ABSTRACT

This research aims to analyze the process capability of ash and protein content in Dahlia wheat flour using the Statistical Process Control (SPC) method. The study is motivated by the importance of quality control in the wheat flour industry, considering the increasing demand for consistent and high-quality products. The research was conducted at PT. XYZ, a producer of various wheat flour brands, with Dahlia flour being the highest in demand. Data were obtained through direct observation in the Production Department and analysis of daily reports on ash and protein content. The research methodology included constructing control charts, process capability analysis, and evaluating results against company standards. The study found that several quality parameters did not meet the specified standards, with Cp and Cpk values < 1, indicating that the production process was not stable. Improvements were recommended by optimizing work methods and enhancing quality monitoring. Subsequently, recalculations were performed using the same stages, resulting in stabilized outcomes with Cp and Cpk > 1. In conclusion, the SPC method effectively identifies quality issues and provides solutions to improve product consistency.

Keywords: *Ash, process capability, protein, statistical process control, wheat flour*