



8<sup>th</sup> Central European Congress on Food

*Food Science for Well-being*  
23-26 May 2016, Kyiv, Ukraine



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# BOOK OF ABSTRACTS

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The congress addressed the following topics:

FOOD EXPERTISE, SAFETY AND TECHNOLOGIES

- **Food Expertise and Safety**
- **Food Technologies**

ENERGY SYSTEMS FOR FOOD CHAIN

- **Energy Efficiency**
- **Machine Building for Food Chain**
- **Intelligent Control Systems**

NATURAL BIOACTIVE COMPOUNDS, FUNCTIONAL AND NATURAL FOOD PRODUCTS, PACKING, STORING AND PROCESSING

- **Natural Bioactive Compounds, Functional and Local Food Products**
- **Packaging, Storing and Processing**
- **Food Processing**

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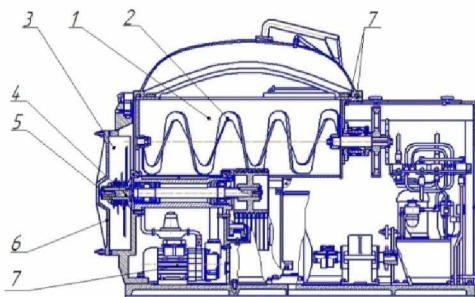
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### IMPROVED DESIGN OF THE CUTTING-AND-MIXING MACHINE FOR PRODUCTION OF SEMI-SMOKED SAUSAGES

This design relates to food production and can be used in obtaining the manufacture of minced meat sausages, sausages, cooked and smoked sausages.

The basis of this design task is to improve the quality of the stuffing by eliminating air access to process raw materials in the zone of the cutting-and-mixing of stuffing.



*Fig. 1. The cutting-and-mixing machine  
with improved design*

The cutting-and-mixing machine consisting of a body 1, bowl with moon spiral auger 2 inside, cutter 3, which is connected to the sidewall of the mixing with blades 5 on the drive shaft 4 and the ending caps 6. Under this model execution the ending cap of the mixer and sidewall cover at the cutter are connected hermetically and are provided with vacuum system.

The using of a vacuum in the mixer are providing the saving color of the material raw, improving the binding protein and moisture, increasing the number and quality of products, reducing the rate of aerobic microorganisms and accelerating the oxidation of proteins and fats. Reducing the oxygen content in the raw extend its storage. Due to the vacuuming decreases the supply of air of oxygen to the stuffing and reduced duration of the cluttering, improving the process of grinding the connective tissue, stuffing becomes less intense, stable color, inhibited growth of aerobic microorganisms.

This design of the cutting-and-mixing machine with the installed system of vacuuming of stuffing, not only enhance its quality indicators, but also to replace the enterprises for the production of sausages just two machines — the vacuum cutter and meat mixer.

The technical result of the proposed technical solution is to improve the quality of the stuffing with vacuuming of the zone of the cutting-and-mixing of stuffing.

**KEY WORDS:** cutting-and-mixing machine, vacuum system