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TECHNOLOGY OF THE FERMENTED MILK PRODUCT PRODUCED BY USING THE RICE FUNGUS STARTER

T.I. Shingareva, T.L. Shulyak, A.A. Kupriets

A study was made into the technological characteristics of the production of a new fermented milk product by using rice fungus starter. Influence of milk pasteurization, fermentation and maturation conditions on the physico-chemical, organoleptic and rheological characteristics of the new product was analyzed. Technology of a new kind of fermented milk product by using rice fungus starter was developed. Quality indices and microbiological properties of a new type of fermented milk product as well as their change during storage were examined.

CHARACTERISTICS OF THE BIOLOGICAL VALUE OF «BELPRO» CONCENTRATE PROTEINS

Z.V. Vasilenko, A.V. Akulich, E.N. Rogova

Biological value of connective tissue proteins «BELPRO» concentrate made from hide sawn-off piece of cattle was studied. Amino acid composition of connective tissue proteins «BELPRO» concentrate was determined as compared with that of the proteins of hide sawn-off piece of cattle and import protein supplement «NovaPro». The digestibility of connective tissue proteins «BELPRO» concentrate was described in comparison with that of hide sawn-off piece of cattle and import protein supplement «NovaPro». Concentrate of connective tissue proteins «BELPRO» is found out to be characterized by high digestibility. The possibility and prospects of using the concentrate «BELPRO» in the production of sausages are shown.

COMPARATIVE CHARACTERISTICS OF AMINO ACID COMPOSITION OF FLOUR PROTEINS FROM «PHARAOH» PEA GRAINS AND PEA FLOUR «PEATEX»

Z.V. Vasilenko, A.V. Akulich, O.A. Vetoshkina

Amino acid composition and biological value of proteins of flour from pea grains of «Pharaoh» variety and «PEATEX» brand pea flour obtained by the extrusion method were studied. Proteins of flour from pea grains of «Pharaoh» variety are found out to be characterized by higher values of indicators characterizing biological value than those of «PEATEX» brand pea flour. It is shown that both pea grains of «Pharaoh» variety and «PEATEX» brand pea flour can be used as additives in the production of meat products as well as the main ingredient of combined meat products.

STUDIES ON CHEMICAL COMPOSITION OF A FERMENTED WHEAT PRODUCT AS A RAW MATERIAL INGREDIENT FOR BAKERY

R.G. Kondratenko, E.N. Urbanchik, E.M. Parkalova, T.L. Shchuplyakova

Chemical composition of the fermented wheat product was studied. A comparative analysis was made into chemical composition and physico-chemical quality parameters of the fermented product and top and first grade wheat flours. The possibility of using the fermented wheat product for manufacturing functional bakery products was analyzed.

DEVELOPMENT OF SCIENTIFIC-BASED TECHNOLOGY OF THE PRODUCTION OF CULINARY PRODUCTS FOR GLUTEN-FREE DIET

Z.V. Vasilenko, V.V. Redko-Bodmer

The technological properties of several types of gluten-free flour have been investigated and their application for culinary products technology and recipes has been scientifically justified. There has been shown the expediency of combining ingredient composition to have optimum value of digestible indispensable amino acid score, to increase calcium content and to give functional food status to culinary products.

INVESTIGATION OF POSSIBILITY OF USING COMPONENTS CONTAINING CAROTENOIDS FOR THE PRODUCTION OF MIXED FODDERS FOR CARP

L.V. Rukshan, J.V. Koshak, D.V. Dolgaya

Traditional and non-traditional components of mixed foddors for carp are investigated. The content of carotenoids in them has been determined. Recipes have been worked out and mixed foddors which include components containing the greatest number of carotenoids have been developed. Feeding of commodity carp with mixed foddors that include fodder supplements - coloring agents «Eco Gold» and «Cantaxanthin» was carried out. The analysis of carp muscles was also done. Optimum dosages of supplements «Eco Gold» and «Cantaxanthin» and time for carp feeding have been determined.

DEVELOPMENT OF SCIENTIFICALLY-BASED TECHNOLOGY FOR THE PRODUCTION OF PECTIN FROM APPLE POMACE

Z.V. Vasilenko, V.I. Nikulin, L.V. Lazovikova

Influence of the parameters of apple pomace preparation for hydrolysis and those of hydrolysis process of protopectin was studied in order to develop a scientifically based energy-saving technology for the production of pectin, which makes it possible to extract the maximum amount of pectin with high quality indices.

A QUALIMETRIC MODEL OF PREDICTING THE QUALITY INDICATORS OF CANNED MAIN DINNER COURSES WITH THE ADDITION OF GERMINATED WHEAT GRAINS

M.L. Zenkova, D.A. Babich

A qualimetric model for a comprehensive assessment of the quality of canned main dinner courses with the addition of germinated wheat grains was analyzed. This model includes a tree of properties as well as «House of Quality» developed by means of the method of structuring the quality function (SFC). Consumer properties in product designing were studied as well as stages of structuring the quality function (SFC) of canned main dinner courses with the addition of germinated wheat grains were presented.

