Abstract

Background: Functional Foods are considered nowadays by consumers as the range of foods of major interest. Objectives: The aim of the present work was the evaluation of color, texture and sensorial properties of fresh Cape Gooseberry (FG) and vacuum impregnated Cape Gooseberry (IG) with calcium and vitamins B₉, C, D and E during storage at 4°C. Methods: Entire cape gooseberries were vacuum impregnated (VI) with tocopherol and cholecalciferol emulsified in aqueous phase with sucrose, ascorbic acid, folic acid, calcium chloride, calcium fumarate, low methoxyl pectin, isolated soy protein, tensoactives and preservatives. The texture was determined from puncture assays, and the color from the CIE Lab coordinates. The sensorial profile was determined with the aid of trained panelists, through a multidimensional approach of characteristic descriptors of general appearance, odor, taste and texture. Results: The instrumental values of color and texture for IG were significantly different from the FG, because are being softer, more elastic, darker, brighter and of less color saturation. The samples of FG and IG presented intense sensorial characteristics in the descriptors orange color, brightness, spherical uniformity, smooth surface, fresh appearance, odor, cape gooseberry characteristic taste and fractal, fleshy texture, juicy, firmness and turgidity. By the effect of VI process the most relevant significant differences were the descriptors orange color, superficial stains, fresh appearance, sweet taste and cape gooseberry characteristic taste, soft texture, firmness and juicy; whereas for the effect of storage time were fresh appearance, dehydrated appearance, peduncle cicatrization, aromatic odor, overripe, cape gooseberry characteristic taste, fractal taste, soft texture, juicy, firmness and turgidity. Conclusions: The VI significantly affects the objective assessment of color and texture, finding correspondence with the sensorial evaluation; nonetheless, the general quality of the FG presented a greater score than those presented by IG.

Keywords
Physalis peruviana L., vacuum impregnation, color, texture, sensory evaluation.