

Section: Technical sciences

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MERCHANDISING ANALYSIS OF QUALITY OF THE FAST-FROZEN MEAT SEMI-FINISHED PRODUCTS

Food is the most important physiological requirement of a human body which satisfaction substantially defines a state of health and quality of human life. A tendency of increasing demand for the products that need the minimum time for preparation which called fast-frozen semi-finished products is accurately traced all around the world. The main advantages of the fast-frozen products are sales life of organoleptic characteristics and a nutrition value, and also the preparation speed demanding the minimum time inputs. However, the quality of the fast-frozen meat semi-finished products, in particular pelmeni, that are realized on the market of Ukraine, is unsatisfactory that, in turn, causes actuality of scientific work. For this reason the chosen subject is actual in nowadays realities.

The purpose of the research was the merchandising assessment of quality of the fast-frozen meat semi-finished products - pelmeni that are realized on the market of Ukraine.

Object of the research: the frozen meat semi-finished products in a dough cover – pelmeni: a sample 1 - pelmeni of trademark "Levada", a sample 2 - pelmeni of trademark "SmaCom", a sample 3 - pelmeni of trademark

"Ekonomka", a sample 4 - pelmeni of trademark "Mushketer", a sample 5 - pelmeni of trademark "Legka strava".

The merchandising analysis of quality of pelmeni was carried out on compliance of organoleptic and physical and chemical indicators according to State Standards of Ukraine 6028:2008.

It was established by results of research that studied samples of pelmeni were not stuck together, not deformed, edges were stuck well together, forcemeat did not go beyond edges, the surface was dry, during the stirring of pelmeni the accurate and expressive sound was felt. Pelmeny of trademarks "Levada" and "SmaCom" were characterized having round form, and pelmeny of trademarks "Ekonomka", "Mushketer", "Legka strava" had semicircular form.

During the analysis of the view on a section type of pelmeni of trademarks "Levada" and "SmaCom" was established a stuffing of light pink color, and samples of trademarks "Ekonomka", "Mushketer", "Legka Strava" had a gray colour. In our opinion, gray color of forcemeat is caused by using a large amount of onions as a part of forcemeat.

After cooking in all samples forcemeat was juicy, soft, a dough cover was not broken off, but in pelmeni of trademark "Levada" the dough cover of some pieces after cooking was stratified. Taste and smell after cooking were palatable and peculiar to a product, without foreign smack or smell. After cooking of pelmeni a broth of all samples was clear and did not include foreign additives.

The results of researches of physical and chemical indicators are given on the following page in Tab. 1.

By results of physical and chemical indicators was established that thickness of a dough cover for samples of pelmeni of trademarks "Levada", "SmaCom", "Ekonomka" and "Mushketer" was in limits of 1,3 - 1,9 mm, while the studied sample of pelmeni of trademark "Legka Strava" was 2,3 mm that is 0,4-1 mm more comparing with other studied samples and exceeds norms on 0,3 mm [1].

Table 1

The results of research of physical and chemical indicators of pelmeni

Name of an indicator	Sample 1 Trademark "Levada"	Sample 2 Trademark "SmaCom"	Sample 3 Trademark "Ekonomka"	Sample 4 Trademark "Mushketer"	Sample 5 Trademark "Legka Strava"
Thickness of a dough cover, mm	1,3	1,5	1,7	1,9	2,3
Thickness of a dough cover in places of adhesion, mm	1,8	2,4	2,3	2,6	3,2
Mass of one piece, g	2,49	8,62	10,38	10,36	7,41
Mass fraction of a stuffing, %	39	42	51	44	42
Ratio of mincemeat and dough, %	40:60	43:57	51:49	46:54	43:57
Reaction to starch	Positive		Negative	Positive	
Mass fraction of moisture, %	71	70	63,5	58,5	49

Thickness of dough cover in places of adhesion for pelmeni of trademarks "Levada", "SmaCom", "Ekonomka" fluctuated in borders of 1,8-2,3 mm that meets the established standards [1].

However, the samples of trademarks "Mushketer" and "Legka Strava" were characterized having bigger indicator of thickness of a dough cover. This means that producers of trademarks "Mushketer" and "Legka Strava" provide net weight at the expense of the raised contents of the dough in comparison with a mass fraction of a stuffing.

The highest indicator of mass of one piece had samples "Ekonomka" and "Mushketer" which masses were 10,38 g and 10,36 g, however, the indicators are less than the established norms on 1,62 g and 1,64 g.

By results of definition of mass fraction of a stuffing was established that only the sample of pelmeni of trademark "Ekonomka" meets standards (51%), while mass fraction of a stuffing of pelmeni "Levada" (39%), "SmaCom" (42%), "Mushketer" (44%) and "Legka Strava" (42%) was less than the established norms on 11%, 8%, 6%, 8%.

As a result of a ratio of mincemeat and dough was revealed that pelmeni of trademarks "Levada", "SmaCom", "Mushketer" and "Legka Strava" had

percentage 40:60, 43:57, 46:54 and 43:47, while pelmeni “Ekonomka” had percentage 51:49.

During the determination of content of starch only the studied sample of pelmeni of trademark "Ekonomka" had negative reaction that proves an absence of starch as a part of stuffing.

The mass fraction of moisture of studied samples of pelmeni of trademarks "SmaCom", "Ekonomka", "Mushketer" and "Legka Strava" did not exceed 70%, while indicator of pelmeni “Levada” exceeded established norms on 1%.

In conclusion, according to the results of experimental studies established that only studied sample of pelmeni of trademark "Ekonomka" meets the requirements of normative acts by the organoleptic and physical and chemical parameters.

Literature:

1. ДСТУ 6028:2008. Напівфабрикати з м'ясом у тістовій оболонці заморожені. Загальні технічні умови. – [Чинний від 2008 – 12 – 05]. – К. : Держспоживстандарт України. – 2009. – 24 с.