

ABSTRACT

SCREENING AND IDENTIFICATION OF FIBRINOLYTIC ENZYME-PRODUCING FUNGI IN KECAP

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Fibrinolytic enzyme can be found in many fermented foods which can be fermented by both fungi or bacteria. Kecap is a traditional fermented food-flavoring product from Indonesia. The purpose of this study is to discover fibrinolytic enzyme activity in Kecap and to find out what fungi produce the enzyme. This study is an experimental study that uses samples from 20 different brands of Kecap distributed in Surabaya. Samples were diluted with the ratio of 1:1 to be screened of its proteolytic enzyme activity in Skim Milk Agar media. 20 out of 20 samples had proteolytic enzyme activity. Fungi from Kecap samples were cultured and used to make fungi suspension with 25% transmitant. There were 12 fungi that can be cultured. The suspensions were screened of its fibrinolytic activity in fibrin plate media. 12 out of 12 fungi had fibrinolytic enzyme activity. One fungus that had the biggest fibrinolytic enzyme activity index was chosen to be identified. The colony of the fungus with code R was blueish green with white border, the growth of the fungus was rapid and under microscope with magnification of 100x, the structure of the fungus looks like “brush” which indicated that the genus of the fungus is *Penicillium sp.*

Keywords: fibrinolytic enzyme, proteolytic enzyme, Kecap, fermented food, *Penicillium sp.*, screening, identification