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Assessment of phenolic content and free radical-scavenging capacity of some Thai indigenous plants

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Abstract

Ethanolic extracts from various parts of 26 Thai indigenous plants were examined for phenolic constituents and free radical scavenging capacity, to determine their potential as a source of natural antioxidants. Total phenolic content and total flavonoid content were evaluated according to the Folin-Ciocalteu procedure, and a colorimetric method, respectively. The results showed that total phenolic compounds and flavonoid content were higher in seed extracts of berries used in wine production, while the levels in extracts obtained from herbs and vegetables were lower. Chewing plants which have an astringent taste gave a significantly higher total phenolic content and flavonoid content. Antiradical activity determined from $1/EC_{50}$ by the DPPH radical-scavenging method was highest in wine production seeds and chewing plants. The correlation coefficient from regression analysis showed a positive relationship between total phenolic and total flavonoid content (r = 0.9). The results suggest that ethanolic extracts of some Thai indigenous plants exhibit a potential *for* use as natural antioxidants.

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Keywords: Thai indigenous plants; DPPH; Antioxidant activity; Total phenolic content; Total flavonoid content

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