

ABSTRACT

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Title of Diploma Thesis: Determination of fatty acids in human tissues

The fatty acids are non-negligible component of lipids as one of the basic nutrients. This thesis in its theoretical part presents above all the group of polyunsaturated fatty acids (PUFA), which are important structural units of the cell membranes, they are also the precursors to several significant biologically active substances. In the human organism PUFA participate in many physiological and pathological processes this way, where they cause the large spectrum of actions. Onwards the thesis describes the gas chromatography method that is used in chemical analysis of lipids for the fatty acid determination as the gold standard. Experimentally, the fatty acid representation was determined in the blood, muscle, heart, liver and kidney among 26 cadavers divided into two groups according to the presence/absence of inflammatory process at the time of death. The data obtained were statistically analysed. The results were descriptively evaluated and there were indicated possible explanations of differences discovered in the fatty acid representation between the both groups of cadavers in the tissues given.

Key words

essential fatty acids, polyunsaturated fatty acids, omega-3 and omega-6 fatty acids