

## ABSTRACT

**FORMULA OPTIMATION OF EMULGEL PEEL OFF MASK  
VCO KOPYOR (*Cocos nucifera* L.) WITH  
POLYVINYL ALCOHOL BASE AS ANTIACNE AGAINST  
*Propionibacterium acnes***

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Virgin Coconut Oil of Kopyor contained lauric acid that already known has an antibacterial activity against *Propionibacterium acnes* that ususally improve the severe of pimple. Researches based on the extract virgin coconut oil activity as a natural antimicrobial have been reported. The extract solutions were tested for antibacterial activity against *Propionibacterium acnes* ATCC 11827 in Nutrient agar. Growth inhibition test was carried out by agar disk diffusion. The minimum inhibition concentration (MIC) of the VCO was 20%. In this research, VCO 20% and 30% was formulated as a component of emulgel peel off mask containing PVA in various concentration (8% and 10%). The emulgel peel off mask of VCO kopyor then undergoes viscosity, pH, drying time, spreadability, droplet size, droplet size distribution, zeta potential, antibacterial activity, and also stability thermal cycling evaluation on the temperature  $40^{\circ}\pm 2^{\circ}\text{C}$  and  $4^{\circ}\text{C}\pm 2^{\circ}\text{C}$  in 3 cycle. Through this evaluation, the chosen formula was formula 1 containing 20% of VCO and 8% of PVA. This formula has pH that suitable with skin pH 4,5-6,5, has no significant difference in zeta potential, good spreadability, and also undergoes the antibacterial activity determination that has no significancy different with the other formula that contains more concentration of VCO and PVA.

Keywords : Antibacterial activity, *Propionibacterium acnes*, PVA,  
Virgin Coconut Oil