

PubMed

Display Settings: Abstract



J Food Sci. 2012 Jun;77(6):C653-7. doi: 10.1111/j.1750-3841.2012.02736.x.

## Bioactive compounds in lipid fractions of pumpkin (*Cucurbita* sp) seeds for use in food.

Veronezi CM<sup>1</sup>, Jorge N.

### Author information

### Abstract

Seeds are considered to be agro-industrial residues, which can be used as source of macronutrients and/or raw material for extraction of vegetable oils, since they present great quantities of bioactive compounds. This study aimed to characterize the lipid fractions and the seeds of pumpkin (*Cucurbita* sp) varieties Nova Caravela, Mini Paulista, Menina Brasileira, and Moranga de Mesa aiming at using them in food. The chemical composition of the seeds was performed according to the official methods of American Oil Chemists' Society and Association of Official Analytical Chemists. Total carotenoids and phenolic compounds were determined by spectrophotometry, while the levels of tocopherols were analyzed by high efficiency liquid chromatography. It was noted that the seeds contain high amounts of macronutrients that are essential for the functioning of the human organism. As to total carotenoids, Mini Paulista and Menina Brasileira pumpkin varieties presented significant amounts, 26.80 and 26.03 µg/g, respectively. Mini Paulista and Nova Caravela pumpkin varieties showed high amounts of total phenolic compounds in the lipid fractions and in the seeds. It was also found that γ-tocopherol is the isomer that stood out in the lipid fractions and in the seeds, mainly in Menina Brasileira. Finally, the consumption of these seeds and use of lipid fractions provide the supply of large quantities of compounds that are beneficial for health and that may be potentially used in food, besides representing an alternative to better use of agro-industrial residues.

**PRACTICAL APPLICATION:** Bioactive compounds, besides presenting basic nutritional functions, provide metabolic and physiological health benefits when consumed as part of the usual diet. Therefore, there is a growing interest in vegetable oils of special composition, such as the ones extracted from fruit seeds. The seeds of *Cucurbita* sp are shown to be promising sources of oils, and especially the *Cucurbita moschata* and *maxima* species have not yet been fully elucidated. For this reason, it becomes important to investigate the chemical composition and lipid fractions of these seeds, aiming to use them in food.

Journal of Food Science © 2012 Institute of Food Technologists® No claim to original US government works.

PMID: 22671521 [PubMed - indexed for MEDLINE]



Publication Types, MeSH Terms, Substances

LinkOut - more resources

---

## PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)