Abstract

Triacylglycerols are among the most abudant classes of lipid. Their chemical, physical and biological characteristics depend on degree of unsaturation and positions of double bonds in acyls. This thesis was focused on localization of double bonds using tandem mass spectrometry with atmospheric pressure chemical ionization. We studied 14 standards and 44 standard mixtures with different number of double bonds and lenght of hydrocarbob chain in acyls. Standards were obtained from commercial sources and prepared of randomizations reaction in microscale. Localization of double bonds was deduced from fragments of molecular aduct with $C_3H_5N^{+\cdot}$ ($[M+55]^{+\cdot}$) created in presence of acetonitrile in the mobile phase. This metod was applied for HPLC/MS analysis of natural mixtures of triacylglycerols.

Key words: triacylglycerols, randomization, localization of double bonds, atmospheric pressure chemical ionization, mass spectrometry, high performance liquid chromatography with mass detection