ABSTRACT

MANALAGI APPLE *(Malus sylvestris)* PEEL KOMBUCHA ANTIBACTERIAL TEST AGAINST *Escherichia coli* BACTERIA

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Kombucha was a result of fermentation by SCOBY. Kombucha has many benefits such as antibacteria, antioxidant, increasing immune and lower hypertension. Kombucha usually made with various ingredients, for example is manalagi apple *(Malus sylvestris)* peel. Manalagi apple *(Malus sylvestris)* peel has benefit such a polyfenol and flavonoid which can be use for antibacterial against such *Escherichia coli*. *Escherichia coli* can be pathogenic which can result in infection, for example diarrhea. The target for this research was to check if manalagi apple *(Malus sylvestris)* peel kombucha have antibacterial ability against *Escherichia coli*. The research use different rate of apple peel for each kombucha, such as 10 gram, 15 gram and 20 gram. The concentration used for the antibacterial test are 0%, 50%, 75% and 100%. The result of this research was inhibition zone. The inhibition zone test will use *Kirby hauer* method. The result for 100% concentration has the highest inhibition zone. Kombucha with 10 gram apple peel concentration, the result was 10,4 and classified in medium category. Kombucha with 15 gram apple peel concentration, the result was 14,3 and clasified in strong category. Kombucha with 20 gram apple peel concentration, the result was 16,9 and classified in strong category. The inhibition zone affected by the rate of the apple peel in kombucha, the concentration used and type of bacteria. Base on the result, can be concluded that manalagi apple peel kombucha has the antibacterial ability against *Escherichia coli*

Keywords: Kombucha, Manalagi apple *(Malus sylvestris)* peel, *Escherichia coli*, Antibacterial, Inhibition zone