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# RESEARCHES CONCERNING SOME MEAT PRODUCTS CONTROL IN A SPECIALIZED UNIT

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***Abstract***

*Meat products are going on to be on an important place in human being nutrition, because they are available in a large variety and could be consumed fresh, without any thermal processing. The present study has in view the legal requiring keeping range applicable to some meat products. During July 2011-April 2012 there were analyzed samples of meat and there were established the following parameters: water content, salt, nitrites, fat and protein. The obtained results proved that the recipes and processing technologies are kept, excepting a few samples which recorded an exceeding of the maximum admitted limit for salt content. Concluding, it is necessary the permanent monitoring of food industry units regarding keeping of the imposed parameters for the processed foodstuffs.*

***Key words:*** *meat, salt content, physical and chemical parameters.*

## INTRODUCTION

Human nutrition is a constantly acting factor that determines the development of metabolic processes. Currently, food takes its toll on human pathology as a result of the imbalance between intake and requirement of biologically active substances. Animal foods, unlike those of vegetable origin (Cristea, 2012; Tapaloaga, 2012) have a higher biological value determined by content rich in almost all essential amino acids. Because time has become an issue of all, we tend to buy ready-to-eat foods that do not require additional training. Therefore, meat products industry have diversified, being available a wide range of meat products for consumption date (Petcu, 2006).

## MATERIALS AND METHODS

This study aims to tracking compliance with the legal requirements applicable to certain categories of meat products. In the period July 2011-April 2012 there were analyzed meat samples, which were made sensorial tests and there were determined the following parameters: water content, salt, nitrite, fat and protein (Marin, 2006; Savu, 2002). Samples were collected so that more accurately represent the group which they originated from. A total of 23 samples, representing varieties of cooked and double smoked meat (sausages, salami summer), cooked meat (pork sausage), smoked and cooked meat products (Italian salami, Bucharest salami, smoked sausages) (Ord 210/2006), were collected and analyzed for physical and chemical examination carried out during July 2011-December 2011. In the second study period, January 2012-April 2012 there were analyzed 15 samples of meat products harvested at the end of the process flow. Analyses were performed in the program's self-profile unit and there were performed by internal laboratory. Used methods of analysis are the common methods performed to quickly highlight any nonconformity of products (Savu, 2002) .

## RESULTS AND DISCUSSIONS

Results showed that compliance recipes and manufacturing technologies, except for samples with exceeding of the maximum permitted limit of salt. In the first study period there were recorded fair values of the analyzed parameters (Table 1). Following the laboratory, the water content was appropriate, which proves that they respect the manufacturing networks. Also, NaCl content ranged between 1.3 and 2.9, falling within the maximum limit for this parameter. Nitrite and easily hydrolysable

nitrogen have raised all relevant evidence. Also, the fat content and protein were suitable for all the analyzed samples previously mentioned.

Table 1. The results of physical and chemical examination of meat products analyzed during July 2011-December 2012

| No | Sample | Water % | Fats % | NaCl % | Nitrites mg% | Protein % | mg $NH_3$ / 100g |
|---|---|---|---|---|---|---|---|
| 1 | Bucharest salami | 52.3 | 28.6 | 2.3 | 6.2 | 16.8 | 32.6 |
| 2 | Smoked sausages | 54.8 | 25.9 | 2.2 | 5.9 | 17.1 | 38.5 |
| 3 | Smoked sausages | 58.1 | 23.4 | 2.3 | 4.6 | 16.2 | 41.2 |
| 4 | Bucharest salami | 54.2 | 25.7 | 2.3 | 5.1 | 17.8 | 43.2 |
| 5 | Pork salami | 59.2 | 22.2 | 2.4 | 3.3 | 16.2 | 37.8 |
| 6 | Bucharest salami | 51.6 | 27.7 | 2.6 | 5.8 | 18.1 | 39.5 |
| 7 | Smoked sausages | 48.6 | 30.7 | 2.6 | 4.3 | 18.1 | 29.8 |
| 8 | Italian salami | 51.2 | 29.2 | 2.1 | 5.7 | 17.5 | 32.4 |
| 9 | Cabanos | 49.8 | 33.8 | 1.9 | 5.4 | 16.5 | 35.4 |
| 10 | Smoked sausages | 51.9 | 28 | 2.9 | 5.2 | 17.2 | 34.5 |
| 11 | Bucharest salami | 52.4 | 26.7 | 2.8 | 4.6 | 18.1 | 36.8 |
| 12 | Italian salami | 49.8 | 30.6 | 2.7 | 5.3 | 16.9 | 31.8 |
| 13 | Bucharest salami | 52.4 | 27.9 | 2.9 | 4.9 | 16.8 | 32.9 |
| 14 | Pork salami | 56.8 | 23.1 | 2.8 | 5.8 | 17.3 | 39.2 |
| 15 | Italian salami | 51.6 | 29.7 | 2.3 | 5.7 | 16.4 | 35.2 |
| 16 | Pork salami | 52.8 | 27.4 | 2.3 | 4.6 | 17.5 | 39.5 |
| 17 | Smoked sausages | 51.3 | 28.3 | 2.3 | 5.6 | 18.1 | 32.6 |
| 18 | Bucharest salami | 52.1 | 30.3 | 2.4 | 5.4 | 15.2 | 35.6 |
| 19 | Cabanos | 52.3 | 26.5 | 2.8 | 5.2 | 18.4 | 35.6 |
| 20 | Smoked sausages | 51.6 | 27.3 | 2.9 | 5.1 | 18.2 | 37.8 |
| 21 | Italian salami | 51.6 | 28.2 | 2.7 | 5.4 | 17.5 | 34.6 |
| 22 | Cabanos | 49.5 | 32.8 | 1.3 | 5.8 | 16.4 | 32.3 |
| 23 | Smoked sausages | 48.9 | 29.8 | 2.9 | 5.6 | 18.4 | 33.2 |
| | | P.N.=0% | P.N.=0% | P.N.=0% | P.N.=0% | P.N.=0% | P.N.=0% |

