

ANTIOXIDANT ACTIVITY TEST AND BODY SCRUB FORMULATION USING NUTMEG MACE EXTRACT (*Myristica fragrans* Houtt)

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Introduction : This study focuses on the antioxidant activity test of mace (*Myristica fragrans* Houtt) and the formulation of body scrub preparation. The body has the ability to counteract free radicals, which can cause cell damage and various degenerative diseases, known as antioxidants. Body scrub is a skin care product that aims to remove dead skin cells and promote skin regeneration. In addition, it is expected to evaluate the antioxidant ability of natural ingredients used in the manufacture of body scrubs as well as develop a suitable formulation.

Aim : This study was conducted to determine the antioxidant value of mace nutmeg from Ternate City and to determine the characteristics of body scrub cream preparation from ethanol extract of mace nutmeg.

Methods : Determination of antioxidant activity of ethanol extract of mace nutmeg was done by DPPH (2,2-diphenyl-1-picrylhydrazyl) free radical capture method. This research also includes the formulation of body scrub cream preparation using ethanol extract of mace nutmeg with concentration F1 (0.1%). Furthermore, the physical characteristics of the preparation were tested including organoleptic test, homogeneity, pH, viscosity, spreadability, adhesiveness and emulsion type test.

Result : The ethanol extract of mace nutmeg (*Myristica fragrans* Houtt) has an IC₅₀ value of 44.65 µg/mL and is included in the very strong antioxidant category. F1 organoleptical test produces a brownish yellow color, semi-solid shape, has a distinctive and homogeneous aroma, spreadability (5.76-5.73 cm), stickiness (2.14-1.99 seconds), pH (6.80-6.28), viscosity (19780-19420 cps), emulsion type (oil/water emulsion type).

Conclusion : The ethanol extract of nutmeg mace (*Myristica fragrans* Houtt) has an IC₅₀ value of 44,65 µg/mL and is categorized as a very strong antioxidant because it has an IC₅₀ value of less than 50 ppm. And ethanol extract of mace nutmeg (*Myristica fragrans* Houtt) can be formulated in a cream dosage form as a body scrub and meets the requirements of physical test parameters.

Keywords : Nutmeg mace, antioxidant, body scrub.