Univerzita Karlova, Farmaceutická fakulta v Hradci Králové

Název rigorózní práce	**CHARACTERIZATION OF PLGA-BASED FILM FORMING SYSTEMS**
Uchazeč	**Mgr. Andrea Věříš**
Oponent	**Dr. Georgios Paraskevopoulos, PhD**

Posudek oponenta rigorózní práce

The thesis is dealing with the physicoechemical characterization of mixtures containing potential components for the formation of in situ film forming systems.

The theoretical part is describing the different components of film forming systems together with techiques used for their characterization. Experimentaly, several combinations of polymer containing plasticizer or not and salicylic acid as active substance were prepared and tested for selected properties including DSC, Rheology, adhesion, SEM and drug release.

The theoretical part of the thesis is nicely written. Some minor language mistakes exist but the message is succesfuly given. I really enjoyed reading the part explaining the different components of film forming systems. From the experimental part is missing the description of preparing the different formulations before testing but I assume it is simple mixing and mixture homogenization. The absence of text at the section of results is a drawback which I would not recommend for the future. A combined section of Results and Discussion would be advantageous. The discussion part would be of higher quality if (a) there was a justification of the different concentrations used for each component (eg why the specific concentrations of plasticizer were used or why the speicifc concentrations of salicylic acid were used) and (b) the obtained experimental data of this work were compared in a further extend with similar experiments published before. It is noteworthy that only three references are present in this section (references 36, 38 and 74).

Nevertheless, the content of the thesis is presenting a workload sufficient for a rigorous thesis and this is why I am recommending for presentation.

Questions:

1) Section 1.3.3.3, table 2: Chitosan is described as non soluble in water and ethanol but characterized as hydrophilic. Why?

2) Section 2.7: For the drug release profile experiment the formulations were tested at temperature 37 oC and pH 7.4. Why? In addition, even if it is not a part of this work, the calibration curve of Figure 6 was used. How this calibration curve was prepared?

3) Section 4.5. How the percentages of salicylate release (page 58) were calculated?

4) Ethyl pyruvate was found to be the most efficient plasticizer. Do you have some possible explanation?

V , dne

Podpis oponenta rigorzní práce