

Title Correlations of carotene with sensory attributes in carrots under different storage conditions
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Abstract

The all-*trans*- α -, all-*trans*- β -, and *cis*-carotene content, measured by HPLC–DAD and the main sensory attributes in two carrot varieties, of the years 2002 and 2003, during storage at 4 °C, 20 °C, –18 °C and –25 °C were determined. At 4 °C, increase of the total carotene content of 8% and 23% were found in the 1st and in the 2nd harvest year, respectively within 14 days of storage. Deep-frozen carrots were characterized as more “juicy”, less “tender”, “aromatic” and “sweet” compared to fresh carrots in both harvest years. Sensory attributes and chemical data were correlated, and it was shown that the carotene content was positively correlated with the attribute fibrous texture and negatively correlated with the attribute tender texture.