

STUDIES REGARDING PORK PARISER QUALITY

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Abstract

To determine the organoleptic and physico-chemical quality of pork baloney were examined six batches. Sampling, packaging and transport of samples was done according to accepted legal norms. Storage was made refrigerated (0-4°C), and the examination was made in the day of sampling and in the second day. The water determination from a food provides precise information on its nutritional value, conditions storage and preservation. In all samples examined the percentage of water was below the maximum of 70%. The average value of this indicator was 62.76%. All food with a high water kept refrigerated only (0-4°C), have limited capacity for storage and thus lower product shelf life. The proportion of fat was various (19.88% to 25.16%) failure to fully confirming the receipe. The average value of this parameter was 23.49% below the maximum of 26%.

Key words: Pariser, Meat products, Fat content, Sodium Chloride, Protein content.

INTRODUCTION

Pariser is one of the most popular meat product in Romania. There is important to evaluate the pariser quality in order to have an overview about the product. The quality is influenced by storage duration, and the shelf life of pariser is one of the biggest issues.

In this way parameters taken in study are important from all points of view, innocuity especialy. Methods used for analysis are according with romanian standards and are quottation in latest studys.

MATERIAL AND METHOD

For determination the physico-chemichal and organoleptic indicators in pork products were carefully examined 6 samples.

The samples were kept refrigerated (0-4°C) and the parameters was determined in the same day and in the second day.

The samples were examined from the organoleptic point of view, and they analyzed the shape of the exterior, aspect of the section, general aspect, also the consistency, the color, the smell and the taste.

In the physico-chemichal examination was checked the water percentage, the fat content, the protein content and also the sodium chloride content, the sodium nitrite level, and the hydrolyzable nitrogen percentage.

The research methods were according Romanian regulation. As following:

Organoleptical parameters:

Were done by scoring the samples from 0 to 10 points.

The water content:

According to the STAS 9065/3-1973, drying in the oven at the 103°C, which is also mandatory in case of litigation.

Determination of the fat substances

According to the STAS 9065/2-1973 the fat content from the samples by Soxhlet method.



Fig. 1. Soxhlet device for fat assesment

The sodium chloride determination

According to the STAS 9065/5-1973, the sodium chloride was determined by using the Mohr method.

The determination of the total protein substances

The most important component with nutritional value from the animal products is the protein. The quality of this products was appreciated after their protein content, by Kejdahl method.

NH₃ determination

The determination of the easily hydrolysable nitrogen and ammonia was made by: the qualitative method with Nessler reagent for the identification with the ammonia;

The samples were exanimate in a manner that protect them from alteration of any kind or modification of the composition and were homogenized in the meat mincer and then kept into a glass container that completely filled and then hermetically closed and refrigerated.

The samples stay under observation no more than 12 hours after homogenization.



Fig. 2. Protein assessment by Kjeldahl apparatus

Determination of the nitrites

Nitrites (sodium or ammonium) are frequently used in the preparation of the meat products because in this industry, has the capacity of combining with myoglobin, the characteristic pigment of the meat (but also with the hemoglobin, the pigment characteristic to the blood from which residual red blood cells and mixes with the capillaries meat) with which they form an red complex which can be stabilized by heat.

According to the STAS 9065/9-1974, determination of nitrate it was done by Griess method.

RESULTS AND DISSIONS

Organoleptic examination did not reveal any significant changes to the conditions of admissibility imposed by legal regulations allowed (SP-C 402/1995) as:

-shape: cylindrical bars with the diameter of the membrane used properly;

-Appearance: clean, non-sticky, no agglomeration of fat on the ends of sticks or under the membrane, continuous coating, adhesive composition and undamaged, specific color;

-Section aspect: Compact composition, well connected without fatty lumps or foreign parts;

-Consistency: firm, uniform throughout the mass, the early section with pleasant feeling mastication, juiciness specific items;

-Color of the exterior was uniform specific pink items;

-The section was uniform, free from color change;

-Smell and taste: specific types, characteristic, pleasant, moderately salty and spicy, tasteless and odorless modified or foreign.



