

Chemometric Analysis of Raw Milk Quality Originating from Conventional and Organic Dairy Farming in AP Vojvodina, Serbia

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Abstract : The present study describes the application of chemometric methods in analysis of milk samples which were collected in a conventional dairy farm and an organic dairy farm in AP Vojvodina, Republic of Serbia. The chemometric analysis included the application of univariate regression modeling and Analysis of Variance (ANOVA) method. The ANOVA was used in order to determine the differences in fatty acids content in the milk samples from conventional and organic farm. The results of the ANOVA testing indicate that there is a highly statistically significant difference between the content of fatty acid (saturated fatty acid vs. unsaturated fatty acids) in different dairy farming. Besides, the linear univariate models have been obtained as a result of modeling the linear relationships between the milk fat content and saturated fatty acids content, and the linear relationships between the milk fat content and unsaturated fatty acids content. The models obtained on the basis of the milk samples which originate from the organic farming are statistically better than the models based on the milk samples from conventional farming.

Keywords : chemometrics, milk, organic farming, quality control

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