Supporting Information

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On line coupling lab on valve - dispersive liquid-liquid microextraction - multisyringe flow injection with Gas Chromatography - Mass Spectrometry for the determination of sixteen priority PAHs in water

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Five supporting materials are given

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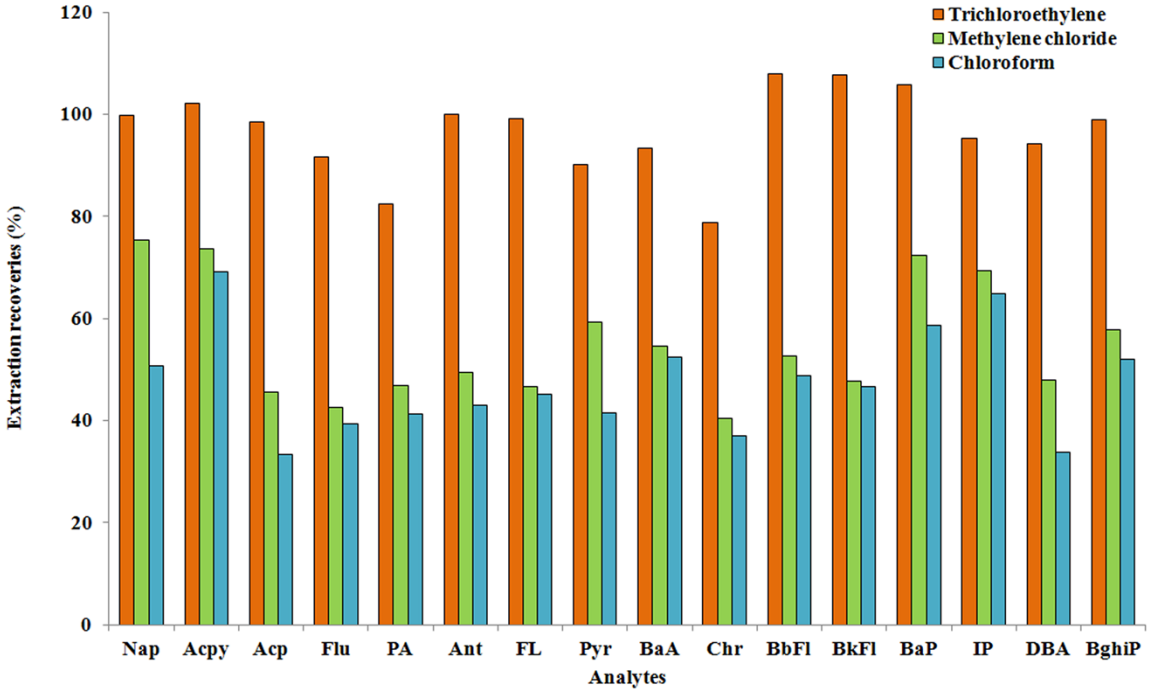
Table S-1...

Sequence and description			LOV position	Flow rate (mL/min)	Volume (μL)
1	Sample loading into HC				
	Aspirate	sample into HC	2	1.0	4000
	Aspirate	acetonitrile into HC	5	0.8	900
	Aspirate	trichloroethylene into HC	4	0.5	100
2	DLLME extraction into EC				
	Dispense	mix of solvents into EC	6	15.0	5000
		wait 30 seconds			
	Aspirate	dead volume portion into HC	6	0.5	0.05
	Dispense	dead volume portion to waste	1	0.5	0.05
3	Transportation of eluate into GC				
		injection valve moves to “load”			
		start loop: sample loading			
	Aspirate	eluate into HC	6	0.5	0.02
	Dispense	into micro loop	2	0.5	0.02
4	Eluate injection into GC				
		injection valve moves to “inject” and solenoid valve			
		switches to GC-MS			
	Aspirate	air into S2		15	1000
	Dispense	air to completely deliver the eluate via air streaming		15	1000
		to the CG injector			
		wait 20 seconds			
	Activation of GC-MS instrument				
	End loop: repeat three fold from sample loading loop				
5	System conditioning				
	Aspirate	sample mixture into HC	6	2.5	5000
	Dispense	sample mixture to waste	1	2.5	5000

Start loop cleaning EC				
Dispense	cleaning EC with carrier solvent (acetonitrile:water 95:5)	6	5	2000
Aspirate	carrier solvent from EC into HC	6	2.5	2000
Dispense	carrier solvent from HC to waste	1	2.5	2000
End loop: repeat three fold from cleaning EC				
	injection valve moves to “load” and solenoid valve switches to waste			
Aspirate	acetonitrile into HC	5	2.5	500
	injection valve moves to “inject”			
Dispense	air to completely deliver the acetonitrile via air segmentation to the solenoid valve	2	15	500

