ABSTRACT

Widhiyawati Tantono (03420120041)

FUNCTION OF KLUWEK (Pangium edule Reinw.) AS SOURCE OF ANTIOXIDANT IN LACTIC ACID FERMENTATION DRINK PRODUCT (xv + 75 pages: 22 figures, 9 tables, 28 appendices)

Kluwek has some bioactive compounds, like beta carotene, ascorbic acid, tocopherol, and antioxidants. The purpose of this research is to make fermented drink using kluwek as the main ingredient that has the potential to increase the antioxidant activity. On this research, there are two treatments which is fruit and water content ratio concentration, and also skim milk concentration. The concentration of fruit and water content ratio used is 1:5, 1:6, 1:7 and then the concentration of skim milk used is 5, 6, and 7%. Kluwek fermented drink is fermented with lactobacillus casei and incubated for 24 hours. The fermented drink is analyzed for it's pH, total titratable acidity, lactic acid bacteria amount, phenolic compound, flavonoid compound, and antioxidants. The best formula obtained is with 1:5 ratio with skim milk at 7% concentration. The results are pH 3.57, total titratable acidity 0.63%, lactic acid bacteria at 9.31 log CFU/ml, phenolic compound 1.09 mgGAE/ml, flavonoid compound 0.62 mgQE/ml, and IC50 291.59 mg/l. The best storage time for kluwek fermented drink at the fridge (6-7°C) is at 2 week. The fermented drink is still acceptable at the 2 week mark according to the fermented drink standard.

Keywords: fermented beverage, kluwek, ratio, skim milk, storage