POCIS

Be selective

Food / Feed Safety

Environment

Cosmetics

Pharmaceutical R&D

MONITORING OF GLYPHOSATE - AMPA WITH A PASSIVE SAMPLER

Passive Sampling with POCIS

Passive sampling enables the monitoring of contaminants in water (surface water, groundwater, coastal water...) for a long period (days or weeks). An average of the concentration of this contaminant is measured.

For hydrophilic organic compounds, the Polar Organic Chemical Integrative Sampler (POCIS) is designed to provide the time weighted average (TWA) concentration of chemicals during the sampling period.

The POCIS consists of a solid sorbent contained between two microporous membranes. The sorbent collects the contaminant in water. Each sorbent may have a retention for specific contaminant or a family of contaminant.

AFFINIMIP® POCIS Glyphosate

AFFINIMIP® POCIS Glyphosate enables the sampling of Glyphosate and AMPA in water (Groundwater, geothermal, mineral...).

Then the powder is collected in an empty SPE column for the extraction of Glyphosate and AMPA

Publications

Data extracted **Laboratory calibration of a POCIS-like sampler based on molecularly imprinted polymers for glyphosate and AMPA sampling in water**, C. Berho, B. Claude, E. Coisy, A. Togola, S. Bayoudh, P. Morin, L. Amalric, *Anal Bioanal Chem*, 409, 2029, 2017

PROTOCOL OF EXTRACTION

Extraction of collected Glyphosate and AMPA from AFFINIMIP® POCIS Glyphosate with a SPE

Washing of interferences (optional)

Water

Extraction of the analytes (E)

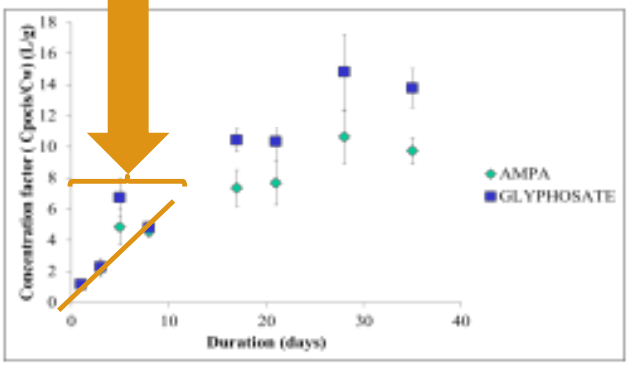
HCl solution (100mM)

The extraction solution is then evaporated and reconstituted with water prior analysis

RESULTS

Laboratory sampling rates estimation for AMPA and glyphosate using the AFFINIMIP® POCIS Glyphosate

Sampling rates: 130mL/day/200mg AFFINIMIP® POCIS Glyphosate in agreement with other pesticides in classical POCIS.



Mineral water (pH = 7) fortified at 500ng/L of AMPA and glyphosate. Concentrations kept constant during whole experiment.

Pesticides concentration in the tank, temperature, TOC and conductivity monitored during the experimental period to verify the stability of physico-chemical conditions in water.

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