

The Department of Natural Sciences and Sustainable Resources, Institute of Analytical Chemistry, is currently seeking a

## Postgraduate Research Associate

### **Mass spectrometry methods for assessment of the impact of raw materials and products from circular bioengineering on the aquatic environment (COE Project 4.2)**

assigned to research program *Circular prospects* of **Cluster of Excellence (CoE) Circular Bioengineering** <https://www.circularbioengineering.at>

(Reference code 205)

**Extent of employment:** 30 hours per week

**Duration of employment:** 1<sup>st</sup> of December 2025, limited to 30<sup>th</sup> of November 2029

**Workplace:** BOKU University, 1190 Vienna, Muthgasse 18

**Allocation in compliance with the Collective Agreement for University Staff to job group:**  
B1

**Gross monthly salary:** (depending on previous eligible experience) at least: € 2.786,10  
(payable 14 times per year)

## About the Position:

This project aims at the development and implementation of analytical methods for the assessment of raw materials and products from circular bioengineering regarding emissions into the aquatic environment. The concept of precautionary thinking is key, when aiming at the development of novel bio-based materials. Evidently, the sustainable raw materials, products and circular processes, will lead to (un)intentional emissions into the environment. To address the fate and transformation of the designed materials and compounds in freshwater and marine systems (including sediments), fit-for-purpose analytical methods need to be designed. High-resolution mass spectrometry coupled with multi-dimensional chromatographic separation strategies as well as ion mobility will enable the detection and identification of compounds and compound classes of respective transformation and breakdown products of selected bio-based materials, including their leachable and extractable components.

Research Objectives:

- Design of model experiments allowing to anticipate environmental impact of bio-based materials upon end-of-life service

- Setting up a mass spectrometry portfolio for investigation of transformation and breakdown products of selected key materials development within the Cluster of Excellence Circular Bioengineering, including their leachable and extractable components

Tasks and methods:

- Design and conduction of weathering experiments of materials
- Development of LC-HRMS/MS methods for non-targeted analysis investigating degradation/transformation products from weathering experiments
- Ion mobility mass spectrometry (LC-IM-QTOFMS) for determination of CCS values to characterize unknown molecules
- Targeted LC-MS/MS for tracking of non-volatile organic leachables and extractables in the aquatic environment

## Required skills and qualifications

- Diploma degree in Chemistry or other equivalent university degree
- Language skills: very good English skills

## Desirable skills and qualifications

- PhD candidate is creative, curious and a good team player
- PhD candidate holds a Master's degree in the field of chemistry or completed a master thesis in the field of analytical chemistry
- PhD candidate has advanced English speaking and writing skills

Applications can be submitted until: 28<sup>th</sup> of October 2025

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

People with disabilities and appropriate qualifications are specifically encouraged to apply.

Please send your job application to Personnel Management, University of Natural Resources and Life Sciences, Peter-Jordan-Straße 70, 1190 Vienna; E-Mail: [recruiting@boku.ac.at](mailto:recruiting@boku.ac.at).

**(Reference code: 205)**

- Please use this **Application form – PhD-positions**

- Please note that we will not be able to process your application without this form and unless it is sent to [recruiting@boku.ac.at](mailto:recruiting@boku.ac.at)
- Following additional documents have to be submitted as .pdf files:
  - Curriculum vitae
  - Copy of certificates from the applicant's bachelor and master/diploma studies
  - A translation of the documents is necessary if the original documents are not in English or German

For information on the further application procedure – online hearing and interviews – see <https://www.circularbioengineering.at/jobs>

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

**[www.boku.ac.at](http://www.boku.ac.at)**