

Thesis Title	Efficacy of 3% <i>Euterpe Oleracea</i> Extract Cream for Reduction of Periorbital Wrinkles
Author	Hsu Mon Zaw
Degree	Master of Science (Dermatology)
Advisor	Rassapoom Sumaetheiwit, M. D.

ABSTRACT

Background: Periorbital wrinkle occurs because of extrinsic and intrinsic aging. Asides from aging, genetics, smoking, drinking and even certain sleeping positions can contribute to wrinkle development. Free radical damage is proven to be one of the main reasons for aging and wrinkles. Several anti-aging and anti-wrinkle treatments are being studied upon these days but the efficacy of *Euterpe oleracea* has not been established yet. *Euterpe oleracea* or the acai palm is known to possess the highest amount of antioxidant capacity among fruits and vegetables. Some of the various constituents found are anthocyanin, orientin, scoparin, isovitexin and resveratrol. Among them, anthocyanins are known as free radical scavengers against harmful oxidants such as reactive oxygen and nitrogen species. They are also found to be photoprotective.

Objective: To study the efficacy of topical 3% *Euterpe oleracea* extract cream in decreasing periorbital wrinkles

Methods and materials: 20 subjects of age between 30 to 50 years were recruited for this clinical experimental study. Both male and female participated and the study lasted for 12 weeks. Volunteers were instructed to apply 3% *Euterpe oleracea* extract cream twice daily to periorbital area during the 12-week period. Skin

parameter measurements such as skin elasticity, hydration and wrinkle score assessment by dermatologists were taken at baseline, 4th, 8th and 12th week respectively.

Result: The mean of cutometer score (skin elasticity) increased from the start to week 12 and it was statistically significant. The mean corneometer score (skin hydration) also improved significantly from baseline to week 12. A rise in wrinkle evaluation score was also recorded from week 4 to week 12 with a significance. There was no adverse effect in all subjects throughout the study with high patients' satisfactory score.

Conclusion: The study demonstrated that Acai palm extract decreased periorbital wrinkles when it is applied topically with no adverse effects. It could be an alternative anti-wrinkle treatment.

Keywords: *Euterpe oleracea*, Acai, Wrinkle, Elasticity, Hydration