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**PHYSICAL FACULTY
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**MICROWAVE - RESEARCH METHODS
ACTIVATED AQUEOUS SOLUTIONS**

GRADUATE WORK

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CONCLUSION

Liquids, as shown by numerous experiments, are very sensitive to the effects of physical fields of various nature. Moreover, structural changes occurring in aqueous media lead to the appearance of anomalous properties of these substances. An example is electrochemically activated solutions that can have a significant effect on physical and biological systems. However, the complexity of EXA processes, both contact and non-contact, makes it difficult to explain the mechanisms of the occurring phenomena. The phenomenon of contactless activation of liquids, discovered during electrolysis with a diaphragm [20–21] and without [13–15], introduces new aspects to the theoretical justification of the unusual properties of EXA liquids. Non-contact activation, which changes the structure and properties of liquids without changing their chemical composition, will increase the area of practical use of activated solutions in medicine, agricultural, industry and in everyday life. In connection with this, the possibility of recording structural changes in EXA fluids, in particular, BAJ, by the proposed method became fundamentally important in this work.

1. A measuring stand has been developed for registering the dielectric properties of liquids in the microwave range, which is based on the created laboratory work on the subject of “microwave technology” and “microwave methods for analyzing liquids” in the courses “Radiophysics” and “Water and aqueous solutions”.

2. Studies of various contact and non-contact activated liquid media on a measuring stand in the microwave range of electromagnetic waves from 8.8 to 9.4 GHz have been conducted.

3. For the first time, experimentally confirmed and investigated the phenomenon of contactless activation of liquids by microwave – method.

4. In the course of the BAJ experiments, two types of liquids were determined: in some, under the influence of activation, the attenuation coefficient increases (distilled water, alcoholic beverages), in others it decreases (physiological NaCl solution, blood).

5. At the end of the activation processes, a faster relaxation of the activated media by the ORP parameter was noted, in contrast to the relaxation determined by the attenuation coefficient parameter.

6. Based on the results of this work, theses were published and a report was made at the 8th All-Russian Scientific Conference of Physicists and Young Scientists in Yekaterinburg [43]. The report is awarded with a diploma of the second degree.