

MICROBIOLOGICAL QUALITY of KARS GRUYERE CHEESE

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Kars gruyere is a spongy cheese which is made of high-fat cow milk. It looks like Swiss Gruyere but tastes like Swiss Emmental cheese. This study aims to determine the microbiological quality of Kars Gruyere cheese which was processed in Kars province under traditional little dairy farm conditions. Cheese production was made with and without starter culture as traditional pattern. Starter culture was the mixture of *Propionobacterium shermanii*, *Streptococcus thermophilus* and *Lactobacillus bulgaricus*. The samples were collected from all the process steps as raw milk, curd, heated curd, pressed curd and cheese. The samples were analyzed in terms of *Lactobacillus* spp, *Lactococcus* spp, coliform bacteria and fecal coliforms, *Staphylococcus aureus*, *Micrococcus* spp, enterococci, yeast and mold, which were resulted in respectively 6.38-8.55 logCFU/g; 5.16-7.65 logCFU/g; <2.00-3.03 logCFU/g; <2.00 logCFU/g; <2.00-3.00 logCFU/g; <2.00-6.48 logCFU/g; <2.00-5.16 logCFU/g; 5.14-6.89 logCFU/g. Fecal coliform bacteria were <2 logCFU/g in all samples whereas LAB count were the most intensive bacteria in all of the samples. Addition of starter culture was not effective on undesired microorganisms. Kars gruyere cheese is generally produced in dairy farms under traditional conditions. It is hard to provide standard quality of uncontrolled productions. Qualified gruyere cheese production can be ensured by applying hygiene rules.

Keywords: Kars gruyere cheese, microbiological quality, LAB, coliform bacteria

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