



**“ANGEL KANCHEV” UNIVERSITY OF RUSE  
UNION OF SCIENTISTS – RUSE**

**РУСЕНСКИ УНИВЕРСИТЕТ “АНГЕЛ КЪНЧЕВ”  
СЪЮЗ НА УЧЕНИТЕ – РУСЕ**

# **Sessions Schedule & Abstracts**

## **Програма & Резюмета**

*58<sup>th</sup> Annual Science Conference of Ruse University*

**NEW INDUSTRIES, DIGITAL ECONOMY, SOCIETY -  
PROJECTIONS OF THE FUTURE II**

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**НОВИ ИНДУСТРИИ, ДИГИТАЛНА ИКОНОМИКА, ОБЩЕСТВО –  
ПРОЕКЦИИ НА БЪДЕЩЕТО II**

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## OPTIMIZATION OF MEAT-CONTAINING SEMI-FINISHED PRODUCTS FORMULATIONS WITH THE MICROBIOLOGICAL DERIVED PROTEASES APPLICATION

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**Abstract:** *The article is devoted to the influence of microbiological derived proteases on the functional and technological characteristics of meat-based semi-finished products, which included in their recipes the fillets of broiler chickens, chickpeas and lentils. Optimal modes of hydration and pre-treatment of plant raw materials have been established for further enzymatic treatment with *Aspergillus niger* proteases (1). Thus, the experimental samples presented semi-finished products with different content of vegetable and meat raw materials, which resulted in the determination of the optimal formulation and its comparison with the data obtained by modeling the formulation by chemical composition and nutritional value (2, 3). According to the data obtained, the maximum value of water holding capacity (78.6%) was recorded in the semi-finished product using boiled chickpeas in combination with step-by-step enzymatic treatment with the introduction of 35 mg of enzyme raw material per gram of substrate. Limit formulations of meat-based semi-finished products are also modeled, based on organoleptic characteristics and minimal value of water holding capacity during heat treatment (frying). The change of the herbal component in the composition of the formulation, as well as its combination, had a significant effect on the consistency and organoleptic characteristics of the finished product, but had little effect on the pH and yield of the studied products (4, 5). The further aim of the research should be to determine the shelf life of meat-containing semi-finished products in all thermal states (under freezing conditions at -40 and -18 °C and at + 4-6 °C), as well as to adjust the organoleptic parameters of finished semi-finished products.*

**Keywords:** *meat, semi-finished products, microbiological derived proteases, plant stuff.*

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