

Influence of information transfer and weak electromagnetic effects on complexation
in the system polymer - polymer low molecular weight mediator
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Each chemical compound has an inherent electromagnetic field structure. In biological systems, complex interconnected and clearly coordinated biochemical processes take place both at the material and field levels. Many reactions go through the stages of complexation (DNA-protein-enzyme-vitamin..., etc.). These processes are difficult to study and usually take place at the molecular nano level. The role of electromagnetic fields (EMF) is difficult to assess.

Model systems for studying these complex processes can be simpler polymer - polymer complexes with a low-molecular-weight mediator.

The purpose The present work consisted of conducting a reconnaissance experiment to reveal the influence of weak electromagnetic fields on the complexation process in the polymer - polymer - low-molecular-weight mediator system.

The objects of study were water-soluble complexing polymers polyacrylic acid, sodium polyphosphate, and a low-molecular-weight mediator - methylene blue dye. The reaction was carried out at pH 4.

Weak electromagnetic effects on the reaction medium were carried out in two ways. The first, by means of information transfer of weak EMFs from the previously obtained complex to an aqueous solution of one of the polymers by means of the IMEDIS-BRT apparatus in the "transfer" mode.

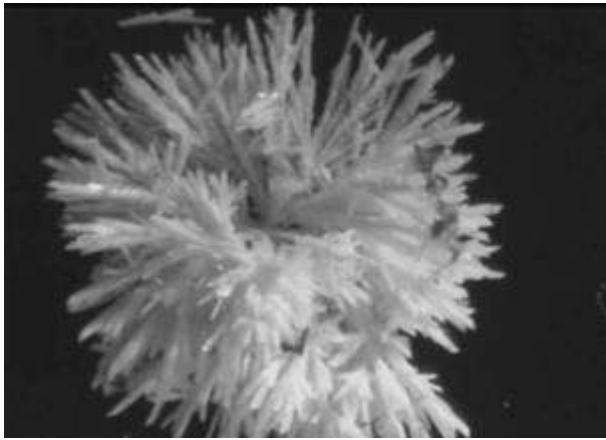
And the second, by carrying out the complexation reaction in a weak induced electromagnetic field of a broadband generator of ultra-weak EMF - a neutralizer "Gamma-7n.", Operating with a radiation intensity of $4 \cdot 10^{-16}$ W / cm² in the frequency range 30-300 GHz.

The effect of weak EMP was assessed by the morphological features of the structure of the crystals of the three-component complex.



Rice. one. Crystals of the complex in the absence of sources of weak EM

In fig. 1 with 1 resolution 15 shows micrographs of crystals of the complex obtained in the absence of the action of sources of weak EMP (control samples and samples for information transfer).



Rsi. 2. Crystals of the complex after information transfer to the reaction medium

In fig. 2 photomicrographs of the complex obtained as a result of information transfer of weak EMP from the previously obtained complex to the reaction medium. In this case, contrary to the expectations of the authors to obtain smaller and more homogeneous crystals, the complexation proceeded from a single center with the formation of thin long crystals resembling a "hedgehog".



Rice. 3. Crystals of the complex during the reaction in the presence of the neutralizer "Gamma-7"

In fig. 3 shows the crystals obtained by carrying out the complexation reaction in the presence of the neutralizer "Gamma-7n." It is noteworthy that the crystals have the shape of a "donut". The shape of these crystals partially confirms the assumption that the neutralizer itself "Gamma7n." creates vortex electromagnetic field structures in the form of a "spiral vacuum".

Thus, it has been shown that weak electromagnetic effects on complexation processes in polymer - polymer systems with

the morphology of the resulting complex is rendered as a low-molecular mediator.

significant impact on

The work is exploratory in nature.

Authors invite all

interested organizations to participate in continuing research. this direction

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