

Research Title	Study of Efficiency of Hair Dye Cream from <i>Caesalpinia sappan</i> Linn. Crude Extract
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The aim of this study was to formulated hair dye from sappan (*Caesalpinia sappan* Linn.) crude extract. Dried plant was macerated in 95% ethanol and propylene glycol. The antioxidant activities and the total phenolic content of ethanolic extract and propylene glycol extract were determined using DPPH scavenging assay, ATBS assay compared to L-ascorbic acid, Trolox. The results showed that ethanolic extract had antioxidant activity more than propylene glycol extract calculated in IC₅₀, 14.20 µg/mL and 21.02 µg/mL, respectively. The total phenolic content was determined according to the Folin-Ciocalteu method 1,236 and 630 mg GAE/g extract, respectively. The crude extracts were then mixed in proper cream base. Stability study was done under temperature cycle, viscosity of the find products was examined. The color staining was tested by applying the find product on the pieces of hair and allowing it to result for 30 minutes. Afterward, hair color was visually recorded to see how it would hold up to hair treatments and shampoo by three to four times a week for four weeks. The result showed that *Caesalpinia sappan* Linn. extract was to found to provide hair with long lasting reddish-orange color. Scanning electron microscope showed that the surface of the cortex of hair pieces were smooth.