

Abstract

The aim of this project was to formulate *Aloe vera* and Samrong anti-acne gel for inhibiting the growth of *S. aureus* which is a major cause of skin and soft tissue infection. The experiment was divided into two parts which were raw material preparation and gel formulation.

Three treatments of *A. vera* preparation was studied including manual chopped, blended, and blended and pasteurized. All treatments showed similar result which could inhibit 7.51×10^8 CFU/ml (46%) of *S. aureus*. Then blended treatment was chosen to prepare *A. vera* for gel formulation.

Samrong concentration was varied into four levels consist of 25%, 50%, 75%, and 100% of Samrong gel. It was found that 75% Samrong has the highest antimicrobial activity. However 25% Samrong was chosen to formulate *Aloe vera* and Samrong anti-acne gel because the color is the most suitable to use in gel.

The plain gel formulation was done in order to determine suitable amount of water content in *Aloe vera* and Samrong anti-acne gel so 40ml, 60ml, 80ml, and 100ml water were studied. There was no significant difference among treatments at $p > 0.05$. Then water at 100ml was chosen.

Aloe vera and Samrong anti-acne gel was formulated by varying three levels of samrong concentration which were 5%, 15%, and 25% of Samrong. *A. vera* gel was added in the formula as 20% *A. vera*. Moreover, the effect of parabens to *Aloe vera* and Samrong anti-acne gel was studied and showed no differences to the control. *Aloe vera* and Samrong anti-acne gel containing 5% Samrong was the most preferred by panelists.