

RESEARCHES CONCERNING THE QUALITY OF THE SOME MEAT PRODUCTS

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Abstract

In this paper are presented the results achieved through the physical-chemical exam/test for the estimation of the integrity for the next meat preparations: Tourist ham, Haiduceșc steaks, Kaizer, Tiganesc fillet, pork pastrami. The water, NaCl and nitrites have been determined. In the case of the meat products included in the specialty group, it was noticed for each assortment that water, salt and nitrites vary in the limits accepted by STAS. In general, for each product, the lab analyses highlighted smaller values in comparison with the standard limits. For Tourist ham, it was noticed an excess in the water content of 76% and 77.41%, in comparison with 74%, the maximum limit foreseen by STAS); for Kaizer, it was noticed an excess of water quantity (53.45%, respectively 55.25% in comparison with 50%)

For Kaizer, it was noticed a great quantity of nitrites (5%), but it doesn't exceed the maximum accepted limit of 7%. In the case of pork pastrami, it was discovered the existence of a maximum quantity of salt (3%).

Key words: sanitary-veterinary control, meat preparations, physical-chemical exam/test

INTRODUCTION

Food represents an needful factor for the human beings and animals, because it provides the energy and basic substances necessary for the accomplishment of the metabolic processes, growth and development of organisms. Nutrition influences the living organisms in the metabolic processes, homeostasis, energetic and thermic balance, cell growth and development, imuno-competency, motor activity and behaviour, pharmacodynamics processes. The disbalance between the input and needs in alimentation determines profound metabolic changes, especially that the human body is more and more submitted to the environmental pollution and numerous stressing factors. Due to the complexity of the relationship between human being and food, the role of the food industry in the sanogenesis increases day by day.

The sanitary-veterinary control for the estimation/evaluation of the integrity provides the emphasis of the constitutive elements, both from a quantitative and qualitative point of view. The evaluation of the integrity refers to the highlighting of the natural elements existent in food, as well as

to the ingredients of the factory receipts of different preparations. These determinations are made for the natural food per se (meat, milk, eggs, fish), as well as for their derived food (meat products, dairy products, fish and egg products). The determination of the integrity removes the suspicions regarding the frauds and defines the quality of the product from an alimentary point of view.

MATERIAL AND METHOD

In the present paper are presented the results achieved through the physical-chemical exam/test for the estimation of the integrity for the next meat preparations: Turist ham, Haiduceasc steaks, Kaizer, Tiganesc fillet, pork pastrami. The water, NaCl and nitrites have been determined.

The determination of water was made through the method of drying in the drying chamber of the sample at the temperature of 105⁰C for 4-5 hours.

The determination of the sodium chloride was made through Mohr method by the titration of the chlorine ions from the aqueous extract with a solution of silver nitrate in the presence of the potassium chromate used as an indicator.

The Griess method was used for the determination of the nitrites which consists in the measurement of the pink colour intensity in the azotic compound formed as a consequence of the reaction between the nitrites in the aqueous deproteinized extract and Griess reactive.

RESULTS AND DISCUSSIONS

In most of the cases, the examined products are included in the limits foreseen by the Romanian STAS from a physical and chemical point of view.

The water quantity in the case of Turist ham has a maximum value of 76%, and a minimum value of 62.14%. The average value is of 69.07%. In the case of Haiduceasc steak, the maximum value of the water quantity is of 68.10%, the minimum value is of 62.25%, the average value being of 65.17%. In the case of Kaizer, the water had a maximum value of 55.22%, and the minimum value of 42.06%, the average value being of 48.64%. In the case of Tiganesc fillet the maximum value was of 58.75, the minimum value of 62.25, and the average value of 65.17%. For pork pastrami, the maximum quantity of water was of 65.83%, the minimum value of 62.27%, and the average value of 64.05% (Figure 1).

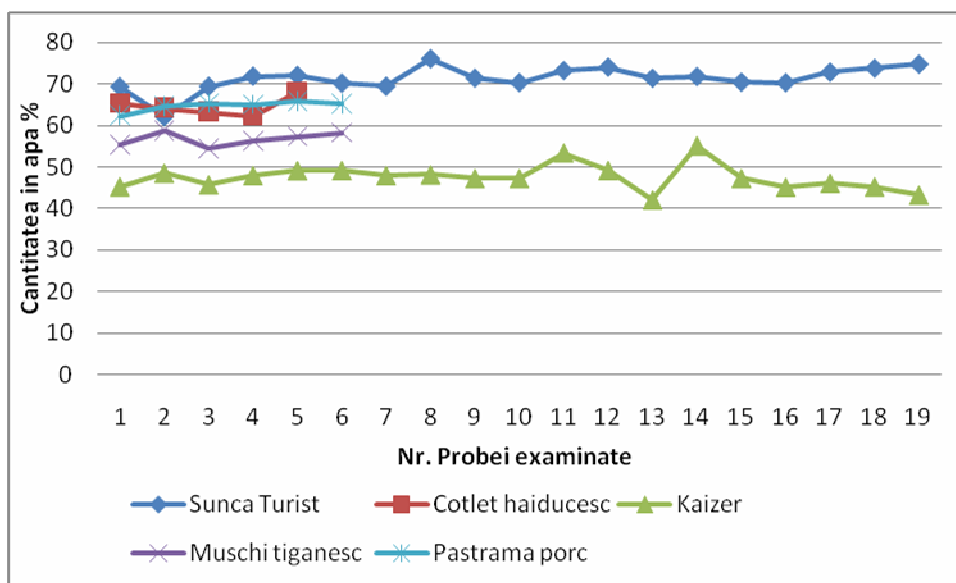


Fig. 1. Variation of the water content in Turist ham, Haiducesc steaks, Kaizer, Tiganesc fillet, pork pastrami.

