

Oxidative Stability of Canarium Nut (*Canarium indicum* and *Canarium vulgare*) Oil during Storage at 30 and 40 °C

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Abstract

*The aims of this research were to study the effect of temperature and storage on the oxidative stability of crude and refined canarium nut oil extracted from the seeds of *Canarium indicum* and *Canarium vulgare*. The experiment was designed to include storage of two type of canarium nut oil at two different temperatures for up to 35 days. The oils (crude and refined) used had the similar condition. Parameter used for oxidative deterioration indicators were two peroxide value, TBARS (thiobarbituric acid reactive substances), and free fatty acid value. The result showed that refining oil can decrease component natural antioxidant of canarium oil cause more sensitive to the oxidation. Increased storage temperature can raise oxidation of crude and refined oils from both species *Canarium*. The peroxide values of crude and refined oils both *Canarium indicum* and *Canarium vulgare* stored at 30 °C were 2.17, 4.35, 3.36 and 3.77 meq O₂/kg oil, respectively. When they were stored at 40°C the similar results were 6.21, 19.09, 8.12 and 17.23 meq O₂/kg oil. Furthermore, TBARS value of crude and refined oils both for *Canarium indicum* and *Canarium vulgare* stored 30°C were 4.55, 7.78, 5.70 and 6.58 μmol MDA/kg oil. When they were stored at 40 °C the similar results were 9.99, 55.46, 12.46 and 43.62 μmol MDA/kg oil.*

Key words: *Canarium nut oil, peroxide value, TBARS*