

Final report

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Home University/Country: Universität zu Köln, Germany

Subject: optimising biofuel production

Guest University/Country: Maaülikool Tehnikainstituut

Name of supervisor: Lisandra Meneses

This is my final report about my internship in Estonia at the Tehnikainstituut.

All of my applications tended towards plant science and research for ecologically beneficial projects or world hunger reducing solutions. Thanks to my supervisor, my preparation was very easy since she could tell me all about useful devices or help me out with finding a housing inside a local student dormitory. Due to Covid-19, the travel was kind of challenging since I had to take a flight to Riga first, then travel to Tallinn, the capital of Estonia, to Tartu by bus. However I found time to spend a whole day in Riga to look around the city and get some rest. My travel started in the late evening of the 12th July till noon of the 15th of July.

Arriving in Tartu, my supervisor welcomed me at the bus station and guided me to the dormitory closest to the Tehnikainstituut called Tornii where we could very quickly find my flat since I already had signed a contract. The flat was sufficiently clean and the laundry room was very modern.

Even though my supervisor would have allowed a resting day before starting my internship, I rejected to use my limited time as best as I could. The first work days I was shown the labs and the overall procedure for the experiment but I got used to it without any complications. The weather was nice and sunny the first two months so I was able to go to the city center a lot to look around, meet some people and have a nice time after work in a restaurant too. There were multiple “culture crash course” events for foreigners to meet up with new people and have nice trips through the city or museums. The last month it got rainier and a lot colder so I felt quite unprepared with my clothing. However, thanks to the scholarship I was able to buy the required equipment like a warm rain jacket without a struggle.

The project I was working in was about optimising the bioethanol production from barley straw as a feedstock. I had to mill the straw, prepare the bioreactor with the straw, catalyst and water and initiate some biological reactions to obtain the bioethanol. The colleagues did not seem too communicative, however my supervisor and me got along very nicely. The others did not work with me directly anyways, so their behaviour did not bother me in any way. Since the colleagues were not talkative, there were no major distractions either, so I could work without disturbances. I learned a few tweaks and had to prepare my feedstock on my own rather than ordering all pre-made required reactants.

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The Tehnikainstituut is a moderately sized building for science. It has four floors, including the underground while the bottom two of them are fitted with laboratories in one of which I had been working. The entire building was very modern since most of the doors were regulated by electronical key-chips. Furthermore, in the back of the building, they have a garage to fit all of the feedstock, the shredder, various tools, etc.

In the end, the internship taught me about creating your tools or feedstocks instead of ordering them already prepared. Furthermore, I also practiced general scientific procedures or enforcing my skill of interlocking different sequential steps.

This internship showed me, that there is a lot to learn from going abroad and I am looking forward to gaining more experience outside of my own country.

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