ABSTRACT

The health and beauty of facial skin is an important aspect for a person's self-confidence, encouraging the use of skin lightening products. However, many cosmetic products contain harmful chemicals such as mercury and hydroquinone that can damage the skin. This study aims toto find out what are the bioactive compounds of polar and non-polar fractions of purple leaf extract, to find out the effectiveness of purple leaf extract in the process of reducing free radical activity and inhibiting the tyrosinase enzyme, and to find out the best serum preparation formulation containing active purple leaf extract that can brighten and prevent hyperpigmentation on the skin. The stages of this study began with maceration, extraction of polar and non-polar fractions, characterization of the extract with phytochemical and GC-MS tests, antioxidant tests using the DPPH method, tyrosinase enzyme inhibition tests, and the preparation of brightening serum formulations and characterization of serum preparations. The results obtained were that it was known that Purple leaf extract polar fraction contains saponin, tannin, alkaloid, terpenoid, and flavonoid compounds. While the non-polar fraction contains flavonoid, tannin, and terpenoid compounds. The polar fraction of purple leaf extract has tyrosinase enzyme inhibitor activity to control skin hyperpigmentation on IC50 concentration32, 916ppm, and the best formulation of brightening serum preparation based on purple leaf extract is Formulation 2.

Keywords: Purple leaves, skin brightener, antioxidant, tyrosinase inhibition, flavonoids.