



## Universal complex "IKAR-TEST" for contactless registration of dynamics of physical, chemical and biochemical processes in aqueous solutions

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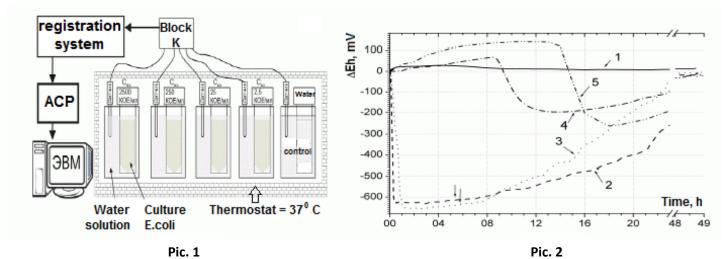
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The invention (pic. 1, 2) relates to the field of applied physics, chemistry and biology and can be used for contactless registration of "superweak" radiation (SR) arising in aqueous solutions. The main cause of SR radiation, as it became clear recently, is water activated (transferred to a nonequilibrium thermodynamic state) by one or another physical, chemical or biological method. It has been proven that it has a cluster structure, has "memory" and energy.

Numerous "anomalous" phenomena of structured water and aqueous solutions (transmutation of chemical elements, mutation of microorganisms in sealed ampoules, "mitogenetic" radiation of A.G. Gurvich, acceleration of chemical and biochemical reactions, Kirlian effect, cold "thermonuclear" fusion, laser "mustache", the effects of non-contact activation, non-contact methods of prevention, treatment and diagnostics (sb36-7.htm, sb32-1.htm), heat generators with efficiency> 100%, resonant hydrogen energy ...) have already become the basis of new promising technologies.



Pic. 1. Block diagram of the «IKAR-TEST» hardware and software complex.

**Pic. 2.** Typical graphs of ORP changes (DEh=DOBΠ(t)) distilled water under the influence of various non-equilibrium systems): **1** - infusion solution (IS) 0,9% NaCl (control); **2** - IS for electrolysis without a diaphragm (through polypropylene 0.2 mm); **3** - microhydrin solution (through polyethylene 0.02 mm); **4** -" contamination" of drinking water with bacteria E.coli (1 CFU/ml, through 1.2 mm polypropylene); **5** - culture of lactic acid bacteria in milk (through polypropylene 0.1 mm).

Studies have shown that the relaxation time of the induced cluster structure of activated aqueous solutions is seconds, minutes, and even years. The radiation arising from activation and relaxation is considered "superweak", and extremely complex and expensive equipment (chemiluminometers, IR-spectrometers "lkar" ...) is used for its registration. At the same time, the radiation parameters provide important information on the dynamics and structure of the processes taking place in activated water.

Therefore, in order to elucidate the nature of the phenomena and further optimize new promising technologies, it became necessary to develop new, inexpensive, supersensitive methods for recording the dynamics of processes occurring in aqueous solutions.

The method proposed by the authors is new, simple and affordable, in comparison with the previously known methods.

The method is based on the effect of non-contact activation of liquids (BAF).

Non-contact activation (change in physicochemical characteristics) of the reference aqueous solution occurs due to radiation from the investigated aqueous solution, transferred to a thermodynamically nonequilibrium state, in one way or another: electrolysis, dissolution of chemicals, biochemical, physical processes. Non-contact impact is observed through polymer, chemically inert, dielectric partitions, impermeable to liquids, chemicals and gases. In a reference aqueous solution with a constant chemical composition and a slight change in pH, significant shifts in the redox potential (ORP) (pic.2).

Experimentally, the BAJ effect was discovered by the authors [1-3] during electrolysis without a diaphragm (1999), during chemical (2002) and biochemical (2004, 2006) reactions by the methods of ORP-metry, microwave and optical spectroscopy. Theoretically - the effect is explained by the author [1] based on the solution of the problem " $1/R^3$ " (1984). Solution to the problem " $1/R^3$ " due to nonlinear parametric resonance made it possible to prove the possibility of the occurrence of stable discrete resonant states of motions in a system of two or more oscillating dipoles - resonant microclusters (RM) and supercoherent radiation (SI) from them. RMs arise when liquids are activated by one or another physical or chemical method. Electromagnetic supercoherent radiation from resonant microclusters is by no means small in the near zone ( $^{\sim}1/r^4$ ) and leads through thin dielectric partitions to the BAJ effect.

The block diagram of the IKAR-TEST hardware-software complex is shown in (Pic. 1). These changes in ORP are displayed and processed on the computer. Typical graphs of ORP changes (DEh=DOBΠ(t)) distilled water under the influence of various nonequilibrium systems are shown in (pic. 2): 1 - infusion solution (IS) 0,9% NaCl (control); 2 - IS for electrolysis without a diaphragm (through polypropylene 0.2 mm); 3 - microhydrin solution (through polyethylene 0.02 mm); 4 -" contamination" of drinking water with bacteria E.coli (1 CFU / ml, through 1.2 mm polypropylene); 5 - culture of lactic acid bacteria in milk (through polypropylene 0.1 mm).

The authors hope that, like chemiluminescence, the discovery of the BAF phenomenon from living systems, during chemical reactions and physical processes, can become the basis for new extremely simple, hypersensitive and widely available non-contact express diagnostic methods and research in medicine, microbiology and other industries:

- early diagnosis of contamination of liquids (water, drinks, blood, human body, animals) by microbes, viruses, chemicals; prevention of pandemic, epidemics;
- registration and optimization of chemical, biochemical and physical processes under the influence of various factors (biotechnology, hydrogen energy technologies, vortex heat generators, crystallization, pharmaceuticals, beverage preparation, dietary supplements).

List of publications:

- [1] Shironosov V.G., Resonance in physics, chemistry and biology, Izhevsk, Publishing House "Udmurt University", 92 p. (2001).
  - [2] Resonance technologies (analytical note).
- [3] Technologies based on non-linear parametric resonance of N. Tesla (demonstrations from a series of unexplained phenomena "physicists are joking"). (Shironosov V.G.).

Translated by Shironosova O. E. Found a mistake?

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