

## **Capability of Isolates Probiotic Bacteria, Isolated From Spontaneous Fermented goat Milk as Starter In milk Fermentation**

**Afriza Yelnetty<sup>1</sup>, Purwadi<sup>2</sup>, Arie Mirah<sup>1</sup>**

<sup>1</sup>Faculty of Animal Husbandry Samratulangi University Manado - Indonesia

<sup>2</sup>Faculty of Animal Husbandry Brawijaya University- Jawa Timur, Malang Indonesia  
email: yelnetty\_makmur@yahoo.com

**ABSTRACT :** The purpose of this research was investigate the capability of Three isolates probiotic bacteria isolated from spontaneous fermented goat milk, as starter in milk fermentation in order to produce a functional food. The isolates namely *Lactobacillus plantarum* YN 1.1, *Lactobacillus plantarum* YN 1.3 and *Lactobacillus plantarum* YN 1.6. This experiment stage consist of tree experiments that where selected were the growth of isolates in MRS media and chages of pH during microbial growth. The second experiment was carried out for measuring organic acid produced during isolate growth in MRS media. The third experiment was study the growth capability of isolates in milk fermentaion by measuring the isolates viability during growing in 8% skim milk and also measuring the pH changes during fermentation. The results of this experiment showed that *L.plantarum* isolate of YN 1.1, YN 1.3 and YN 1.6 were able to growth in MRS media and have ability to decreaced pH of MRS media. Lactic acid is the highest level of organic produced during fermentation if it was compare to other organic acids produced such as acetic acid, propionic acid and butiric acid. *L.plantarum* YN 1.3 were produce higher amount of Lactic acid compare to *L.plantarum* YN 1.6 and *L.plantarum* YN 1.1. All of Isolates also growth have capability in fermentation of goat milk. The conclusion of this study that Lactic Acid Bacteria *L.plantarum* YN 1.1, YN 1.3 and YN 1.6 it was able to ferment milk and be used as culture starter to produce fuctional goat milk yoghurt.

**Keywords :** *L. plantarum*, starter, growth of isolates, pH, Lactic Acid.