

Title Microbiological changes of minimally processed jackfruit after UV -C treatment
Author M.R. Bizura Hasida, M.P. Nur Aida, M.N, Latifah, M. Hairiyah, Fauziah, O.
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Abstract

This study aimed at evaluating the microbial changes of minimally processed (MP) jackfruit after been exposed to 240 TIm UV radiation at different time and ways of exposure. Treatment of the research works were as follows: Treatment A- samples without UV exposure (control). Treatment B -5 min direct UV exposure. Treatment C- 5 mins UV exposure on sealed polypropylene container + lid. Treatment D- 10 mins direct UV exposure and Treatment E- 10 mins UV exposure on sealed polypropylene container + lid. Microbiological attributes ((total plate count (TPC), total coliforms (TC) and total yeast and moulds (TYM)) were assessed throughout 2 weeks of storage at 5 °C. Microbial results shown that different times (5 and 10 mins) and ways of exposure (with and without the lid) did affect on the microbial population growth throughout the storage period (2 weeks). Treatment B was effectively reduced TPC and TC counts but not TYM as compared to control samples. UV treatment was found less effective in reducing TYM as shown by high number of populations (3.1-3.2 logs) compared to the control sample with only 2.7 logs. High microbial population was observed from MP jackfruit treated with Treatment E. Regardless of how the UV radiation was exposed, overall results indicated that 5 mins of UV radiation is already sufficient to reduce TPC and TC in MP jackfruit during 2 weeks storage at 5°C.