

THE INDEXES OF MILK SOURING WITH APPLICATION OF IMMOBILIZED FERMENT STREPTOSAN

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The sour milk products are much in demand of Ukrainian population. The probiotic cells in these products have positive influence on human digestion and health. Several ferments are used for production of sour milk drinks, one of them is streptosan.

To increase the resistance of the microorganisms in the streptosan ferment to negative factors (anti-microbial preparations, detergents and disinfectants) that can get into milk in different ways, the immobilized forms of the latter were obtained. The food additives were used as carriers: modified pectin and modified gelatin. The impact of different doses of stabilized streptosan ferments on milk souring was experimentally found out: minimal time for the milk clot development, clot development and titrated acidity 8 hours after thermostating.

It was proved that during 8 hours of thermostating at $36,0 \pm 0,5^{\circ}\text{C}$, milk curdling occurred with 360 mg/l of streptosan ferment immobilized on modified pectin and with 420 mg/l of streptosan ferment immobilized on modified gelatin. Application of immobilized ferment in amount of 40 and 45 mg per 250 cm^3 milk did not provoke milk curdling during 20 hours of thermostating. Application of 125-130 mg of streptosan ferment immobilized on modified pectin leads to a finished sour milk drink during 5,3-5,5 hours. With the increase of ferment quantity per raw material unit, the curdling time is decreasing.

The titrated milk acidity after 8 hours souring with small doses of immobilized ferment (40-80 mg per 250 cm^3 milk) did not correspond to normative requirements. The optimal titrated acidity was observed in the samples where 90-115 mg of streptosan ferment immobilized on modified pectin and 105-120 mg of streptosan ferment immobilized on modified gelatin were used for milk souring.

With the increase of ferment amount in milk, the titrated acidity of the product increases.

Keywords IMMOBILIZED STREPTOSAN FERMENT, SOUL MILK DRINKS, MILK, TITRATED ACIDITY OF SOUL MILK PRODUCT, FORMING OF SUCKLING CLOT, IMMOBILIZATION OF MICROORGANISMS.