

## ABSTRACT

Back slopping is referred to as the small inoculation of a previous successful fermentation product to the raw material, as the starter culture. One example of the traditional fermented product that utilizes the back-slopping methods is *dadih*. As it is an artisanal product that is made using traditional methods that involve humans and is prone to contamination, such as *Staphylococcus aureus*. These pathogens are able to produce toxins and cause intoxication in humans. In this study, the evaluation of protective culture was conducted to inhibit the growth of the *Staphylococcus aureus*. The specific strain used as the protective culture is *Bacillus subtilis* P5-6. The results of this study showed that the *Bacillus subtilis* P5-6 was able to inhibit the growth of *Staphylococcus aureus* by 1 log CFU/mL in the back-slopped fermented milk, without interfering with the growth of LAB as the main fermenter. However, this study only showed the bacteriostatic activity of the *Bacillus subtilis* P5-6. To obtain a bactericidal activity of *Bacillus subtilis* P5-6 it is recommended to test and use the MBC value to be utilized in the fermented milk. Moreover, it was advised to re-added the *Bacillus subtilis* P5-6 after two times of back-slopping to obtain maximum protective action in the fermented milk.

*Keywords: Protective culture, Bacillus subtilis, Staphylococcus aureus, Back-slopping*