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Propolins content in the different parts of *Macaranga tanarius* trees—a source plant of the Pacific type propolis

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Taiwanese Green Propolis (TGP) is a Pacific type of propolis, which is derived from the fruit surface materials of *Macaranga tanarius* trees, a propolis source plant collected by honey bees. The ethanol extract of TGP contains the unique active chemical ingredients - propolins, with the highest content of propolin C, D, F, G, and H, which has been proven to have antibacterial, anticancer, antioxidant, anti-inflammatory and other biological activities. Due to the small production of TGP, it can only be produced and harvested during a specific fruiting period (approximately May-July). *Macaranga tanarius* is a masculine pioneer tree, which is widely distributed throughout the island of Taiwan, and the plant itself has the characteristics of easy collection, easy planting and year-round picking. Therefore, in this study, different parts (leaves, petioles, flowers, fruits) of the plants were collected in different seasons, dried and extracted with 80% ethanol, and the propolins content of the extract was analyzed. The results showed that, in addition to the petioles, the leaves, flowers and fruits of *Macaranga tanarius* tree contained propolins. Among them, the total content of propolins in fruit extract (5.03 mg/ml) was the highest, and the content of C, D, F, G, and H of propolins was similar to that of TGP, but the total content of propolins was still lower than that of TGP (89.9 mg/ml). Although the propolins content (1.79 mg/ml) in the leaf extract was not high, the content of propolin G could reach 1.57 mg/ml. In addition, the DPPH free radical scavenging ability was tested with the same concentration (10 mg/ml) of TGP extract and *Macaranga tanarius* leaf extract, and the scavenging ability of the latter was about 30% of that of the former. In summary, the fruits, flowers, and leaves parts of the *Macaranga tanarius* plant contain vary propolins, which has the potential to become a substitute raw material for TGP, especially the leaves of the plant can be extracted as an important source of propolis G.