We are a leading research organisation in the area wood and wood-related renewable resources in Europe. Our core competences are materials research and process technology along the complete value chain – from raw material to finished products. More than 120 highly qualified researchers are developed methods and basics and perform applied research on the economy-science interface, in order to enable resource-efficient management in the circular bioeconomy.

For support in the numerous research projects we are looking for a:

Master thesis (f/m/d)

Starting date: As soon as possible (fixed-term contract: 6 months)

Topic: Biotechnological treatment of aqueous condensates to reduce the concentration of sulphur-specific compounds

Your responsibility:

An integrated pulp and paper company uses the alkaline kraft process to convert wood chips into high-quality packaging paper, with the aim of replacing plastic. Such a complex chemical factory is very energy-intensive and uses water as the main medium. In order to mitigate the effects of climate change, factories aim to reuse their water streams as often as possible; however, the quality of the water sets some limits.

In order to reduce a factory's water footprint, research needs to be conducted to identify new opportunities for reusing aqueous media, such as filtrate and condensate, in order to conserve fresh drinking water.

At Wood K plus and Mondi, we want to overcome the limitations of this complex process by testing new biotechnological approaches that will allow us to reduce water consumption per tonne of paper by purifying hot aqueous condensates. We are seeking a biotechnological process that can selectively remove or deactivate reduced sulphur species, such as DMS and DMTS, in designated reactors (aerobic or anaerobic). This is a unique opportunity for young researchers to support climate change adaptation by developing methods to use bacteria or enzymes that can reduce sulphur species in hot condensates.

The specific objectives are as follows:

- Learn how to use modern analytical methods to quantify sulphur species.
- Develop new processes to improve condensate quality during laboratory trials.

Your qualifications:

- Ongoing master's degree in biotechnology, chemistry, or process engineering
- High level of commitment and initiative
- Independent, structured, responsible and accurate way of working
- Interest in biotechnology and analytics
- Ability to work in a team
- Independence
- Communication skills

Your benefits:

- Flexible and family friendly working hours (flexitime, time off)
- Possibility for home office
- An international, motivated team and a highly active scientific environment
- Work in basic and industry-related projects
- Modern laboratories and pilot plants
- Numerous professional and varied opportunities for further training and development
- Opportunities to work in a dynamic team
- Attractive working environment and modern offices
- Excellent working atmosphere in a committed team
- Public transport connection and parking spaces
- Gross monthly salary from EUR 700,00 (14 x per year)

Place of employment:

Linz

Contact:

Kateryna Huemer
Area Biorefinery Processes & Composite Materials
Tel.: +43 732 2468-6772

Please send your application via e-mail to: E-Mail: k.huemer@wood-kplus.at