

ABSTRACT

Overripe tempeh is tempeh that had been fermented for 2 – 5 longer than fresh tempe wherein mold fermentation ceases and taken over by bacterial fermentation. It is commonly used in traditional Javanese cuisine as a basic flavoring agent. Most of the studies of tempeh range from microbiology, chemical and nutritional changes, functionality and its sensorial aspect but information on overripened tempe is still limited to 72 hours of overripening. Studies on physicochemical characteristics, textural and water soluble protein content has not been done recently and/or absent for the past few years. Therefore, this study aims to evaluate individual changes in modern and traditionally produced tempe in all parameters including physicochemical changes, textural and water soluble protein throughout the overripening process (0, 24, 48, 72, 96, and 120 hours), together with evaluating their daily comparison of each parameter and also with correlation analysis between selected parameters. Tempeh from two methods of production were used, modern (MPT) and traditional (TPT), both tempeh is subjected to 5 days of overripening and each sample was analyzed every 24 hours for its physicochemical parameters including pH and moisture as well as textural changes (Force peak analysis) along with water soluble protein analysis. Significant differences were found in pH value change both in MPT and TPT. Whereas other parameters such as moisture, texture and water soluble protein change were found to have either no differences or one significant difference found in one tempe type but not the other. Both daily comparison of all parameters in both tempe type yielded significant changes in only moisture content. Weak correlation was observed between pH with moisture content and moisture content with texture. Moderate correlation was observed between pH with texture. However no correlation was found between pH with water soluble protein content.

Keywords: *tempeh, overripened, pH, moisture, texture, water soluble protein*