

Application Note



Analysis of Metolachlor OA and Metolachlor ESA in large water volumes using AttractSPE® Disks - HLB



Introduction

Metolachlor Oxalic Acid (OA) and EthaneSulfonic Acid (ESA) are degradation products of metolachlor, a widely used pesticide. **AttractSPE® Disks - HLB** offers a good solution for rapid analysis of large water volumes at trace levels.



Process of the experiment

One liter of water was spiked at 1 µg/L of metolachlor OA and metolachlor ESA.

INSTALLATION AND CONDITIONNING

Put **AttractSPE® Disk - HLB** on a classic vacuum filtration system.

1. 50 mL of methanol
2. 50mL of ultrapure water

LOADING

1 L of sample loaded up to 50 mL/min

WASHING

50 mL of ultrapure water

ELUTION

50 mL of methanol

ANALYSIS

Dilution by 10 with mobile phase and analysis



Conditions of analysis:

LC-MS/MS HPLC U3000 - QTRAP 4000. Column: Hypersil Gold 150x2.1cm 3µm, pre-column (Hypersil gold 1cm) at 30°C. Injection volume: 20 µL. Gradient: Water with 0.01% Formic acid and Acetonitrile with 0.01% Formic acid. Flow rate: 0.3 mL/min.

Table. Results obtained for the loading of 1 L of solution at a concentration of 1 µg/L

	Recovery yield for Metolachlor OA (%)	Recovery yield for Metolachlor ESA (%)
Ultrapure water	100	83
Tap water	98	97

Part number of products used in this application note

Product:	Quantity:	Part number:
AttractSPE® Disks - HLB for environmental applications- 47mm diameter	20/pk	SPE-Disks-HLB-47.T1.20
AttractSPE® Disks - HLB for environmental applications- 90mm diameter	10/pk	SPE-Disks-HLB-90.T1.10
SPE Disks manifold 47mm – 1 station	1 unit	ACC-DISKSPE-G47-1
SPE Disks manifold 47mm – 3 station	1 unit	ACC-DISKSPE-G47-3
SPE Disks manifold 47mm – 6 station	1 unit	ACC-DISKSPE-G47-6