

PRIMA-SAFE at the 5th International Conference on Risk Assessment of Pharmaceuticals in the Environment (ICRAPHE)

Description



Environmental sustainability and water management are critical global challenges, and pharmaceuticals in the environment pose a significant risk to ecosystems and human health. PRIMA-SAFE's active participation in the 5th International Conference on Risk Assessment of Pharmaceuticals in the Environment (ICRAPHE) showcased its commitment to addressing these pressing issues. This event provided an excellent platform for exchanging innovative ideas and fostering collaborations aimed at mitigating environmental risks and promoting sustainable solutions.

Key Contributions by PRIMA-SAFE

PRIMA-SAFE made two notable contributions to the conference, each focusing on innovative approaches to improve water quality and promote environmental sustainability.

1. Oral Presentation
"Biochar Derived from Forest Residues: A Sustainable Solution for Venlafaxine Removal,

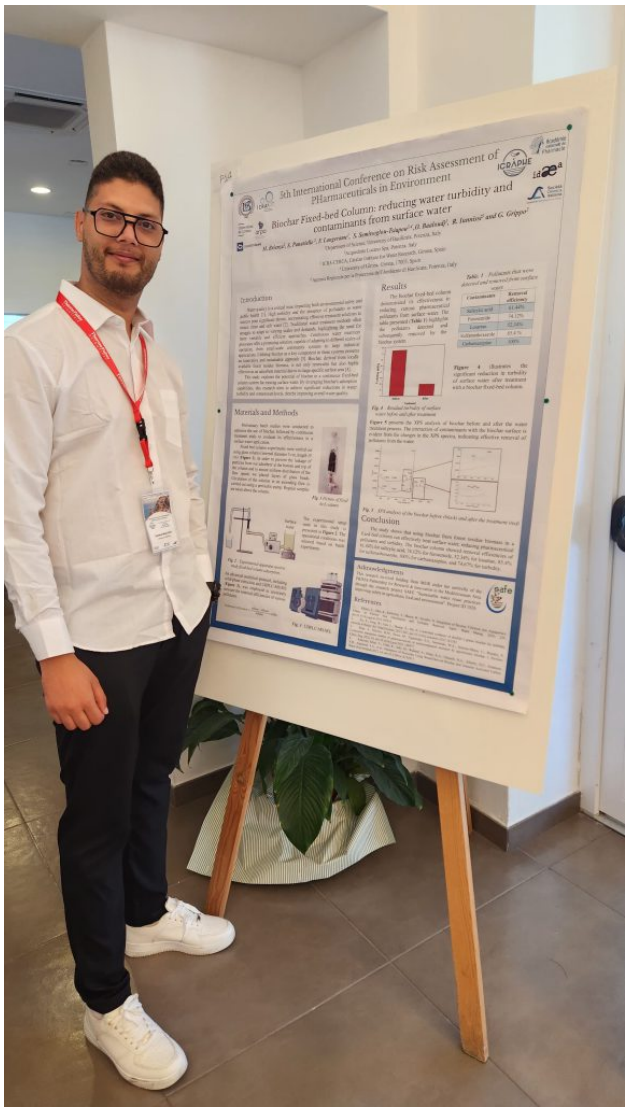
Promoting Waste Valorization and Water Reuse”

This presentation delved into the use of biochar, a carbon-rich material derived from forest residues, to tackle the challenge of pharmaceutical contamination in water systems. Let’s explore some of the key concepts:

- **Biochar**: Produced through the pyrolysis of organic waste, biochar’s porous structure makes it highly effective in adsorbing pollutants, including pharmaceutical residues like venlafaxine—an antidepressant frequently detected in water sources.
- **Waste Valorization**: This process involves transforming waste materials, such as forest residues, into valuable products, thereby reducing waste and supporting circular economy principles.
- **Water Reuse**: By removing harmful contaminants, this technology enables treated water to be safely reused, reducing freshwater demand and supporting sustainable water management.

The study demonstrated the potential of this innovative approach to enhance water quality while contributing to waste management and resource efficiency.


ICRAPHE
5th International Conference on Risk Assessment of PHarmaceuticals in Environment
Biochar Derived from Forest Residues: A Sustainable Solution for Venlafaxine Removal, Promoting Waste Valorization and Water Reuse
O. Baaloudj, A. R. Zizzamia, Z. Krinii, L. Scrano, S. A. Bufo, F. Lelario, S. Chiron, M. Brienza
Anacapri, 23th to 26th June, 2024



2. Poster Presentation
“Adsorption Fixed-Bed Column: Reducing Water Turbidity and Contaminants from Surface Water”

This poster highlighted the application of adsorption fixed-bed columns in improving the quality of surface water. Key aspects include:

- **Adsorption Fixed-Bed Columns**: These systems use materials with high adsorption capacities to remove impurities as water flows through them. This process effectively reduces turbidity—the cloudiness caused by suspended particles—and eliminates various pollutants.
- **Surface Water Treatment**: Surface water sources, such as rivers and lakes, are often contaminated with sediments and pollutants. The demonstrated technology provides a scalable and efficient solution for enhancing water clarity and safety.

The presentation emphasized the practicality and scalability of these technologies in achieving cleaner water systems.

Building Towards a Sustainable Future

The ICRAPHE conference served as an ideal venue for sharing insights, strengthening partnerships, and advancing research to address the environmental risks posed by pharmaceuticals. PRIMA-SAFE's contributions underscore the importance of innovative solutions that not only mitigate contamination but also promote sustainability through waste valorization and water reuse.

By leveraging natural materials like biochar and innovative technologies such as fixed-bed columns, PRIMA-SAFE is making strides toward a future where water resources are managed sustainably, and environmental impacts are minimized.

For more updates on PRIMA-SAFE's groundbreaking research and initiatives, visit our website and join the conversation on sustainable water management!



Category

1. Senza categoria

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