COMPARISON OF TOTAL PLATE COUNT (TPC) VALUES IN KEPOK BANANA STARCH (Musa paradisiaca L.) AFTER UV IRRADIATION AND WITHOUT UV IRRADIATION

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ABSTRACT

Background: *Kepok banana starch (Musa paradisiaca L.) produced by the Sidodadi MSME, Gedangan District, Malang Regency, is manufactured using a simple method and has the potential for wider development. However, this simple production method poses a risk of microbial contamination, which can affect product quality. Sterilization is an effective alternative method to reduce microbiological contamination, but its effectiveness on kepok banana starch from the Sidodadi MSME still requires further investigation. Therefore, to assess the microbiological contamination of this product, a Total Plate Count (TPC) microbiological test was conducted.* ***Objective:*** *This study aims to compare the TPC values of UV-sterilized and non-sterilized kepok banana starch and evaluate microbial contamination limits based on BPOM regulations.* ***Methods:*** *The study employed the TPC testing method using the pour plate technique with Plate Count Agar (PCA) as the growth medium, followed by incubation for 72 ± 3 hours at 30°C ± 1°C.* ***Results:*** *The results showed that UV-sterilized kepok banana starch had an average TPC value of 8.5×10^6 CFU/g, while the non-sterilized starch had an average TPC value of 1.1×10^8 CFU/g.* ***Conclusion:*** *The findings indicate that UV-sterilized kepok banana starch exhibited a lower TPC value compared to non-sterilized starch. However, the TPC values for both samples still exceeded the microbial contamination limits set by BPOM Regulation No. 13 of 2019 for the flour and starch category..*

Keywords: *Kepok banana starch, UV light sterilization, Total Plate Count*