

Abstract

The objective of this study is screening the highland plants which have the antioxidant and anti wrinkle activity for development the anti aging product. The product that has the active ingredient from the highland plants is rebounded with the demand on marketing and it will support the value of the highland plants. The highland plants in the study were selected from the preliminary data that have the antioxidant, melanogenesis inhibition and tyrosinase activity inhibition activities such as the extraction from *Harrisonia perforate* (Blanco) Merr., *Ricinus communis* L., *Caesalpinia sappan* L., *Celastrus paniculata* Willd. and *Aesculus assamica* Griffith.

Preliminary tests showed that the extraction from the core of *Caesalpinia sappan* L. had more the inhibition tyrosinase enzyme activity than other extractions. In addition, the extraction still had the antioxidant activity and showed the most total phenolic content. Therefore, the extraction from the core of *Caesalpinia sappan* L. was appropriate to develop for anti wrinkle product.

The development of the anti wrinkle cream product that used the extraction from the core of *Caesalpinia sappan* L. at concentration 0.20%w/w was prepared to o/w cream. The cream showed light, good for thickening and well spread after applied on skin. The color of this cream was orange - light brown. As the screening activities test by DPPH radical scavenging activity and total phenolic content found that the anti wrinkle product had the antioxidant activity.

The result from the stability test at 4°C, room temperature, 45°C and heating-cooling cycles around 24 days found that temperature affected for the stability of the cream as well as color, odor, thickening and although, antioxidant activity but it could not affect to pH and rheogram of the product. According to the stability test, the product must be contained in the light resistant container.

Keywords: *Caesalpinia sappan* L., anti wrinkle, antioxidant, DPPH