FORMULATION OF PEEL-OFF GEL MASK CONTAINING MUNG BEAN (Vigna radiata (L.) Wilczek) EXTRACT

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ABSTRACT

Mung bean (Vigna radiata (L.) Wilczek) is one of the plants that rich in antioxidant compound. Antioxidant is a compound that can inhibit the skin aging process because of photoaging. The aim of this study was to formulate peel-off gel mask containing mung bean (Vigna Radiata (L.) Wilczek) extract using polyvinyl alcohol (PVA) as a base of mask and Hidroxy Prophyl Methyl Cellulose (HPMC) as a viscosity increasing agent and to determine the antioxidant activity of the peel-off gel mask. Antioxidant activity was tested using DPPH (1,1-di phenyl-2-pycrilhidrazil) assay. Mung bean was extracted by maceration method using ethanol 96%. The concentration of mung bean extract in the peel-off mask gel was 4% and various concentration of PVA were 5% (F1), 7.5% (F2), 10%(F3). The evaluations were organoleptic, pH, viscosity, drying and film forming, and gel spreadness. The study result showed that the organoleptic of the gel was brownish yellow with pH approximately 6, 196-513 cps in viscosity, 0.0646-0.0730 cm/g in gel spreadness and 27.6-54.5 second in drying and film forming. F3 containing mung bean extract 4%, PVA 10%, HPMC 2%, propylene glycol 15%, potassium sorbate 0.2%, olive oil 0.5%, alpha tocopherol 0.05 and aquadest ad 100% was the best formula with IC50 value was 85,2793 ppm and significantly different than F1 and F2 (p < 0.05).

Keywords: peel-off gel mask, mung bean extract, Vigna radiata (L.) Wilczek antioxidant