



## EVALUATION OF DIPLOMA THESIS - ASSESSMENT OF THE MENTOR

### Title:

### **Production of membranes from nanofibrous polysaccharides**

Thesis author: **Elcin Tören**

Thesis mentor: **Ing. Jiří Chvojka Ph.D.**

### Evaluation of work content:

In the introduction, the author comments on nanotechnology and nanofibers. Then he focuses on areas of use of the submicron fibers; the main aim of the thesis is filtration, purification, and biomedical applications. I appreciate the information about electrospun polysaccharide nanofibers and a membrane market overview. The Pullulan and PVA nanofibers are commented at the end of the chapter. I am missing more articles with polysaccharides membranes. It would be suitable for comparison.

The theoretical part includes information about the manufacturing techniques of nanofibers. Chapter 2.3 focuses on polysaccharides and pullulan. The author comments correctly on the membrane technology and its applications. It is possible to find many processes, which are applicable in practice. In the chapter, objectives are information about the advantages or benefits of nanofibers. Then are specified thesis objectives.

Experiments focus on nanofiber preparation from pullulan. For this purpose, the Nanospider was used. This nanofibrous material was modified, and pullulan/PVA nanofiber film was created. The results and discussion show material analysis and surface morphology of modified samples. The materials were tested to bet analysis, air permeability, and water solubility.

In conclusion, the results are commented correctly. Plagiarism was found to be below 5% in the STAG system.



**Diploma Thesis classification:**

The work meets all the requirements for the title of engineer. I recommend the thesis for defense.

**Grade:**

**-Excellent-**

By signing, I also confirm that I am not in any personal relationship with the author of the work.

In Liberec on 11.6.2021

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**Ing. Jiří Chvojka Ph.D.**