Mianingrum Study Program of Food Engineering Technology Majoring of Agriculture Ttechnology

ABSTRACT

Emping melinio is one of Indonesia's traditional foods that is widely favored for its crispy texture and distinctive taste. One of the crucial steps in its production process is drying, which directly affects the final product's quality. This study aims to optimize the drying temperature and duration of emping melinjo using the Taguchi method to determine the best combination of drying parameters. The variables tested included three temperature levels (50°C, 60°C, and 70°C) and three drying durations (3, 4, and 5 hours), resulting in a total of nine experimental combinations using the L9 Orthogonal Array. The parameters analyzed were moisture content, texture, browning index, and organoleptic attributes (color, aroma, and taste). The results showed that the combination of 70°C for 4 hours was the optimal treatment, producing the lowest moisture content (2.80%) and the best texture (force value of 6.64 N). The Taguchi method proved effective in identifying the most dominant parameters and provided an efficient approach to improving product quality. Drying temperature had a greater influence on texture, while drying time was more dominant in affecting moisture content. This research makes a significant contribution to enhancing production efficiency and improving the quality of emping melinjo in a systematic and measurable way.

Keywords: Drying, Emping melinjo, Taguchi method.