

## ABSTRACT

### Isolation Of Bacteria Producing Fibrinolytic Enzyme From *Terasi* Sidoarjo

Apriliana Rachmawati

Shrimp paste is one of traditional fermented food from Asia which is known to have a strong fibrinolytic activity (Mine, et al., 2004). The shrimp paste is known as *terasi* in Indonesia. The aim of this study is to obtain and characterize the bacteria with strong fibrinolytic activity from *terasi*. The *terasi* were collected from seven different home industries and available in the market in Sidoarjo Regency. The fibrinolytic activity of the bacteria from the *terasi* sample was tested with *Skim Milk Agar* (SMA) proteolytic test and fibrin plate test. Characterization of the bacteria was performed with Gram staining and biochemistry test. In the proteolytic test, sample was diluted with Nutrient Broth up to  $10^{-4}$  and then inoculated on the SMA media, incubated in  $37^{\circ}\text{C}$  for 24 hours. All the samples showed positive result to proteolytic test which is shown by the clear zone around the colony. The isolate bacteria that showed the proteolytic activities were underwent the test for its fibrinolytic activity with fibrin plate and incubated in  $37^{\circ}\text{C}$  for 48 hours. Six samples showed positive result to fibrinolytic test, which is shown by the clear zone around the colony. Calculation of fibrinolytic index showed that Bacteria T4 has the highest fibrinolytic activity compared to the other isolates. The Bacteria T4 underwent the characterization of its morphology and physiology and then determined with Bergey's Manual of Determinative Bacteriology. The result of this study showed that the bacteria from the *terasi* Sidoarjo which has strong fibrinolytic activity is *Bacillus pumilus*.

**Keywords:** Fibrinolytic enzyme, Fibrinolytic activity, *Terasi*, Characterization, *Bacillus pumilus*.