

ABSTRACT

A theoretical part of the diploma thesis describes solubility, classification of solubility and ways of influencing of solubility, and it gives a detailed summary of naproxen as the drug further used and evaluated in *in vitro* experiments for drug release.

An experimental section is focused to *in vitro* release of naproxen from nanofibre membranes produced by electrospinning with regard to the possibility of the use of layering.

At both layered and non-layered nanofibre membranes of three different naproxen concentrations (e.g. 5%, 15% and 30% by weight) the drug release amounts within 5 minutes were from 10 to 90 percent of total amounts.

An overall percentage of naproxen released in 60 minutes was always about 100 % of the total drug loaded in the nanomembranes.

The nanofibre membranes layered with the glycerol and propylene glycol were of the same profiles as with non-layered membranes.