

Program	Program Nucleu, PN 16 25 01 08
Project title (ENG):	Identification and quantification of toxic organic contaminants, included in the Directive of the priority substances, in environmental samples
Project title (RO):	Identificarea si cuantificarea unor contaminanti organici toxici, inclusi in Directiva substantelor prioritare, din probe de mediu
Duration	2016
Team Leader	Senior Researcher Iancu Vasile
Summary ENG (short description)	<p>In this phase of the project it was developed a method for the simultaneous analysis of four neonicotinoid insecticides in surface water, 3 included in the Water Framework Directive.</p> <p>The method involves solid phase extraction of analytes in aqueous samples -SPE followed by separation and quantification by LC-ESI-MS / MS.</p> <p>Results of studies and experiments conducted to validate internal systematic method developed in the laboratory certifies that the method is suitable for the purpose achieve the required performance parameters. Detection limits determined for real samples of surface water were in the range 0.3 ng/l acetamiprid and 0.9 ng/l clothianidin and the limits of quantification ranged between 1 ng/l acetamiprid and 3 ng/l clothianidin, thus respecting the Directive 39/2013 recommended method limit (9ng/l) .</p>
Summary RO (short description)	<p>In aceasta etapa a proiectului a fost dezvoltata o metoda de analiza simultana a 4 insecticide neonicotinoide, din care 3 incluse in Directiva Cadru a Apei, in apa de suprafata.</p> <p>Metoda implica extractia in faza solida -SPE a analitilor din probe apoase urmata de separarea si cuantificare prin LC-ESI-MS/MS.</p> <p>Rezultatele studiilor și experimentelor sistematice efectuate pentru validarea interna a metodei dezvoltate in laborator atesta faptul ca metoda este adecvata cu scopul si atinge parametrii de performanța necesari.</p> <p>Limitele de detectie determinate pentru probe reale de apa de suprafata variaza in domeniul 0.3 ng/l acetamiprid si 0.9 ng/l clotianidin, iar limitele de cuantificare variaza intre 1 ng/l acetamiprid si 3ng/l clotianidin, respectand astfel limita de metoda (9 ng/l) recomandata de Directiva 39/2013.</p>