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Assessment on quality attributes of mosambi extract in ohmic heat process

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Development of new technologies in thermal food treatments are showing promise for industrial and scientific processing of foods with minimum nutrient loss. Ohmic heating is an advanced thermal processing is based on the principle of Ohms' law where in the food material itself serves as an electrical resistor which is heated by passing current through it and heats the entire mass of the food product. Food quality preservation through this technology is useful for the treatment of protein rich perishable foods like fruits which tends to denature and coagulate when thermally processed. Ohmic heating has immense potential for achieving rapid and uniform heating in foods retaining the nutritional quality, providing microbiologically safe and high quality foods with less nutrient loss. Properly processed and packed fruit preparations are potential readymade energy sources for immediate consumption. In the present study Mosambi, rich in ascorbic acid essential for many bodily functions and plays an integral role in our overall health was subjected to thermal and Ohmic heat treatment and assessed for the quality attributes ascorbic acid and non-enzymatic browning index after packaged in three different packaging materials. Between treatments fruit juice exhibited a non-significant ascorbic acid degradation and for all packaging materials for the storage period of 60 days. The colour was expressed as L*(brightness), a*(redness) and b*(yellowness) and the hue a relative position of the colour between redness and yellowness and chroma the colour intensity were analysed. The non-enzymatic browning index calculations based on L,a,b colour values showed that the quality loss is less for the OH treatment of 50V/cm than other treatment.

Key Words : Mosambi extract, Ohmic heat, Ascorbic acid, Browning, Package, Quality

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