DEVELOPMENT OF SERUM STICK USING *CURCUMA XANTHORRHIZA* (TEMULAWAK) TO RETAIN SKIN YOUTH

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ABSTRACT

DEVELOPMENT OF SERUM STICK USING *CURCUMA XANTHORRHIZA* (TEMULAWAK) TO RETAIN SKIN YOUTH

Incorporation of natural active ingredients *like Curcuma xanthorrhiza (C. xanthorrhiza)* extract into solid skincare products can offer potential benefits for skin health. *C. xanthorrhiza* has been widely used for its benefial effects since years ago. The usual conventional route of use is by powder, capsule, lotion and moisturizer. This study investigated the potential of *C. xanthorrhiza* extract for topical application. The extract was obtained using Soxhlet extraction with ethanol, achieving a yield of 8.84% and 7.47%. The extract exhibited a promising IC50 value of 20.86 ppm, indicating significant antioxidant activity. Additionally, the total phenolic content (TPC) was 45.71 ± 0.36 mgGAE/g, and the total flavonoid content (TFC) was 30.06 ± 0.41 mgQE/g, suggesting the presence of potentially beneficial bioactive compounds. A serum stick formulation was developed incorporating the *C. xanthorrhiza* extract that maintained a slightly acidic pH of 5.018 that aligns with healthy skin's natural pH. This research lays the groundwork for further development of Curcuma xanthorrhiza extract-based topical products with potential antioxidant properties. Future studies could explore the efficacy and safety of the formulated serum stick in clinical trials.

TABLE OF CONTENTS