ABSTRACT

Mangosteen pericarp evidently contains lots of secondary metabolites, such as xanthone, phenolic acids, anthocyanin, and tannins that contribute to high antioxidant content. The research is done to study and discover the antioxidant component from mangosteen pericarp through extraction, then apply it into mantou. The mangosteen pericarp extraction was derived from different solvent ratio and % tartaric acid. The best mangosteen pericarp extract obtained from chemical analysis included IC\textsubscript{50}, total phenolic, anthocyanin, and flavonoid content. The data resulted in best treatment for extracting mangosteen peel was using water:ethanol 45:55 (v/v) with 0.6% tartaric acid. Then, the extract was applied into mantou with five different concentrations (5%, 10%, 15%, 20%, and 25%) and measured for its chemical, sensory, and physical characteristic. Higher extract amount resulted in higher chemical components with moderate physical characteristic and acceptable sensory evaluation. The 25% mangosteen pericarp extract was successfully increased IC\textsubscript{50} up to forty levels higher from mantou control.

Keywords: Mangosteen pericarp, extraction, solvent ratio, tartaric acid, antioxidant, extract concentration, mantou.

References: 90 (1983-2012)