

## Monitoring of Sustainability of Decorated Confectionary Product 'Moskva Cake' in Order to Define the Expiration Date

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**Abstract :** The fresh cake is in the group of perishable food which cannot be kept a long period of time. The study of sustainability has been done in order to extend the shelf-life of the product which was 10 days. According to the plan of sustainability, it was defined that 5 samples had to be stored for 20 days at max +8°C and analyzed every 5th day from the day of reception until the 20th day. The shelf life of cake has expired during the study of sustainability in the period between 10th and 20th day of analyses. Cake samples were subjected to sensory analysis (appearance, odor, taste, color, aroma) and bacteriological analysis (*Listeria monocytogenes*, *Salmonella* spp. and *Enterobacteriaceae*) according to Serbian state regulation. All analysis were tested according to ISO methodology: sensory analysis ISO 6658, *Listeria monocytogenes* ISO 11290-1, *Salmonella* spp ISO 6579, and *Enterobacteriaceae* ISO 21258-2. Analyses showed that after ten days of storage at a temperature defined by the manufacturers and within the product's shelf life, the cake did not have any noticeable changes in sensory characteristics. Smell and taste are unaffected there was no presence of strange smell or taste. As far as microbiological analyses are concerned, neither one pathogen was detected and number of *Enterobacteriaceae* was at level less than 102 cfu/g. After expiry of shelf life in a period of 15th and 20th day of storage, the sensory analysis showed the presence of strange sour-milky smell and rancid taste. Concerning microbiological analyses, there still were not positive results for pathogen microorganisms but the number of *Enterobacteriaceae* was at level more than 103cfu/g. Reviewing the results of sensory analysis indicates that it is not recommended to extend the shelf-life of the product comparing to the already defined shelf-life because occurred changes may adversely affect the consumer desire for the choice of this product.

**Keywords :** confectionary product, extension of shelf life, sensory and microbiological analyses, sustainability

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