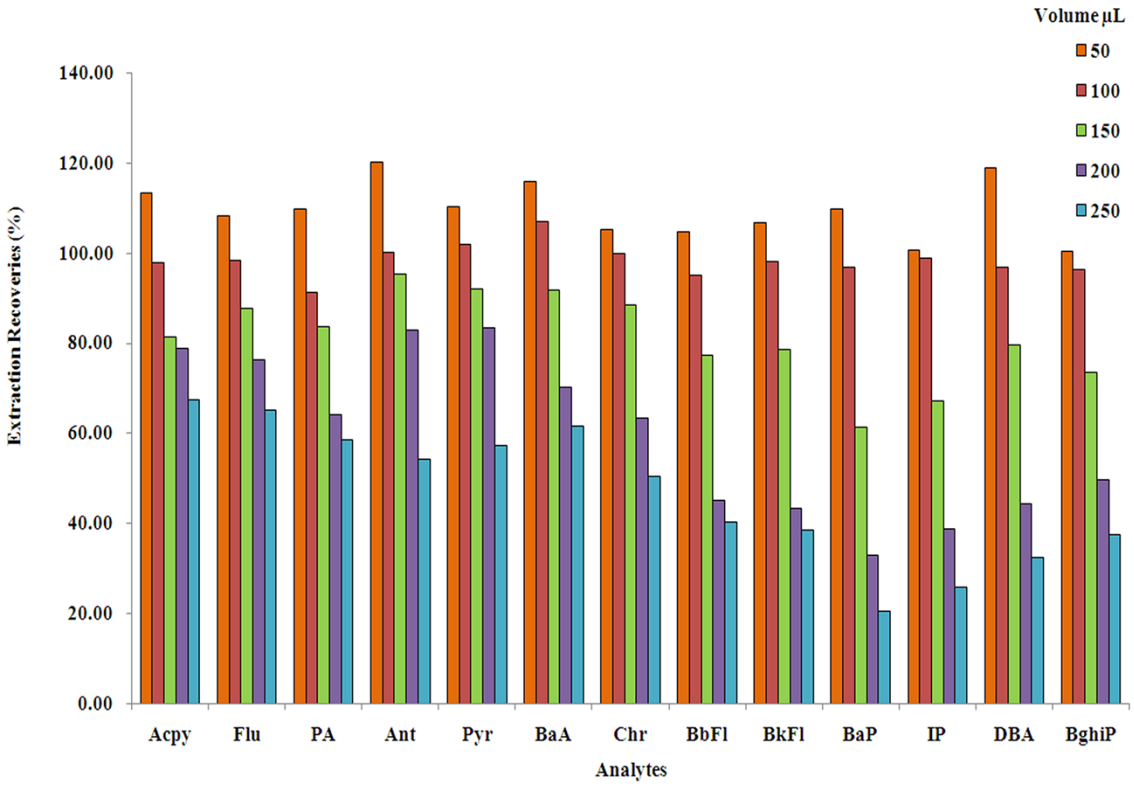
Analytical sequence for the automated preconcentration of PAHs prior to GC separation and MS quantification by the LOV-DLLME-MSFIA system

Figure. S-2



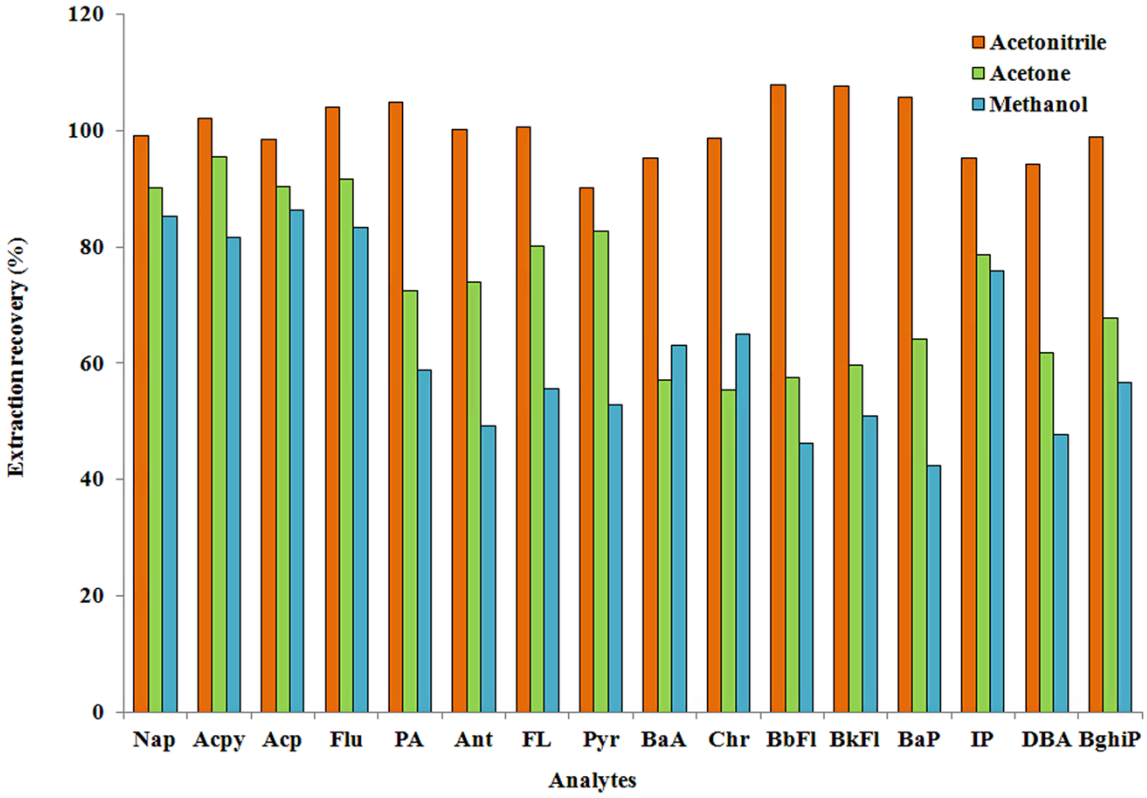
Effect of the type of extracting solvent on the extraction recovery (n = 3) Experimental conditions: PAHs concentration: 50 µg/L; IS concentration: 10 µg/L; aqueous sample: 4mL, extracting solvent: 100 µL; dispersive solvent 900 µL

