ABSTRACT

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THE UTILIZATION OF MANGOSTEEN PERICARP(*Garcinia mangostana* L.) AS AN ANTIOXIDANT SOURCE FOR LOW FAT ICE CREAM

(xvii + 151 pages: 7 tables; 28 figures; 38 appendices)

Nowadays, people start to pay more attention with regards to their health. They begin to think to consume food which contains good sources of nutrients, such as antioxidants for their body. In fact, mangosteen pericarp contains many nutrients, including natural antioxidants. Thus, due to its high antioxidant activity, mangosteen pericarp has been used as a source of antioxidant for low fat ice cream. Initially, the pericarp and the flesh of the fruit were separated. Then, the pericarp was extracted with three different ratios of the amount of the sample and ethanol (1:2, 1:4, and 1:6). The extraction process used a maceration method with shaker for 6 hours. The result showed that the best pericarp’s extract (using ratio of the amount of the sample and solvent 1:6) had *IC*₅₀ of 44.15 ppm, phenolic content of 30.95 mg GAE/g sample, and flavonoid content of 9.5 mg QE/g sample. Thus, in the low fat ice cream application, it was shown that the higher the mangosteen pericarp concentrations, the higher the antioxidant activity, phenolic content, flavonoid content, anthocyanin content, and overrun. On the contrary, the higher the mangosteen pericarp concentrations, the lower the “Hue, viscosity, pH, and melting characteristics. In conclusion, the best mangosteen pericarp concentration for low fat ice cream was 20% concentration of mangosteen pericarp.

Keywords: mangosteen peel, *Garcinia mangostana* L., low fat ice cream, antioxidant, phenolic content

References: 52 (1990 – 2011)