

In Vitro Antioxidant Activity of Zingiber officinale, Piper retrofractum, and Their Combinations

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Abstract	<p>Many plants are used empirically as antioxidant. Plants that are frequently used in Indonesian communities are Zingiber officinale and Piper retrofractum. The aim of this research was to investigate the in vitro antioxidant activity of single ethanolic extract and the combinations of Z. officinale and P. retrofractum using free radical scavenging DPPH (1,1-diphenyl-2-picrylhydrazyl) method. Z. officinale and P. retrofractum were extracted by maceration using 95% ethanol for 3 x 24 hours. Antioxidant activity was evaluated using 1,1-diphenyl-2-picrylhydrazyl (DPPH) method. The concentration of the extract (1/4g/mL) that was required to scavenge 50% of free radicals (IC50) was calculated using the percent scavenging activities of six different extract concentrations. The results showed that the single ethanolic extract of Z. Officinale produced the highest antioxidant activity with IC50 of 56 1/4g/mL, while the antioxidant activity of the single ethanolic extract of P. retrofractum produced an IC50 of 3.445 1/4g/mL. The IC50 of combination of Z. officinale and P. retrofractum ethanolic extracts at concentration ratios of 1: 2, 1 : 1, and 2 : 1 were 148 1/4g/mL, 85 1/4g/mL, and 73 1/4g/mL. Keywords: Zingiber officinale, Piper retrfratum, Antioxidant, DPPH</p>
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