Figure S-3



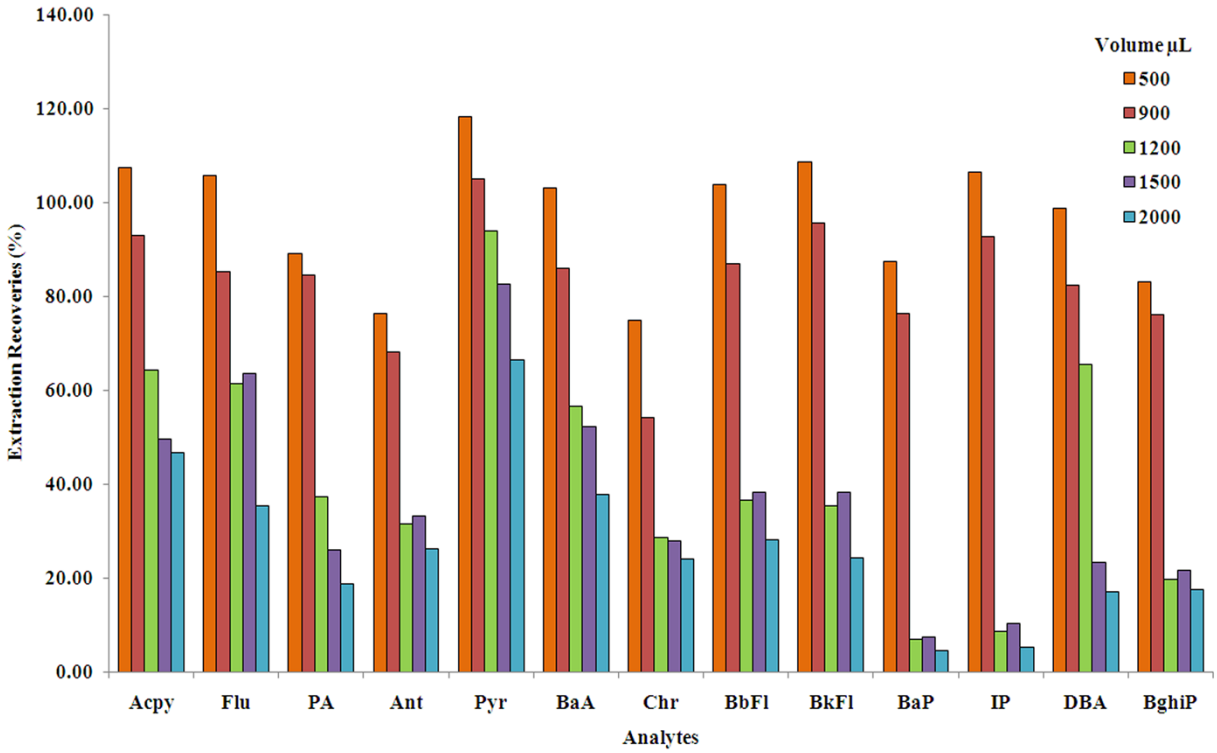
Effect of the volume of extracting solvent on the extraction recovery (n = 3): Experimental conditions PAHs concentration: 50 µg/L; IS concentration: 10 µg/L; aqueous sample: 4mL, dispersive solvent 900 µL

Figure S-4



Effect of the type of dispersive solvent on the extraction recovery (n = 3) Experimental conditions PAHs concentration: 50 µg/L; IS concentration: 10 µg/L; aqueous sample: 4 mL, extracting solvent: 100 µL; dispersive solvent 900 µL

Figure. S-5



Effect of the volume of dispersive solvent on the extraction recovery (n = 3): Experimental conditions PAHs concentration: 50 µg/L; IS concentration: 10 µg/L; aqueous sample: 4mL, extracting solvent: 100