

Development of the Integrated Quality Management System of Cooked Sausage Products

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Abstract : Over the past twenty years, there has been a drastic change in the mode of nutrition in many countries which has been reflected in the development of new products, production techniques, and has also led to the expansion of sales markets for food products. Studies have shown that solution of the food safety problems is almost impossible without the active and systematic activity of organizations directly involved in the production, storage and sale of food products, as well as without management of end-to-end traceability and exchange of information. The aim of this research is development of the integrated system of the quality management and safety assurance based on the principles of HACCP, traceability and system approach with creation of an algorithm for the identification and monitoring of parameters of technological process of manufacture of cooked sausage products. Methodology of implementation of the integrated system based on the principles of HACCP, traceability and system approach during the manufacturing of cooked sausage products for effective provision for the defined properties of the finished product has been developed. As a result of the research evaluation technique and criteria of performance of the implementation and operation of the system of the quality management and safety assurance based on the principles of HACCP have been developed and substantiated. In the paper regularities of influence of the application of HACCP principles, traceability and system approach on parameters of quality and safety of the finished product have been revealed. In the study regularities in identification of critical control points have been determined. The algorithm of functioning of the integrated system of the quality management and safety assurance has also been described and key requirements for the development of software allowing the prediction of properties of finished product, as well as the timely correction of the technological process and traceability of manufacturing flows have been defined. Based on the obtained results typical scheme of the integrated system of the quality management and safety assurance based on HACCP principles with the elements of end-to-end traceability and system approach for manufacture of cooked sausage products has been developed. As a result of the studies quantitative criteria for evaluation of performance of the system of the quality management and safety assurance have been developed. A set of guidance documents for the implementation and evaluation of the integrated system based on the HACCP principles in meat processing plants have also been developed. On the basis of the research the effectiveness of application of continuous monitoring of the manufacturing process during the control on the identified critical control points have been revealed. The optimal number of critical control points in relation to the manufacture of cooked sausage products has been substantiated. The main results of the research have been appraised during 2013-2014 under the conditions of seven enterprises of the meat processing industry and have been implemented at JSC «Kyiv meat processing plant».

Keywords : cooked sausage products, HACCP, quality management, safety assurance

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