3. Fortification of cut semi-finished product using oat flour and dry demineralized milk whey

Yulia Biryuk, Olga Chernyushok
National University of Food Technologies, Kyiv, Ukraine

Introduction. In the modern world, the role of the meat processing industry in solving the problem of providing the population with high-quality and biologically complete food products is growing significantly. For normal vital activity and good absorption of food, the human body must receive all nutrients in certain ratios.

Materials and methods. The objects of the study are samples of chopped semi-finished products (natural chopped schnitzel) containing chicken, pork cutlet meat, eggs, breadcrumbs with smoked paprika, fresh onion, black pepper, salt, fresh garlic. These samples differed in the content of hydrated demineralized whey fortified with Mn and Mg and hydrated oat flour. Analytical, organoleptic, physico-chemical, structural-mechanical, microbiological methods and statistical-mathematical processing of experimental data using modern devices and computer technologies are used.

Results. Samples of chopped semi-finished products were developed, which differed in the content of hydrated demineralized milk whey fortified with Mn and Mg and hydrated oat flour (Table 1.)

Table 1. Recipes of samples of chopped semi-finished products

Raw	Amount, %				
	Control sample	Sample 2	Sample 3	Sample 4	Sample 5
1	2	3	4	5	6
Cutlet beef meat	35,0	-	-	-	-
Chicken fillet	-	35,0	35,0	35,0	35,0
Pork cutlet meat	29,0	29,0	29,0	29,0	29,0
Hydrated demineral. whey (1:2)	-	10,0	-	5,0	10,0
Hydrated oatmeal (1:2)	-	-	10,0	5,0	10,0
Chicken eggs	1,6	1,6	1,6	1,6	1,6
Fresh onions	2,4	2,5	2,5	2,5	2,5
Garlic is fresh	0,2	0,2	0,2	0,2	0,2
Black pepper	0,15	0,2	0,2	0,2	0,2
Kitchen salt	1,4	1,5	1,5	1,5	1,5
Breadcrumbs	4,0	3,0	3,0	3,0	3,0
Smoked paprika	-	2,0	2,0	2,0	2,0
The water is drinkable	26,25	15,0	15,0	15,0	5,0
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

The quality assessment of finished products was carried out by the tasting committee on a five-point scale. Appearance, cross-section, taste, smell, and consistency were taken into account. According to the tasters, sample 4 was the best - the ratio of demineralized enriched whey and oat flour is 50/50%. The finished product has a delicate consistency and improved appearance and taste characteristics.

Conclusions. As a result of the research, it was established that the development of chopped semi-finished products containing a composite mixture of oat flour and dry demineralized whey fortified with Mg and Mn is expedient. The introduction of components makes it possible to obtain a product with improved organoleptic and physicochemical indicators.