



## **STABILITY OF CAROTENOIDS IN PUMPKIN DURING THE DIFFERENT HEAT TREATMENTS**

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Pumpkin contains high content of carotenoids, the majority of which are alpha-carotene, beta-carotene, alpha-cryptoxanthin, lutein/zeaxanthin and violaxanthin. The main beneficial effect of carotenoids derives from their antioxidant activity, i.e. protecting cells against the harmful effects of free radicals. The aim of this study was to determine the content of total pumpkin carotenoids during cooking, baking in oven and microwave oven to examine how different heat treatments affect the stability of the carotenoids. The standard spectrophotometric method was used to determine the content of total carotenoids, measuring the absorbance of extracted samples at a wavelength of 445 nm. Samples were extracted by petrolether. According to the obtained results, the highest content of carotenoids was in raw pumpkin (172.93 µg/g dry matter), then in an oven baked pumpkin (66.63 µg/g dry matter), then in a microwave oven baked pumpkin (65.97 µg/g dry matter) and the lowest content of total carotenoids was determined in cooked pumpkin (54.42 µg/g dry matter). These results indicated that different heat treatments significantly affected the stability of carotenoids in pumpkin. The higher losses were during cooking, while the losses of baking in the oven and microwave oven were similar.

***Keywords: pumpkin, heat treatment, total carotenoids, spectrophotometry***

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