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Book of Abstracts

# International VETistanbul Group Congress 2014

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**DETERMINATION OF FATTY ACID IN ASPARAGUS WITH GAS CHROMATOGRAPHY**

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Asparagus contain a lot of macronutrients and micronutrients including folate, dietary fibre (soluble and insoluble) and phenolic compounds. Also asparagus is a good source of unsaturated linoleic and linolenic fatty acids which are precursors for EPA (Eicosapentanoic acid) and DHA (Docosahexanoic acid). Unsaturated fatty acids have important biological effects and they have important role in human health. The objective of this study was to analyze fatty acid composition of asparagus as a potential source of linoleic and linolenic acid a precursor for EPA and DHA.

For this reason we analyzed twenty four samples of asparagus collected from the local market. We used AOAC 996.06 method and analyses were performed with GC-FID (gas chromatograph with flame-ionized detector).

The highest concentration of fatty acid in the asparagus was linoleic acid (C18:2n6) which content in asparagus is 25.620±1.0%. Also, asparagus is good source of  $\alpha$ -linolenic fatty acid (C18:3n3) and content of this fatty acid in asparagus is 8.840±0.3%. The omega-6 to omega-3 (n6/n3) ratio in asparagus was 3.19. Polyunsaturated fatty acids (PUFAs) were higher than monounsaturated fatty acids (MUFAs), and from saturated fatty acids, palmitic acid was most frequent with 24.324±1.0%.

From our study we can conclude that asparagus is very good source of unsaturated fatty acids, especially linoleic and linolenic fatty acids.