

Thesis in the theoretical part provides a summary of basic information about the formation and properties of nanofibers and nanofibre membranes, briefly acquainted with natural and synthetic polymers suitable for the formation of nanofibers and gives an overview of the properties of the two drugs suitable for processing into nanofibers.

In the controlling permeating pre-experiment aimed to evaluation of the wholeness of extracted sublingual membranes and using caffeine as a permeating marker was not found any evidence of violation of membranes.

The average amount of sumatriptan released in 5 minutes and up to 60 minutes away from the tested PVA nanomembrane STT10% CHI into phosphate buffer pH 7.4 was the same as the release amount into artificial salivary fluid.

Nearly 60 % of active substance released in 5 minutes stays nearly on the same level up to 60 min

The same fact was also found for elution of API from the membrane of PVA\_API PVA\_API\_PAA type. A significant difference was in that, that only about 30% of the substance was released.

The values obtained for J flux API1 from nanofiber membranes labeled as chitosan5% API1\_5 STTchitosan% (H1, H2) and 5% chitosanAPI1\_chitosan5% STT (I1, I2) were  $6.0 \pm 2.7$  [mg / cm<sup>2</sup>.hod 1] or  $6.75 \pm 2.7$  [g/cm<sup>2</sup>.hod 1], respectively. These data are interesting in comparison with the values of J fluxus caffeine (about 408 to 504 [g/cm<sup>2</sup>.hod 1])