

Program	Program NUCLEU PN 09-13 03 19
Project title (ENG):	Exploiting natural products in industrial wastewater treatment field containing hydrocarbons
Project title (RO):	Valorificarea unor produse naturale in domeniul epurarii apelor uzate industriale cu continut de hidrocarburi
Duration	2014 -2015
Team Leader	Dr. Eng. Smaranda Mășu
Summary (short description) ENG	Comparative study of wastewater treatment results by: 1.filtrare through layers of natural materials indigenous tuff, sheep wool, charcoal, crop residues, 2.coagulare with optimum doses of coagulants and coagulant new chitosan PCBA and PCBA at chitosan report: Al = 0.3 and 0.6 in the presence / absence of an adjuvant, tuff indigenous comparative presentation of case studies in relation to: a) .coagularea waste water containing oil products with different gelling agents, salts Al or Fe-based, synthetic anionic polyelectrolytes, etc., b) adsorptive materials,adsorbtion of the petroleum products. 3 models have been developed on experimental laboratory coagulation / filtration in the absence PCBA / agents • natural sorbents. Develop a technology for industrial wastewater containing oil based on models developed
Summary (short description) RO	Studiu comparativ al rezultatelor obținute la tratarea apelor uzate prin: 1.filtrare prin straturi de materiale naturale autohtone tuf, lâna de oaie, cărbune vegetal, resturi vegetale, 2.coagulare cu doze optime de coagulant PCBA și coagulanți noi din chitosan și PCBA, la raport chitosan:Al=0,3 și 0,6 în prezența/absența unui adjuvant, tuf indigen Prezentarea comparativă a unor studii de caz cu privirea la: a).coagularea apelor reziduale cu conținut de produse petroliere cu diferiți agenți de coagulare, săruri pe baza de Al sau Fe, polielectroliti anionici sintetici, etc., b).adsorbția produselor petroliere pe materiale adsorbante. S-au elaborat 3 modele experimentale de laborator privind coagularea /filtrarea cu PCBA în absența/prezența agenților adsorbanti naturali ♦. Elaborarea unei <i>tehnologii de epurare a apelor uzate</i> industriale cu conținut de hidrocarburi pe baza modelelor elaborate.
Dissemination of results	
Full-paper ISI	Masu S, Grecu E., Solutions in the Coagulation of Oil Wastewater, <i>Studia Universitatis Babes-Bolyai, Seria Chemia</i> , 2016 , LXI, 4, 189 –202,ISSN(print):1224-7154, ISSN (online):2065-9520, ISSN-L: 1224-7154
Conferences (platform, poster, abstract / full-paper	Mășu S. , Use UV spectrophotometer analysis to optimize water quality monitoring in treatment plants. Part 2 Total petroleum hydrocarbons wastewaters treatment, 22 September, 2014 , <i>The 22^h Symposium on Analytical and Environmental Problems</i> , Szeged, Ungaria, Proceedings, 71-74. Mășu S. ,Removal of some oil compounds from wastewaters using adsorbents of natural origin, 17-19, oct 2014 , <i>Conferința Internațională, Ecomediu, Practici si Experiente in Protectia Mediului</i> Arad, Romania, 9-11, ISBN 978-606-675-043-1.

	<p>Mășu S., Natural Materials Used for the Removal of Petroleum Compounds from Wastewater, May, 28-30, 2015, <i>Conference Environmental Engineering and Sustainable Development</i>, , Alba Iulia, Romania, Book of Abstracts, Aeterniras Publishing House. Alba Iulia, 113, ISSN 2457-2829, ISSN-L2457-2829.</p>
	<p>Petrescu A., Albulescu M., Mășu S., Iliu G., Toxicity evaluation in a series of natural phenolic compounds with pesticidal activity, May, 28-30, 2015, <i>Conference Environmental Engineering and Sustainable Development</i> Alba Iulia, Romania, Book of Abstracts, Aeterniras Publishing House. 137, ISSN 2457-2829, ISSN-L2457-2829.</p>
	<p>Mășu S., Applying a Mixed Coagulation Agent - Polyaluminum Chloride Chitosan - for Treatment of Wastewater with Petroleum Hydrocarbons, 29-30 oct 2015, <i>SIMI 2015" International Symposium „Environment and Industry”</i>, Bucharest, Romania, Proceedings International Symposium Environment and Industry, abstract 71, ISSN 2344, full text 66-70, ISSN L 183-5831</p>
	<p>Mășu S. , Albulescu M., Wastewater Coagulation with Chitosan-Al Compounds, 28 September 2015, <i>21st International Symposium on Analytical and Environmental Problems</i>, Szeged, Hungary, Proceedings 290-295, ISBN 978-.963-306-411-5</p>