



Marque River, Northern France

Polar Organic Chemical Integrative Sampler (POCIS)—Pesticides and Pharmaceuticals

Summary

Media:	Surface water
Study Type:	Side-by-side
Technology:	Accumulation
Peer Reviewed:	Yes
Publication Date:	July 2017

Study Description

- Results are provided for a side-by-side comparison of POCIS-collected data with 24-hour average automatically collected samples in a small urban river (Marque River) in Northern France.
- POCIS were deployed over two periods of two weeks with concurrent 24-hr average samples collected from the same locations. Target compounds consisted of 46 pesticides, 17 pharmaceuticals, caffeine, and sucralose.
- POCIS-sourced data points were compared to the ranges of water sample results and whether compounds were detected in one or both sampling method results.
- Comparison results indicated 75% of results were in relatively good agreement between the two methods, with differences specific to particular compounds.

Remedial Phase

POCIS samplers were used as part of investigation activities.

Outcome

In most cases, passive samplers gave comparable data (POCIS results within the maximum and minimum composite concentrations). The study notes the advantage of time-integrated results from a cost-effectiveness and convenience perspective.

References

Criquet, J.; D. Dumolin; M. Howsam; L. Mondamert; J.F. Gossens; J. Prygiel; and G. Billon. 2017. Comparison of POCIS passive samplers vs. composite water sampling: A case study. *Science of the Total Environment* 609: 982–991. <https://doi.org/10.1016/j.scitotenv.2017.07.227>