TOCOPHEROL LEVEL AND FATTY ACIDS PROFILE OF STRAWBERRY SEED OIL (FRAGARIA VESCA)

Ana Carolina da Silva, Neuza Jorge. Department of Engineering and Food Technology, São Paulo State University, São José do Rio Preto, 2265, Cristóvão Colombo St., 15054-000, São José do Rio Preto, São Paulo, Brazil.

Tocopherols are monophenolic compounds which occur naturally in most vegetable oils, protecting the unsaturated fatty acids from lipid oxidation. In human organism, they present biological activity of vitamin E. The composition of fatty acids in food is of great importance, mainly the polyunsaturated ones, to which are related several benefits for human organism, such as the prevention of cancer and cardiovascular diseases. This study aimed to determine the tocopherol level and the fatty acids profile of the oil extracted from strawberry seeds. The seeds, obtained from agroindustrial waste, were separated, washed and dried in an oven, at 40°C. The oil was obtained by cold extraction, according to the method of Bligh & Dyer. The composition of tocopherols was done in high performance liquid chromatography (HPLC), with fluorescence detector, and data was quantified by external standardization and expressed in mg/kg. As to the fatty acids profile, gas chromatograph with flame ionization detector was used, and the quantification was performed by area normalization (%). The level of total tocopherols was 86,33 mg/kg, among which 61,95% were γ-tocopherol and 38,05% were δ-tocopherol. Regarding the fatty acids profile, linolenic acid stood out, 31,50%, followed by linoleic acid, 44,78%. The content of linolenic acid was higher than that found in common oils, such as soy and canola. Having these results in mind, it is possible to notice that the strawberry seed oil is a source of tocopherols and essential fatty acids, especially Omega-3, favoring its use in food and pharmaceutical industries.

Acknowledgements: Fapesp and CNPq.