

Program	Program NUCLEU PN 16 25 02 08
Project title (ENG):	Research on the chemical composition of atmospheric deposition
Project title (RO):	Cercetari privind compozitia chimica a depunerilor atmosferice
Duration	2016- 2017
Team Leader	Senior Researcher Eng. Mihaela PETRESCU
Summary (short description) ENG	The project comprises a literature study and performance with the latest analytical methods used to characterize atmospheric deposition (wet and dry). To determine the concentration of heavy metals in atmospheric deposition dry analyzed dry deposition taken in five of the sampling organized in 2016, the second being the summer season (July and August) and three in autumn (September, October and November). Analyses were carried out respecting the requirements of SR EN 15841: 2010 - " The quality of the surrounding air. Standardized method for the determination of arsenic, cadmium, nickel and lead in atmospheric deposition. Determination of anions and cations soluble in dry deposition (Ca^{2+} , Mg^{2+} , Na^{+} , K^{+} , Cl^{-} , NO_2^{-} , SO_4^{-} , NO_3^{-}) was achieved by technique optical emission spectrometry with inductively coupled plasma and ion chromatography directly from the sample taken with a prior filtration.
Summary (short description) RO	Proiectul cuprinde un studiu de literatura cu cele mai recente si performante metode analitice utilizate in caracterizarea depunerilor atmosferice (umede si uscate). Pentru determinarea concentratiei de metale grele din depunerile atmosferice uscate s-au analizat depunerile uscate prelevate in cinci campanii de prelevare organizate in 2016, doua fiind in sezonul de vara (iulie si august) si trei in sezonul de toamna (septembrie, octombrie si noiembrie). Analizele au fost efectuate respectand cerintele standardului SR EN 15841:2010 - " Calitatea aerului inconjurator. Metoda standardizata pentru determinarea de arsen, cadmiu, nichel si plumb in depuneri din atmosfera. Determinarea anionilor si cationilor solubili din depunerile uscate (Ca^{2+} , Mg^{2+} , Na^{+} , K^{+} , Cl^{-} , NO_2^{-} , SO_4^{-} , NO_3^{-}) s-a realizat prin tehnica spectrometriei de emisie optica cu plasma cuplata inductiv si cromatografiei ionice direct din proba prelevata cu o filtrare prealabila.
Dissemination of results	
Full-paper BDI	Petrescu M., Bucur E., Andrei V., Diodiu R., Vasile G., Danciulescu V., Bratu M., Tanase Ghe. <i>Characterization of the chemical composition of atmospheric deposition</i> , SIMI 2016, 376-382 pp.