

the technological process: preliminary maturing of the unsalted herring under the regulated conditions (method 1) [3]; maturing that is combined with a defrosting, in the potassium chloride solution (method 2).

To characterize the rheological characteristics the research of the Pacific herring utmost shift tension (UST) alterations were carried out. The UST was defined with the structure-o-meter ST-1M by method that is based upon the definition of the cone loading tension with its introduction to the definite depth into the product and the definition of the tension relaxation time, which is caused by its deformation.

Table one provides us with the data of the herring tissue UST alteration while using the maturing methods described above. Also the data of the UST alterations while using the traditional method of salted fish maturing are illustrated for comparison:

- experimental sample 1 – preliminary maturing under the refrigeratory keeping in regulated conditions;
- experimental sample 2 – herring maturing in potassium chloride solution;
- experimental sample 3 – salted herring maturing with the content of sodium chloride in tissue 3,5-4% (traditional method).

The alterations in Pacific herring UST in dependence of its keeping, kPascal

Sample	Keeping duration, days					
	0	2	4	6	8	10
Experimental sample 1	22,8	22,2	19,4	16,6	15,2	14,8
Experimental sample 2	22,4	21,9	20,7	17,8	16,4	15,4
Experimental sample 3	23,4	23,2	22,8	21,6	20,8	19,6

Within the process of the preliminary biochemical maturing (experimental sample 1) and under the herring keeping in potassium chloride solution (experimental sample 2) the softening of the fish's tissue takes place which is proved by the decrease in the utmost shift tension. The decrease flies faster in the experimental samples as the proteolytic herring ferments show the highest activity with the implementation of these methods.

#### References

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#### MODIFIED CRYOPHERESIS IN AN INTEGRATED THERAPY OF RHEUMATOID ARTHRITIS PATIENTS

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The point of this research is the evaluation of the results of course modified cryopheresis (patent №2245167 of 27.01.2005) implementation within the patients with rheumatoid arthritis (RA) under the increase in the process activity and the impossibility of the traditional therapy implementation in its fullness.

72 patients with RA were involved into the research, 50 of them formed the major group and 22 of them formed the control group. The inclusion criteria were also defined. RA was in its active

phase within all the patients. 4 or more ACR criteria for RA were registered. Laboratory showings of the rheumatism process activity were being defined according to unified methods with the «Labsistem» complex. The dynamics of immunological indexes and the microcirculation condition were estimated according to the data cognunkival biomicroscopy. In average within the cryoapheresis course that consisted of 5-6 procedures (every other day), 3500 ml of plasma went through the processing. Night and morning joint pains reduced and ended under the impact of complex therapy, the volume of movement widened more comparative to the control group. Richie index reduced from  $26,2 \pm 1,1$  to  $16,2 \pm 0,9$  ( $p < 0,001$ ). Within the control group – from  $24,1 \pm 1,2$  to  $20,1 \pm 1,0$ . VAS index – from  $72,3 \pm 4,6$  to  $35,3 \pm 2,9$  ( $p < 0,05$ ). Within the control group – from  $68,4 \pm 3,7$  до  $58,4 \pm 2,7$ . Statistically-significant decrease in blood sedimentation rate, seromucoid, sialic acids, fibrinogen, CRC, rheumatoid factor, proline and oxiprolin, glucosamioglycans fractions in blood was registered ( $p < 0,01$ ). Significant positive alterations were registered also in the immunity in-

dexes (the increase in T-lymphocytes number, CRC decrease and all the immunoglobulines classes decrease,  $p < 0,05$ ). The procedures of cryoapheresis have improved the indexes of microcirculation condition that displayed in the decrease in intravascular and perivascular indexes ( $p < 0,01$ ). The cryoapheresis procedures have increase the efficiency of the following medicamental therapy. The positive impact of cryoapheresis has also displayed in rheocorrection, hemodelution effects, and the alteration of inflammation mediator concentration.

Cryoapheresis is an effective auxiliary pathogenetic method of the RA patients treatment. It allows us to achieve the decrease in the disease activity under the impossibility of the adequate basis therapy implementation in its fullness.

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