

***Analysis of White Tofu Product Quality Control Using
Statistical Process Control (SPC) at UD Novi Jaya
in Sidoarjo Regency.***

Rahmat Dhandy S.TP., M.Tr.P as *Chief Counselor*

Nur Fadila Sofiana

Off-Campus Study Program in Agroindustry Management

Department of Agribusiness Management

ABSTRACT

UD Novi Jaya was a tofu production business unit that had been operating for approximately 20 years, with a soybean processing capacity of 532 kg per day, producing around 11,400 pieces of white tofu. However, the still-conventional production process caused variations in product defects. This study aimed to identify the criteria and attributes of defects, and to analyze quality control by applying Statistical Process Control (SPC) in the quality management of white tofu at UD Novi Jaya. This was an applied research using a quantitative descriptive method with a survey approach. The analytical tools used included check sheets, control charts, Pareto diagrams, cause-and-effect diagrams, and process capability analysis. The results of the p-control chart analysis showed two points outside the control limits for the soft tofu attribute, while overall statistical quality control was found to be stable. The Pareto diagram indicated that the main defect was in the soft tofu attribute, with a total of 858 defective units. The cause-and-effect diagram for the soft tofu attribute showed contributing factors including materials, manpower, methods, equipment and machinery, and the environment. The process capability analysis indicated high success rates for the attributes of broken tofu (97.8%), soft tofu (96.2%), and dirty tofu (99%). Suggested improvements included raw material sorting, worker training and supervision, process standardization through SOPs, equipment and machinery upgrades, as well as improved cleanliness and waste management to support effective and environmentally friendly production.

Keywords: *Quality, Tofu, Statistical Process Control*