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Total carotenoids pumpkin (*C. moschata* DUCH) of landraces after cooking: a preliminary study

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Introduction: Hunger causes a series of deficiencies. In developing and underdeveloped country populations, and is a public health problem for children and pregnant women. Vitamin A deficiency can be minimized by the ingestion of foods with a high content of carotenoids, mainly β -carotene. The introduction of raw matter rich in carotenoids precursors of this vitamin is a viable alternative. Landraces varieties of pumpkin must be investigated to evaluate their potential as source of pro vitamin A and to recommend their use in breeding or biofortification programs, already being implemented in Brazil and worldwide. The objective of this study was to determine the total carotenoids contents in pumpkin landraces (*Cucurbita moschata* Duch) steam cooked and cooked by immersion in water to verify which method best preserved these micronutrients.

Methodology: Pumpkins were cultivated in June 2009, with a 120 day-harvest cycle. The each sample was cut into 4 parts :1 part (raw) was used to determine the total carotenoids; two parts of each sample were codified as: Aa and Ba cooked in water (5 minutes) and Ab, and Bb steam cooked (14.5min.), respectively, and the fourth parts were frozen at -20°C (control). UV/Visible spectrophotometry was used to determine the content of total carotenoids, read at 450nm. All analyses were done in triplicate

Results and Discussion: The results showed mean contents of total carotenoids of 344.7 $\mu\text{g/g}$ (A) and 234.2 $\mu\text{g/g}$ (B), on wet basis in raw samples, respectively.

Conclusions: Both cooking methods presented no significant losses of total carotenoids. The steam cooking time was quite longer compared to water cooking method. Further studies are being carried out with landraces pumpkin samples.

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