

Some Plant Extracts as Important Sources of Vital Nutrients.

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- **Abstract:** This research is carried out as part of a master's thesis, which highlights the content of three plant extracts of nutrients important for the health of the individual. Coconut water and extracts of thyme and rosemary are selected. They are subjected to analyses using HPLC and GC devices and an amino acid analyzer so as to detect the content of these extracts of amino acids and vitamins soluble in water and fat, in addition to phenols and long-chain fatty acids. The results of amino acid analysis shows that the extract of thyme plant has the highest concentrations of five essential amino acids higher than coconut water and rosemary. As for coconut water, it contains three essential amino acids with higher concentrations than thyme and rosemary, while rosemary has low essential amino acids. For the predominant amino acids in thyme, rosemary and coconut water, they are glycine, glutamic and aspartic, respectively. It is also found that the fat-soluble vitamins of the thyme plant extract contain a higher percentage of vitamin D₃, E, and K than in rosemary and coconut water, while rosemary is distinguished by containing vitamin A at a higher rate than in thyme and coconut water. Concerning the water-soluble vitamins, it is found in rosemary, namely C and B₁ in higher proportions than in thyme and coconut water, but the thyme plant is found to have a higher rate of B₂ than in rosemary and coconut water. Concerning the concentrations and types of phenols, it is found that coconut water contains four types of phenols, namely pyrogallol, gallic acid, rutin, and eugenol with a rate higher than that in rosemary and thyme. Rosemary contains three types of phenols, namely Kaempferol, Cinnamic, and quercetin, which are higher than that in thyme and coconut water. As for thyme, it contains two types of phenols whose concentration is higher than that of rosemary and coconut water, namely Cinnamaldehyde and Lignin. It is concluded from this that the thyme plant contains the most number of essential amino acids and fat-soluble vitamins, which is considered a nutritious extract for the health of the individual. However, coconut water is distinguished by containing the highest number and concentration of antioxidants (phenols).
- **Keywords:** Coconut water, antioxidants, Cinnamaldehyde, Lignin