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Effects of juice processing on flavonoids and carotenoids of apricot

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Apricot fruits can be considered as a good source of phytochemicals. Being climacteric fruits, apricots present a challenge in postharvest storage, limiting the amount of time within which they may be stored and consumed fresh. Processing serves as a means to add value extend fruit shelf life and facilitate year-round availability. However these compounds are very unstable species undergoing many reactions during food processing. The aim of our work is to follow these compounds step by step during juice process. Samplings were performed at five different processing steps (reception, blanching, refining, 1st and 2nd pasteurization). Total carotenoids were extracted according to the method of Rodriguez. The total carotenoids content was measured spectrophotometrically at 450 nm. The AlCl3 method adapted from Bahorun was used for the determination of the total flavonoids content. The results indicate that flavonoids are better retained than carotenoids in juice. In general processing has significant effects on these compounds, carotenoids have shown fragility during juice process where more than 60% have been degraded mainly after blanching (50%). The isomerization of carotenoids could be the main reason for this decrease. The effects on flavonoids were not uniform. A first blanching step led to increase in flavonoids in the puree with 30%, were heat have the potential to release bound phenolics associated to cell walls. However, these compounds were partly declined after refining and pasteurization. Overall, the juice process has preserved the flavonoids content.

Biography

Barkat Malika has a Doctorate in Food Biotechnology at the University of Constantine 1. She is a Member of the Biotechnology Laboratory and Food Quality (BIOQUAL). She is Head of Food Biotechnology Department. She has overseas 10 doctoral theses in Food Science. She has published more than 10 papers in international journals.

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