

## RESEARCHES CONCERNING THE QUALITY CHECKING OF SOME MEAT PRODUCTS IN MEMBRANES

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### **Abstract**

*The following preparations were used in the study: Victoria salami, Bucharest salami, Mistret salami and Pork salami. The amount of water varies between 42.68% and 64.21%, with an average value of 51.31% for Victoria salami, 45.73 % and 52.59% in the case of Bucharest salami. For Mistret salami and Pork salami the values ranged between 47.92 % and 54.36%, respectively 48.27% and 59.18%. The percentage of salt varies between: 1.64 % and 2.34 % in the case of Victoria salami, 2.10 % and 2.57 % in Bucharest salami, 1.52% - 2.34% in Mistret salami and 1.17% - 2.36% in Pork salami. The nitrites' values ranged between 2.0 and 5.0 mg/100 g product in Victoria salami, 1.0-3.0 mg/100 g product in Bucharest salami, 0.5- 3.0 mg/ 100 g product in the case of Mistret salami, and 1.5-4.0 mg/100 g product in Pork salami. Products under study range within the standard limits from the physical-chemical point of view.*

**Key words:** meat products, membranes, quality of food products

### **INTRODUCTION**

The quality of a food product is a complex problem, of which depends the acceptance or rejection by the consumer, and in essence, fulfilling the role for which it was created. Man's feeding must have a scientific, rational character, taking into account the plastic, energetic and physiological role which foods carries on the human body. Achieving qualitative corresponding indexes for various food products depends on several factors, namely: the quality of raw materials used, the processing activity, the degree of competence of workers, etc.

The quality of food products represents a particularly important factor, having profound implications, because feeding underlies to the bottom of life itself and determines the development of metabolic processes and has considerable influence on the development of the human body.

The need for a sanitary-veterinary control of the animal products results from the following objectives:

- To prevent illness from consumers if they would consume defective products from a hygienic point of view;
- To protect the staff from the industry and control of animal food products from the hazard contamination by manipulating certain non-hygienic products;

- To avert the danger of dissemination of infectious diseases or undergone by contaminated products;
- To supervise the compliance of legal norms by the units that harness the raw material of animal origin in food products;
- To monitor and prevent fraud through substitutions, additions of foodstuffs or substances of low or inferior value, thus, harming the consumer

## **MATERIAL AND METHOD**

The water determination was made by drying in the drying chamber at a temperature of to the 103<sup>0</sup>C. The method principle consists in the determination of the loss of weight by heating at 50<sup>0</sup>C for one hour, after a homogenous mixture of sample with sand and ethyl alcohol was formed in advance.

The determination of sodium chloride was made by Mohr's method. In the aqueous extract obtained from the sample product under study, the ions of chlorine are titrated with a silver nitrate solution (AgNO<sub>2</sub>), in the presence of potassium chromate used as an indicator. Chlorine ions are exhausted under the form of silver chloride, and the first drop in excess of silver nitrate in contact with the potassium chromate form the silver chromate of a brick-red color

The determination of nitrates (NO<sub>2</sub>) has been achieved through Griess method. The nitrates may not be combined in an acid medium with a flavored amine forming a certain salt of diasoniu. If this salt is condensed or coupled with another primary aromatic amine, a colored complex is formed. The color intensity of the solution under study is compared with that of a solution containing a known quantity of nitrites. Reading has been made with a spectrophotometer by using a standard curve.

The following preparations were used in the study: Victoria salami, Bucharest salami, Mistret salami and Pork salami.

## **RESULTS AND DISCUSSIONS**

After the lab test was made, it was noticed that the products ranges in most cases in the limits of STAS from a physical-chemical point of view.

**Victoria salami:** 19 samples were taken for analyses, obtaining the following results

- The quantity of water determined varies between 42.68% and 64.21%, with an average of 51.31%, being under the maximum limit allowed by STAS (68%);

- The amount of salt varies between: 1.64% and 2.34% with an average of 2.02% being under the maximum limit allowed by STAS(3%);"
- Quantity of nitrites ranges between 2.0 and 5.0 mg/100 g product, being under the maximum limit allowed by STAS (7 mg/100 g product).

