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RESEARCHES REGARDING THE SOMATIC CELLS NUMBER FROM RAW MILK USED IN TELEMEA CHEESE TECHNOLOGICAL PROCESS

CERCETĂRI PRIVIND NUMĂRUL DE CELULE SOMATICE DIN LAPTELE MATERIE PRIMĂ UTILIZAT ÎN PROCESUL DE OBȚINERE A BRÂNZEI TELEMEA

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It is known that by milk production hygiene must be assure: milk microbiological security, increase the sensorial and nutritive properties, increase term of availability and consumption. The milk hygienic national strategies involved: raw material risk contamination avoiding and reducing as can is possible and the microorganisms destroying or stopping development of those. In this paper it is presented the results of somatic cells number determination by raw milk used in Telemea cheese technological processes within 5 research stations. Determinations were effectuated on 2 series with 57 samples each of them, prelevated in reception phase in summer and winter seasons.
Key words: somatic cells, quality, contamination, raw milk, hygienic value.

Introduction

It is known that by milk production hygiene must be assure: milk microbiological security, increase the sensorial and nutritive properties, increase term of availability and consumption. The milk hygienic national strategies involved: raw material risk contamination avoiding and reducing as can is possible and the microorganisms destroying or stopping development of those. In this paper it is presented the results of somatic cells number determination by raw milk used in Telemea cheese technological processes within 5 research stations. Determinations were effectuated on 2 series with 57 samples each of them, prelevated in reception phase in summer and winter seasons.

Materials and Methods

The somatic cell number was determinates using somatic cells counting devices.

Results and Discussions

In table no. 1 is presented the testing of differences significant observed between prelevating stations for SCN (somatic cells number) microbiological exam, effectuated at raw milk reception, in summer season.

For testing the relation between 5 researches stations it is observed that exist high significant differences between registration values for P1, P2, P3 stations (stations without HACCP procedures) and other stations (P4, P5, with HACCP procedure). Between stations 1, 4 and 5 are high significant difference for somatic cells content.

Table no. 1

The testing of differences significant observed between prelevating stations for SCN microbiological exam, effectuated at raw milk reception, in summer

Comparative stations	Calculated Student value	Critical value of Student test			
		$T_{0,05}$	$t_{0,01}$	$t_{0,001}$	$t_{0,2}$
P1-P2	$0,8018^{NS}$	1.981	**2.621**	**3.382**	1.289
P1-P3	$0,9408^{NS}$				
P1-P4	**3,0646****				
P1-P5	**3,0347****				
P2-P3	$0,2345^{NS}$				
P2-P4	**4,2190*****				
P2-P5	**4,2669*****				
P3-P4	**4,1475*****				
P3-P5	**4,2029*****				
P4-P5	$0,1401^{NS}$				

In table no. 2 is presented testing of difference significant observed between prelevated stations for SCN microbiological exam, effectuated at raw milk reception, in winter season.

Table no.2

The testing of differences significant observed between prelevating stations for SCN microbiological exam, effectuated at raw milk reception, in winter season.

Comparative stations	Calculated Student value	Critical value of Student test			
		$t_{0,05}$	$t_{0,01}$	$t_{0,001}$	$t_{0,2}$
P1-P2	$0,0029^{NS}$	1,981	**2,621**	**3,382**	1,289
P1-P3	$0,8447^{NS}$				
P1-P4	**4,0475*** **				
P1-P5	**3,6638*** **				
P2-P3	$0,8727^{NS}$				
P2-P4	**4,1930*** **				
P2-P5	**3,7982*** **				
P3-P4	**3,2929*** **				
P3-P5	**2,8835** **				
P4-P5	$0,4937^{NS}$				

For testing the relation between 5 researches stations it is observed that exist high significant differences between registration values for P1, P2, P3 stations (stations without HACCP procedures) and other stations (P4, P5, with HACCP procedure).

For other comparisons the differences were non significant.

Conclusions

Analyzing the obtained dates regarding to SCN content from raw milk, we conclude:

- In case of results witch are higher than standards values it are suspected the mastitis presents. Those, can affecting the technological value of raw milk and can determinate the economically loss.
- The obtained results are in generally, bigger than legal standard values for microbiological parameters, even in HACCP stations.
- The microbiological results obtained in winter season are lower than results for summer season because is possible that the germs have a low environmental resistance in negative temperature.

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