Fig. 3. External and section aspects of the pork pariser

The physical-chemical exam results for the test samples

Table 1

Values of samples parameters after analysis

Parameter acc. to SP- C. 402/1995	Samples Number							Average	Differences, %
	X	1	2	3	4	5	6		
Water % max. 70	62.76	63.18	60.84	58.4	61.46	68.44	64.28	62.76	0.89
Differences, %	0.89	0.90	0.86	0.83	0.87	0.97	0.91		
Fat % max. 26	23.49	25.16	22.84	25.06	19.88	23.18	24.82	23.49	0.90
Differences, %	0.90	0.96	0.87	0.96	0.76	0.89	0.95		
Proteins % min. 11	12.34	11.86	13.46	12.28	11.16	13.06	12.24	12.34	1.12
Differences, %	1.12	1.07	1.22	1.11	1.01	1.18	1.11		
Sodium Clorhide % max. 2.3	2.67	1.96	2.5	2.86	1.78	3.16	3.8	2.67	1.16
Differences, %	1.16	0.85	1.08	1.24	0.77	1.37	1.65		
Nitrate (ppm) max. 5	4.57	3.96	4.82	5.04	3.6	4.42	5.62	4.57	0.91
Differences, %	0.91	0.79	0.96	1.00	0.72	0.88	1.12		
mg NH ₃ /100g max. 30	26.56	28.16	25.96	24.18	27.42	28.06	25.62	26.56	0.88
Differences, %	0.88	0.93	0.86	0.80	0.91	0.93	0.85		

Determination of water in the food provides precise information on its nutritional value, the storage conditions and storage capacity. In all samples examined the percentage of water was below the maximum allowed - 70%. The medium value of the indicators was 62.76%.

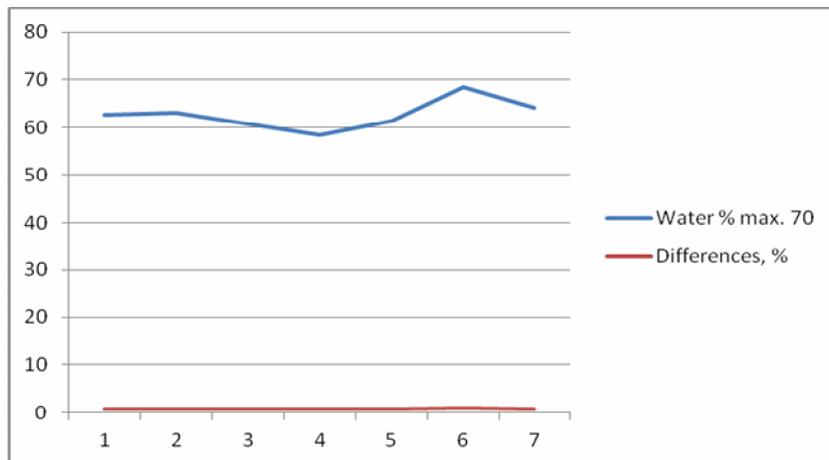


Fig. 4. Water content during analysis

The proportion of fat varies more than was expected (19.88 to 25.16). The average parameter value was 23.49% below the maximum admissible, which is 26%.

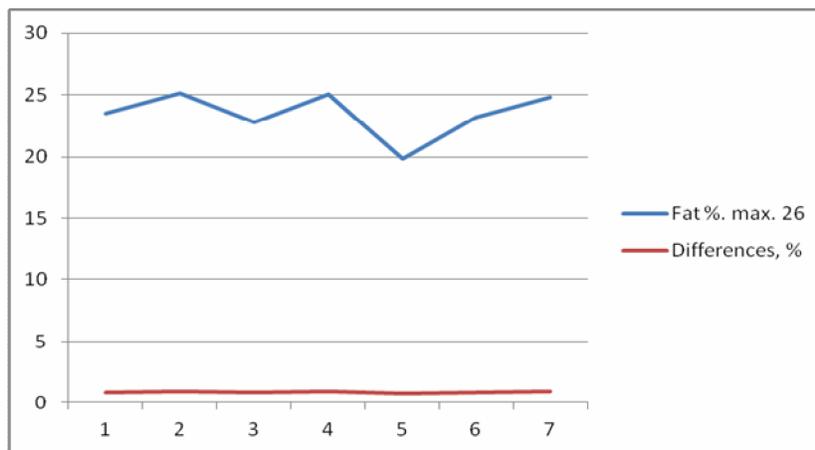


Fig. 5. Fat content during analysis

The medium value of protein content was 12.34% exceeding the minimum value allowed with 1.34%. The protein content is influenced by the quality of the meat material and the amount of added vegetable protein. As we know the quality of the meat that was used in the products is questionable in general, the necessary protein content is assured by the addition of vegetable protein.

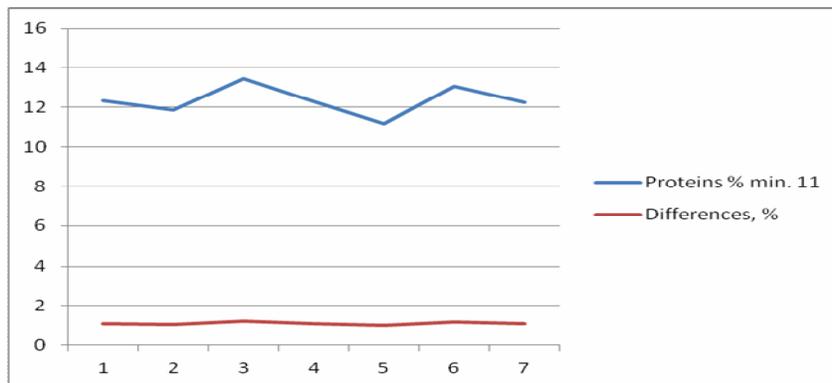


Fig. 6. Protein content during analysis

The content of the sodium chloride has registered a value of 2.67% which means that was exceeded the maximum limit allowed which is 2.3% with 0.37%. From the 6 groups of samples, only 4 were considered to overcome the percentage of salt. This confirms that the quantities of the salt were not respected entirely as they should and the fact that the salt was added in most of the times at random and because storage conditions can lead to the inconstant salt percentage.

