PROXIMATE AND FATTY ACID COMPOSITIONS OF ARTICHOKE (CYNARA SCOLYMS) PARTS CULTIVATED IN BRAZIL

Thiago Claus, Hevelyse M. C. Santos, Makoto Matsushita, Jesuí V. Visentainer, State University of Maringá – UEM, Avenida Colombo 5790, 87020-900 Maringá, Paraná, Brazil

Artichokes (Cynara scolymus) are usually packed in oil or brine. Only the edible part of the plant (the heart) is used, so the remaining parts (bracts, spikes and stem) are discarded as waste. The objective of present study was to evaluate chemical and fatty acid (FA) compositions of different parts of fresh artichokes cultivated in Brazil. Moisture, ash and protein analyses were performed according to AOAC methodologies; the carbohydrate value by Nifext fraction; lipid extraction according to Bligh and Dyer, and the transesterification of total lipids (TL) according to Joseph and Ackman. The separation of methyl esters was performed by gas chromatography. When the different artichoke parts were expressed as percentages of mass, it was found that they were made up of: bracts (47.45 ± 1.88%); heart (19.18 ± 1.42%), spikes (17.79 ± 1.63%) and the stem (15.58 ± 1.96%), when cut at 5cm from the base of the artichoke. The heart showed the highest moisture and ash values (88.44 ± 0.30% and 1.27 ± 0.03%, respectively), while the spikes showed high protein and lipid content values (3.16 ± 0.10% and 1.79 ± 0.29%, respectively) and the bracts had the highest carbohydrate content (15.84 ± 2.12%). Sixteen FAs were identified in the TL fractions. The main FAs in the various parts were palmitic (16:0), alpha linolenic (18:3n-3) and linoleic (18:2n-6) acids. It can be concluded that the residual artichoke parts have good nutritional value and show good potential for use in food-product supplementation.