Effect of Storage Conditions on Sensorial Characteristics of a Kefir-Type Formula Containing Brewer’s Yeast During Shelf-Life

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SUMMARY

A kefir-type formula containing brewer’s yeast was manufactured in the Pilot station of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania by inoculating 1.8% skimmed, pasteurized cow milk with an optimized inoculum of lactobacilli, kefir and brewer’s yeasts, as we have describe in our previous research paper (Păucean et al., 2010). In order to assess the effect of storage conditions during product shelf-life (1-21 days), we considered three storage conditions as affecting the sensorial characteristics of the studied product: freezing at (-10°C), refrigeration at 0-4°C and storage at room temperature 21-32°C.

Kefir samples were randomized and 15 panellists, specially trained for this study, evaluated them using a hedonic scale of 1-5 points for taste, aroma, texture, aftertaste and overall acceptability. All samples were served in plastic cups and freeze-stored, respectively refrigerated samples were allowed to reach the 5-10°C before evaluation (Drake, 2007, Muhammad et al., 2009). The taste and aroma of samples stored in the freezer (4.0 and 4.3, respectively) and in the refrigerator (3.7 and 3.5) rated between fair (3.0) and pleasant (4.0) and were significantly (p<0.01) higher than those of the samples stored at room temperature (2 and 2.2) during all the analysed period (21 days). The aftertaste of the sample stored at room temperature was unpleasant (1) after 14 and 21 days of storage.

The texture of the samples stored in the freezer and refrigerator were evaluated as good (4.5 and 3.9) and were significantly (p<0.01) different from the score obtained by the sample stored at room temperature, which was considered as indifferent (2.3). The overall acceptability of the freezing samples was assessed with the highest score.

Based on these results, it was concluded that kefir-type product containing brewer’s yeasts could be stored for up to 14 days in the refrigerator or freezer and for up to 7 days or less at room temperature.

REFERENCES