**Bucharest Salami:** from a number of 8 samples examined it resulted:

- The quantity of water ranges between the values 45.73% and 52.59%, with an average of 49.99%, the maximum limit allowed by STAS being of 56%
- The percentage of salt obtained from deteriorations varies between 2.10% and 2.57% with a mean value of 2.14%, being under the maximum allowed by STAS (3%);
- The quantity of nitrites ranges between: 1.0-3.0 mg/100 g per product, with an average value of 1.37 mg/100 g per product, being significantly below the limit allowed by STAS (7 mg/100 g product).

**Mistret salami:** six samples were taken for study obtaining the following results:

- The quantity of water varies between: 47.92% and 54.36%, with an average value of 50.75% below the maximum limit allowed by STAS (59%);
- the amount of salt varies between: 1.52%-2.34% with an average value of 2.06%, being less than STAS limit (3%);
- The quantity of nitrites is between: 0.5-3.0 mg/100 g product, with an average value of 1.83 mg/100 g product, being below the maximum limit of STAS (7 mg/100 g product).

**Pork salami:** from a number of 8 samples under study, the following results were drawn:

- The quantity of water varies between: 48.27% and 59.18%, with an average value of 52.29% below the maximum limit allowed by STAS (60%);
- The amount of salt varies between: 1.17%-2.36% with an average value of 2.12%, being less than STAS limit (3%);
- The quantity of nitrites is between: 1.5-4.0 mg/100 g, with an average value of 2.75 mg/100 g product, being under the maximum limit of STAS (7 mg/100 g product).

The results are presented in Fig. 1, 2 and 3.

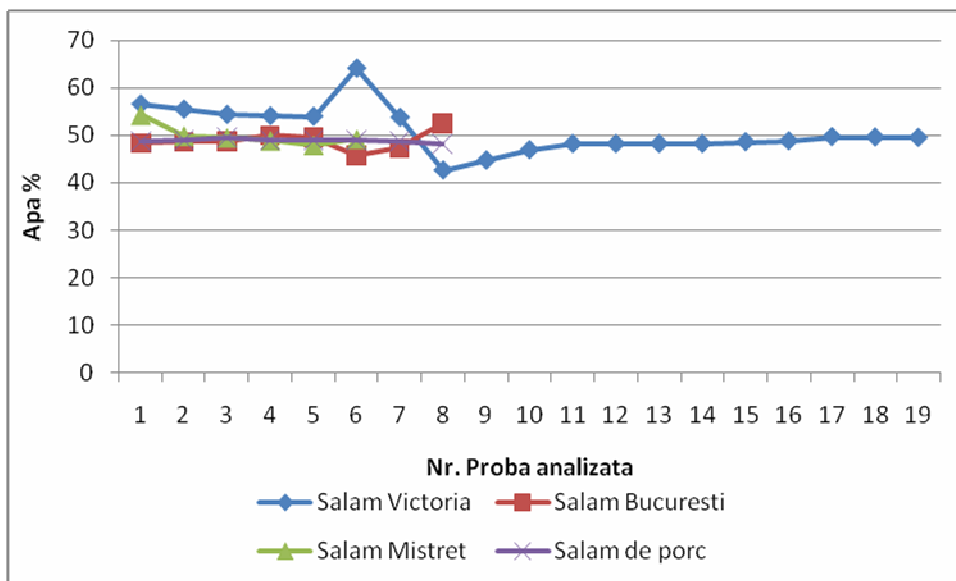


Fig.1. Water content variation in Victoria salami, Bucharest salami, Mistret salami, Pork salami

