

**Faculty of Agriculture  
Goce Delcev University - Stip**



**2<sup>nd</sup> INTERNATIONAL MEETING  
AGRISCIENCE & PRACTICE  
(ASP 2019)**

**BOOK OF ABSTRACTS**

**12<sup>th</sup> April 2019  
Stip, Republic of North Macedonia**

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**2<sup>nd</sup> INTERNATIONAL MEETING AGRISCIENCE & PRACTICE  
ASP 2019**

**Organized by**

**FACULTY OF AGRICULTURE  
GOCE DELCEV UNIVERSITY - STIP, REPUBLIC OF NORTH MACEDONIA  
12 April 2019, Stip, Republic of North Macedonia**

In the past twelve years the educational, research and applicative activities of the Faculty of Agriculture – Stip, Goce Delcev University – Stip, contributed to the development of agricultural sector in the country and abroad.

The Faculty of Agriculture organizes the 2<sup>nd</sup> International Meeting Agriscience & Practice (ASP 2019), giving an opportunity to the participants for presentation and discussion of original scientific and practical results in different fields of agriculture.

The 2<sup>nd</sup> International Meeting Agriscience & Practice (ASP 2019) is organized with intention to bring together all agricultural stakeholders for sharing their knowledge, experience and obstacles. One of the main aims is to link research and field work in agricultural sector in the country and abroad, giving it an international dimension.

The main goal of the Meeting is to connect and promote scientific achievements and practical knowledge presented in different thematic areas.

We are pleased to welcome you at the Faculty of Agriculture and we wish you active participation in the Meeting.

**President of the Organizing Committee  
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**GAS CHROMATOGRAPHY ANALYSIS OF OMEGA-3 FATTY ACIDS CONTENT IN FISH OIL SUPPLEMENTS** Mila Arapcheska<sup>1\*</sup>, Zehra Hajrulai – Musliu<sup>2</sup>, Risto Uzunov<sup>2</sup>, Jovanka Tuteska<sup>3</sup>, Vangelica Jovanovska<sup>1</sup>

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**Abstract**

Fish oils are excellence source of omega-3 polyunsaturated fatty acids. Two main bioactive components responsible for health benefits of fish oil are omega-3 fatty acids: eicosapentaenoic (EPA) and docosahexaenoic (DHA), which are essential for humans as cannot be synthesized by the human body. They have been shown to lower risks of cardiovascular disease and reduce inflammation. Fish oil dietary supplements are widely available at various health food stores and pharmacies. The main objective of this study was to analyze omega-3 fatty acids content in encapsulated fish oil dietary supplements present at local market. Samples of four commercial types of encapsulated fish oil products sold on the local market were analysed by gas chromatography (GC-FID). The content of their eicosapentanoic acid (EPA) and docosahexaenoic (DHA) content was examined. The obtained values for EPA and DHA content in analyzed samples were lower than product declared values ranging from 6.06% to 10% for EPA and from 0.45% to 8% for DHA. These results indicate that the label claims for EPA and DHA for analyzed encapsulated fish oil products are presented with reasonable accuracy.

**Key words:** eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), GC-FID

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