For Turist ham, the salt quantity has the maximum value of 2.72%, the minimum value of 2.10% and the average value of 2.41%. For Haiducesc steak, the maximum value of salt was of 2.93%, the minimum value of 2.17%, the average value being of 2.55%. For Kaizer, the maximum value of salt was of 2.93%, the minimum value was of 1.64% and the average value was of 2.27%. In the case of Tiganesc fillet, the maximum value of salt was of 2.72%, the minimum value of 2.10% and the average value of 2.41%. In the case of pork pastrami, the values of the sodium salt had values ranging between 1.99% and 3%, with an average value of 2.48% (Figure 2).

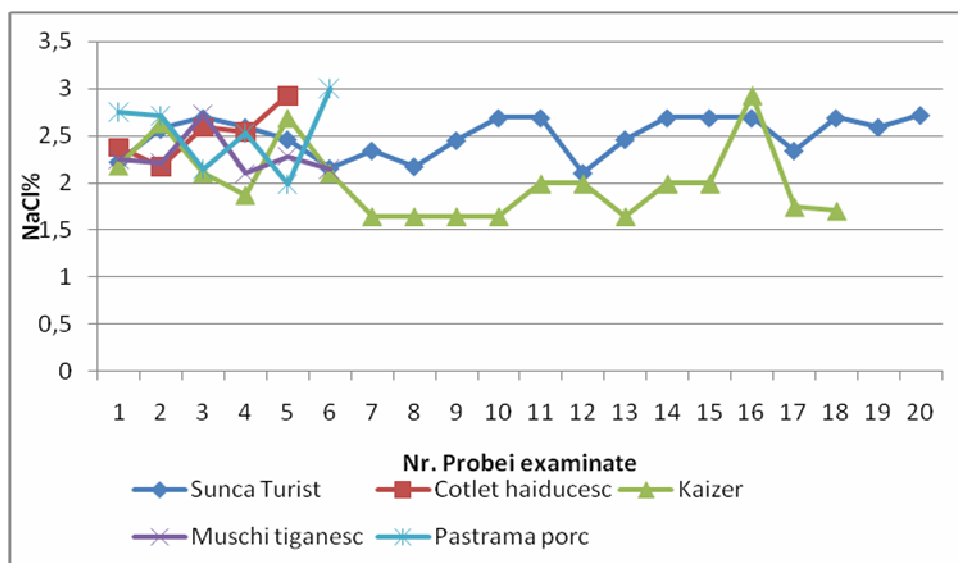


Fig. 2. Variation of NaCl content for in Turist ham, Haiducesc steaks, Kaizer, Tiganesc fillet, pork pastrami.

The quantity of nitrites achieved in the case of Tourist ham had a maximum value of 3 mg%, and a minimum value of 1 mg%. The average value being of 2 mg%. In the case of Haiducesc steak, Tiganesc fillet and pork pastrami the same values were achieved, respectively a maximum value of 3 mg%, a minimum value of 2 mg% and an average value of 2.50%. For Kaizer, the maximum quantity of nitrites was of 5 mg%, the minimum value was of 0 mg%, and an average value of 2.50 mg% (Figure 3).

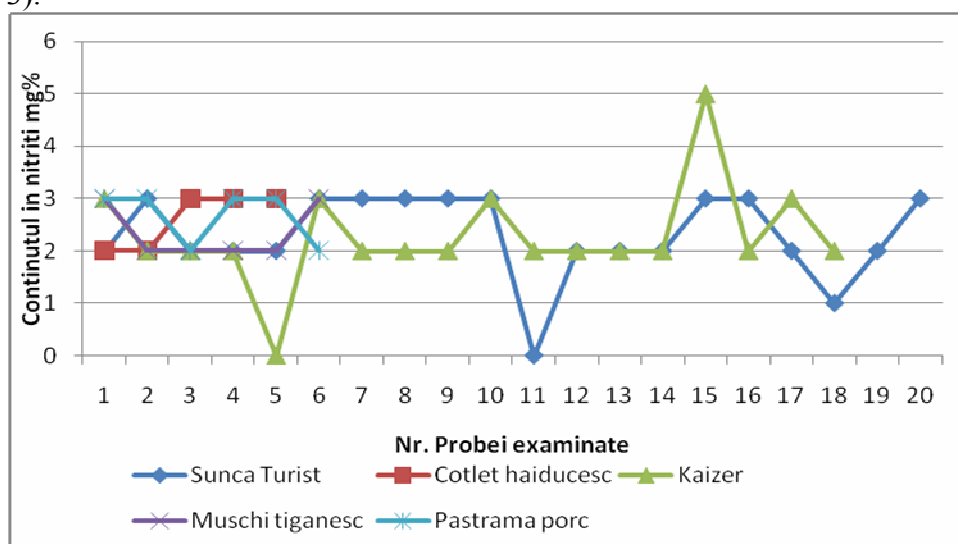


Fig. 3. Variation of nitrite content in Turist ham, Haiducesc steaks, Kaizer, Tiganesc fillet, pork pastrami.

CONCLUSIONS

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

➤ In the case of the meat products included in the specialty group, it was noticed for each assortment that water, salt and nitrites vary in the limits accepted by STAS. In general, for each product, the lab analyses highlighted smaller values in comparison with the standard limits.

➤ For Tourist ham, it was noticed an excess in the water content of 76% and 77.41%, in comparison with 74%, the maximum limit foreseen by STAS); for Kaizer, it was noticed an excess of water quantity (53.45%, respectively 55.25% in comparison with 50%)

➤ For Kaizer, it was noticed a great quantity of nitrites (5%), but it doesn't exceed the maximum accepted limit of 7%.

➤ In the case of pork pastrami, it was discovered the existence of a maximum quantity of salt (3%).

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