

## Posudek oponenta diplomové práce

**Příjmení a jméno studenta:** Boahene Stephen  
**Studijní program:** Polymer Engineering  
**Studijní obor:** Polymer Engineering  
**Zaměření**  
(pokud se obor dále dělí):  
**Ústav:** UIP  
**Vedoucí diplomové práce:** Prof. Ing, Pavel Mokrejš, Ph.D.  
**Oponent diplomové práce:** Ing. Ondřej Krejčí, Ph.D.  
**Akademický rok:** 2020/2021

**Název diplomové práce:**

Laying Hens Heads as an Untraditional Source of Collagen

**Hodnocení diplomové práce s využitím klasifikační stupnice ECTS:**

Kritérium hodnocení	Hodnocení dle ECTS
1. Splnění zadání diplomové práce	<b>B - velmi dobře</b>
2. Formální úroveň práce, včetně jazykového zpracování	<b>D - uspokojivě</b>
3. Množství, aktuálnost a relevance použitých literárních zdrojů	<b>E - dostatečně</b>
4. Popis experimentů a metod řešení	<b>E - dostatečně</b>
5. Kvalita zpracování výsledků	<b>D - uspokojivě</b>
6. Interpretace získaných výsledků a jejich diskuze	<b>C - dobře</b>
7. Formulace závěrů práce	<b>C - dobře</b>

Předloženou práci **doporučuji** k obhajobě a navrhuji hodnocení

**D - uspokojivě**

**Komentáře k diplomové práci:**

The master thesis was prepared on 106 pages, it is supplemented by a number of pictures, tables and graphs and also by three appendices. The work uses 42 literary sources (listed). The theoretical part of the thesis has a range of 46 pages, the content of this part accomplished the assignment and the text is relatively well written and structured. I positively evaluate the statistical data of current quantities of by-products. Unfortunately, the impression of the work is reduced by ambiguities in the sources and citations, which there are occurred here in several forms of notation, and many cited sources are not listed in the bibliography. Also, some long passages and chapters have only one source listed or they are completely without a source.

The practical part of the work deals with the preparation and analysis of gelatines from hens' heads. This section is also well structured and is supplemented by a number of figures, tables and graphs. I very positively assess the methodology used for experiments planning and their subsequent statistical evaluation. In particular, I appreciate the effort to compare the measured results with similar studies in literature. On the contrary, I have to evaluate negatively many terminological ambiguities (e.g. the term "purified collagen" already used for the input material, etc.), factual and spelling errors and unclear comments at some results. Despite these allegations, the work fulfilled the assignment and therefore I recommend it for defence.

**Otázky oponenta diplomové práce:**

- 1) On page 51 you write „Purified collagen dissolved in distilled water“. Is collagen really dissolved in water immediately? So why is enzymatic treatment of the material necessary?
- 2) On page 51 you write about the removal of glutelins from the material. Are glutelins part of meat proteins or cereal proteins?
- 3) In chapter 5.5.5 on page 59 you should have a description of the ash content determination, but you have here only meaningless numbers. Can you describe how this test works?
- 4) On page 74 you write "The optimum level for the ash content of the 1st gelatin fraction of the extraction temperature was obtained to be 70 ° C, at the extraction time was obtained to be 90 minutes". This is, according to the results, content 2.02 %, which is almost the highest value. Shouldn't it be the opposite, so look for the lowest ash content?

Ve Zlíně dne **28. 05. 2021**

Podpis oponenta diplomové práce