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RESEARCH PAPER

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Effects of different pre-treatments on browning of frozen banana slices

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SUMMARY:

A study was undertaken to examine the effects of different pre-treatments on browning of frozen banana slices. The bananas were ripe at 21°C temperature with 91 per cent humidity upto the desired stage #4 (18-20°B) and different pre-treatments such as chemical dip in different concentrated solutions $\{0.1\% \text{ (w/v)} \text{ ascorbic acid} + 0.05\% \text{ (w/v)} \text{ citric acid}, 1\% \text{ (w/v)} \text{ ascorbic acid} + 0.5\% \text{ (w/v)} \text{ citric acid} \}$, blanching (65°C/5min) and sugar solution dip (60°B/30 min), were used to prevent from browning before freezing at -33°C for one hour. The browning rate was high initially when the respiration rate was highest and then decreased or increased according to the pre-treatments effectiveness. Different pre-treatments showed various patterns of browning. Therefore, qualitative results found that the oxidation process was the most inhibited by ascorbic acid + citric acid and the least inhibited by the blanching for storage of frozen banana slices at -20°C.

KEY WORDS : Bananas, Freezing, Pre-treatment, Frozen banana slices, Sensory evaluation

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