



New solutions for the detection and monitoring of contaminants in our water treatment plants

How can we optimize the detection and monitoring of priority contaminants and those of emerging concern in our water treatment plants?

Challenge context

Origins

The detection, monitoring and prediction of emerging and priority contaminants of concern in water has become a critical issue. Their presence poses a latent risk to public health and the environment.

Detection, given the low concentration of contaminants, still presents great challenges. Also, the efficiency of current detection and monitoring processes hinders the implementation of new systems.

Problem description

- To compensate for the current inefficiencies in the processes of detection, control and prediction of CECs and priority contaminants, the treatment plants need technological solutions that can be integrated with the existing processes and allow water analysis in the same facilities.
- The lack of solutions for on-site processes for detection and treatment restricts the availability of information on the presence of these harmful substances.
- Water treatment legislation's trend is evolving towards identifying and treating the presence of these contaminants for all possible water uses.
- The adverse effects that contaminants have on the environment and on users make better detection and prediction highly necessary, with the aim of reducing the risk quotient.

Challenge goals

Identify and implement technological solutions and tools that allow us to detect, analyze, monitor and predict on-site the presence, in our water treatment plants, of any of the following substances:

- **Contaminants of Emerging Concern (CECs)**
- **Micro and Nano plastics**
- **Microorganisms**
- **Metals and other contaminants**

Aspects to be considered

We are looking for innovative solutions that:

- Allow to detect, quantify and eliminate as accurately as possible the presence of contaminants in existing water flows.
- Provide the existing infrastructure with the capability to monitor on-site selected contaminant levels in a continuous manner.

Target audience

This challenge has a global scope and is aimed at the entire professional innovation community such as startups, scaleups, technology centers, universities and established companies.

Expected impact

- Increasing the frequency and efficiency of contaminant detection and quantification processes.
- Controlling and preventing the presence of contaminants and microorganisms that may pose a threat to public health.
- Establishing predictive analysis models that allow us to detect potential risks in treated water flows in advance.

**Register to the
Challenge**