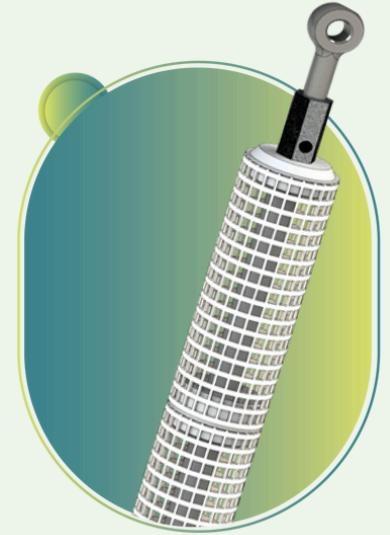


iFLUX Sampler



Removing all contamination in the underground is often unrealistic and economically unfeasible. By measuring groundwater and contaminant transport over time, our iFLUX Samplers enable faster and more cost-efficient remediation projects.

Groundwater and mass flux results provide you with the key insights you need to reduce the risk and uncertainty of soil contamination management.

There are plenty of reasons to start proactively gathering insights for evidence-based groundwater management.

A few key figures:

According to a report by the U.S. Environmental Protection Agency (EPA), the cost of preventing contamination through regular monitoring and early intervention can be substantially lower than the costs associated with cleaning up contaminated groundwater. Prevention and early detection can save up to 80% compared to remediation costs incurred after contamination has spread.

A study published in the journal "Groundwater Monitoring & Remediation" highlights that proactive groundwater monitoring can reduce overall remediation costs by **30% to 70%** by enabling early detection and targeted remediation efforts.

What differentiates the iFLUX Samplers from other methods?

Features & Benefits

Measuring Flux

The patented iFLUX Samplers are groundbreaking for their ability to measure mass flux and water flux simultaneously, easily, and accurately.

iFLUX measurements offer detailed insights into localizing the contaminant sources, the orientation and speed of transport, and the outflow. Our solution is primarily used to assess risks at complex sites, including those with mixed pollutants and brownfield projects.



Challenging Conventional Methods

Conventional methods to assess groundwater contamination rely on a limited number of direct measurements which provide a 'snap-shot in time'. This implies substantial uncertainties which can lead to remediation failures and high costs for contaminated site owners.

A flux measurement gives a time-averaged result. iFLUX Samplers measure groundwater and contaminants over a specified exposure time, including dynamics. This means reliable measurements, e.g. for exposure at lower detection limits, and a leveling-out of any peaks or dips in concentrations.

Customizable and Modular

Our system can be tailored to fit any well-size and allows measurements of varying compounds at several depths, simultaneously.

Easy-to-install

Thanks to its patent design, the installation on site takes around 10 minutes per location, including the measurement of groundwater levels and the depth of the monitoring well.

Broadly applicable

The iFLUX Samplers are validated for +150 different contaminant types, and the list is still growing. Additional validation can be performed upon request.

Sampler cartridges are available for organics, metals & heavy metals, nutrients, 1,4 dioxane, cyanides, PFAS, and waterflux. Our sensors are capable of measuring not only the horizontal flux but also the vertical flux.

Additionally, with IsoFLUX, we developed a technology capable of accurately measuring the natural or stimulated degradation potential of complex contaminants in soil and groundwater.



www.iFLUX.be/sampler



When to use the iFLUX Sampler?



- At locations where the risks of complex contamination plumes need to be assessed.
- In situations with unpredictable factors causing complex groundwater dynamics (pumping activities, infiltration activities, tides).
- In 'in situ' remediation projects where dosing and targeted placement of injection products are key success factors. Insights into the high flux zones allow for better dimensioning of where and how to inject or extract.
- In projects where it is important to identify preferential flow paths in heterogeneous soil layers. For this, measurements are conducted simultaneously at various depths and locations.



- Bedrock soils where contamination moves through fractures.
- Sites where insufficient information is available about the contamination issues.
- A homogeneous subsurface or small-scale contamination. In such cases, estimates and traditional measurement methods are often sufficient.
- Zones where the concentration of a product, such as a contaminant, is so high that it primarily moves through diffusion transport. This means that the contaminants spread due to a concentration gradient, rather than moving with the groundwater flow.

About iFLUX

Our mission is to provide sustainable groundwater management for a better future. iFLUX improves groundwater management by giving groundwater the visibility it deserves.

At iFLUX, we combine state-of-the-art measurements with in-depth expertise to produce actionable insights.