



ODESSA NATIONAL ACADEMY OF FOOD TECHNOLOGIES

DEVELOPMENT OF ICE CREAM PRODUCTION TECHNIQUE FOR PEOPLE WITH LACTASE DEFICIENCY

Purpose and scope

Production of a new product (ice cream) that can be used by people, who suffer from lactase deficiency, is a prior task for improving public health.

Main characteristics and the development essence

Technique of ice cream production with a reduced content of sugar that can be achieved by process of normalized mixture enzymic hydrolysis was developed. In the work, the components for ice cream production were selected; modes of the received mixture enzymatic hydrolysis by β -galactosidase products were developed and discussed; recipe for the production of ice cream with a low content of lactose was calculated. Ice cream for people with lactose deficiency is a product received in the result of normalized mixture enzymic hydrolysis with its further beating and freezing out of moisture from it. The product has a low content of lactose 1.3% (6.7% - in traditional ice cream), that helps to recommend it for usage by people, who suffer from lactose deficiency.

Comparison with the world's analogues, the main development advantages

This technology helps to achieve sugar saving in the production to 13.7 kg per 100 kg of mixture (15 kg per 100 kg - the traditional ice cream).

The intellectual property protection status

No patents.

Demand in the market

Sales market for the product is wide because about 45 ... 50% of the adult population in Ukraine suffer from lactose deficiency.

The readiness for development status

The technologies for small-scale production, the technology is ready for industrial application, the normative documentation (TU and TI) for production was developed. Industrial tests of the technique have been conducted at the LLC "Elit".



Ice cream for people with lactase deficiency

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