TECHNOLOGY FOR CURD PRODUCTION ON THE BASIS OF ACID COAGULATION OF MILK PROTEINS WITH APPLICATION OF CALCIUM CHLORIDE AND TRANSGLUTAMINASE

O.I. Skokova, A.I. Pachkovskiy, Yu.Yu. Chekanova

Studies have been made into combined application of high-temperature treatment of milk, calcium chloride and transglutaminase in curd production on the basis of acid coagulation of milk proteins. The expediency of using transglutaminase enzyme in curd production on the basis of acid coagulation of milk proteins to increase the yield of the finished product, to reduce raw materials and cut production costs of the finished product has been shown. A resource-saving technology for curd production based on acid coagulation of milk proteins with the use of calcium chloride and transglutaminase has been developed.

IMPROVEMENT OF THE QUALITY OF MILK OBTAINED AT COMMERCIAL DAIRY FARMS

T.I. Shingaryova, V.A. Sharshunov, S.V. Krasotskiy

The problems of the composition of the milk obtained and improvement of its quality at commercial dairy farms are considered. Factors influencing significantly on the grade of milk and microbiological indices such as cooling, sanitary-hygienic state of commercial dairy farms, bactofugation have been studied. An analysis of the dependence of the composition of milk on the state of animal health associated with mastitis was carried out. Data are given on the non-feasibility of installing bactofuges at dairy farms at the present time.

DURUM WHEAT AS A RAW MATERIAL FOR CEREALS INDUSTRY

I.S. Kostsova, A.I. Lysenkova, E.V. Godun

The results of the studies on biochemical and physical properties such as geometric dimensions, sphericity, size, evenness, nature, mass of 1000 grains, vitreousness, density and volume of caryopsis of durum wheat grain grown in the Republic of Belarus are presented. A number of correlation dependencies between individual

attributes of grain quality are established. For the first time there was made a comprehensive assessment of technological properties of durum wheat grown in the Republic of Belarus and the possibility of its using as a raw material for cereals production was studied

EFFICIENT METHODS AND VORTEX APPARATUSES FOR CLEANING DUST AND GAS EMISSIONS FROM FINELY DISPERSED PARTICLES

A.V. Akulich, V.M. Lustenkov, A.A. Akulich

New methods for cleaning dust and gas emissions and energy-efficient vortex apparatuses developed on the basis of interacting swirling flows and including grouped dust collectors of countercurrent and straight-flow type are considered. The results of experimental studies of the hydrodynamics of the developed apparatuses are presented. The influence of regime and design parameters on the hydraulic resistance and the efficiency of trapping fine particles in vortex dust collectors is shown. The results of industrial application of vortex dust collectors developed by the authors are presented.

APPLICATION OF THE VOLUMERIC AND WEIGHT METHODS OF DOSING IN FOOD AND DAIRY INDUSTRIES

A.V. Ivanov, T.I. Shingareva, N.V. Ivanova

Dosing methods used for the packaging of dairy products with the properties of bulk materials are considered. Textural features of curd that should be taken into consideration when selecting the packing equipment so that the deviations in the mass of the products do not exceed the standard ones are considered. The possibility of a volumetric dosing for curd with different fat content and consistency to ensure the accuracy of products by weight is described.

DIRECTIONS FOR THE IMPROVEMENT OF EQUIPMENT IN MIXED FODDER PRODUCTION

V.A. Sharsunov, A.V. Cherviakov, S.V. Kurzenkov, O.V. Pontalev, S.I. Kozlov, P.Yu. Krupenich

The promising directions and technical solutions for combined effects on grain and grain mixtures are presented. Recommendations are given on the application of the presented technological operations and on the use of the processed products in the diet of animals and poultry.

METHODS OF FORECASTING TIME OF HEAT TREATMENT OF MEAT PRODUCTS IN STEAM-AIR MEDIA

A.A. Smolyak, D.A. Smagin, M.N. Smagina

Theoretical and experimental studies on the process of heating meat chopped products have been carried out. It is shown that the regularities of transient heat

conduction of homogeneous bodies can be used for food products (for example, meat chopped products) subjected to heat treatment in a superheated water vapor environment. Mathematical relationship between frying time of ellipsoid shaped products made from natural minced meat and the radius, thermal diffusivity and initial temperature of the product recommended for the use in the production operations is worked out.

CUTTING AGRICULTURAL RAW MATERIALS IN THE CUTTER

A.L. Zheludkov, S.V. Akulenko, K.K. Guliaev

The types of raw materials for processing in machines for fine grinding at enterprises of various branches of the food industry and food service establishments are determined. The possibility of using the cutter for grinding vegetable raw materials (apples, pumpkins, sugar beets) has been established. Some aspects of grinding protein-containing raw materials, which allow increasing the yield of finished sausages and reducing production losses, have been studied.

ON SOME DIRECTIONS OF THE STRATEGIC DEVELOPMENT OF MEAT PROCESSING ORGANIZATIONS

Yu.E. Klimova, T.A. Volyntsevich

The main trends of meat and meat products market in the Republic of Belarus were studied. To improve the efficiency of the organization there were recommended promising directions for the development of meat-processing enterprises, taking into account modern trends in the production of meat products and consumer preferences.