Sensory and textural characterization of citrus and pineapple fruits candied with healthy components

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Production of low-calorie candied fruits was investigated by substituting sucrose with fructose, maltitol, sorbitol and actilight. Quality of candied fruits was evaluated with respect to yields obtained for the fruit candied process, chemical composition, microbial growth, rheological characteristics, color, and sensory attributes.

The sensory attributes investigated were influenced by the osmotic agent used. Each of the different OD agents significantly influenced the taste and/or texture profile of the candied fruit, and affected their sensory profile; but, the changes depended on the fruit species (pineapples or citrus fruits). However, compared to the control (sucrose) the osmodehydrated fruits had difference in flavor and some flavors are more evident in the control (sucrose) than in the actilight, maltitol, sorbitol or fructose candied fruits. Principal component analysis revealed that the sugar used had some similar characteristics, but, also imprinted distinct organoleptic features to the fruits, for instance, actilight pineapple candied samples presented an fresh flavor; and persistent aftertaste; while actilight orange peel candied samples presented a; bitter flavor; and spicy aftertaste; Citron candied with actilight were better characterized by their flavor of caramel and fresh flavor.

Due to high water activity and microbial growth on actilight and maltitol candied fruits, the shelf life of this processed fruits is minor than the ones candied with fructose. Still, only a consumer’s trail would assess the palatability of the different fruits/OD agents tested as due to their lower energetic content they are a great alternative for people liking sweets and caring for their health.