

Comparison of Antioxidant Activities by Different Extraction Temperatures of Leaves from *Stewartia pseudocamellia* Maxim.

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This study was carried out to evaluate antioxidant activities of leaves from *Stewartia pseudocamellia* Maxim. The dried leaves of *S. pseudocamellia* were extracted at different temperatures (25°C and 80°C) using 70% ethanol and extracts were evaluated for extraction yield and antioxidant activity. The total polyphenol content in the dried leaves extracts of *S. pseudocamellia* was 134.39±0.05 mg of gallic acid equivalents/g and 162.39±0.91 mg of gallic acid equivalents/g in 25°C and 80°C, respectively. The total flavonoids content in the dried leaves extracts of *S. pseudocamellia* was 56.6 ±0.4 mg of quercetin equivalents/g and 59.1 ±0.9 mg of quercetin equivalents/g in 25°C and 80°C, respectively. The leaves of *S. pseudocamellia* extracted at 80°C showed slightly better scavenging ability on DPPH and ABTS than leaves of dried leaves from *S. pseudocamellia* extracted at 25°C. But, there was no significant difference in antioxidant activity by the different extraction temperature. The toxicity of dried leaves extracts from *S. pseudocamellia* was investigated using WST-1 (Water Soluble Tetrazolium salt) assay on the mouse macrophage cell line RAW 264.7. These results suggested that regardless of the extraction temperature, dried leaves extracts of *S. pseudocamellia* could be used as a potential source of functional material in cosmetics as well as in foods.

Key words: Antioxidant activity, Dried leaves, Extraction temperature, *Stewartia pseudocamellia* Maxim.