

APPRECIATING THE NUTRITIVE VALUE OF “SUMMER SAUSAGE” GIVEN BY THE PROTEIC CONTENT

F. Berbentea, Crina Berbentea, A. Rinovetz

Faculty of Food Processing Technology, Banat'University of Agricultural Sciences and Veterinary Medicine, Calea Aradului , No.119, RO-300645, Timisoara, Romania

Abstract

The summer sausage is a food product with a very high level of quality, with a high nutritive value which gives the nutritive and physiological balance between the main components of food - proteins, fats, carbohydrates and vitamins – that will satisfy the needs of a specific, rational, balanced and complete feed depending on the nature of the labor and the consumers age. After all the determination it was proved that the summer sausage sample with the heist protein contain has a nutritive value superior to the other two samples that we worked with.

Keywords: *quality, proteins, meat composition, nutritive factors*

Introduction

The nutritive value left from the chemical composer of meat that is the prime mater in the summer sausage fabrication. The protein contained by the summer sausage represents an important source of nitrogen with a great biological value, condition by the essential aminoacids contained (Banu, 2002).

Experimental

The method used in the determination of total proteic substances was the Kjeldahl method. Hitting it up with a concentrated sulfuric acid in presence of a catalyst mineralized the sample. In the end of the breaking down of the proteins and the compounds that contain nitrogen it releases ammonium ions that reaction with sulfuric acid forming ammonium sulfate acid. The ammonium released by the strong

alcalinization is distilled and than titrated with natrium hydroxide (Lupea 2000).

After the cooling down the mineralized has a green – blue color. The mineralization must be done with caution, so that the level of the sulfuric acid vapor conversation must not pas the tort of balloons neck. The process lasts four hours.

The titration was made carefully to catch exactly the moment in which the indicator turns from red to yellow. For the mineralization Kjeldahl mineralization balloons with 250ml capacity, the distillate unit, concentrated sulfuric acid, copper sulfate, kalium sulfate, sodium hydroxide 0,1N, alcoholic indicator solution (red methyl 0.2%) were used.

Results and Discussions

Because under the aspect of nutritive value, the proteins are the primary component in the alimentation products with animal origin, the quality of these products is appreciated by the quantity of proteins.

Tree samples of summer sausage mate by tree different fabricators were analyzed.

The physical-chemical characteristics are showed in the table 1, and the protein content of analyzed summer sausages is presented in figure 1.

Table 1. The physical-chemical characteristics for tree samples of summer sausages

	Dry matter [%]	Fat [%]	NaCl [%]	Nitrogen [mg/100g]
Summer sausage I	45.31	32.88	1.81	1.70
Summer sausage II	47.65	29.04	1.88	2.43
Summer sausage III	47.80	31.50	1.80	2.80

For correct evaluation of nutritive value of products the following parameters showed in the table 2 were calculated:

- Unitary Value (UV) = dry substance/humidity

- Energetic Indicator (EI) = fat % / protein %
- Plasticity Indicator (PI) = protein % / fat %
- Energetic Value (EV) = UV·EI
- Plastic Value (PV) = UV·PI
- Nutritive Value (NV) = EV·PV

Nutritive value is graphically presented in figure 2.

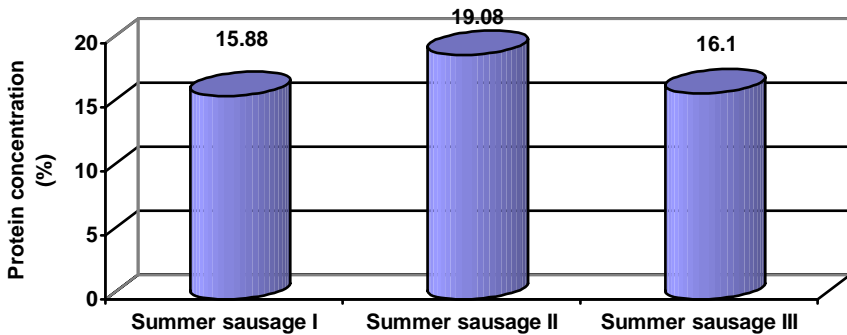


Fig. 1. Protein concentrations (%) in the samples of summer sausage

Table 2. Nutritive value in the samples of summer sausage

	I	II	III
UV	1.207	1.098	1.09
EI	2.07	1.52	1.95
PI	0.48	0.65	0.51
EV	2.49	1.67	2.12
PV	0.58	0.72	0.56

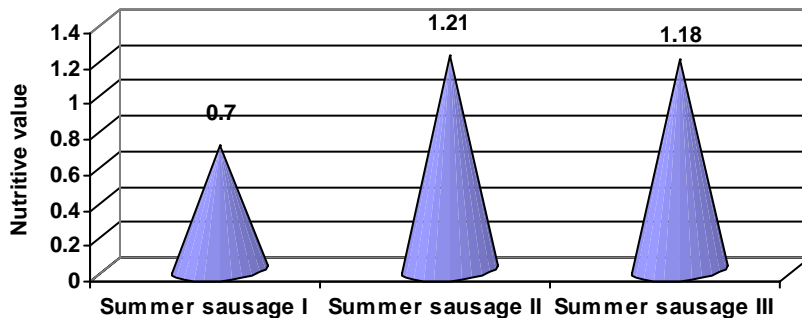


Fig. 2. Nutritive value in the samples of summer sausage

Conclusions

Counting on the all proteic substances for a minimum 15% in owner technical in use, the sausage samples analyzed there are in the these limits. After the analyses were proved that the summer sausage with the biggest proteic compound has a superior nutritive value then the other too samples.

References

- Banu C. (2002). *Manualul inginerului de industrie alimentară*, Ed. Tehnică, București
- Lupea, A.X. (2000). *Chimia și controlul alimentelor de origine animală*, Ed. Politehnică, Timișoara
- Standard Profesional SP – C 401 – 98, *Preparate din carne - Salamuri*