

**Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE
FACULTY OF VETERINARY MEDICINE - SKOPJE**



**Joint meeting
5th International Vet-Istanbul Group Congress
&
8th International Scientific Meeting
Days of veterinary medicine - 2018**

BOOK OF ABSTRACTS

**23-27 September 2018
Ohrid, R. of Macedonia**

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Ohrid, 2018
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CHANGES OF FATTY ACIDS COMPOSITION DURING YOGURT PROCESSING

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Yogurt is popular fermented milk product, with health benefits and therapeutic properties. Milk fat plays an important role in fermented beverage manufacturing. It affects taste perception and the final volume of curd, while also limiting syneresis. The main objective of this work was to analyze the changes of fatty acids composition during processing of fresh cow milk into yogurt. The samples were taken from different phases of yogurt processing (after homogenization, pasteurization, inoculation with yogurt cultures, incubation period and final product) and compared with chemical and fatty acid composition of fresh milk. The following parameters were examined: fat content, dry matter content and acidity. Changes of fatty acids composition of samples during the examined periods of yogurt processing and fresh milk samples were analyzed by gas chromatography. A total of 17 fatty acids were analyzed. The obtained results have shown significant differences ($p < 0.05$) in the fat content and acidity. Fatty acids compositions of samples from different phases of yogurt processing compared with fresh milk sample have shown significant difference in content of: C4:0; C10:0; C12:0; C14:1; C17:0; C18:2n6c and C18:3n3. The decrease of contents of most of analyzed fatty acids was noted during different phases of yogurt processing. The changes in fatty acids composition have significant effect in organoleptic and nutritional qualities of milk products, and because of this it is important to evaluate the level of these compounds in fermented milk beverage - yogurt.

Key words: fatty acids composition, yogurt processing, gas chromatography