

Internship in Ghana

Work experience

The internship was done at the Department of Food Science and Technology at the Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi, Ghana. The internship was through IAESTE Austria and IAESTE Ghana and was 8 weeks long. It was divided in three different labs in which I helped with work, either on internal projects, mainly helping with a doctorates thesis, or on project given by companies to ensure food quality standards in their products. The different labs were the general food science lab, the fermentation lab and the mycotoxin lab.

General Food Science Lab

The first lab I arrived in and worked for the first three weeks of my internship. Here I worked to help other interns from Ghana (1st year students at KNUST) to obtain basic knowledge about the various methods of food components determination.

As for the first week the experiments done were moisture determination to obtain the amount of unbound water in food samples, fat determination to determine the various fat percentages in the samples and lastly the ash content determination to get the inorganic components in the samples. My work, as I already knew the procedures, was mostly to guide the interns through the steps, show them how to calculate the various percentages for these experiments and overall just help out in a tutoring way.

The second week was similar to the first week in the work I had to do only the experiments where mixed up so the ones this week were determination of the oil constant, determination of the total flavonoid content, determination of phytochemicals and also the determination of the total phenolic content in various food samples.

For the third week most interns knew what to do already so project from outside the university were brought in to mostly determine various compounds, like mentioned above, in these samples. The work here was mostly to look over the procedures and check if the work was done ok.

Fermentation Lab

Here I worked for two weeks with a supervisor and one other intern to test different food samples given by outside companies to test if there are unwanted bacteria residues in the sample.

For the first week the supervisor showed us how to determine E.coli and salmonella in the food samples especially how it is done in his lab as there are various methods to obtain this information. So he walked us through the steps of media preparation, autoclaving, sample preparation and incubation techniques.

The second week me and the other intern got food samples as our own project on which we checked if there was E.coli or salmonella present. This was mostly done by our own with some supervision.

Mycotoxin Lab

For the last three weeks I worked together with one co-worker in this lab and there a project was given to find toxins in different plant and food samples. So at first we researched the plant samples, as we knew what kind they were, and checked if there already was work done that showed toxins we could search for.

After that the plant samples were extracted and a HPLC measurement was done to check the various peaks so we could group different components together and check if they are present. This was done in the first week.

The second week we then checked another HPLC run with the samples and also some standards we prepared to compare if the searched for components are really present and also an IR was done.

The last week was sadly cut short for me as I had to already travel home earlier but I was part of the NMR measurements of the samples to again check the presence of the components.

Impression

Overall was the internship really interesting as to see how different the work is done in other countries especially countries outside of Europe. As for the labs in Ghana I was surprised that most of the machinery is similar to which we have here in Europe. For me the biggest difference was the time management or more of the lack of time management there. This showed the most when I worked together with other Ghanaian people that they were way more carefree with their time and many experiments were drawn out longer than they would have been in Austria.

Country and Life in Ghana

Lastly I wanted to give a small overview how the life in Kumasi and Ghana overall was as there is a big difference to the way we are living in Austria. The first and biggest thing are the people of course as they are way more open and joyful here. On the other hand (especially if you are white and blond) they can be overbearing and too touchy, especially to girls. They also try to get money/other things from you as they believe you are rich and can be used for money. Life itself here is way simpler this starts at the accommodation I was living in as it consisted of just one small room with a bed, bathroom and a table+chair. After one month I even had to share this room with another intern which was really small then.

The food options are pretty good but also quite limited and you can't be picky as it mostly consist of rice, chicken and beans in some way. A positive point for food was that there always were stands with fresh fruits like bananas or mangos around which was really nice. In Kumasi itself it was pretty hard to get western food especially real western food as we found Pizza for example but the dough was sweet which made it really bad.

Kumasi itself as city does not really have much to give you can visit the KNUST campus which is beautiful and has a nice pool and botanical garden or the Kumasi mall but otherwise there is not much to see. On the other hand I made several trips to Busua, Sunyani, Cape Coast and Accra which all are extremely beautiful places to visit and there are various different things to see from water falls in Sunyani to the historical castles in Cape Coast.

As conclusion I would encourage people that are open to the world to check if they could do an internship in Ghana as the people can be really nice if you learn to know them and also are open to welcome their differences. The country itself can be really beautiful if you are going to the right places but can also be full of trash if you go to the wrong one. The work itself was interesting to see how big the differences are especially in time management skills.