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**Antioxidant Activity Test of Sappan (*Caesalpinia sappan* L.) and Chinese Teak (*Senna alexandrina*) Extract Combination Using DPPH (1,1 Diphenyl 2 Picrylhydrazyl) Free Radicals Scavenging Method**

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**ABSTRACT**

Sappan (*Caesalpinia sappan* L.) is applied as food and traditional medicine. Chinese teak (*Senna alexandrina*) is a plant from the tropics that can be developed as an antioxidant. This study was conducted to determine the antioxidant activity of the combination of Sappan and Chinese Teak by the DPPH (1,1 Diphenyl 2 Picrylhydrazyl) Free Radical Scavenging method. The extraction method used was maceration with Ethanol 96% as solvent. Determination of antioxidant levels was done quantitatively using the UV- Vis Spectrophotometer instrument at a wavelength of 514 nm. From the results of the study, the regression value obtained for the comparison of Quercetin is  $y = 3.1303x + 0.2292$  with  $R^2 = 0.9974$  and  $IC_{50}$  value of 15.899  $\mu\text{g/mL}$ . For the antioxidant activity of Secang, the regression value  $y = 0.5769x + 18.543$  with  $R^2 = 0.9969$  and  $IC_{50}$  value of 54.53  $\mu\text{g/mL}$ , Chinese Teak obtained regression value  $y = 0.1421x + 17.506$  with  $R^2 = 0.9989$  and  $IC_{50}$  value of 228.67  $\mu\text{g/mL}$ , and for the combination obtained regression value  $y = 0.4304x + 36.622$  with  $R^2 = 0.9954$  and  $IC_{50}$  value of 40.38  $\mu\text{g/mL}$ . The results of this study indicate that the combination of Sappan and Chinese Teak extracts has a very strong antioxidant effect ( $<50 \mu\text{g/mL}$ ).

**Keywords:** Antioxidant, DPPH, Sappan, Chinese Teak.