EVALUATION OF BIOLOGICAL ACTIVITY OF VIETNAM PINEAPPLE (*Ananas comosus*) EXTRACT, PREPARATION OF MELASMA CARE CREAM IN THE LABORATORY SCOPE

ABSTRACT

Objective: Biological activity assessment (Antioxidant, inhibits tyrosinase enzyme) and total phenolic (TPC) and flavonoids (TFC), of methanol extraction from pineapple (*Ananas comosus*) grown in Kien Giang province, Vietnam to test the preparation of care to care for melasma in the laboratory.

Methods: Antioxidant activity was assessed with three methods (DPPH and $ABTS^{+}$ radical scavenging activity and ferric reducing power), total phenolic, flavonoid content, and tyrosinase inhibitory activity, which were determined using standard in vitro methods, liquid-liquid extraction methods to separate fractional extraction and Analyze fractional LC/MS spectrum to identify some main groups of compound. Project testing the preparation of melasma care cream on a laboratory scale.

Results: Methanol extract of pineapple peel gives the best results with a total phenolic 309 mgGAE/g and flavonoid 56.08 mg QE/g. Antioxidant activities with the IC50 values are 64.79 µg/mL, 313 µg/mL, and reducing power with Abs0.5 value is 204.81 µg/mL. The ability to inhibit tyrosinase activity in vitro extract with IC50 is 102.85 µg/mL. Results of gas chromatographic analysis of mass spectrometry (LC/MS) of F2 in the presence of 11 substances/compounds that have been shown to have vital tyrosinase inhibitory activities

Conclusions: Methanol extracts of Vietnam (*Ananas comosus*) biological activity assessment is evaluated for high, a potential source of raw materials for skin whitening for the pharmaceutical and cosmetic industries.

Keywords: *Ananas, Antioxidant, extraction, inhibitory, tyrosinase*