

## ABSTRACT

### **Sensitivity of Lactic Acid Bacteria Isolates as a Probiotic Candidates from Pineapple (*Ananas Comosus*) to Antibiotics of Ampicillin, Erythromycin, Chloramphenicol, and Vancomycin**

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Lactic acid bacteria are one source of probiotics that have many benefits for human health. Lactic acid bacteria can be consumed from fruits, such as pineapple. Due to the abundant types of lactic acid bacteria that exists, the WHO had made reservations for probiotics resources that are safe for human use, one of which is testing for the sensitivity of LAB to antibiotics. This research is made by literature review, where data are extracted and compared with from related articles that are being used for this research. The aim of this research is to find out the sensitivity of lactic acid bacteria present in pineapples (*Lactobacillus plantarum*, *Lactobacillus fermentum*, and *Lactobacillus lactis*) to antibiotics such as ampicillin, erythromycin, chloramphenicol, and vancomycin. It is known that LAB that are resistant to antibiotics have the potential to transfer these resistant genes to pathogenic bacteria which can be problematic to the human body. Based from the results, lactic acid bacteria strains *Lactobacillus plantarum*, *Lactobacillus fermentum*, and *Lactobacillus lactis* are sensitive to ampicillin, erythromycin, chloramphenicol, but are intrinsic resistant to vancomycin. Therefore it is concluded that lactic acid bacteria strains present in pineapple are safe for human use. However, direct experimental research have to be conducted to confirm the accuracy of the results and other lactic acid bacteria strains present in pineapple could also be tested for other probiotic candidates according to FAO/WHO guidelines.

**Keywords:** Lactic acid bacteria, *Lactobacillus*, antibiotics, resistant sensitive