

The sour milk drink with antioxidant properties

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Introduction. The food of modern society is characterized by lack of valuable food substances, first and foremost macro elements, and by the surplus consumption of other nutrients.

Sour milk drinks are popular among the population because of their refreshing taste, delicate texture, the beneficial action on the human body. Recently many manufacturers have begun to enrich sour milk drinks with some food additions, but often they did it haphazardly, without considering the features of microstructure, rheological characteristics, biological compatibility of components of the enriched and milk base.

The purpose of research is to study the organoleptic and rheological properties of sour milk drinks.

Materials and methods. During the technological processes of milk drinks (receiving milk-based of domestic production with 2.6% fat) we fulfilled the following operations: fermented milk (which firstly was boiled) at 40 ° C temperature with simultaneous application of dry leaven such as "Symbiotyk" and TM GoodFood and P vitamin complex with relevant pectin (fruit or citrus), and then thoroughly mixed this mix. Further ripening was conducted at 18 ° C for 24 hours in aerobic environment.

The obtained investigated samples consist of the following components: №1 sample contains only milk ferment and dry leaven; the sample number 2 - milk, dry leaven and ferment fruit pectin; sample number 3 - milk, dry leaven and citrus pectin; sample number 4 - milk, dry leaven and P-vitamin complex, № 5 - milk, dry leaven, P-complex vitamins and fruit pectin, № 6 - milk, dry leaven, P-vitamin complex and citrus pectin.

The evaluation of taste and smell of the sour milk drinks were performed using the profile method, based on the fact that if individual pulses of taste and smell are united, they will give a new pulse in the common taste and aromatic characteristics of the product. The sour milk leaven without filler was used as a standard of comparison, which determined the order of appearance and intensity of individual pulses.

Results and discussion. Five-point scale was used to evaluate the organoleptic properties of the samples: 5 stars - excellent quality 4 - good 3 - satisfactory, 2 - bad (defective food product) 1 - very bad (technical lack).

Main descriptors of taste are: 1 - strong sour milk flavor; 2 - sour and fruity; 3 - slightly sour taste; 4 - sour taste with a bitter taste; 5 - strong bitter taste; 6 - harmonious sour and bitter taste. Main descriptors of smell are: 1 - pleasant; 2 - satisfactory; 3 - satisfactory; 4 - satisfactory; 5 - bad; 6 - bad.

It has been established that P-vitamin complex strengthens the bitter taste and pectin softens the flavors (sample number 5, 6). Sweet taste is strengthened if fruit pectin is injected (sample number 2, 5), citrus pectin (sample number 3, 6) provides more refreshing taste with a strong sour milk taste.

Conclusions. The usage of P-vitamin complex as a functional ingredient for enriching sour milk drinks will expand their range and improve the nutritional and biological value. The usage of fruit pectin and vitamin P complex significantly improves the texture and structure of sour milk product and make better taste and smell.

References:

1. Mogensen, G. Influence of whey protein denaturation and casein aggregation on the consistency of yoghurt. G. Mogensen, H. Madsen, H.Olsen, P.Poulsen // XXI International Dairy Congress. – 1982, brief communications, vol.1, book 1, p.285.