

## INTISARI

Ekstrak etanol-air daun pepaya (*Carica folium*) dapat digunakan sebagai *antiacne* karena mengandung karpain yang memiliki potensi antibakteri terhadap *Staphylococcus epidermidis* (Ardina, dkk, 2007). Tujuan penelitian ini untuk mengetahui potensi antibakteri gel *antiacne* terhadap *S. epidermidis* serta mendapatkan dan mengetahui rentang komposisi optimum gel *antiacne* ekstrak etanol-air daun pepaya (*Carica folium*) berdasarkan sifat fisis dan stabilitas gel.

Penelitian ini merupakan jenis penelitian eksperimental murni menggunakan rancangan *simplex lattice 2* komponen humektan yaitu gliserol dan propilen glikol. Tiap formula diuji dengan mengukur diameter zona hambat terhadap *S. epidermidis*, respon daya sebar, viskositas, dan uji stabilitas dengan mengukur pergeseran viskositas. Persamaan yang diperoleh dianalisis menggunakan analisis uji F dengan taraf kepercayaan 95%.

Dari hasil penelitian diketahui bahwa gel *antiacne* ekstrak etanol-air daun pepaya memiliki potensi antibakteri terhadap *S. epidermidis*, serta berdasarkan pendekatan *simplex lattice* didapatkan dan diketahui rentang komposisi optimum gel *antiacne* yaitu 67% gliserol : 33% propilen glikol sampai dengan 3% gliserol : 97% propilen glikol.

Kata kunci : ekstrak etanol-air daun pepaya, gel, *antiacne*, gliserol, propilen glikol, *simplex lattice design*, *Staphylococcus epidermidis*

## ABSTRACT

Aqueous-ethanolic extract of *Carica folium* can be used as antiacne because it contained carpaine as antibacterial agent against *Staphylococcus epidermidis* (Ardina, dkk, 2007). The aims of this study were to observe antibacterial potential of antiacne gels against *S. epidermidis*, also to observe and to obtain the optimum composition range antiacne gels aqueous-ethanolic extract of *Carica folium* reviewed on physical properties and gels stability.

This experiment was designed by using two components simplex lattice design involving glycerol and propylene glycol as the factors. Each formula was tested for its zone of inhibition by observing against *S. epidermidis*, spreadibility, viscosity, and stability (viscosity shift). The equations were analysed for their validity by using F test statistic analysis with the confident interval of 95%.

From the result, the antiacne gel showed antibacterial effect against *S. epidermidis* also based on simplex lattice design observed and obtained the optimal area of the composition which provide gel with good physical properties and stability can be obtained, which was the area of 67% glycerol : 33% propylene glycol until 3% glycerol : 97% propylene glycol.

Keywords : aqueous-ethanolic extract of *Carica folium*, gel, antiacne, glycerol, propylene glycol, simplex lattice design, *Staphylococcus epidermidis*.