

Quality assessment of microwave blanched sweet corn kernels

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■ **ABSTRACT** : Sweet corn (*Zea mays* L.) is an annual grass of the Poaceae (Grass) family. Sweet corn also called sugar corn and pole corn which is a variety of maize with high sugar content. It is a good source of carbohydrate, fibre, carotenoids, minerals and vitamins (A and E) and widely used as fresh, processed food and to make masala corn, curry and corn bread. Shelf-life of ready to use fresh sweet corn kernels is important due to its high moisture content. Blanching is one of the steps for shelf-life extension during storage. Therefore, an investigation was carried out to study the effects of microwave blanching treatments on the quality of sweet corn kernels in order to determine suitable blanching time. Sweet corn kernels were blanched in microwave for various times (1, 3, 5 and 7 min) at 540 watt. Blanched samples were also analyzed for sensory analysis and physico-chemical qualities *i.e.* moisture content, TSS, pH, total sugar, total carotenoids, colour (L*value, hue angle, chroma) and firmness using standard methods. These blanching treatments were evaluated with respect to the highest sensory score and the process was optimized on the basis of the maximum retention of colour, texture and total carotenoids and minimum loss of total soluble solids and total sugar. The degree of colour, texture, flavour, taste and overall acceptability was found higher for sample MB₃ (Sample blanched for 3 min). From result it was observed that there was decrease in moisture, TSS, total sugar while increase in pH for 1 to 7 min blanching time. There was a strong significant influence of the blanching time, on colour, firmness and total carotenoids. It can be concluded that sweet corn kernels blanched for 3 min resulted in better quality parameters.

■ **KEY WORDS** : Sweet corn kernels, Blanching time, Quality, Total carotenoids

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