

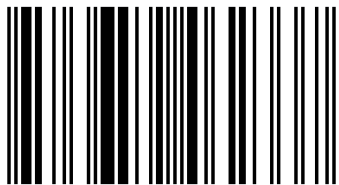
In the monograph questions of production of food tinned products are considered. The role of microorganisms in canning production is characterized, microbiological bases of conservation are lit, microbiological indicators and main types of microbiological damage of raw materials and finished goods, the characteristic of separate groups of microorganisms, components residual microbio-that canned food are given, and also data on test cultures of microorganisms according to which the operating modes of thermal treatment are developed for the wide range of canned food. Data on power efficiency of modern designs of the sterilizing equipment of the canning industry are provided and use of the concept "exergy" for an assessment of efficiency of technological decisions is offered. Questions of use of the principles of HACCP at an assessment of quality of raw materials in the food industry are considered and tinned foodstuff.



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Microbiology, energy, packing and control of the canning production



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MICROBIOLOGY, ENERGY, PACKING AND CONTROL
OF THE CANNING PRODUCTION

SCIENTIFIC PUBLICATION

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INTRODUCTION

The canning production is one of the most important branches in the food industry. Production of the wide range of tinned foodstuff and its delivery to the consumer market are of great importance for the population because of their considerable contribution to reducing of labour and time expenditure on cooking under domestic conditions. Besides, the use of modern technologies in the canning industry makes it possible both to develop high-quality production and satisfy various increasing demands of the population. When the canned food is being produced the raw materials are exposed to various kinds of processing, which influence them in different ways by technological processes and operations.

The main technological process of the canning production is sterilization of a ready tinned food product, i.e. canned food treatment for microflora, which makes it possible to store the finished products for a long time under normal conditions for the purpose of their further consumption.

In order to conserve the foodstuff the glass, metal or polymeric consumer containers of various capacities are used. The features of consumer containers of each type demand an individual approach to developing the modes of final physical processing of production for receiving canned food, i.e. the long-term storage foodstuff. Besides, the modes depend on a type of the preserved production and its physicochemical and microbiological indices.

The processing of food raw materials at production of canned food is made on various technological lines which consist of different equipment. To choose the most acceptable sequence of technological equipment the authors of the present edition offer to use the method of an exergic assessment of power-intensive processing equipment modified for the food industry. According to the legislation of the European Union (the requirement of Regulations of the EU No. 2073) the following of a set of requirements for safety of foodstuff is provided. The safety problem, being the most important characteristics of the food quality, continues gaining more relevance as the increasing environmental pollution is leading to a constant growth of the food raw materials contamination and quantity of chemically contaminated food which is not peculiar to the nature and is harmful for a person's health.

The problem of the foodstuff quality and safety is many-sided. The authors have focused their attention to its most important questions in the present publication. First of all the microbiological safety ensuring is concerned. The considerable attention is also paid to the investigation of the international documents (ISO, the Codex

Alimentarius, the EU etc.) regulating the foodstuff quality and safety. On the basis of the Codex Alimentarius documents, the ways of creation of system of microbiological safety ensuring and the principles of development and application of microbiological criteria, in particular, are considered. Herewith the authors proceed from the fact that the direct control, being destructive, expensive and slow, being not able to provide necessary reliability of the end results, has to be supplied with the system of technological control based on the indirect markers control.

The information on reliability of the existing methods of the specified microorganisms detection, efficiency and accuracy of these methods, inactivation of these microorganisms under the influence of various physical and chemical factors is provided.

The book reflects the peculiarities of the control procedure of the different types of canned food accepted on the basis of long-term researches.