PENGARUH KADAR POLIVINIL ALKOHOL SEBAGAI *FILM FORMING* TERHADAP WAKTU MENGERING SEDIAAN MASKER NANOEMULSI GEL *PEEL-OFF* MINYAK TAMANU (*Calophyllum inophyllum* L.) DAN UJI STABILITAS *FREEZE THAW*

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Jerawat disebabkan oleh bakteri seperti bakteri *Staphylococcus aureus*, *Propionibacterium acnes* dan *Propionibacterium granulosum*. Minyak tamanu merupakan konstituen neoflavonoid mengandung *calophyllolide* yang diketahui memiliki aktivitas antibakteri terutama terhadap *Staphylococcus aureus.* Penelitian ini bertujuan untuk mengetahui pengaruh kadar PVA sebagai *film forming* terhadap waktu mengering sediaan masker nanoemulsi gel *peel-off* minyak tamanu dan stabilitas sediaan dengan uji stabilitas *freeze thaw*. Nanoemulsi minyak tamanu mengandung minyak tamanu (3%), tween 80 (20%), gliserin (10%) dan *aquadest* (ad 100%). Formulasi masker nanoemulsi gel *peel-off* dibuat dengan variasi konsentrasi PVA (0%, 5%, 7,5% dan 10%) sebagai *film forming agent.* Evaluasi sediaan masker gel *peel-off* terdiri dari uji organoleptik, uji homogenitas, pH, daya sebar, waktu mengering dan uji stabilitas *freeze thaw*. Hasil penelitian menunjukan bahwa sediaan memiliki karakteristik organoleptik berwarna jernih hampir hijau dengan bau khas minyak tamanu dan tidak tengik, secara visual homogen, pH 7,11-7,52, kapasitas penyebaran 5,325 cm - 5,100 cm dan waktu mengering 30,04 - 27,57 menit, sedangkan formula kontrol memiliki pH 7,00, kapasitas penyebaran 5,500 dan waktu mengering >60 menit. Berdasarkan pengujian waktu mengering, formula dengan 10% PVA memiliki waktu mengering yang lebih cepat. Berdasarkan hasil analisis secara statistik menggunakan *one-way* ANOVA didapatkan nilai signifikansi $P<0.05$, yang menandakan bahwa terdapat pengaruh kadar PVA terhadap waktu mengering sediaan. Sediaan masker nanoemulsi gel *peel-off* stabil berdasarkan uji organoleptik, homogenitas, pH, daya sebar dan waktu mengering selama 3 siklus.

Kata Kunci : PVA, waktu mengering, *freeze thaw*, nanoemulsi, masker gel *peel-off*, *Calophyllum inophyllum* L.

INFLUENCE OF VARIATION LEVELS PVA AS FILM FORMING ON DRYING TIME OF PREPARATION PEEL-OFF GEL MASK CONTAINING TAMANU OIL (Calophyllum inophyllum L.) NANOEMULSION AND FREEZE THAW STABILITY TEST

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Acne caused by bacteria such as Staphylococcus aureus, Propionibacterium acnes and Propionibacterium granulosum. Tamanu oil is neoflavonoid constituents that contain calophyllolide known to have antibacterial activity against Staphylococcus aureus. This study aim to determine the effect of PVA as a film forming on drying time peel-off gel mask preparation containing tamanu oil nanoemulsion and preparation stability with freeze thaw stability test . Tamanu oil nanoemulsion contains tamanu oil (3%), tween 80 (20%), gliserin (10%) and aquadest (ad 100%). Peel-off gel mask containing tamanu oil nanoemulsion was formulated using various levels of PVA (0%, 5%, 7,5% dan 10%) as a film forming agent. Peel-off mask gel of tamanu oil nanoemulsion was evaluated including organoleptic, homogeneity, pH, spreadability, drying time and freeze thaw stability test. The study results showed that the organoleptic characteristic of the preparation was clear almost green with a distinctive odor of tamanu oil and not rancid, visually homogeneous, pH 7,11 - 7,52, spreadability capacity 5,325 - 5,100 cm and drying time 30,04 - 27,57 minutes, while the control formula have pH 7,00, spreadability capacity 5,500 cm and drying time >60 minute. Based on the result of the drying time test, formula with 10% PVA have the fastest drying time. Based on the results of statistical analysis by one-way ANOVA, the value of significance was $P < 0.05$, which indicates that there is an effect of the level of PVA on drying time of the preparation. The preparation of peel-off mask gel is stable based on the results of organoleptic test, homogeneity, pH, spreadability and drying time for 3 cycles.

***Key words* :** PVA, *drying time*, *freeze thaw*, *nanoemulsion*, *peel-off gel mask*, *Calophyllum inophyllum* L.