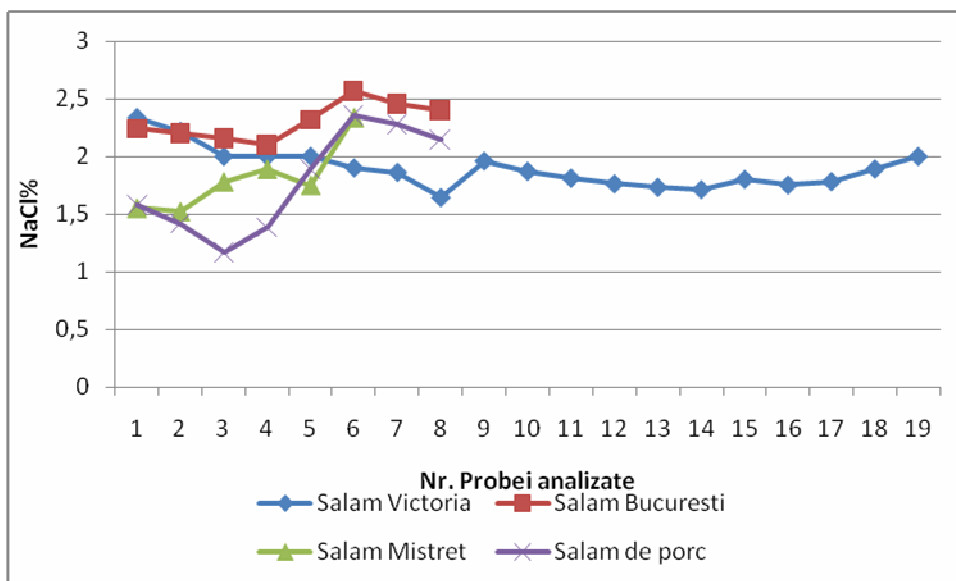


Fig. 2. Salt content variation in Victoria salami, Bucharest salami, Mistret salami, Pork salami

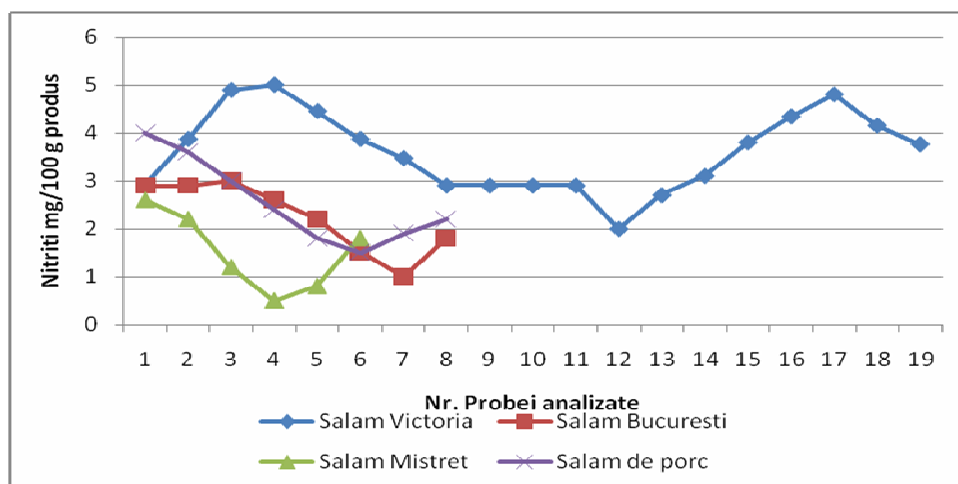


Fig. 3. Nitrite content variation in Victoria salami, Bucharest salami, Mistret salami, Pork salami

## CONCLUSIONS

The following conclusions were drawn at the end of this study:

- The amount of water varies between 42.68% and 64.21%, with an average value of 51.31% for Victoria salami, 45.73 % and 52.59% in the case of Bucharest salami. For Mistret salami and Pork salami the values ranged between 47.92 % and 54.36%, respectively 48.27% and 59.18%.
- The percentage of salt varies between: 1.64 % and 2.34 % in the case of Victoria salami, 2.10 % and 2.57 % in Bucharest salami, 1.52% - 2.34% in Mistret salami and 1.17% - 2.36% in Pork salami
- The nitrites' values ranged between 2.0 and 5.0 mg/100 g product in Victoria salami, 1.0-3.0 mg/100 g product in Bucharest salami, 0.5-3.0 mg/ 100 g product in the case of Mistret salami, and 1.5-4.0 mg/100 g product in Pork salami.
- Products under study range within the standard limits from the physical-chemical point of view.

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