ABSTRACT

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CHARACTERISTIC OF ROSELLE (HIBISCUS SABDARIFFA L.) FERMENTATION BEVERAGE USING LACTIC ACID BACTERIA

Roselle flower (Hibiscus sabdariffa L.) has been reported to contain bioactive compounds that promote beneficial effects such as antioxidant. This research was aimed to investigate the roselle fermented beverage as a potential probiotic fermented beverage. Fermented beverage was made from different ratio (roselle:water) (1:75, 1:100, or 1:125) and different concentration of skim milk (4%, 5%, or 6%). The fermented beverage was fermented for 14 h using lactic acid bacteria Lactobacillus acidophilus and lactobacillus plantarum (1:1, 4%). Physicochemical properties of fermented beverage including pH, total titratable acidity, total lactic acid bacteria were observed. The chosen fermented beverage is formulation with ratio(rosella:water) 1:100 and concentration of skim milk 6% which had pH values of 3.62±0.01, total titratable acidity of 0.69±0.02%, and total lactic acid bacteria of 9.43x10^8 CFU/mL. The product was then stored for 3 weeks in refrigerator. Every week (0, 1, 2, and 3) product was analyzed for several parameters including pH, total titratable acidity, total lactic acid bacteria, antioxidant activity, total phenolic compound, total flavonoid, total monomeric anthocyanin, sensory analysis. Based on sensory analysis, the result shows storage time for roselle fermented beverage is 2 weeks.

Keywords: fermented beverage, lactic acid bacteria, roselle flower, skim milk

References: 102 (1992-2016)