

Study of influence of hydroxyethylcellulose on eye drops weight

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Abstract:

The purpose of the work was a study of influence of hydroxyethylcellulose ingredient on weight of eye drops various dripping adapters, made of gum and plastic, in two different angles of dripping of concentration line 0,16 - 0,75 % HEC solution with 6 - 98 Pa.s range of viscosity there was found out the weight of the drops and compared to the weight of water drops gained under the same experimental circumstances. In the three - factor screening experiment there was found out that between non-water adapter is no evident difference, both of them during vertical dripping water drops of approximately same weight (43,5 mg). The weight of drops significantly rised up with HEC ingredient due to watering of surface of dripping part of both adapters. Watered gum adapter produced significantly larger drops than watered plastic adapter with both kind of dripping angles. The weight of drops significantly went down for both studied adapter with reducing the dripping angle from 90° to 45°. There was found out in this detail study quite large rising of the eye – drop weight with present of HEC ingredient of concentration range 0,16 - 0,75 % in comparison to the weight of water drops for both dripping adapter. The largest drops with avarage weight of cca 72 mg were noticed with gum adapter for 0,75 % HEC solution with 90° dripping angle.