

Control of the Sustainability of Fresh Cheese in Order to Extend the Shelf-Life of the Product

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Abstract : The fresh cheese is in the group of perishable food which cannot be kept a long period of time. The study of sustainability have been done in order to extend the shelf-life of the product which was 15 days. According to the plan of sustainability it was defined that 35 samples had to be stored for 30 days at 2°C–6°C and analyzed every 7th day from the day of reception until 30th day. Shelf life of the cheese has expired during the study of sustainability in the period between 15th and 30th day of analyses. Cheese samples were subjected to sensory analysis (appearance, odor, taste, color, aroma) and bacteriological analyzes (*Listeria monocytogenes*, *Salmonella* spp., *Bacillus cereus*, *Staphylococcus aureus* and total plate count) according to Serbian state regulation. All analyses were tested according to ISO methodology: sensory analysis ISO 6658, *Listeria monocytogenes* ISO 11 290-1, *Salmonella* spp ISO 6579, *Bacillus cereus* ISO 7932, *Staphylococcus aureus* ISO 6888-1, and total plate count ISO 4833. Analyses showed that after fifteen days of storage at a temperature defined by the manufacturers and within the product's shelf life, the cheese did not have any noticeable changes in sensory characteristics. Smell and taste are unaffected there was no separation of whey and there was not presence of strange smell or taste. As far as microbiological analyses are concerned neither one pathogen was detected and total plate count was at level of 103 cfu/g. After expiry of shelf life in a period of 15th and 30th day of storage, the analysis showed that there was a separation of whey on the surface. Along the edge of the container was present a dried part of cheese and sour-milky smell and taste were very weakly expressed. Concerning the microbiological analyses there still were not positive results for pathogen microorganisms but the total plate count was at a level of 106cfu/g. Based on the obtained results it can be concluded that this product cannot have longer shelf life than shelf life which is already defined because there are a sensory changes that would certainly have influence on decision of customers when purchase of this product is concerned.

Keywords : sustainability, fresh cheese, shelf-life, product

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