

## ABSTRACT

### ANALYSIS OF BACTERIA ON MANALAGI APPLE PEEL KOMBUCHA (*Malus sylvestris*) IN TOTAL PLATE COUNT METHOD (Studies conducted in Microbiology Lab of Akademi Farmasi Surabaya)

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Kombucha is a traditional beverage from China more than 2000 years ago. Kombucha produced by the fermentation of tea with sugar using a kombucha starter culture (*Acetobacter xylinum* and several types of yeast). The purpose of this research is to determine total plate count of bacteria in the sample of *manalagi* apple peel kombucha at 7 days (week 1) and 14 days (week 2) fermentation. The method of this research is a experimental method with 2 treatments and each treatment was replicated at 2 times. The treatment was the time of fermentation at 7 days (week1) and 14 days (week 2). The results obtained from the total plate count of bacteria test at 7 days (week 1) of fermentation in 3 last dilution, total colonies reached  $411 \times 10^{19}$  CFU/mL,  $115 \times 10^{20}$  CFU/mL and  $46 \times 10^{21}$  CFU/mL, while at 14 days (week 2) of fermentation in 3 last dilution total colonies decline to  $4 \times 10^{19}$  CFU/mL,  $3 \times 10^{20}$  CFU/mL and  $2,5 \times 10^{21}$  CFU/mL.

**Keyword:** *Manalagi* Apple Peel Kombucha, Fermentation, Total Plate Count