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**PHYSICAL FACULTY
DEPARTMENT OF BIOMEDPHYSICS**

**Menshikova
Svetlana Gennadevna**

**Contactless blood activation test
by physical methods**

Graduation work

**Scientific director
Candidate of Physico-Mathematical Sciences
V.G. Shironosov
Head of the Department of Biomedphysics**

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CONTENTS

INTRODUCTION.....	4
CHAPTER 1. REVIEW OF LITERATURE.....	5
1.1. Electrochemical activation of solutions.....	7
1.2. The redox potential of the internal environments of living organisms.....	10
1.3. Contactless activation as a way to influence the biochemical processes of living organisms..	14
1.4. Hypotheses explaining the effect of changes in the redox potential on living organisms.....	16
1.5. Electrophoresis study of cells.....	18
1.6. The study of liquids by microwave spectroscopy.....	22
1.7. The study of cells by scanning electron microscopy.....	24
1.7.1. The form of red blood cells. A change in the shape of red blood cells under the influence of various factors.....	25
CHAPTER 2. MATERIALS AND METHODS	
2.1. The choice of the object of study.....	29
2.2. Method of non-contact activation of physiological saline.....	29
2.3. Electrophoresis method.....	30
2.3.1. Electrophoretic cell and installation scheme for microelectrophoresis.....	32
2.3.2. Methodology and cell scheme for conducting experiments.....	34
2.4. Microwave spectroscopy method.....	36
2.4.1. Methodology and setup scheme for conducting experiments.....	36
2.5. Scanning electron microscopy.....	37
2.5.1. Test setup.....	37
2.5.2. Methodology for preparing biological samples for research.....	38
2.6. Applied formulas and mathematical processing of results.....	41
CHAPTER 3. CONDUCT, RESULTS AND DISCUSSION OF EXPERIENCES	
3.1. Experiments on non-contact activation of saline.....	43
3.2. Experiments on the study of the electrokinetic properties of red blood cells of non-contact activated blood by microelectrophoresis.....	45
3.3. Experiments on the study of the absorption spectrum of contactlessly activated blood by microwave spectroscopy.....	49
3.4. Experiments on the study of the morphology of red blood cells of non-contact activated blood by scanning electron microscopy.....	53
CONCLUSIONS	60
LIST OF REFERENCES.....	61
APPLICATION 1 (instrument specifications).....	71
APPLICATION 2 (laboratory manual).....	73

Conclusions

In the graduate work, for the first time, the effect of contactless activation on the state and properties of blood and its formed elements, red blood cells, was experimentally investigated by various physical methods. Based on the results of the work done, we can draw the following conclusions:

1. The process of non-contact activation of the liquid in containers of the material used (polyethylene) with a wall thickness of 0.16 mm occurs, as a rule, in 10 - 15 minutes, the relaxation process can last for hours.

2. The time E_h of a contactlessly activated liquid in polyethylene containers reaches a stable level is an average of 15 minutes.

3. The change in the amplitude of oscillations and the percentage of red blood cells with bioelectrical activity during non-contact activation is due to a change in the surface charge of cells.

4. Non-contact activation of blood, accompanied by a shift of E_h to the region of negative values, is characterized by an increase in blood radio transparency: the attenuation coefficient of microwave waves increases.

5. A change in the morphology of red blood cells with non-contact activation indicates structural changes in the membrane.

6. The change in the electrokinetic properties, the structure of the erythrocyte membrane, the attenuation coefficient of the microwave waves in the blood with non-contact activation is due to a change in the energy potential and the appearance of structural - energy excitations in the blood.

7. A methodology has been developed and a training and methodological stand has been created for laboratory work on the topic: " Research of water quality using the biotest".

8. The obtained experimental results can serve as the basis for the development of new methods for culturing cells, creating systems for long-term blood storage (biotechnology, medicine, water treatment, etc.). It is also supposed to be possible to introduce the diagnosis of various diseases at an early stage of their development.