

INFLUENCE OF DIFFERENT COOKING METHODS IN TOTAL CAROTENOIDS CONTENTS, α - AND β -CAROTENE AND *cis*- β -CAROTENE ISOMERS IN PUMPKIN (*Cucurbita moschata* Duch.)

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Pumpkin is an excellent source of provitamin A. Some varieties present high levels of carotenoids, mainly α - and β -carotene, β -cryptoxanthin, lutein e zeaxanthin. The aim of this study was to evaluate the total carotenoid, α - and β -carotene, 9 and 13-*cis*- β -carotene isomers in samples after three types of cooking process. The pumpkin cultivars were cultivated in Embrapa Tabuleiros Costeiros/SE and sent to Rio de Janeiro for moisture, soluble solids, total carotenoids, α - and β -carotene, 9 and 13-*cis*- β -carotene isomers analyzes. In the raw sample it was found 85% for moisture, 12.15 °Brix of soluble solids, 236.12 $\mu\text{g.g}^{-1}$ for total carotenoids. The contents of β -carotene, α -carotene; 13-*cis*- β -carotene and 9-*cis*- β -carotene 172.19; 39.94; 3.64, and 0.83, respectively. The sample cooked in water the moisture was 87.96%, soluble solids 9.27°Brix, total carotenoids 262.72 $\mu\text{g.g}^{-1}$, β -carotene 187.06, α -carotene 45.42 $\mu\text{g.g}^{-1}$, 13-*cis*- β -carotene 6.35 $\mu\text{g.g}^{-1}$, 9-*cis*- β -carotene 0.86 $\mu\text{g.g}^{-1}$. The sample steamed cooked showed 86.58% of moisture, 10.77°Brix of soluble solids, 280.77 $\mu\text{g.g}^{-1}$ of total carotenoids, 188.09 of β -carotene, 50.91 of α -carotene, 9.27 of 13-*cis*- β -carotene, 2.27 of 9-*cis*- β -carotene. Sample cooked with sugar addition the results were: moisture- 80.43%, soluble solids- 17.08°Brix, total carotenoids- 251.92, β -carotene- 181.19, α -carotene- 42.31, 13-*cis*- β -carotene- 7.38, 9-*cis*- β -carotene- 1.10 $\mu\text{g.g}^{-1}$. Carotenoid contents increased after all cooking methods. It can be attributed to the easier extraction of these micronutrients in plant cooked matrices than in raw matrices. Beside, fruits and vegetables usually exhibit greater biological activity when subjected to thermal processing due to various chemical changes during heating increasing its bioavailability.