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BOOK OF ABSTRACTS

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RAW MILK MICROBIOLOGICAL QUALITY INFLUENCE ON PROTEIN CONTENT

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Abstract

Increased somatic cell count and total plate count in milk are often associated with mastitis in dairy cows. Alterations appearing in milk with increased somatic cell count are mainly addressed to increased pH value, the unfavourable ratio of casein fractions, changes in coagulation capability of milk, reduced yield and cheese quality. Casein is participating with approx. 80% of the total milk protein, which makes it one of the most important parts of the protein content. Numerous parameters impact raw milk selection for cheese production, but the most important is still casein. Together with raw milk microbiological quality (total plate count and somatic cell count) varies also casein content. During the research, a large number of raw milk samples with different quality was analysed. The aim of the research was to determine the impact of total plate count and somatic cell count, depending on the season, on changes in raw milk physical-chemical characteristics, with special attention on casein. Raw milk samples were tested with LactoScope FTIR Advanced (Delta Instruments). The results obtained, indicate a significant connection between raw milk microbiological quality and total casein content. Raw milk microbiological quality when obtained from healthy dairy animals depends mostly on farm conditions and GHP, but also on raw milk manipulation until processing. From the results obtained, we can conclude that raw milk microbiological quality is one of the most important indicators for milk selection during the production process.

Key words: casein, somatic cells, cheese