Program	**Program NUCLEU PN 06-12 03 08**
Project title (ENG):	**Experimental study on the biodegradability of substances priority / hazardous from wastewater, in order to establish the admissibility limits in biological treatment plants.**
Project title (RO):	**Studiu experimental privind biodegradabilitatea unor substante prioritare/prioritar periculoase din ape uzate, in vederea stabilirii limitelor de admisibilitate in statii biologice de epurare.**
Duration	2006-2008
Team Leader	Senior Researcher Chem. Maria Taralunga
Summary (RO) (short description)	Obiectivul proiectului este stabilirea dinamicii de biodegradare a unor substante prioritare/prioritar periculoase (Tricloretilenei, Percloretilenei, Hexaclorbutadienei si 1,2,4 Triclorbenzenului) in vederea stabilirii limitelor de admisibilitate in statii biologice de epurare de epurare biologica. Experimentele de epurare biologica au fost conduse pe instalatii micropilot in flux continuu cu o singura treapta de aerare si cu recircularea namolului din decantorul secundar (in mod similar treptei biologice industriale). Pe baza rezultatelor experimentelor batch obtinute in primele faze, experimentele de laborator s-au realizat la trei timpi de contact, TRH=16h, 12h si 10h. Apa de alimentare a instalatiilor micropilot a fost constituita dintr-un influent realizat din solutie sintetica cu continut de Tricloretilena, Percloretilena, Hexaclorbutadiena,1,2,4 Triclorbenzen si apa menajera. Concluzia experimentelor in instalatiile micropilot in flux continuu este ca apele uzate cu continut in Tricloetilena (0,3 g/l), Percloretilena (0,05 g/l), Hexaclorbutadiena (0,003 g/l), 1,2,4 Triclorbenzen (0,015 g/l) pot fi introduse in treapta biologica a unei statii de epurare biologica.
Summary (ENG) (short description)	The project objective is to establish the dynamics of biodegradation of substances priority / hazardous (trichlorethylene, perchlorethylene, 1,2,4 trichlorobenzene and hexachlorobutadiene) in order to establish the admissibility limits in biological treatment plants for biological treatment. The experiments were conducted on plants micropilot continuous flow, single-stage aeration, and sludge recirculation from the settling in the secondary (similarly to biological industry). Based on the results obtained in the first stage of batch experiments, laboratory experiments were carried out at three contact times, TRH = 16h, 12h and 10h. Water supply installations micropilot was made of a solution made of synthetic influent containing trichlorethylene, perchlorethylene, hexachlorobutadiene, 1,2,4 trichlorobenzene and domestic water. The conclusion of experiments in micropilot continuous flow installations is that it wastewater containing the trichlorethylene (0.3 g/l), perchloroethylene (0.05 g/l), hexachlorobutadiene (0.003 g /l), 1,2,4 trichlorobenzene (0.015 g /l) may be placed in the biological stage of a biological wastewater treatment plants.
Dissemination of results	
PhD Thesis – Title RO, ENG	Evaluarea poluarii cu substante prioritar periculoase a ecosistemelor apa si sediment in zona unei platforme industriale complexe si metode de distrugere a poluantilor, Mihaela Iordache, 2013 Evaluation of priority hazardous substances pollution of water and sediment ecosystems in the complex industrial platform area and destruction methods of the pollutants.
Full-paper ISI	**M. Iordache**, A. Meghea, S. Neamțu, L.- R. Popescu, I. Iordache, Removal of bis (1-chloro-2-propyl) ether from wastewater using sonodegradation and biodegradation, *Environmental Engineering and Management Journal*, (**2009**), 8, 201-206

Conferences (platform, poster, abstract / full-paper)	**M. Iordache**, M. Taralunga, Consideratii privind biodegradarea unor compusi organoclorurati alifatici (tricloretilena si percloretilena) din ape uzate, *International Symposium – SIMI* 2007, Bucuresti, ISNB 978-973-7681-65-2
	M. Iordache, M. Taralunga, L. R. Mandoc, Consideratii privind biodegradarea unor substante prioritare/prioritar periculoase(hexaclorbutadiena si 1,2,4-triclorbenzen) din ape uzate, – *Conferinta Nationala de Chimie Calimanesti - Caciulata*, 08-10.10.2008