

Abstract:

The title of the work is “Quality of lipids in food”. The work is divided into two parts. The first is theoretical, the other is experimental. The theoretical part is divided into two chapters. The first section describes general chemical composition and properties of lipids. This point is further divided into four sections, which are specifically focused on different groups of lipids. The second theoretical point of attention is focused on the importance of fat in the diet, the synthesis of fatty acids, lipid digestion and issues related to absorbancy and lipid transport. This section also contains a passage which refers to further dietary recommendations, among which highlights the question of the proper quantity and quality of fat contained in food. There are not omitted principles of proper use and storage of fat. The last section of this section deals with dietary supplements and functional foods from which the positive effect on human health is expected. The experimental part is based on chemical analysis of twenty samples of dietary supplements containing n-3 fatty acids. These fatty acids play a vital role in the prevention and treatment of many diseases, especially myocardial infarction or ischemic heart disease. In the screening of these products, attention was focused on the content of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Results of chemical analysis revealed a very low content of these fatty acids in two samples, one sample did not contain them at all. The content of *trans*-fatty acids was negligible in all samples.

Key words:

lipids

fatty acids

n-3 fatty acids

dietary recommendations

dietary supplement

gas chromatography