

Title Evaluation of antioxidant properties in naturally and artificially ripened sugar apple (*Annona squamosa* L.) fruits

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Abstract

Antioxidant contents and their properties in naturally in artificially ripened sugar apple (*Annona squamosa* L.) fruit cvs. 'Fai' and 'Nang' were evaluated. Harvested mature green fruits of both varieties were divided into two groups. The first group was placed on paper sheet liner in plastic baskets and left at ambient temperature while the second one was placed in plastic baskets containing 10 g/kg of CaC₂ each and then covered with paper sheets and left at room temperature for 24 hr. Subsequently, antioxidant contents and properties from both ripened groups were investigated. It was revealed that ascorbic acid contents from both ripened groups were about 0.1 mg/ml. Phenolics in 'Nang' sugar apple were slightly higher than 'Fai' fruit (0.63-0.65 mg/ml in cv. 'Nang' and 0.58 mg/ml in cv. 'Fai'). Flavonoids from CaC₂ – treated fruits in both varieties were slightly lower than those of naturally ripened one which were 0.33 and 0.41 mg/ml, respectively. In case of reducing power, there was similar ability found in both ripened groups (about 0.3 at Abs. 700 nm). For ferrous ion chelating, this ability was very low (0.01-0.02%), whereas DPPH (1,1-diphenyl-2-picrylhydrazyl) free radical scavenging ability was obviously higher than 95%.