

## **APPLICATION OF IONISING RADIATION FOR STERILISATION OF PREPARATIONS ON THE BASIS OF SNAKE VENOM**

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It is known that low radiating firmness of the medical products representing diluted water solutions, excludes possibility of application an ionizing radiation for their sterilization. In order to make radiation method suitable for preparations it is necessary to increase radiation-chemical stability of these preparations. It can be reached in two main ways. The first way is addition of the substances protecting preparation from influence of products of water radiolysis in a solution. The second way is an irradiation of water medical products in the frozen polycrystalline condition. In such condition the phase of ice and the dissolved substance are divided, therefore the indirect action of products ice radiolysis on the dissolved substance is practically excluded. The direct action at its concentration can be neglected. Therefore radiating firmness of a preparation considerably increases. Such influence has been found in a case of many water medical products.

The purpose of the present work was studying influence of radiation on venom of *Vipera Lebetina Obtusa*.

The radiothermoluminescence method allows receiving data on structural properties of system, on the centers of stabilization of charges of primary products of venom radiolysis, about ways of migration of absorbed energy at an irradiation and so on. Samples of poison were irradiated in a special ditch by gamma beams at 77K to doses of 5kGr. Before an irradiation samples were cleared from oxygen traces. The irradiation was spent on air and in vacuum. Curve of lightning registered with a speed  $\sim 5$  K/min.

It was established that influence of  $\gamma$ -radiation up to 2.7kG, 4.05kG, 5.4kGr dozes leads to reduction of intensity of absorption at 260 nm and 300 nm.

It was shown that the influence of radiation sterilization on a solution of snake poison up to 1.35kGr dozes within 30 minutes promotes stabilization of toxicity, and pharmacological activity with simultaneous increase of a period of storage of water solutions of snake venom and it can be recommended for a pharmaceutical industry by manufacture of injections on a basis zootoxins.

It was experimentally revealed that the toxicity of snake venom is reduced at an irradiation of snake poison from 1.35kGr to 5.4kGr dose.

Thus the doses of  $\gamma$  radiation for sterilization both snake poison, and its water solutions were experimentally established. The revealed values can be applied at development of preparations on the basis of venom of snake.

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