

Thesis Title	A Comparative Study of the Efficacy of 4% White Radish Root Extract Cream Versus 2% Alpha Arbutin Cream in Facial Whitening
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ABSTRACT

Nowadays, fair skin is becoming popular among both men and women. The difference in skin color is due to the melanogenic activities in the melanocytes, the proportion of mature melanocytes and the distribution to the surrounding keratinocytes. The ability to control skin hyperpigmentation disorders is the most important research goals in cosmetic formulations. Currently, Alpha Arbutin is one of the most popular whitening ingredients in the world, it is used to treat many hyper pigmentation disorders. α -Arbutin has a high market value due to its wide applicability in the cosmetic and pharmaceutical industries.

In recent years, cosmetics containing herbal medicines and botanical ingredients are said to be safer than those containing synthetic ingredients and are attracting consumer interest. High quality studies with larger sample sizes are needed to confirm the safety and clinical efficacy of herbal medicines with high therapeutic indices. Previous studies have shown that radish root extract inhibits the tyrosinase enzyme, a key enzyme in melanogenesis, and it also has antioxidant properties. White radish is inexpensive and easy to grow in Thailand. The purpose of this study is to investigate the efficacy of radish root extract for facial whitening. Objective: To compare the facial whitening efficacy of a cream containing 4% radish root extract versus 2% alpha arbutin, which is widely recognized as a standard treatment for skin whitening.

In this study, a total of 24 volunteers between the ages of 20 and 50, men and women with Fitzpatrick II-V skin, diagnosed by a dermatologist who wanted to voluntarily whiten their face, were collected to participate in this study for 12 weeks.

White radish root extract 4% and 2% alpha-arbutin creams were instructed to apply twice daily to the entire face, parallel group study design for 12 weeks. Improvement was measured by Mexameter® MX18 and VISIA® analysis and the results were statistically analyzed. As a result, 4% white radish extract reduced the melanoma index after 12 weeks. No complications or side effects were noted during and after the study.

Keywords: 4% White Radish Extract Cream, Raphanus Sativus L, Tyrosinase Inhibitor, Skin Whitening

