

# THE SECOND NORTH AND EAST EUROPEAN CONGRESS ON FOOD

## NEEFood-2013 Kyiv

May 26-29, 2013

NUFT, Kyiv, Ukraine

Organized by:



National University  
of Food Technologies

and



Association  
«Higher Educational Institutions and  
Enterprises of Food Industry  
UkrUFoST»

In cooperation with:



## AIR DISTRIBUTION RESEARCH IN CELLS FLUCTUATIONAL FEEDING THE MIXTURE IN SMOKED SAUSAGES PROCESSING

Igor Babanov<sup>1\*</sup>

<sup>1</sup>*National University of Food Technologies, 68, Volodymyrska str., 01601, Kyiv, Ukraine*  
<sup>\*</sup>*info@nuft.edu.ua*

One of the necessary conditions for the maintenance of the quality and weight loss reduction of meat products, including raw smoked sausages, with heat treatment of air, aero-steam and smoke-steam environments - is a uniform distribution of temperature and humidity and velocity fields of the environment, which transmits heat in the working volume of the cameras. Uniformity of distribution of the environment, which transmits heat, depends on the method and design of air distribution system.

System of pulsating air division consists of fan supply air airgoing, two air distribution channels, mechanism, switch supply air or smoke-steam environment in discharge channels, dampers and outlet of the channel.

For the study of air distribution system we measured speed and temperature of air in smoke-steam environment of the supply and in the most characteristic points of the working zone of thermal cameras. The speed of air and smoke-steam environment movement is measured by thermoanemometr with digital data.

The system under consideration (air division) allows to reduce air exchange ratio and the specific air load, and, accordingly, electric power consumption on the distribution of air and smoke-steam environment in the working volume of the chamber, as well as energy consumption in its handling of the unit for conditioning (directly in the air conditioner or smoke generator). Processing the product of an aircraft or smoke-steam environment in the heat chamber on a "top - to the mountain" allows to obtain uniform distribution of the fields of motion and, as a consequence, the temperature and humidity fields. On the basis of the conclusions about the system of pulsating air division, it is possible to recommend the introduction of the thermal chamber and other devices for thermal processing of meat products.

**KEY WORDS:** Pulsation, heating stage, air conditioning