

Program	Program NUCLEU PN 09-13 01 08
Project title (ENG):	Analytical studies for establishing performant methods for determination of xenobiotics from the class of substituted anilines, from wastewaters and surface water
Project title (RO):	Studii analitice privind stabilirea metodelor performante de determinare a unor xenobiotice din clasa anilinelor substituie din apa uzata si de suprafata
Duration	2012
Team leader	Senior Researcher chem. Liliana Cruceru
Summary (short description) ENG	<p>Development of a simultaneous analytical method for the determination of monochloroanilines (2-chloroaniline, 3-chloroaniline, 4-chloroaniline) and dichloroaniline (3,4-dichloroaniline) from wastewater and surface water samples, using HPLC-UV technique.</p> <p>Two extraction techniques were tested: Liquid-Liquid Extraction (LLE) with dichloromethane and Solid Phase Extraction (SPE) on OASIS HLB copolymeric adsorbent, with ethyl acetate solvent. Both methods indicated a good recovery (78%-98%).</p> <p>The method was validated "in-house". The detection limits (0,05 µg/L - 0,08 µg/L) were situated under the imposed concentrations according to the legislation for priority substances.</p> <p>The method is used for the analytical control of chloroanilines from different categories of water samples.</p>
Summary (short description) RO	<p>Dezvoltarea unei metode analitice pentru determinarea simultana a monocloroanilinelor (2-cloroanilina, 3-cloroanilina, 4-cloroanilina) si a dicloroanilina (3,4-dicloroanilina) din apa uzata si apa de suprafata , utilizand tehnica HPLC-UV.</p> <p>S-au testat doua tehnici de extractie: extractia lichid-lichid (LLE) in diclormetan si extractia in faza solida (SPE) cu adsorbant OASIS HLB copolimeric utilizand acetatul de etil ca solvent. Ambele metode au condus la randamente de recuperare de 78%-98%.</p> <p>Metoda a fost validata intern. Limitele de detectie stabilite (0,05 µg/L - 0,08 µg/L) s-au situate sub valoarea concentratiilor impuse de legislatia pentru substantele prioritare.</p> <p>Metoda este utilizata pentru controlul analitic al cloranilinelor din diferite categorii de apa.</p>
Dissemination of results	
Conferences (platform, poster, abstract/full-paper)	Cruceru Liliana, Iancu Vasile Ion, Simultaneous determination of some priority substances from the class of chloroanilines from wastewater and surface water by HPLC, 17 – 18 May 2012, pg 122, <i>Conferința Internațională „TOTUL PENTRU O APĂ CURATĂ”, III Edition, Pitești</i> ,