
13. Shelf-life of Fresh-Cut Orange

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The current consumer trend is towards fresh, natural, minimally processed, and yet, convenience foods (1,3). Minimally processed fruits can full fill this demand as they preserve their natural characteristics, including nutritional content and they are "ready to eat" (2).

Minimally processed fruits are usually more perishable than fresh produce from which they are made, due to wounding and damage to the skin (1, 4). When peeled and cut the outside protective layer is removed, exposing the fresh cells, rich in water, sugars and organic acids. This leakage of plant nutrients will allow microbial growth, and the damaged tissue also provides a portal entry for establishing a microbial colony (2).

The objective of this study was to evaluate the shelf-life of fresh cut orange (seedless regional variety, from the north of Portugal - Felgueiras) stored at 4°C, in terms of physicochemical properties (colour, flavor: pH, soluble solids content, titrable acidity), nutritional content (L-Ascorbic acid content), texture, microbial contamination and sensorial acceptability.

No significant changes were found in colour, soluble solids content and pH value during 13 days of storage. Titrable acidity and L-Ascorbic acid content decreased. No microbiological development was observed during 15 days of

storage. Sensorial analyses determined the shelf-life of fresh-cut orange. Panelists were able to identify the refrigerated orange samples only after 8 days' storage. Flavor and aroma changes detected by panelists may result from the loss of compounds responsible for good flavour or from the accumulation of compounds that produce off-flavours (1).

Storage temperature of 4°C appears to be an effective control procedure to extend the shelf-life of cut orange to 8 days (2 days at 25°C), in terms of microbiological contamination.

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