

Application of Dual-Stage Sugar Substitution Technique in Tommy Atkins Mangoes

Authors : Rafael A. B. De Medeiros, Zilmar M. P. Barros, Carlos B. O. De Carvalho, Eunice G. Fraga Neta, Maria I. S. Maciel, Patricia M. Azoubel

Abstract : The use of the sugar substitution technique (D3S) in mango was studied. It consisted of two stages and the use of ultrasound in one or both stages was evaluated in terms of water loss and solid gain. Higher water loss results were found subjecting the fruit samples to ultrasound in the first stage followed by immersion of the samples in Stevia-based solution with application of ultrasound in the second stage, while higher solids gain were obtained without application of ultrasound in second stage. Samples were evaluated in terms of total carotenoids content and total color difference. Samples submitted to ultrasound in both D3S stages presented higher carotenoid retention compared to samples sonicated only in the first stage. Color of mangoes after the D3S process showed notable changes.

Keywords : *Mangifera indica* L., quality, *Stevia rebaudiana*, ultrasound

Conference Title : ICAFE 2016 : International Conference on Agricultural and Food Engineering

Conference Location : New York, United States

Conference Dates : June 06-07, 2016