

Abstract

Vegetable oils are an important part of a healthy diet. A trend is now developing to use oils that historically were not a common part of our cuisine. These oils are extracted from crops from which oil is not normally obtained and are therefore often referred to as non-traditional fats and oils. The aim of this work was not only to inform about these new products, but also to monitor and compare their nutritional, sensory and utility quality. The theoretical part therefore focused on the botanical origin of the selected crops, the use of the fat or oil obtained from them and its chemical composition. For the practical experimental part of the work, a total of 21 samples of fats and oils available on the Czech retail market were purchased. The representation of fatty acids was determined after their esterification to methyl esters by gas chromatography using flame ionization detector (GC/FID) and discussed with available literature data. The organoleptic properties of the samples were assessed in the Sensory Laboratory of the University of Chemical Technology Prague, which is equipped according to the relevant international standard ISO 8589, by a 12-member panel of trained evaluators.

The results of this work will be of practical use to both consumers and the food industry. Consumers will have access to information on the composition and quality of fats and oils. This will enable them to make more sophisticated food choices and to include different types of oils in their diet. The food industry will have data that can be used to develop new products and improve the quality of existing products. The right choice of fats and oils can have a positive impact on health and reduce the risk of certain diseases such as heart disease and obesity. The results of this work can provide a basis for further research in the field of nutrition and food science and contribute to the development of healthy lifestyles.

Keywords:

composition of fatty acids, cold-pressed oil, organoleptic properties, omega-3 fatty acids