OPPONENT ASSESSMENT OF DIPLOMA THESIS

Student's name: Elçin Tören, B.Eng

Title of thesis: Production of membranes from nanofibrous polysaccharides

Thesis supervisor: Ing. Jiří Chvojka, Ph.D

Opponent: Ing. Adnan Ahmed Mazari, Ph.D.

1. Evaluation of diploma thesis

Evaluation	A	A-	B	B-	C	F
Fulfillment of aim and the assignment of work	X					
Choice of keywords		X				
Quality of the research part		X				
Methodology of the work			X			
Evaluation of the typographic level of the work. The correct division into subchapters	X					
Evaluation of the stylistic level of the work	X					
Consistency in explaining the meaning of abbreviations and symbols	X					
Correct quotation of the sources	X					

*Mark correct grade by using **x** in the corresponding cell.*
The final evaluation of the supervisor of the diploma thesis is given by the overall subjective review.
The classification of work in point 5 is given verbally, not numerically, or by letter.

2. Comments and remarks on the diploma thesis

The Master thesis" Production of membranes from nanofibrous polysaccharides" by Elçin Tören is written systematic and without scientific or drafting errors. The Thesis consists of 84 pages, 38 references and well explained chapters.

The thesis includes literature review related to Pullulan fibers, its production, advantages and the applications. Some processes mentioned in the thesis are not directly related to the theme of the thesis but overall gives a wider information of the nano fibers. The objectives of the thesis is to produce and describe the biodegradable and harmless nanofibers that allow functional uses by using polysaccharides, the theoretical part is well explained but little lacks in the experimental analysis. Majority of the objectives are covered in the thesis successfully.
The theme of theis is quite unique and can be further researched in future.

3. Questions regarding diploma thesis

Following are the questions related to the thesis

1-Why PVA was selected for this experiment

2- Why Epoxy and hardner is used, how it will effect the biodegradabale property.

3-Fig 5.4 Explain the graph, especially why a mixture of Pullulan and PVA produced more finer fibers(low average diameter)

4- Fig 5.6 Explain the thickness measurement method.

5- Under the Fig 11. You mentioned: “The smaller pore size of the 60/40 ratio Pullulan / PVA has a higher diameter and higher tensile strength than others and a smoother nanofiber form. Therefore, surface treatment was carried out with this nanofiber“ kindly explain this considering figure 5.4 as well

6- Explain pore diameter measurement method and define the statistics of how many samples/number of pores were considered.

4. Opponent's statement whether the diploma thesis meets the requirements for the award of an academic degree and whether it is recommended for defense

I recommend the thesis for defence.

5. Classification of the opponent of the diploma thesis

The research work is publishable, unique and I rate the thesis as **Excellent**

In Liberec, on

8.6.2021

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signature of the opponent of the diploma thesis