

ABSTRACT

The purpose of this research was to obtain the enhancement of lactic acid levels on salt concentration and the duration in pickled radish fermentation manufacturing. The material which was used in this research was white radish.

The basic material which was used in this research was white radish. The research method consisted of two phases, those were the preliminary study and the main study. The preliminary study was carried out the analysis of basic material toward the lactic acid levels, water content and total sugar content in radish. The main study was done after the preliminary study. It was manufactured of pickled radish by using fermentation. After fermentation, it was carried out the analysis of lactic acid levels by titration method and analyzes the total of bacteria in pickled radish by TPC method.

The result of first phase research, which was the preliminary study, was obtained that the basic radish materials contained water content component amounted to 94,74%, 0,072% lactic acid levels, and 1,6% the total of sugar content. For the result of the second phase research, was obtained that the salt concentration could affect lactic acid rate. It was where the radish is fermented with 2,5% salt concentration obtaining the highest lactic acid level, that was research 0,546% with 3,19 pH. Salt concentrations affect the rate of lactic acid, color and texture pickled during fermentation, the higher the salt concentration of the levels of lactic acid produced the lower, the more soft pickled texture and color to yellow. In this study showed that the rate of lactic acid only increased lactic acid levels up to the 12th day and began to decrease lactic acid from the 13th day until 18th day. The total of bacteria during fermentation increased until the 18th day and the total bacteria obtained at the highest salt concentration of 2.5% that is $2,35 \times 10^4$.

Keywords: Radish, fermentation, pickle and the lactic acid.