



SUPERVISOR EVALUATION

Bachelor thesis

Thesis title: **Flow properties of collagen matter**
Author: **Hadeel Atallah**
Supervisor: **Skočilas Jan, doc., Ing., Ph.D.**
Reviewer: **Ing. Jan Štípek**

Author elaborated bachelor thesis within range of 82 pages, containing 47 figures, 39 tables and 5 appendixes. 41 literature sources were used for literature search.

The thesis deals with analysis of flow properties of collagen dough by capillary rheometer. Experiments were carried out with different capillary dimension. Three capillaries were tested. Pure viscous non-Newtonian model (power law) was used to describe recorded data. Parameters of model, coefficient of consistency and flow index were determined by data regression analysis. Different measurement methodology were tested compare to old one. Data correction was implemented to own script in MATLAB, concerning Bagley's correction and Kozicki's parameters for rectangular slit.

The student's approach was very active and responsible. She worked mostly independently. Her literature research related to collagen and measuring principles of non-Newtonian fluids. She assisted experiments (device need more than one person) and evaluated data by own proposed and assembled code in MATLAB. The results of the work were affected by the COVID-19 pandemic, which broke out in 2020.

The author acquired a lot of experiences and knowledge in the field of rheology on non-Newtonian fluids, experimental work and own source script assembling.

Miss. Atallah fulfilled all aims of the submission. I evaluated her by grade

A (excellent)

In Prague, 17. 8. 2020