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Ratio of Omega-6/Omega-3 Fatty Acids in Spelt and Flaxseed Pasta

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Abstract : The dynamic way of life has the tendency to simplify and decrease preparing healthy, quick, cheap and safe meals. Spelt pasta is meeting most of these goals. Contrary to bread, pasta can be stored a long time without deterioration in flavour, odour and usability without losing quality. This paper deals with the chemical composition and content of fatty acids in flaxseed and spelt flour. Ratio of essential fatty acids ω-6/ω-3 is also analysed in spelt pasta and pasta with 0%, 10% and 20% flaxseed flour. Gas chromatography with mass spectrometry is used for carrying out a quantitative analysis of flaxseed flour, spelt flour and pasta liposoluble extracts. Flaxseed flour has a better fatty acid profile than spelt flour, with low levels of saturated fat (approximately 9g/100g), high concentration of linolenic acid (57g/100g) and lower content of linoleic acid (16g/100g), as well as superior ω-6/ω-3 ratio that is 1:4. Flaxseed flour in the share of 10% and 20% in spelt pasta positively contributes to the essential fatty acids daily intake recommended by nutritionists and the improvement of ω-6/ω-3 ratio (6,7:1 and 1:1.2). This paper points out that investigated pasta with flaxseed is a new product with improved functional properties due to high level of ω-3 fatty acids and it is acceptable for consumers in regard to sensory properties.

Keywords : flaxseed, spelt, fatty acids, ω-3/ω-6 ratio, pasta
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