

## INTISARI

Pati kentang (*Solanum tuberosum* L.) memiliki sifat *opaque* yang tidak dapat ditembus cahaya tetapi dapat memantulkan sinar, bermanfaat untuk mencegah penetrasi radiasi sinar *ultraviolet* pada kulit. Secara umum, penelitian ini bertujuan untuk memperoleh suatu produk tabir surya dari bahan alam, yaitu pati kentang dalam bentuk sediaan *lotion*.

Percobaan menggunakan pati kentang yang dibuat sediaan *lotion oil in water* dengan variasi konsentrasi pati kentang 10,00%; 12,50%; 15,00%; 17,50%; dan 20,00% b/b. Evaluasi fisik formulasi *lotion* yang telah dibuat dilakukan selama penyimpanan dengan pemeriksaan organoleptis, homogenitas, pH, viskositas, uji daya sebar, uji daya lekat, serta stabilitas sediaan dengan siklus *freeze thaw*. Aktivitas tabir surya dilakukan dengan mencari nilai faktor pelindung surya atau *Sun Protecting Factor* (SPF) sediaan *lotion* pati kentang yang ditentukan secara *in vivo* menggunakan kelinci albino yang sebelumnya diinduksi dengan pemberian *methoxsalen* atau 8-MOP, kemudian disinari dengan lampu UV.

Hasil dari variasi konsentrasi pati kentang sebesar 15,00% memberikan *lotion* yang stabil selama satu bulan penyimpanan berdasarkan dari parameter organoleptis, homogenitas, pH, daya sebar dan daya lekat dari uji t berpasangan (*paired t test*). Peningkatan konsentrasi pati kentang memberikan pengaruh yang berbeda bermakna terhadap stabilitas fisik *lotion oil in water* selama satu bulan penyimpanan dari uji ANOVA. Nilai SPF *lotion oil in water* pada konsentrasi pati kentang 15,00% yaitu sebesar 15.

**Kata kunci :** SPF, pati kentang, stabilitas fisik

## ABSTRACT

Potato starch (*Solanum tuberosum* L.) owns the opaque characteristic that cannot be penetrated by the light but can reflect it which makes potato starch useful to prevent the penetration of ultraviolet radiation towards skin. Generally, this research is purposed to obtain a sunblock product from natural resources which is potato starch in lotion form.

The research used potato starch made from the preparation of lotion oil in water with the variety of potato starch 10,00%; 12,50%; 15,00%; 17,50%; and 20,00% b/b. The physic evaluation of the already made lotion formulation was done during storage with examination of organoleptic, homogeneity, pH, viscosity, dispersive power test, adhesive test, and preparation stability using freeze thaw cycle. The activity of sunblock was examined by looking for the factor value of the Sun Protecting Factor (SPF) of potato starch lotion preparation which was determined in vivo using the albino rabbit that have been induced by the adduction of methoxsalen or 8-MOP, then was irradiated by UV light.

The result of variety of potato starch's concentration is 15,00%, giving the stable lotion for one month of storage based on the parameter of organoleptic, homogeneity, pH, viscosity, dispersive power test and adhesive test from paired t test. The increase of concentration of potato starch gives the different meaning of influence towards the stability of the physic of lotion oil in water for one month of storage from ANOVA test. The SPF value of lotion oil in water in the potato starch concentration 15,00% is 15.

**Keywords :** SPF, potato starch, physical stability