Dietic products with low allergic effects

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The reason of food allergy widely spread among adults and children (USA Allergists Committee reported 10% of the population, i.e. more than 18 million, have allergy diseases) is super-fluous nutrition, especially rich in protein application of food dyes, preservatives, subs-titutes, use of chemical fertilizers and pestisides in agriculture. It is customary to con-sider that true food allergy is more often met in children than in adults. It is explained by more high permiability of intestinal and liver barriers of children organism to food al-lergences [1]

More high persidering of internation of all former allergic reaction it is followed the principle Mulle working out diets for children having allergic reaction it is followed the principle of allergene spare, i.e. sharp restriction of all food ingredients and decrease of animal protein level. In the same time this diet should be physiologically balanced, have no indi-vidual food allergenes, extractives and food additives, and have low levels of natrium chlo Vidual food allergenes, extractives and food additives, and have low levels of natrium chlo-Pide [2].

Poultry meat is considered to be more active allergene than meat of other animal species. Poultry meat is considered to be more active allergene than meat of other animal species. Thus in order to produce new poultry meat products special technological methods are requi-red which decrease poultry meat sensibilizing effect. Ready-to-cook chicken broiler carcasses of II category were used for canning and production of freeze-dryed powder. All carcasses were precooked 25-30 minutes in boiling water one half with and the other without skip and shdominal fat. Then they were manually deboned and screw

with and the other without skin and abdominal fat. Then they were manually deboned and screw

Find (foramen diameter - 1,5 mm). "Out mass entended for canning with added boiled water (43-455), starch (1%) and natrium chloride (1%), was passed through colloid mill, deacrated and prepacked into 100 g alluminis-the time. Canned meat was sterilized in autoclave under the folowing conditions 15-25-15-120 C Control of the sterilized in autoclave under the folowing conditions 15-25-15-120 C Conditions of freeze-drying were: minus 36-40°C for freezing and 28-32°C for drying, powder Wes prepucked into multy layer filin bags in atmosphere of mitrogen. Set mass and end products were studied in order to determine chemical, amino acid and fatty icid composition. Biological value of canned meat and powder was studied using carcass met-log [3]

Nod [3]. Cherical composition of meat mass and the products is represented in Table 1. Table data the composition of meat mass and the products is represented in Table 1. Table data the composition of raw and end product depending upon prosence or absence of fat and skin. It is known that biological value of food products de-points not only upon protein and fat content, but upon quality of this components determined is not only upon fatty acid composition.

^{l'est} object	Content, %			Protein/fat ratio	
	water	protein	fat		
1	2	3	4	5	
Cooced chicken meat mass: a) with skin and fat	 81,5	14,0	3,84	3,6	
b) without skin and fat	82,7	14,6	1,93	7,6	
a) with skin and fat b) without skin and fat	79,2 79,5	10,25 13,32	11,4 8,3	0,9 1,6	
a) with skin and fat b) without skin and fat	2,3 3,0	56,0 72,1	39,5 22,0	1,4 3,3	

Pable 1. Chemical composition of meat mass and end products.

(casein) NPU. high biological value of the studied products is apparently a resalt of fa-Vouring protein/amino acid ratio and of high degree of nonsaturation of the product fatty $^{\rm Component.}$

Table 2. Amino acid composition of cooked chicken broiler meat proteins (g/100g of protein)

Amino acid denomination	Chicken broiler meat		
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	without skin	with skin	
kssential amino acids Valin Isoleucine Leucine Lysine Methionine Phenilalanine	37,83 3,53 4,18 7,20 10,55 4,51 4,51 4,36 3,50	33, 53 5, 51 3, 70 6, 86 9, 53 2, 91 3, 95 3, 27	
Nonessential amino acids Alanine Arginine Aspartic acid Histidine Glutaminic acid Proline Tyrosine Cystine	53,11 4,51 7,84 3,36 3,33 4,09 11,49 4,00 3,26 1,56	52,38 4,78 7,81 3,14 2,98 4,43 11,75 3,94 3,04 1,49	
Chemical scor	lim 1-70,4 valin	lim 1-66,2 valin	

Table 3. Fatty acid composition of meat mass lipids

Vatty acids denomination	Content in per sent to fatty acids sum			
	without skin	with skin		
letradecoic Tetradecenic Pentadecenic Palmitic Palmitoleic Heptadecanoic Gtearic Oleic Linolic Linolenic Arachidonic	1,20 0,37 0,22 24,43 8,37 0,60 0,51 7,00 41,83 13,83 13,83 0,47 0,55 0,28	1,20 0,35 0,18 24,91 8,72 0,62 0,48 5,86 42,47 13,55 0,63 0,67 tracks		
um of saturated fatty acids um of nonsaturated fatty acids including polynonsaturated fatty acids	53,50 66,21 14,58	32,77 66,87 14,18		

"able 4. Biological value of canned chicken meat and freeze-dried powder

"Indices	Ca	nned meat	Chicken freeze-dri	Casein	
	without sk and fat	in with skin and fat	without skin and fat	with skin and fat	
aroup No	1	2	3	4	5
'Onsumption (g/head) of feed	79,6	84,5	75,7	81,8	53,3

a little and at his second the second	A had a first many a transfer and a start of the start of					
	1	2	3	4	5	
Consumption (g/head) of nitrogen Weight gain, g/head Carcass nitrogen, g NPR, M±m	1,29 29,35 1,69 4,37 <u>+</u> 0,36	1,51 31,60 1,68 4,0 <u>+</u> 0,49	1,37 32,30 1,80 4,97 <u>+</u> 0,47	1,40 37,75 1,80 5,00 <u>+</u> 0,38	0,96 16,9 1,38 3,80 <u>+</u> 0,28	
NPU, M±m	69,77 <u>+</u> 4,55	59,20 <u>+</u> 4,85	73,50 <u>+</u> 7,6	72, 20+4,1 (61,79 <u>+</u> 3,5	

Thus the study of products for specialized children nutrition has shown that right compo-sition of initial raw materials, use of proper technological methods and mild conditions of freeze-drying permit to produce food product with high biological value despite of the presence or absence of skin in its composition. Institute of nutrition of USSR Academy of Science made investigation of poultry meat pro-ducts with or without skin having low allergic effect on babies from 4,5 months of age and on children up to 12 years old enclined to have allergy reaction. Health, weight gain, growth, immunological reaction and blood biochemistry were under cont-rol.

rol.

Studied products despite presence or absence of skin and fat proved to be very effective for nutrition of sick children easily giving allergic reaction in clinics.

Literature

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