

A Process for Prevention of Browning in Fresh Cut Tender Jackfruit

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Abstract : Jackfruit (*Artocarpus heterophyllus* L.) in its tender form is consumed as a vegetable and popular for its flavour, colour and meat like texture. In South Asian countries like Bangladesh, India, Pakistan and Indonesia the market value for tender jackfruit is very high. However, due to lack of technology the marketing and transportation of the fruit is a challenge. The processing activities like washing, sorting, peeling and cutting enhances oxidative stress in fresh cut jackfruit. It is also having the ill effects on quality of fresh cut tender jackfruit by an increase in microbial contaminations, excessive tissue softening, and depletion of phytochemicals and browning. Hence, this study was conducted as a solution to the above problem. Fresh cut tender Jackfruit slices were processed by using the independent parameters such as concentration of CaCl₂ (2-5%), concentration of citric acid (1-2.5%) and treatment time (4-10 min.) and the depended variables were Browning index (BI), colour change (ΔE), Firmness (F) and Overall all acceptability (OAA) after the treatment. From the response variables the best combination of independent variables was resulted as 3% concentration of CaCl₂ and 2% concentration of citric acid for 6 minutes. At these optimised processing treatments, the browning can be prevented for fresh cut tender jackfruit. This technology can be used by the researcher, scientists, industries, etc. for further processing of tender jackfruit.

Keywords : tender jackfruit, browning index, firmness, texture

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