

Abstract Characteristics and Antioxidant Activity of Solid Soap Enriched with Secang Wood (*Caesalpinia sappan* L.)

Extract

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Characteristics and Antioxidant Activity of Solid Soap Enriched with Secang Wood (*Caesalpinia sappan* L.) Extract

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Background: Secang wood (*Caesalpinia sappan* L.) have an antioxidant activity and potential to be developed into soap. Soap is a topical preparation in solid or liquid form that used to clean the skin. The addition of secang wood extract to soap preparation can increase the antioxidant activity of the soap so can prevent damage caused by free radicals to the skin such as acne, dull skin, eczema and melasma.

Purpose: This study aims to determine the characteristics and antioxidant activity of soap enriched with secang wood (*Caesalpinia sappan* L.) extract.

Methods: Secang wood extract was prepared by maceration method using 96% ethanol solvent. Soap making by saponification method with 4 formulations, with different percentages of extracts, F0 0%; F1 1.5%; F2 3% and F3 6%. The characteristics of the soap were assessed by the organoleptic test, homogeneity test, pH test using universal indicator paper, water content test and foam height. Testing of antioxidant activity using the DPPH (1,1-diphenyl-2-picrylhydrazyl) method.

Results: The results showed that soap enriched with secang wood (*Caesalpinia sappan* L.) extract was solid, white to blackish brown in color, had a distinctive smell, homogeneous, pH ranged from 9-10, water content ranged from 0.20% - 0.22% and foam height with a value of 9.83cm - 10.16cm. The IC50 values for all formulations were 193.08 ppm; 144.9 ppm; 120.02 ppm and 119.75 ppm.

Conclusion: Soap enriched with secang wood (*Caesalpinia sappan* L.) is in accordance with SNI and have an antioxidant activity in moderate category.

Keywords: Soap Characteristics, Antioxidant, Secang Wood (*Caesalpinia sappan* L.)

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