

ABSTRACT**SCREENING AND IDENTIFICATION OF PRODUCING
FIBRINOLYTIC ENZYME BACTERIA FROM TEMPEH**

Muhammad Hakim Rafiga Putra

Tempeh is well known traditional food from Indonesia. The purpose of this study was to obtain bacteria with strong fibrinolytic activity from tempeh. Samples from this study were obtained from four different markets in Surabaya. Proteolytic activity of bacteria was tested using Skim Milk Agar media then followed by fibrinolytic test on fibrin plate media. Identification of the bacteria performed using gram staining test and 16sRNA identification method. For the proteolytic test sample mixed with normal saline solution up to 10^{-7} . Then, bacteria suspension in normal saline spread on SMA media, incubated in 37°C for 24 hours. The bacteria that produce proteolytic activity are characterized by a clear zone around them. Bacteria with proteolytic activity then cultured on Nutrient Agar media. Proteolytic bacteria were tested in fibrin plate then incubated at 37°C for 24 hours. Not all bacteria produce positive results, some of which do not produce clear zones around them. Bacteria with positive result then calculated fibrinolytic index as shown. Bacteria with sample code T2.2 have the largest fibrinolytic index. T2.2 bacteria were then characterized microscopically, macroscopically, and the 16S rRNA method. The results of this study are bacteria with T2.2 sample code producing the greatest fibrinolytic activity. T2.2 bacteria are similar and are thought to be *Stenotrophomonas maltophilia* with a similarity of 96%.

Keywords: Fibrinolytic enzyme, Fibrinolytic activity, Tempeh, 16S rRNA