ANTIOXIDANT ACTIVITY TEST AND DEVELOPMENT OF PEEL-OFF MASK OF TAMANU OIL WITH VARIATION OF POLYVINYL ALCOHOL CONCENTRATION

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Background

Tamanu or nyamplung oil has antioxidant compounds such as linoleic acid, xantheones and coumarins (Dweck and Meadows, 2002; Raharivelomanana et al., 2018). The use of tamanu oil as a cosmetic ingredient in Indonesia is still limited, although it has the potential as a raw material for cosmetic preparations such as peel-off mask. The critical point in making peel-off mask is the formation of a film layer such as PVA (Polyvinyl Alcohol). The polymer concentration plays a role in the film formation performance of the peel-off face mask. The purpose of this study was to test the antioxidant activity of tamanu oil using the DPPH method, followed by developing tamanu oil into a peel-off mask preparation. Peel-off gel mask of tamanu oil was evaluated based on physical and chemical properties for 4 weeks storage.

Method

Results

Inhibition concentration 50 (IC₅₀) tamanu oil was 111,058 μg/mL.

Conclusions

- Tamanu oil had a moderate antioxidant activity.
- Peel-off mask met the criteria for the physical and chemical properties of the preparation.
- The differences in the concentration of PVA on the preparation had a significant effect on the physical properties of the preparations, namely viscosity, spreadability, adhesion, and dry time.

References