

Melanogenesis inhibitory effect of *Tetracera loureiri* bark extract

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ABSTRACT

Tetracera loureiri, is a Thai traditional medicine, belonging to Dilleniaceae family. The bark extract of this plant has been showed high anti-oxidative activity and phenolic content. Nowadays, the most cosmeceutical whitening agents composed of several phenolic compounds. This study aims to investigate the possibility of *T. loureiri* ethanolic bark extract (TLE) to be whitening ingredient. The effect of TLE on melanogenesis was determined by measuring tyrosinase activity, melanin production and melanogenesis-related genes expression in B16F10 cells. The results showed that TLE inhibited tyrosinase activity with IC_{50} at 0.202 mg/ml. After 48 h of incubation, TLE showed low toxicity on B16F10 cells with IC_{50} higher than 0.5 mg/ml. At dose of 0.250 mg/ml TLE decreased melanin production with 65.61% inhibition. Moreover, TLE at doses of 0.065-0.250 mg/ml inhibited the expression of tyrosinase and tyrosinase related protein-1 genes in B16F10 cells. The findings suggest the melanogenesis inhibitory competency and supported the potential utilization of TLE in whitening product development.

Keywords: Melanogenesis inhibition, *Tetracera loureiri*, Tyrosinase, B16F10 cells