## STUDENT SURVEY

Please send this survey to Veronika Eberl at the **BOKU International Relations** (e-mail: <a href="kuwi@boku.ac.at">kuwi@boku.ac.at</a>) within two months of the end of the study abroad period. The letter of acknowledgement from the host institution should also be turned in to BOKU-IR (Peter Jordan Straße 82A, 1190 Wien). If all forms are not handed in (including this one), it is possible that the entire sum of the scholarship must be re-paid by the recipient to KUWI (see the agreement).

## **BASIC INFORMATION**

1. Name of student: anonymous

Field of study: Food technology

Host Institution: Budapet University of Technology and Economics

Host country/city: Hungary/Budapest

Study Abroad Period: from 01.0.6.2022 until 28.06.2022

### RECOMMENDATIONS FOR FUTURE STUDENTS

2. Information about the research offerings at the host institution: How helpful were the following informational resources?

(1 = not helpful to 5 = very helpful)

- 5 BOKU- International Relations
- 5 Lecturers at BOKU
- 5 Degree course schemes
- 5 Students / friends
- 5 Host institution
- 5 Host institution's web homepages

Other:

**3.** How would you rank your knowledge of the language spoken at your host institution? (1 = little to 5 = excellent)

		im Ausland				im Ausland					
	1	2	3	4	5		1	2	3	4	5
Reading comprehension											$\geq$
Listening comprehension					$\boxtimes$						$\geq$
Speaking ability											$\geq$
Writing Ability										$\boxtimes$	

Vor dem Aufenthalt

Nach dem Aufenthalt

4. Languages most often used at the host institution, in percent:

Used language German: Ja Nein

1.English	100%	2.
3.		4.

15. What quality of support did the host institution give in the search for accommodation? (1 = bad to 5 = excellent)

Student dormitory Hotel / boarding house / guest house Room in a private

Private apartment Shared apartment with other students

Friends/family

Other:

14. Who helped you find living accommodation?

apartment

Broker

Host institution

16. How would you rank the accommodation?
(1 = bad to 5 = excellent)  1 2 3 4 5
17. To which extent were student resources available to you? (libraries, computer labs,
laboratories, facilities, etc.)?
(1 = not at all bis 5 = very good)
18. How was the computer and internet access?
(1 = bad bis 5 = very good)  1 2 3 2 5
19. Monthly expenditure during the course of the stay abroad (in Euros): Travel expenses (for one way there and back):44.80€
Monthly expenditure (incl. accommodation): ,spent on:
350€ Accommodation
Maintenance
20€ Commuting expenses
Costs of books, copy, etc.
Tuition
Other
OVERALL ASSESSMENT
20. Evaluate your stay in an academic sense:
(1 = bad to 5 = excellent)  1 2 3 4 5
21. Evaluate your stay in a personal sense: (1 = bad to 5 = excellent)
22. Which aspects of your study abroad stay did you most enjoy?
In an academic sense:
The host University has an instrument for performing my research that my Institute doesn't have it. Thus, I have experience to use the instrument and complete my research story.
In a socio-cultural sense:
The Budapest culture is quite vibrant, during summer they have a lot of event such music, cultural and historical festival. I enjoyed my stay in Budapest.
23. Did you have any problems during this study abroad stay?
No
24. Did the fact that you studied abroad cause you to have to study at BOKU longer?  Yes No I don't no
If so, why?
25. In your opinion, how can the KUWI scholarship program improve upon itself?
KUWI program is good, it connected scientist from two different countries and give a space to collaborate. Perhaps the duration of the stay could be longer, so it will give more time to perform the research or to enhance the scientific circle.

I agree that this report, including the above data (field of study, host university, year of study, length of stay), will be published on the website of BOKU- International Relations for the purpose of exchanging information on the study visit, so that future interested outgoings can be informed about your experience at the host institution.

The consent is voluntary and can be withdrawn at any time in the future without giving reasons. Any revocation can be declared at any time by e-mail to kuwi@boku.ac.at.:

# **Research Report**

(Brief report of stay abroad from scientific point of view, ca. 1 page)

A micro dough lab was used to evaluate the mixing stability of the GF batter. In addition, several chemicals were applied to determine starch-protein interaction during mixing, such as NaCl, Urea, and SDS. Those chemicals disrupt electrostatic interaction, hydrogen bonding, and hydrophobic forces between and within molecules, respectively. This study intended to investigate two main aspects during mixing. The first aim was the influence of starch-protein interaction on mixing stability. The second step was determining the dominant starch-protein interaction in providing better batter stability.

Some findings of the research were:

### 1. Potato starch-based batter

- a. batter combined with SDS and water showed higher peak viscosity compared to batter sodium and urea. In general, the peak viscosity of the samples was higher than the control (batter without protein). The increased in peak viscosity showed a similar trend as the increased in water absorption.
- b. the development time exhibited insignificant to a different solution, and the value range was 0.68-0.92 minutes. One of the critical parameters during mixing is mixing time, and a lower mixing time showed the batter system's rapid hydration and development time.
- c. the batter stability of control and samples demonstrated a similar trend at 0.4 minutes
- d. softening value indicates resistance breakdown or mixing stability. A combination potato starchpotato protein showed the lowest batter stability in all different solutions.

### 2. Maize starch-based batter

- a. the combination of maize starch-potato protein showed the lowest peak viscosity in all different solutions. Interaction of maize starch-based batter in sodium solution showed the highest peak viscosity. As sodium solution showed the highest peak viscosity, disrupting electrical force negatively affected increasing GF batter's peak viscosity.
- b. batter development during mixing showed the lowest value when the GF ingredients were dissolved in SDS solution. In this case, minimizing hydrophobic forces between and within molecules could increase the mixing performance of maize starch-based batter. The further literature review should be done to evaluate the effect of SDS on the batter, as a combination of GF batter with sodium and urea did not show a high mixing development time.
- c. the stability of maize starch-based batter demonstrated a similar trend as potato starch-based batter by 0.4-0.6 minutes.
- d. a combination of maize starch-potato protein tend to be more stable than other combinations, while sodium solution showed the softer batter in all different protein.

### 3. Rice flour-based batter

- a. a combination of rice flour with three different proteins exhibited the lowest value in a sodium solution. Disturbing electrostatic force seemed to inhibit batter's ability to absorb water or sodium solution in GF batter effect on water competition.
- b. interestingly, rice flour showed a higher development time than other starches, especially when dissolved in an SDS solution. Hence, the water absorption of rice flour-based batter was relatively higher compared to potato and maize starch-based batter.
- c. the batter stability of control and samples demonstrated a similar trend at 0.4 minutes
- d. according to Table 3, rice flour-based batter tends to be stable during mixing, showing
- e. a lower softening value. Moreover, some samples showed error values, meaning the batter did not soften during the analysis.