

# THE UTILIZATION OF HORSEFLESH IN THE MANUFACTURE OF UNCOOKED SAUSAGES

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## Introduction

The aim of this work is the production of horseflesh product retaining all biologically active nutrients. Horseflesh is known to be easily digestible, to contain a considerable amount of complete protein with the optimum balance of amino acids such as linolic, linolenic and arachidonic acids. These acids have a great regulatory function in the body metabolism. Due to the considerable content of unsaturated fatty acids horse fat occupies an intermediate place between animal and vegetable fats and has the marked lypotropic and bileremoving effect. Horse fat contains little cholesterine and saturated fatty acids which are atherogenic factors. High content of vitamins, minerals, trace elements and a number of other compounds which are essential participants in body biochemical processes also adds to the nutritive value of horseflesh (1). In this view we have developed the formula of uncooked semidry sausages of horseflesh. This work was carried out at the Semipalatinsk meat plant.

## Materials and Methods

The recommended sausage products were manufactured of horseflesh and horse fat which were in the certain rations. Physico-chemical, biological and technological indices were investigated by modern methods during the production process and at the end of it (in the finished product). The object of investigation was uncooked air-dried and uncooked smoked

sausages. The raw material was the highest grade horseflesh. After deboning and trimming the cuts were being cured for some days under certain temperature. To prepare sausage meat some portions of the highest grade horseflesh were put into the cutter. While mixing a certain amount of bacterial culture was added to the main raw material mass. Spices and some portions of horse fat were also added with simultaneous mixing for some minutes. Casings were stuffed with the prepared sausage meat. Sausage links were corded and ripened under the temperature of 18-22°C and relative air humidity of 80% during some days. Then sausages were divided into 2 batches. One of them was smoked for 20-30 hours under the same temperature, the other batch (air-dried) was dried without being smoked. Both batches were dried under the temperature of 12°C and relative air humidity of 75% during 20 days.

### Results

Air-dried sausage manufactured without being smoked got a higher tasters' judgement. The sausages fully satisfied the requirements of State Standards in the appearance, colour on the cut, aroma, flavour, only the consistency was soft. As for uncooked smoked sausage it had a dark colour, marked sour taste due to the high content of polyunsaturated lipid fat fractions accelerating the process of these products autoxidation during smoking. It is characteristic that there is no difference in amino acids composition of horseflesh portions. Air-dried sausage had the advantage of higher indispensable fatty acids content:

Fatty acids	% content in the fat of the product	
	air-dried sausage	uncooked smoked sausage
Lauric	0,35	0,37
Myristic	3,6	3,9
Palmitinic	20,0	21,8
Stearic	7,6	7,9
Oleinic	40,0	42,5

1	2	3
Linolic	10,6	7,20
Linolenic	5,40	4,60
Arachidonic	2,96	1,6

The table 1 shows that the use of horseflesh and horse fat in the manufacture of uncooked sausages guarantees preservation of biological complexes ( linolic, linolenic, arachidonic acids ) in the active form in the finished product composition.

References:

E.T.TULEUOV. Horse Meat Production.  
Agropromizdat, 1986.