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THE BOOK OF ABSTRACTS

**XII MEĐUNARODNA KONFERENCIJA O DRUŠTVENOM I
TEHNOLOŠKOM RAZVOJU – STED 2023**

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The authors have full responsibility for the originality and content of their own papers.

COMPARATIVE ANALYSIS OF THE FAT AND FATTY ACID PROFILE OF DONKEY, MARE AND HUMAN MILK

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ABSTRACT

In recent years, the use of donkey milk (DM) and mare milk (MM) in human nutrition attracts more attention in the scientific community due to their similarities to human milk (HM) and specific nutritional properties. Raw DM and MM are traditionally used to treat various respiratory problems in the Balkan region. The aim of this work was to determine the fat content and fatty acid (FA) profile of DM and MM compare to those in HM. The total fat content was determined by the Gerber method, while the separation, identification and quantification of methyl esters of FA was performed by gas chromatography with a flame ionization detector (GC-FID). The results showed that DM and MM contained lower fat content (0.68% and 1.02%, respectively) than HM (3.42%). The DM had higher amount of saturated fatty acids (46.72% of the total FA) compared to HM (37.40%) but similar to MM (49.30%). The share of polyunsaturated fatty acids was higher in DM (22.36%) and MM (21.54%) compared to HM (18.48%). The content of linoleic acid was similar in MM (13.15%) and HM (13.23%) but higher than that in DM (10.25%). DM and MM were characterized by higher content of α -linolenic acid (6.47% and 5.25%, respectively) than HM (1.94%). The favourable profile FA in DM and MM and their similarity to HM may contribute to increasing market demand for these types of milk.

Keywords: fat, fatty acids, donkey milk, mare milk, human milk.

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