

**Safety and Efficacy Evaluation on  
*Curcuma Xanthorrhiza* Roxb. Extract\*) in Cosmetics**

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**ABSTRACT**

The rhizome of *Curcuma xanthorrhiza* Roxb. is extensively used and researched for medicinal purposes but not much research has been conducted for cosmetic use. Studies have been made on its properties for use in natural cosmetics. In this research, we conducted studies on its moisturizing and safety aspects including HET-CAM. The dermatological safety test were conducted using Repeated Opened Patch Test (ROPT) followed by Single Closed Patch Test (SCPT), involving more than 50 selected healthy volunteers, who signed informed consent. From the ROPT, it was shown that ECCX\* did neither cause any irritation nor allergic skin reaction. From SCPT, ECCX\* caused irritation and allergic reactions in 1.9% and 0% of all subjects respectively at all concentrations tested (2.5%, 5.0% and 7.5%). The HET-CAM test revealed that ECCX\* is moderately irritant to eyes at the concentration of 2.5%. Clinical study using Corneometer shows that application of ECCX\* increased skin moisture content significantly higher than its base and tends to reduce the trans epidermal water loss. These results show that *Curcuma* extract is safe and can be used as moisturizing agent in cosmetic.

**Key words:** *Curcuma xanthorrhiza*, natural moisturizing agent, HET-CAM test, safety aspects, clinical study

\*) = Patent pending