

ABSTRACT

POTENTIAL INHIBITING POWER OF KOMBUCHA FROM MANALAGI APPLES (*Malus sylvestris*) SKIN ON BACTERIA GROWTH IN DORY FISH FILLET

Nadia Dewi Oktafiani

Manalagi apple (*Malus sylvestris*) was a type of Malang apple. Apples consist of flesh and skin. Apple skin has many benefits. Apple skin contains polyphenols, phytochemicals derived from polyphenols (catechins, quercetin and chlorogenic acid) and flavonoids which are antibacterial agents. Chemical preservatives in fish can cause health problems, so it is necessary to look for natural preservatives that can be used as an alternative to inhibit bacteria in dory fish. Kombucha fermentation which produced acetic acid can inhibit microbial growth so that it can be used as an alternative to natural food preservatives. This study used 10 grams, 15 grams and 20 grams of apple skin. The samples used in this study were kombucha from *Manalagi* apple skin with concentrations of 0%, 50%, 75% and 100% at 7 days, 10 days, 14 days and 21 days of fermentation. This study was tested using the *Kirby Baurer* disc diffusion method with distilled water as a negative control. The outlines of this study were SCOBY culture preparations, *manalagi* apple skin preparations, apple skin kombucha preparations, bacterial suspension preparation, media preparation, observation and measurement of the inhibition zones formed. Kombucha from *manalagi* apple skin on day 21 with 100% concentration of 20 grams had the highest antibacterial activity of 5.35 mm. Based on this study, kombucha from *Manalagi* apple skin has antibacterial potential against bacterial growth in dory fish fillet.

Keyword : *Manalagi* apple, apple skin kombucha, antibacterial activity