

ABSTRAK

AFIATUN NAFISAH. Pengaruh Variasi Dosis Ragi Dan Lama Fermentasi Terhadap Kadar Etanol, Kadar Glukosa, Dan Kualitas Organoleptik Tape Singkong Khas Bondowoso. Dibimbing oleh Sandry Kesuma, ST., M.Si.

Penelitian ini bertujuan untuk mengetahui kadar etanol dan kadar glukosa yang berpengaruh terhadap kualitas organoleptic tape singkong. Singkong merupakan bahan baku utama dalam pembuatan tape melalui proses fermentasi anaerob. Penetapan kadar etanol dalam sampel menggunakan metode destilasi kemudian etanol yang dihasilkan diukur dengan piknometer. Untuk kadar glukosa menggunakan metode anthrone dan diukur melalui instrument spektrofotometri uv-visible, dan uji hedonik untuk kualitas organoleptik yang disajikan dalam bentuk tabel uji F Simultan. Kadar etanol sampel A1 sebesar 25% dan kadar glukosanya sebesar 8,43%; kadar etanol sampel B1 sebesar 40% dan kadar glukosanya sebesar 8,25%; kadar etanol C1 45% dan kadar glukosanya 7,98%; kadar etanol sampel A2 sebesar 55% dan kadar glukosanya sebesar 7,78%; kadar etanol sampel B2 sebesar 65% dan kadar glukosanya sebesar 7,58%; kadar etanol sampel C2 sebesar 70% dan kadar glukosanya 7,40%. Kesimpulan berdasarkan hasil penelitian yaitu semakin banyak dosis ragi yang ditambahkan dan semakin lama waktu fermentasinya menyebabkan kadar etanolnya semakin tinggi namun menurunkan kadar glukosa karena ada pemecahan glukosa lebih lanjut oleh *Saccharomyces Cerevisiae*.

Kata Kunci : Anthrone, Kadar etanol, Kadar glukosa, Piknometer, *Saccharomyces Cerevisiae*, Spektrofotometri uv-visible

ABSTRACT

AFIATUN NAFISAH. The Effect of Variations in Yeast Doses and Fermentation Time on Ethanol Levels, Glucose Levels, and Organoleptic Quality of Bondowoso Cassava Tape. Supervised by Sandry Kesuma, ST., M.Si.

This study aims to determine the levels of ethanol and glucose levels that affect the organoleptic quality of cassava tape. Cassava is the main raw material in the manufacture of tape through the anaerobic fermentation process. Determination of the ethanol content in the sample using the distillation method and then the ethanol produced is measured with a pycnometer. For glucose levels using the anthrone method and measured through uv-visible spectrophotometric instruments, and hedonic tests for organoleptic quality are presented in the form of Simultaneous F test tables. The ethanol content of sample A1 is 25% and the glucose content is 8.43%; the ethanol content of sample B1 is 40% and the glucose content is 8.25%; the ethanol content of C1 is 45% and the glucose content is 7.98%; the ethanol content of sample A2 was 55% and the glucose content was 7.78%; the ethanol content of sample B2 is 65% and the glucose content is 7.58%; The ethanol content of sample C2 is 70% and the glucose content is 7.40%. The conclusion based on the results of the study is that the more doses of yeast added and the longer the fermentation time, the higher the ethanol content but lower the glucose levels due to further breakdown of glucose by *Saccharomyces Cerevisiae*.

Keywords: Anthrone, Ethanol level, Glucose level, Pycnometer, *Saccharomyces Cerevisiae*, UV-visible spectrophotometry