

EFFECT OF SOMATIC CELL COUNT PROFILE ON PHYSICO-CHEMICAL PROPERTIES IN ULTRAFILTRATED RETENTATE PHASE MILK

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INTRODUCTION: Mastitis is one of the udder markedly increases somatic cell count (SSC) in milk. This disease causes physical, chemical and bacteriological changes in the milk and pathological changes in the glandular tissue of the udder. Therefore, it causes economic losses for dairy farmers due to reduced milk and cheese yield and quality. The objective of this study was to determine the different process such as bacto-fugation, pasteurization, ultrafiltration process on the mounts of somatic cell during ultrafiltration cheese process.

MATERIALS AND METHODS: Milk with different number of low and high scc were selected and sampling was carried out during the procedure in different stage like bacto-fugation, pasteurization, ultrafiltration process. Then somatic cell counts of all samples were fulfilled by somatic cell counter (5000, Somatos, Denmark). The general linear models procedure of SAS:9 was used to analyze the data.

RESULTS AND DISCUSSION: Mastitis is one of the udder markedly increases scc in milk. Results showed the raw milk low scc were indicated 81000 cell/ml by somatic cell counter. After pasteurization milk scc reduced from 81000 to 22000 cell/ml. After Bactofugation milk scc reduced from 22000 to 16000 cell/ml. Finally after ultrafiltration milk scc reduced from 16000 to 11000 cell/ml. The raw milk high scc were indicated 305000 cell/ml by somatic cell counter. After pasteurization milk scc reduced from 305000 to 33000 cell/ml. After Bactofugation milk scc reduced from 33000 to 20000 cell/ml. Finally after ultrafiltration milk scc reduced from 20000 to 17000 cell/ml. Bactofugation, pasteurization, ultrafiltration reduced milk scc.

Barbano et al (1987) reported that ultrafiltration reduced milk scc.

Kosikowski and Fox (1968) were the first to demonstrate the effect of bacto-fugation on the control of microbiological quality of cheese milk. They showed that bacto-fugation of milk decreased bacterial numbers by 95.3%.

Keywords: Mastitis, SCC, Bactofugation, Pasteurization, Ultrafiltration.



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