

EFFECTS OF ENZYMATIC HYDROLYSIS ON TOTAL POLYPHENOL CONTENT AND ANTIOXIDANT ACTIVITY OF *Pouteria campechiana*

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Summary

Phytochemistry and antioxidant properties of *Pouteria campechiana* has not been well studied in Vietnam. This study was conducted to evaluate the effect of enzymatic hydrolysis on total polyphenol content and antioxidant activity of *Pouteria campechiana* hydrolysate. Important parameters affecting hydrolysis process including type of enzyme (pectinase, cellulase), enzyme concentration, hydrolysis temperature and reaction time were investigated. Experimental results showed that at pectinase as well as cellulase concentration enzyme of 0.6 wt%, reaction temperature 60°C and duration of 65 minutes, highest TPC of 8.239 ± 0.07 mgGAE/g was obtained while DPPH test results indicated that antioxidant property of the hydrolysate was $78.73 \pm 2.71\%$ with an IC₅₀ value of 7.944 mg/mL. The results of this study provides valuable nutrition information of *Pouteria campechiana*, especially for the food industry.

Keywords: *Pouteria campechiana*, phenolics, hydrolysis, antioxidant activity, DPPH radical scavenging activity.