

ABSTRAK

Penelitian ini bertujuan membuat formulasi sabun mandi cair yang dapat meningkatkan kelembapan kulit dengan menambahkan kitosan untuk meningkatkan kelembapan serta gliserin dan sorbitol sebagai humektan.

Kitosan memiliki kemampuan mengikat air karena adanya gugus hidrofilik dan kemampuan *film forming*. Lapisan film tersebut diharapkan mampu meningkatkan kelembapan kulit. Kitosan yang diubah menjadi nanopartikel akan meningkatkan reaktifitas muatan di permukaan sehingga diharapkan memperkuat lapisan film yang terbentuk. Gliserin dan sorbitol sebagai humektan memiliki kemampuan menarik air dari lingkungan ke kulit sehingga mampu memberikan efek melembapkan kulit. Nanopartikel kitosan dibuat melalui metode gelas ionik dengan kadar 1%, 1,25%, 1,5%, 1,75% dan 2%. Nanopartikel kitosan di karakterisasi dengan *Particle Size Analyzer* (PSA) untuk mengetahui ukuran partikel yang selanjutnya dicampurkan dalam basis sabun mandi cair. Sabun mandi cair nanopartikel kitosan dievaluasi meliputi *organoleptic*, pH, daya dan stabilitas busa, alkali bebas, viskositas, dan uji efektifitas kelembapan.

Hasil menunjukkan bahwa seluruh formula memenuhi parameter sediaan menurut SNI 06-4085-1996 tahun 1996. Uji kelembapan dilakukan dengan cara *pre-test and post-test control group design* pada menit ke 0, 5, 10 dan 15. Formula 3 dengan kadar nanokitosan 1,5% memberikan efektifitas kelembapan tertinggi, namun Formula 5 dengan kadar nanokitosan 2% memberikan kelembapan kulit tertinggi sesudah pengaplikasian sabun.

Kata kunci : Nanokitosan, *film forming*, humektan.

ABSTRACT

This research made a liquid bath soap formulation that could increased skin moisture by added chitosan to increased moisture and glycerin and sorbitol as humectants.

Chitosan has the ability to bind air due to the presence of hydrophilic groups and film formation capabilities. This film layer is expected to increase skin moisture. Chitosan which is converted into nanoparticles will increase the charge reactivity on the surface so that it is expected to increase the film layer formed. Glycerin and sorbitol as humectants have the ability to draw from the environment to the skin so as to provide the effect of moisturizing the skin. Chitosan nanoparticles were made through ionic gelation methods with levels of 1%, 1.25%, 1.5%, 1.75% and 2%. Chitosan nanoparticles were characterized by Particle Size Analyzer (PSA) to determine the size of the particles which were then mixed in the base of liquid bath soap. Chitosan nanoparticle liquid soap was assessed as organoleptic, pH, free power and foam, free alkali, viscosity, and moisture effectiveness test.

Results that represent formulas that meet the dosage parameters according to SNI 06-4085-1996 in 1996. Moisture tests were carried out by pre-test and post-test control group design in minutes 0, 5, 10 and 15. Formula 3 with nanochitosan levels 1,5% provides the highest moisture effectiveness, but Formula 5 with a 2% nanochitosan content provides the highest skin moisture after the application of soap.

Keywords : Nanochitosan, film forming, humectant.