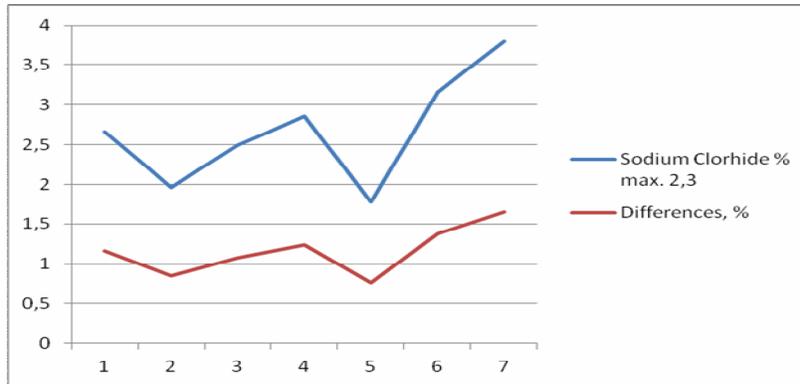


Fig. 7. Sodium Chloride content during analysis

The nitrite content was 4.57 ppm which is with 0.43 ppm less than the maximum limit which is 5 ppm. This value indicates that the producer is very careful not to approach to the toxic dose (with the risk of reducing the storage duration) or very good conditions nitrite reduction during maturation blanks and heat treatment.

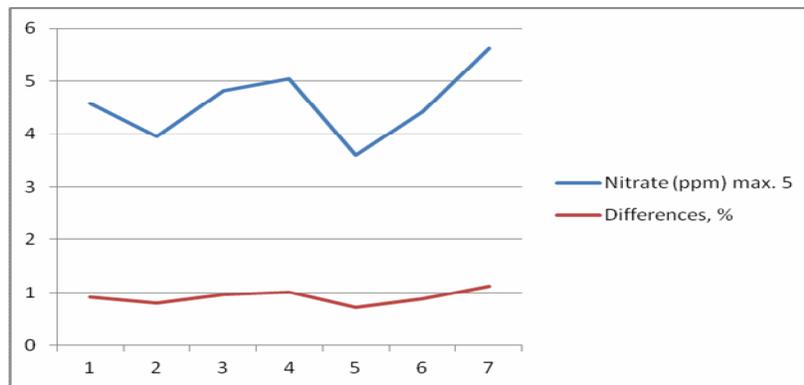


Fig. 8. Nitrite content during analysis

The value of the easily hydrolysable nitrogen was 26.56 mg NH₃/100g product which means that the value is below the maximum admissible value of 30 mg NH₃/100g and in this way product was fresh and ready to eat.

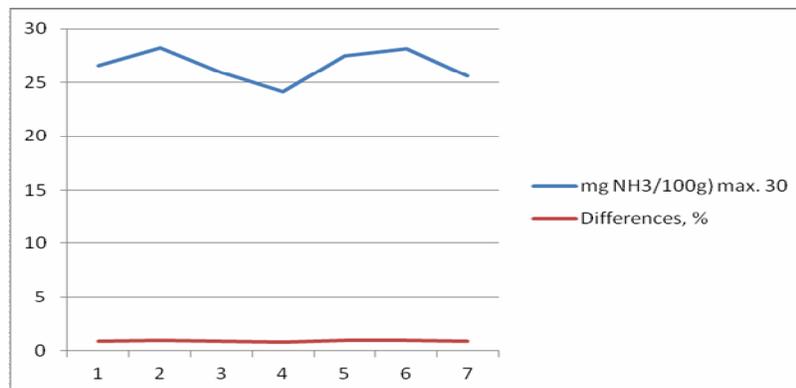


Fig. 9. NH₃/100g content during analysis

CONCLUSIONS

The pork pariser that was analyzed organoleptic and physico-chemical, generally corresponds with the admissible conditions regulated by SP-C 402/1995.

This happens because the raw materials are very carefully sorted, and also the process of the technological design and the implementation of it by control system which are in accordance with the HACCP norms and regulations.

The differences that occurs are determined by the short shelf life of the product and high processing of the meat used.

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