum inhibitory concentration (MIC) with 96% ethanol for 24 hours, resulting to an extract with minimum inhibitory concentration (MIC), on Streptococcus mutans of 8.49 x 10 g/ml. The extract with streng quadrupele of the MIC, or equel to 0.92% provide iodine, was formulate using 2 factorial design. Corn starch, hydroxypropyl methycellulose (HPMC) and sorbitol were independent variables and drying time ,moisture, film hicknes, desintegrating time, and film streng were the dependent ones.The results showed that HPMC significantly fastened the drying time, decreased the moisture, and lengthened the desintegrating time. Sorbitol significantly fastened he drying time, increased the moisture, and strengthened the film, while corn stach decreased the moisture and lengthened the disintegrating time. Optimation of the formula ingredients using contour plot superimposed cannot be determinetd due to edible film disintegrating time that was out of comparative interval.