

PHARMACOKINETICS OF AFFRON®, COMMERCIAL SAFFRON (*CROCUS SATIVUS L*) EXTRACT

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There are few studies about the pharmacokinetics of low molecular weight carotenoids such as crocetin or crocins from saffron (*Crocus sativus L*), but none of them is performed with a commercial saffron extract. This study shows the evolution of the main bioactive component, crocin isomers, in blood of Affron®, a commercial saffron extract, during the pharmacokinetics in humans after oral administration. Pharmacokinetics was performed collecting blood samples at different times: 30, 60, 90, 120, 180, 240, 300, 360 minutes and 24 hours after oral administration of 56 and 84 mg of the commercial saffron extract to a total of 13 subjects. The analysis of the blood samples was carried out by high performance liquid chromatography coupled to diode array. Pharmacokinetics show that crocin isomers are transformed into crocetin rapidly, since mean time (Tmax) to reach the maximum concentration (Cmax) of crocetin in blood was between 60 and 90 minutes; the Cmax and Tmax values are directly related with the dose administered, being Cmax 0.165 and 0.462 µg/mL respectively. Despite the fact that crocin isomers could be degraded during digestion, they are able to reach the bloodstream in crocetin form more quickly than other lipophilic carotenoids of higher molecular weight.

Biography

Paula Almodóvar has received her master's degree in Food Science from the Autonomous University of Madrid (Spain) in 2016. Her degree dissertation consisted on carotenoids extraction and characterization from *Chlorella vulgaris*. She is currently pursuing her Master's degree in Chemical Science and Technology at The National Distance Education University (UNED). During her Bachelor's degree, she collaborated with research group on bacterial biotechnology (BIOBACT) of the Institute of Food Science, Technology and Nutrition (ICTAN). She carried out a research project which was focussed on the study of genetic variability of *Lactobacillus* related to hydroxy cinnamic acids metabolism. She has also started working in Pharmactive Biotech Products S L in May' 2016, in the research and development department. Her work is focused on the method of analyse development and plant extracts characterization, as well as in scientific production writing. She has recently published two scientific articles to indexed journals and participated in different scientific congresses.

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