

Gas Chromatography-mass Spectrometry Applications for Sea Buckthorn Characterization

Monica Culea, Andreea Iordache, Monica Nemtanu, Adela Pinteaa, Babes-Bolyai Univ.,
RO-3400 Cluj-Napoca, Romania

Quantitative analysis of polyunsaturated and polyunsaturated fatty acids in sea buckthorn (*hippophae rhamnoides L*) is presented. The internal standard used was C11:1 for fatty acid methyl esters determination. The extraction procedure was performed in dichloroethane and by maceration. The extraction was followed by methylation of fatty acids with methanol HCl 3M, at 100°C, 30 min and gas chromatographic and gas chromatography- mass spectrometric analysis. A Rtx-5MS capillary column, 30mx0.32mm, 0.25µm film thickness, in a temperature program: 50°C (2 min) then 8° C per minute to 310°C (8min) was used. The method was applied for testing fatty acid changes after the treatment of sea buckthorn oil at different kGy doses.

References:

1. Pinteaa A, Varga A, Stepnowski P, Socaciu C, Culea M, Diehl HA., Chromatographic analysis of carotenol fatty acid esters in *Physalis alkekengi* and *Hippophae rhamnoides*. *Phytochem Anal.* 2005,16(3):188-95S.