

**Title** Antioxidant activity, beta-carotene, and lycopene content of Thai native cultivars of green mango (*Mangifera Indica*) after harvest

**Author** Sa-nguanpuag, K., Techavuthiporn, c ., Wongs-Aree, c., M., Buanong

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#### **Abstract**

In Thailand, mango can be grown all year round and can be exported in large amounts to the international market. In local markets, both green and ripe mangos are consumed, but in the international market, only ripe mangos are consumed. Thai native mango was found to have great nutritional value. The aim of this research was to study antioxidant activity, beta-carotene, and lycopene content of Thai native cultivar green mango. The total phenolic content, DPPH activity, FRAP activity, Beta-carotene, and lycopene content by HPLC were determined. The results showed that total phenolic content of Thai native cultivars of green mango was around 14.59-19.73 mg gallic acid/100 g FW, and was slightly different among cultivars. Mango of the 'Bao' cultivar was shown to have the highest total phenolic content, least DPPH activity, and highest FRAP activity, and was different from other cultivars. The 'Pim Sean Mun' cultivar gave the least total phenolic content, highest DPPH activity, and least FRAP activity. The betacarotene content was found to be about 4.75-42.43 µg/100 g FW. The 'Mun Khun Sri' cultivar was found to have the least beta-carotene content and 'Thong Dam' cultivar was found to have the highest beta-carotene content. Lycopene content was high enough to be detected in only 'Keaw,' 'Mahachanok,' 'Nam Dok Mai,' 'Thong Dam,' and 'Pim Sean Man' cultivars, at about 0.01-0.23 mg/100g FW.