

Guidelines for utilization and processing of native Thai fruits for commercial usage

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ABSTRACT

Thailand is one of the most biodiverse in the world, containing around 15,000 plant species. It is located within biogeographical regions of Indochinese and Sundiac. In consequence, Thailand has the appropriate climate to develop agricultural production. More than 21.06 million hectares are used for the sanctuary of rice species and agricultural crops, especially tropical fruits. It is a source of tropical fruit that has high diversification with more than 1,000 varieties, consisting of 57 kinds of fruit produced commercially. Some Thai fruits are not only tasty but also provide important alternative substances which have interesting useful effects and can be developed into modern medicine. *Manilkara zapota* and *Artocarpus integer* are seasonal fruits from South of Thailand which are popular based on attractive aromatic fragrance and nutritional value. Besides, their practical uses of plant parts such as leaves, root, bark, seed, laticifer and etc., through the traditional knowledge of ethnomedicine have been mentioned in local cultures. The medicinal importance has also been reported to possess antibacterial, anti-inflammatory, antidiabetic, antioxidant and immunomodulatory properties because of their bioactives compounds. In addition to being used as food, the fruits were also developed to value added products which improved the potential of plants used for health benefits. Unfortunately, the available utilization and biochemical process for commercial usage is still waiting to be discovered.

Keywords: Ethnomedicine; Native fruits; Value added product; Medicinal plant.

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REFERENCES

1. Duong, Thuc-Huy, et al. "Manilkzapotane, a novel dimeric alkylresorcinol derivative from the stem bark of *Manilkara zapota*." *Journal of Asian Natural Products Research* 23.11 (2021): 1093-1099.
2. Duong, Thuc-Huy, et al. "Identification of Highly Potent α -Glucosidase Inhibitors from *Artocarpus integer* and Molecular Docking Studies." *Chemistry & Biodiversity* 18.12 (2021): e2100499.
3. Phuong, Nguyen Thi. "Development of fruits production in Thailand." (2018).
4. Sichaem, Jirapast, et al. "Chemical Constituents of the Leaves of *Artocarpus integer*." *Chemistry of Natural Compounds* 58.3 (2022): 538-540.