During January 2012-April 2012 there were analyzed 15 samples of meat products and the results of the physical and chemical determinations are presented in Table 2. There were exceeded, the salt content in 1 sample, representing 6.66% of the total samples analyzed between two of the study.

Table 2. The results of physical and chemical examination of meat products analyzed during January 2012-April 2012

| No. | Sample | Water% | Fats% | NaCl% | Nitrites mg% | Protein% | mg $NH_3$ / 100g |
|---|---|---|---|---|---|---|---|
| 1 | Smoked sausages | 54.2 | 25.5 | 2.5 | 5.6 | 17.8 | 29.5 |
| 2 | Bucharest salami | 52.6 | 26.9 | 2.3 | 3.5 | 18.2 | 35.6 |
| 3 | Smoked sausages | 57.4 | 22.8 | 2.4 | 5.6 | 17.4 | 38.6 |
| 4 | Bucharest salami | 51.5 | 29.5 | 2.3 | 5.6 | 16.7 | 35.9 |
| 5 | Summer salami | 49.2 | 31.2 | 2.8 | 4.8 | 15.8 | 36.9 |
| 6 | Pork salami | 57.3 | 27.5 | 3.3 | 4.1 | 13.1 | 37.6 |
| 7 | Bucharest salami | 56.3 | 27.4 | 2.5 | 6.2 | 13.8 | 34.5 |
| 8 | Italian salami | 58.2 | 26.1 | 2.9 | 6.7 | 12.8 | 36.8 |
| 9 | Smoked sausages | 57.2 | 28.9 | 2.1 | 5.8 | 11.8 | 34.6 |
| 10 | Bucharest salami | 60.2 | 24.4 | 2.3 | 6.2 | 12.1 | 34.5 |
| 11 | Italian salami | 57.3 | 27.6 | 1.9 | 6.2 | 13.2 | 35.6 |
| 12 | Smoked sausages | 58.2 | 27.2 | 2.1 | 4.9 | 12.5 | 31.6 |
| 13 | Summer salami | 37.5 | 39.5 | 1.9 | 5.1 | 21.1 | 34.8 |
| 14 | Italian salami | 51.2 | 34.2 | 2.5 | 4.8 | 11.8 | 42.5 |
| 15 | Pork salami | 62.3 | 23.6 | 2.3 | 5.1 | 11.8 | 33.2 |
| Total | | P.N. = 0% | P.N. = 0% | P.N. = 6,66% | P.N. = 0% | P.N. = 0% | P.N. = 0% |

## CONCLUSIONS

It is important that sampling be performed on homogeneous lots and representative of a third person to ensure the reliability of the results. The samples analyzed in the second study period, although they were fewer, have revealed that the proportions are not always that all constituents, behind the salt content in one sample. For the next period, it was recommended the analyses of a larger number of samples and personnel training to respecting

the manufacturing network. The continuous monitoring of food establishments is required in order to ensure safe products on the market, and if overtaking identification of parameters imposed by legal regulations must be followed the traceability.

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