

Scientific Internship in Nitra

Nitra, located in southwestern Slovakia, is one of the oldest towns in the country. It has about 83 thousand inhabitants and is picturesquely situated at the foot of Mount Zobor. The city is known for its rich history, numerous monuments and tourist attractions, which makes it an ideal place to combine scientific work with active leisure.

There are two large universities, museums and cultural institutions in Nitra. It is a popular destination for students, offering a well-developed academic life and a relatively low cost of living. The city offers a wide range of activities – from visiting monuments such as the Cathedral of St. Emeram or Nitra Castle, to discovering the local nature and tasting regional specialties.

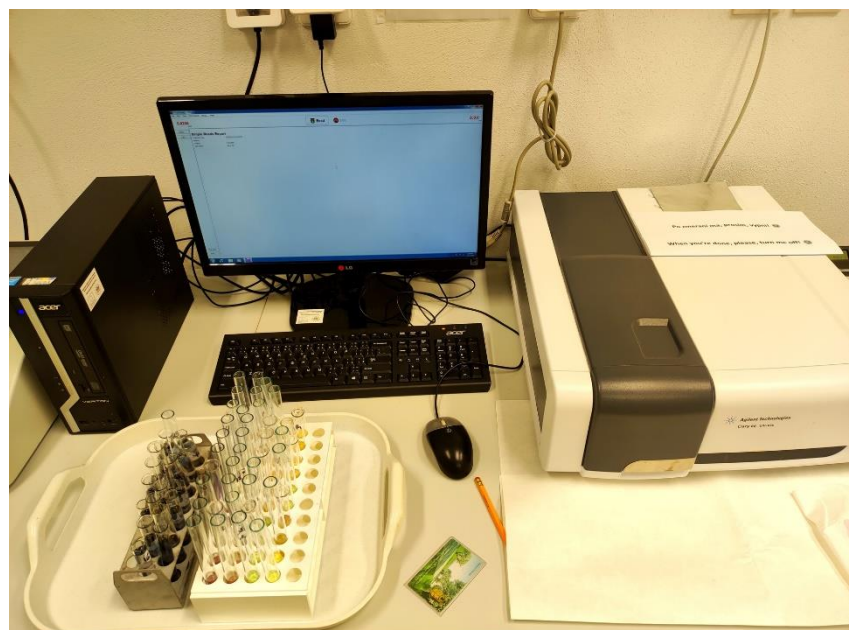
The internship took place at the Faculty of Biotechnology and Food Sciences of the University of Agriculture in Nitra from March 1-31, 2023. The internship was supervised by Ing. Eva Ivanišová, PhD. The University is a leading Slovak research institution of international importance. He specializes in a wide range of sciences, such as genetics, biotechnology, food sciences, agriculture, and landscape engineering. The university campus houses modern laboratories and advanced research equipment, which creates excellent conditions for conducting scientific projects.



The aim of the internship was to conduct research for a doctoral dissertation, including the analysis of the composition and properties of selected biological samples. My work focused on the precise determination of a number of chemical and biological parameters. The project analysed:

- **Protein content:** To assess the protein levels in samples, which is crucial to determine their nutritional value.
- **Fat content:** Study of the lipid fraction to understand its contribution to the total composition.
- **Macro- and microelements:** Determination of elements such as calcium, magnesium, iron and others that affect the biological value and properties of the tested materials.
- **Ash:** Analysis of ash content as an indicator of mineral components.
- **Moisture:** Measuring the water content of your samples, crucial for assessing stability and quality.
- **Antioxidant activity:** Study of the ability of samples to neutralize free radicals, which is important for potential health benefits.
- **Polyphenols, phenols and flavonoids:** Analysis of these bioactive compounds allowed to determine their antioxidant properties and health-promoting potential.

Each stage of the research required precise laboratory procedures and the use of modern equipment available in university laboratories. The results of the analyses were an important element of my doctoral dissertation and had potential application significance in the food and biotechnology industries.



During the stay, it was possible to enjoy the city's rich recreational offer:

- **Sightseeing:** It is worth visiting the Cathedral of St. Emeram, the Nitra Castle and the Cathedral of the Blessed Virgin Mary.
- **Walk through the city center:** Charming streets and squares create a unique atmosphere.
- **Outdoor activities:** Zobor Hill offers hiking trails, and the surroundings of the city invite you to relax in nature.
- **Culture and events:** Nitra is known for its numerous festivals and events that bring the local community and students together.

The internship in Nitra was not only a valuable scientific experience, but also an opportunity to learn about the culture and history of Slovakia. The rich scientific infrastructure of the University of Agriculture in Nitra combined with the atmosphere of the city created ideal conditions for work and development.