ABSTRACT

Sara Anugerah (03420080036)

CHARACTERISTICS AND ANTIOXIDANT ACTIVITY OF LOW CALORIE SOURSOP (Annona muricata L.) JAM
(xviii + 145, 9 tables, 62 figures, 38 appendixes)

Soursop (Annona muricata L.) is commonly found in Indonesia and has high antioxidant and nutrient content. Utilization of soursop is still limited, therefore low calorie jam can increase the diversification of processed products from soursop. Soursop has the appropriate characteristics to be made into jam, because it has pectin, organic acids, and sugar content. Fresh Soursop fruit has 5.38 mg/ml IC50 concentration, 90.76 mgGAE/100 g phenolic concentration, 1.12 mgQE/100 g flavonoid concentration, and 20.42 g/100 g vitamin C concentration. In this research, different types of sweeteners and different concentration of pectin are used. Sweetener used in this research are acesulfame-K, aspartame, and combination of both sweeteners. Low methoxyl pectin concentration used are 0.75%, 1%, and 1.25%. Different cooking temperatures and time are also applied in jam making, in order to find jam with the highest antioxidant content. Temperature used are 85°C, 90°C, and 95°C and will be maintained for 1, 2, and 3 minutes for each treatment. Parameters used to find soursop jam with the best formulation are organoleptic parameter (5-scale hedonic test), physical and chemical parameters (total dissolved solid, sucrose content, pH, degree of whiteness, viscosity, syneresis, and consistency), and antioxidant parameters (IC50, phenolic, flavonoid, and vitamin C concentrations). Based on this research, jam with the best formulation is jam with aspartame sweetener and 1% low methoxyl pectin. The best cooking temperature and time used to maintain the highest antioxidant concentration is 85°C for 1 minute.

Keywords : Soursop, Annona muricata L., low calorie jam, antioxidant