

Research Associate (m/f/d)

In the context of a PhD project in the area Environmental Risk Assessment of Chemical Mixtures

The employment relationship with 75% of the weekly working hours begins as soon as possible, subject to budgetary requirements, and is limited to a period of 36 months.

Mixtures of chemicals are a reality: substances co-occur in the environment and act jointly. Nevertheless, they are usually assessed and regulated individually under the European chemicals regulation. In the context of the European Green Deal, the EU Commission is proposing to implement a "Mixture Allocation Factor" (MAF) into the REACH regulation in order to regulate risks from unintentional mixtures. However, the potential risks of joint exposure and effects of chemicals in the environment must also be characterized and assessed beyond that. This is being discussed in various regulatory areas (e.g. media-related environmental law or substance regulations). Monitoring data on the (temporal and spatial) co-occurrence of substances in organisms or different environmental compartments as well as an improved data situation on exposure, effects and the level of potential risks are an important prerequisite for this. The PhD project will be co-financed by the [PARC](#) project (Partnership for the assessment of risks from chemicals). PARC aims to develop next-generation chemical risk assessment to protect human health and the environment. It supports the European Union's Chemicals Strategy for Sustainability and the European Green Deal's "Zero pollution" ambition with new data, knowledge, methods and tools, expertise and networks.

Ihre Aufgaben:

As part of a PhD project, you will work on the evaluation of monitoring and effect data as well as the further development of the evaluation and regulation of chemical mixtures in order to minimize the negative effects of the combined exposure of pollutants on the environment. This includes, among others:

- Risk assessment of chemical mixtures (REACH substances, plant protection products, pharmaceuticals and biocides) in the environment based on exposure and effect data
- Technical-conceptual work on the processing, use, statistical analysis and interpretation of data on environmental exposure (biomonitoring, monitoring and/or modeled environmental concentrations) under REACH and other regulatory areas (see above). This includes data on including sources, exposure-patterns and environmental behaviour of organic pollutants
- Apply statistical analysis of available data on ecotoxicological effects
- Deriving recommendations for adapting assessment methods and guidance documents and implementing the findings in European chemicals regulations
- Cooperation within the UBA and with international partners and experts from authorities, science and other relevant areas
- Processing and summary of the collected knowledge in the form of working documents, publications, discussion papers and reports as well as presentation of the results to national and international specialist audiences

Possible objectives

The focus of the work will be determined in consultation with the successful candidate and the availability of suitable data sets (e.g. from UBA projects, PARC, NORMAN, IPCHEM, ECHA databases). For example:

- Characterization of environmental risks of mixtures of substances from different regulatory areas (REACH, biocides, PPPs, pharmaceuticals) and different scenarios, e.g. also using modelling and/or GIS-based methods (including visualization).
- Reality check: comparison of exposure levels of measured environmental concentrations with predicted/modeled environmental concentrations
- Accompanying experimental work in ecotoxicological test systems
- Proposals for better use of monitoring data and options for the assessment and regulation of chemical mixtures in substance regulations such as REACH.

Your profile/experiences:

- You have a university degree (Master's degree, university diploma) in the field of environmental sciences, ecotoxicology, biology, chemistry, medicine or a related subject.
- You have in-depth ecotoxicological knowledge, e.g. from your studies, to assess the environmental behavior of chemicals and their effects on organisms. Ideally, you are familiar with the assessment of combination effects and combined exposure and/or have an interest in regulatory issues.
- You have experience in dealing with large data sets and their statistical evaluation.
- You are characterized by the ability to write texts with complex scientific results and environmental policy content and to present them to a broad public in an understandable way. Ideally, you already have scientific publications in peer-reviewed journals.
- You are used to goal-oriented and independent work.
- You are fluent in English and have experience of working in international teams. Sound German language skills are an advantage.

Our offer:

The UBA is involved at EU level in the development of proposals and supporting analyses for the assessment and regulation of mixtures, e.g. in the research cooperation PARC (Partnership for the Assessment of the Risks of Chemicals) or the EU project TerraChem.

You will be able to gain insights into regulatory work in practice and contribute to the further development of the European regulatory framework. You will work in an interdisciplinary team and have the opportunity to cooperate and exchange ideas with other specialist units and the laboratories of the UBA, RWTH Aachen and/or UFZ Leipzig and to use the results for a dissertation. We offer you a responsible and varied job in a scientific authority with flexible working hours and working methods. Further training is an important part of our personnel development. We support the compatibility of work and private life. You can find more information on this under the link: www.umweltbundesamt.de/das-uba/das-uba-als-arbeitgeber/warum-uba.

The place of work is Dessau-Roßlau - with the possibility of temporary stays in Berlin, Leipzig and/or Aachen. There is the possibility of mobile working (60% of working time). Salary: Pay group 13 TVöD 75% (tarife area East). Applications from civil servants will be considered on a case-by-case basis.

Reference no.: 5/IVFT/24

Application deadline: April 9, 2024 (Applications received after the application deadline [receipt stamp of the UBA] can no longer be considered).

For more information on the requirements and job profile, please contact Dr. Gabriele Treu on 0340 2103-2967 or Dr. Frauke Stock on 0340 2103-3127.