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The Study of Flowing Properties of Hydrogels

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The topic of this article was to monitor the impact of excipients on viscosity of gels with local anaesthetic. In previous studies the optimal excipients from the group of polymers, enhancers and humectants were examined during the formulation of chlorhexidine, trimecain and terbinafine to the medical form – hydrogel [1, 2]. The choice of gel creating compound is influencing the reological properties of drug as directly affects its consistency. Reological properties – viscosity – are very important at dermal semisolid drugs, mainly at gels from the aspect of their use. The manufacturing process is significantly influencing the gels consistency as well.

The reological properties were evaluated in the study of hydrogels prepared from various gel creating compounds (Natrosol 250 HX, Natrosol 250 HHX, Natrosol 250 HR and Chitosan) with active ingredient of trimecaini hydrochloridum and gels without the active ingredient. Then the influence of propylenglycol and glycerol humectants in various concentrations on Mesocain gel were examined. Solitary influence of excipients was evaluated using the analyses of reological measurement results.

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