

Comparison of fatty acids, vitamin E and physicochemical properties of *Canarium odontophyllum* Miq. (dabai), olive and palm oils.

ABSTRACT

Canarium odontophyllum Miq. fruit (dabai) is an important food and oil resource for the native people in Sarawak, Malaysia. However, there is little information regarding their oil composition. In this paper, fatty acid compositions, vitamin E contents and physicochemical properties of dabai pulp and kernel oils were studied. These parameters were compared with commercial olive and palm oils. The content of total saturated fatty acid was found to be 44.4% in dabai pulp, kernel (60.8%), palm oil (47.9%) and olive (25.5%) oils. Palmitic, myristic, oleic and linoleic acids were detected in dabai pulp oil (36.1, 5.8, 41.5 and 11.8%), dabai kernel oil (46.4, 9.3, 35.1 and 2.8%), palm oil (33.8, 9.2, 39.7 and 10.9%) and olive oil (9.9, 12.9, 64.4 and 5.1%). Vitamin E was not detected in the dabai pulp oil, while palm oil had the highest vitamin E content, followed by dabai kernel oil and olive oil. In addition, the physicochemical characteristics of dabai oils show better quality than the studied commercial oils. The present study also showed that dabai pulp and kernel oils have good fatty acid composition and a high potential to be developed into healthy cooking oils.

Keyword: Agrobiodiversity and nutrition; *Canarium odontophyllum*; Dabai oil; Fatty acid; Food analysis; Food composition; Kernel; Physicochemical properties; Pulp; Vitamin E.