

ABSTRACT
SCREENING OF BACTERIA PRODUCING
FIBRINOLYTIC ENZYME FROM MILK-BASED PROBIOTIC
PRODUCTS

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The search of better fibrinolytic enzymes is still needed to treat cardiovascular diseases (CVDs). One of many sources to find is from microorganism which in this study is aimed to search bacteria in probiotic products.

Purposive sampling method is used in this study, samples taken based on criteria of milk-based probiotic products sold in supermarket in Surabaya. Samples prepared by 1:1 dilution using sterile distilled water, vortexed, sonicated for 5 minutes, and centrifuged using 4500rpm for 10 minutes. Samples then tested for proteolytic enzyme activity using skim milk agar (skim milk 5%, agar 1.5%, diluted in distilled water; then pasteurised for 30 minutes on 80°C). Samples that are positive then tested for fibrinolytic enzyme activity using fibrin plate (0.3% fibrin, 1.7% agar, 1% methylene blue, diluted in phosphate buffer pH7.8; then pasteurised for 30 minutes on 80°C). Sample K has the highest fibrinolytic activity index of 2.45 ± 0.02 .

The bacteria from sample K are *Pseudomonas aeruginosa* with probability percentage of 92.5%.

Keywords: fibrinolytic, milk-based probiotic, microorganism, bacteria, skim milk agar, fibrin plate, *Pseudomonas aeruginosa*.