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Polymer Gels for Carriers of Medicinal Substances

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The significant role of polymers, in particular, gels in reduction of toxicity, prolongation and controllable allocation of medicinal substances is widely known. For achievement of these purposes in the technology of preparation of medicinal forms the self-structured polymer gels are important. Due to self-structuring the medicinal substance can be entered into structure of the gel before formation of gel that allows to avoid long and laborious stages of washing from monomers, initiators and other harmful impurities which haven't reacted.

That's why abilities of obtaining the effective and prolonged polymeric medicinal forms of domestic biologically active compounds of synthetic and vegetable origin on the basis of polymer - clay composite carriers are investigated.

Application of polymeric hydrogels for treatment of burns and wounds is also known. At the same time, polymeric gels easily leave and they do not prevent the process of treatment. They are more often applied to treatment of burns since they accelerate healing of burns. One of the important and useful properties of gels is maintenance of penetration into an organism of oxygen.

Taken for comparison alchidine dissolved in glycerin, alchidine cream and antiburming medical cream dermazin with which the animals were treated, have led to reddening and a hypostasis of a wound within 3 days. And applied alchidine compositions have led to a covering of a wound by a crust and to healing within 3 days. In the scalding model of burns, no signs of infection under the burn wound were observed.

References:

1. C. Fischbach, et al. *Biomaterials* **28**, 2069-2076 (2007).
2. D. Edwards, et al. *J Burn Care Res.* **32**, 31-38 (2011).
3. S.N. Zhumagalieva, et al. *J Applied Polymer Sci.* **106**, 1601-1605 (2007).