

TITLE: EVALUATION OF CONTAMINATION BY MESOPHILIC AND PSYCHOTROPHIC BACTERIA IN DIFFERENT STAGES OF MILKING AND STORAGE OF THE MILK RAW.

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ABSTRACT:

Milk is an excellent culture medium and its contamination has been the subject of several discussions in the dairy sector, since microorganisms are invisible, which makes it difficult to raise awareness among producers. Thus, the present work had the objective of counting mesophilic bacteria (BM) and psicrotrofos (BP) in raw milk before and after milking, and in refrigerated milk, in order to detect possible contaminations and contribute to increase milk quality raw milk produced by producers. Samples of raw milk were collected from 31 farms located in the Western region of Santa Catarina-SC. The milk was collected once in each property, being one sample directly from cow teats, one after the milking and another of the cooling tank. After, BM and BP were count in the raw milk samples. The results showed that 41.9% of the evaluated producers had raw milk refrigerated with HM counts above the acceptable limit (5.47 log CFU/ml), according to IN 76/2018 of the MAPA. The mean BM count was 5.3 log CFU/ml, ranging from 4.1 to 6.6 log CFU/ml. For the BP counting, 51.61% of the samples were above 5 log CFU/ml, with a mean count of 4.6 logCFU/ml, ranging from 0 logCFU/ml to 6.9 logCFU/ml. The results showed that both BM and BP counts differed significantly ($p < 0.05$) between the collection sites and that the highest count (5.35 log CFU/ml of BM and 4.65 log CFU/ml of BP) was found in the cooling tank. The lowest contamination found for the bacteria investigated (2.13 logCFU/ml of BM and 0.62 logCFU/ml of BP) was in the cow teats. Also observed that the contamination increases during the milking procedures, that is, in ascending order the contamination is lower in the milk obtained directly from the cow teats, increases after milking and in the cooling

tank, demonstrating that all milking and storage steps of raw milk must be carried out in such a way as not to introduce contamination. These results allow us to conclude that the implementation of IN / 76/2018 is still a challenge for producers and the data found are worrying because milk production is one of the main activities in the region and producers who do not maintain the values of bacteria inside of the standards provided by the legislation will be excluded from this activity, which could affect the economy of this region.

Keywords: raw milk, mesophilic and psychrotrophic bacteria, legislation, producers

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