



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

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

Sessions Schedule & Abstracts

Програма & Резюмета

58th Annual Science Conference of Ruse University

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

58^{ma} Годишна конференция на Русенския университет

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

2019

Silistra, Ruse, Razgrad

THE MICROSTRUCTURE OF GERONTOLOGIC FOOD PASTES

Assoc. Prof. Oleg Galenko, PhD

Department of Meat and Meat Products,
National University of Food Technology, Ukraine
E-mail: galen@i.ua

***Abstract:** Technology of production the pastes which are balanced by micronutritional composition is researches for the purpose of developing and widening of assortment of gerontologic products.*

Designed paste has a more balanced micronutritional composition compared with control samples. Found that in the control sample of pastes content of Ca and P is dramatically unbalanced - 1: 9.8 at recommended 2: 1. While increasing content of protein-mineral gerontologic enricher, the content of Ca is increasing and content of P is decreasing. Thus when you add 10% protein-mineral gerontologic enricher to paste recipes, you get almost perfect ratio of Ca: P = 1: 0.5. Also found that the addition of 5% protein-mineral gerontologic enricher (recipe №1) is not sustainable because it is not optimal for gerontologic products - the content of Ca is just 174.1 mg per 100 g or 13.7% of the daily requirement.

The microstructure of the developed paste includes in its composition the muscle tissue in the form of muscle fibers fragments up to 0.7-0.8 mm. Muscle tissue has a microstructural changes which are typical for temperature impact - moderate destruction of muscle fibers, resulting in swelling, appearance of gaps and fragmentation. The cells found in the nucleus of muscle fibers in the form of shadows, in the connective tissue they survive better.

It is recommended to use the developed product in nutrition of elderly and centenarians.

Keywords: meat, nutrition, herodiet, paste, protein, calcium.

REFERENCES

Jochen Weiss, Monika Gibis, Valerie Schuh, Hanna Salminen, (2010). Advances in ingredient and processing systems for meat and meat products, Meat Science, Vol. 86, Is. 1, Pp. 196-213.

Alison J. McAfee, Emeir M. McSorley, Geraldine J. Cuskelly, Bruce W. Moss, Julie M.W. Wallace, Maxine P. Bonham, Anna M. Fearon (2010). Red meat consumption: An overview of the risks and benefits, Meat Science, Vol. 84, Is. 1, 1-13.

Huang S.C., Tsai Y.F., Chen C.M. (2011). Effects of wheat fiber, oat fiber on sensory and physico-chemical properties of Chinese-style sausages, Asian-Australian Journal of Animal Science, Vol. 24, Is. 6, 875-880

Bou R., Codony R., Tres R., Decker E.A., Guardiola F. (2009). Dietary strategies to improve nutritional value, oxidative stability, and sensory properties of poultry products, Critical Review on Food Science and Nutrition, Vol. 49, Is. 9, 800-822

Peshuk L., Galenko O. (2014). Use of collagenase in technology gerodietetic products, Journal of food and packing science, technique and technologies. №3, 8-11.

Peshuk L., Galenko O. (2014). Rational use of the collagen, Ukrainian Journal of Food Science. Volume 2. Issue 1, 361-370.