

6. The research of organoleptic characteristics of minced semi-finished products with the usage of demineralised milk whey enriched with Mn and Mg

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Introduction. In present-day meat raw material deficiency and permanent growing prices conditions, a pressing issue of manufactured meat technology modernisation for product enhancement and quality improvement remains relevant. Demineralised milk whey enriched with Mn and Mg has potential as raw product resource nowadays. As one of the main product quality estimation criteria for consumers is its organoleptic characteristics, our mission is to investigate an influence of enriched demineralised milk whey particularly on these factors.

Materials and methods. The samples of minced semi-finished products, which vary by content from demineralised milk whey enriched with Mn and Mg were produced. The correspondence of organoleptic characteristics of semis was conducted in comparison with organoleptic characteristics specified in DSTU 4437:2005 “Semis, minced meat and cereal. Technical conditions”.

Results. In the course of investigations, it was produced 4 samples of minced semi-products, which were added with some demineralised milk whey, more specifically: the first one is check sample; the second sample – 4%; the third sample – 6% and the fourth sample – 8% (the quantity indicated in % of the semi-product’s mass). The preparation of partially finished goods was conducted in accordance with the flowchart. After cooling, the samples were proposed to tasters, who gave feedback in the form of rating represented in table 1.

Table 1 – Score of the prepared semi-finished products

Prepared minced semi-finished products	Score											
	Check sample			Sample 2			Sample 3			Sample 4		
	T1*	T2*	T3*	T1	T2	T3	T1	T2	T3	T1	T2	T3
View	4	4	5	5	4	5	5	5	5	5	4	4
Sectional view	4	4	3	5	4	5	4	5	5	4	3	4
Consistence	3	4	4	4	5	5	5	5	5	4	4	3
Taste	4	4	3	4	4	4	5	5	5	3	3	3
Smell	5	4	5	5	5	4	5	5	5	4	5	4
Average score	4,0	4,0	4,0	4,6	4,4	4,6	4,8	5,0	5,0	4,0	3,8	3,6
Composite rating	4,0			4,5			4,9			3,8		

*T1, T2, T3 – tasters.

As Table 1 shows, from tasters’ perspective, the third sample was the best – the product is characterised with fine texture, better taste and smell. The lowest score was gained by the fourth sample – the sample has more dry consistency and acquires off-flavour of milk whey, which repels consumers.

Conclusion. The addition of demineralised milk whey enriched with Mg and Mn in production of the minced semi-products leads not only to the physicochemical performance

gain of the end product, but offers an opportunity to create a product that has better organoleptic characteristics, especially nice taste, flavour and fine texture.