ABSTRACT

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UTILIZATION OF MELINJO (Gnetum gnemon L.) PEEL IN THE MAKING OF CIDER
(xiv + 143 pages: 20 figures, 6 tables, and 4 appendices)

Red melinjo (Gnetum gnemon L.) peel is a vegetable belongs to Gnetaceae family. Melinjo peel has a functional property which is antioxidant compound. Generally, antioxidant capacity will increase after fermentation process. Cider is one of fermented beverages which contains alcohol 2.5-8.0%. In this research, cider was made from red melinjo peel so that total phenolic, total carotenoid, and antioxidant capacity before and after fermentation process could be analyzed. The purpose of this research is to evaluate the effect of sugar concentration and fermentation time in melinjo peel cider. The fermentation time of melinjo peel cider is 3 days, 5 days, and 7 days with addition of sugar concentration 30%, 35%, and 40%. Analysis of pH, total titratable acid, total soluble solid, alcohol content, and organoleptic were conducted to evaluate the characteristics of melinjo peel cider. The functional of melinjo peel cider was assessed by the phenolic content, total carotenoid, and antioxidant capacity. The result showed that total phenolic and antioxidant capacity increased significantly during fermentation time. But total carotenoid decreased with the increase of fermentation time. The best formulation of fermentation time and sugar concentration of melinjo peel cider was 3 days with addition of sugar concentration 30%. The alcohol content was 7.218%. Antioxidant capacity was 17,906 mgVCE/100ml. Total phenolic was 0.8 mgGAE/ml. Total carotenoid was 0.896 ppm.

Keywords: Antioxidant, Cider, Fermentation, Melinjo peel, Phenolic

References: 22 (2001-2015)