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## Evaluation of phenolic content in avocado fruit and its by-products

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The avocado, *Persea americana* Miller, is a plant of Lauraceae's family. The avocado tree is indigenous to tropical America; however, in the last years Spain has increased its production in the Mediterranean area. Avocado pulp contains several bioactive phytochemicals including phenolic compounds. These compounds have demonstrated several health benefits against cardiovascular diseases, cancer, diabetes, etc. Because of that, the objective of this study was to determine phenolic compounds in avocado pulp and also its by-products (seed and peel) by using HPLC-DAD-qTOF-MS. Oligomeric proanthocyanidins were also specifically determined by HPLC-FLD. Total phenolic compounds were mostly phenolic acid derivatives (feruloyl and caffeoyl derivatives), whereas seed and pulp mostly presented flavan-3-ol derivatives. Avocado peel showed the highest phenolic content (4406.2 mg/100 g d.w.) followed by avocado seed (1676.8 mg/100 g d.w.) and pulp (71.6 mg/100 g d.w.). Concerning oligomeric proanthocyanidins, 13 oligomers and the polymer were found. Avocado peel was the fraction that contained the highest amount of this phenolic family. Contrary, avocado pulp showed the lowest content of proanthocyanidins. Antioxidant activity was correlated to phenolic compounds found by HPLC-DAD-qTOF-MS. The present results suggest that avocado pulp is a good source of phenolic acids. Instead, avocado fruit by-products as peel and seed contain high amounts of flavan-3-ols, particularly avocado peel could be used as raw material for the production of nutraceuticals.

## **Biography**

Ana Maria Gomez-Caravaca is a researcher in the Department of Analytical Chemistry at the University of Granada and Research and Development of Functional Food Centre (CIDAF), Spain. She received her Master degree and PhD degree in Analytical Chemistry at the University of Granada. Afterwards, she developed a Postdoctoral stay at the Department of Agricultural and Food Sciences, University of Bologna, Italy. She is co-author of more than 45 research articles in international journals with impact factor. She has more than 8 years' experience in carrying out R&D projects in the fields of analytical chemistry and food science and technology.

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