Canarium odontophyllum Miq.: An Underutilized Fruit for Human Nutrition and Sustainable Diets

L.Y. Chew, I. Amin, A. Azrina, C.Y. Lau

ABSTRACT

Canarium odontophyllum Miq. or locally known as ‘dabai’, is one of the popular underutilised fruits of Sarawak, Malaysia. Sarawak is one of states located in Borneo Island that rich with underutilized fruits and commonly grown wild around the area of Iban community. Local community consumes a significant amount of dabai during the fruit ripening season without knowing much about its health-promoting properties. Nutritional composition and antioxidant properties of dabai fruits from different growing areas in Sarawak were investigated. Lipid was the major macronutrient in dabai fruit, while the predominant minerals were magnesium and calcium. Dabai fruit was a good source of unsaturated fatty acids, with 38-44% oleic acid, 12-14% linoleic acid and trace of linolenic acid. The total anthocyanin content in dabai fruit (2.05-2.49 mg anthocyanin/g dried weight) was comparable to that of blackberry, blueberry and grape. Sixteen types of phenolic compounds from phenolic acids to the various subclasses of flavonoids had been identified in dabai fruit. Dabai fruit is a potential fruit with double set of benefits, which its lipids tend to produce a better blood lipid profile while the high content of phenolic compounds gives antioxidant effects. There are several products (mayonnaise, sauces, chips, pickles and soap) have been developed from this fruit for local markets. This fruit has also been used by local restaurants as ingredient in their dishes.

Keywords: Canarium odontophyllum; underutilised fruit; nutritional composition; antioxidant properties; dabai products

Footnote:

Authors: L.Y. Chew, BS a; I. Amin, PhD a,b; A. Azrina, PhD a; C.Y. Lau, BS c
Address: aDepartment of Nutrition and Dietetics, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.
bLaboratory of Analysis and Authentications, Halal Products Research Institute, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor, Malaysia.
cAgriculture Research Centre, Department of Agriculture, Sarawak, Malaysia.

Corresponding author: Associate Professor Dr. Amin Ismail, PhD
Telephone: +603-8947-2435
Fax: +603-8942-6769
Email: amin@medic.upm.edu.my