

<b>Program</b>	<b>Program NUCLEU PN 09-13.01.03.</b>
<b>Project title (ENG):</b>	<b>Research to develop new effective methods of determining the volatile metals (selenium, tellurium and bismuth) emissions from stationary sources in accordance with the requirements of environmental legislation in force.</b>
<b>Project title (RO):</b>	<b>Cercetari pentru elaborarea de noi metode performante de determinare a metalelor volatile (seleniu, telur si bismut) din emisiile surselor fixe in conformitate cu cerintele legislatiei de mediu in vigoare.</b>
<b>Duration</b>	2009-2012
<b>Team Leader</b>	Senior Researcher Eng. Mihaela PETRESCU
<b>Summary</b> (short description) ENG	The project began with a survey of literature on methods recommended in the literature and current standards for determining the concentration of volatile metals by atomic absorption spectrometry. From this database, I experimented and developed four methods for determining the mass concentration for: selenium, tellurium, bismuth and beryllium in stationary source emissions, using atomic absorption spectrometry with atomization in the graphite furnace and generator website hydrides. Also within this project we conducted validation methods developed in the laboratory. For selenium analytical method was validated by participating in an international interlaboratory comparisons scheme and tellurium, bismuth and beryllium were validated "in-house".
<b>Summary</b> (short description) RO	Proiectul a debutat cu un studiu de literatura privind metodele recomandate in literatura de specialitate si normativele in vigoare pentru determinarea concentratiei de metale volatile prin spectrometria de absorbtie atomica. Pornind de la aceasta baza de date, am experimentat si pus la punct patru metode de determinare a concentratiei masice pentru:seleniu, telur, bismut si beriliu din emisiile surselor fixe, utilizand spectrometria de absorbtie atomica cu atomizare in cuptorul de grafit si generator ul de hidruri. Tot in cadrul acestui proiect am realizat validarea metodelor dezvoltate in cadrul laboratorului. Pentru seleniu metoda analitica a fost validata prin participarea la o schema de comparatii interlaboratoare internationale, iar telurul, bismutul si beriliu au fost validate „in-house”.
<b>Dissemination of results</b>	
Conferences (platform, poster, abstract / full-paper)	<b>Petrescu M, Bucur E</b> , <i>Analytical method for selenium determination from stationary sources by atomic absorption spectrometry</i> , 28-30 2009, International Symposium "Environment and Industry", - INCD ECOIND, Bucharest
	<b>Petrescu M, Bucur E, Nicolescu I, Ionita L</b> , Tellurium from the stationary emission sources- analytical method, 6 – 8 October 2010, , <i>Conferința Națională de Chimie, Călimănești – Căciulata, Vâlcea</i>
	<b>Petrescu M, Bucur E, Nicolescu I, Ionita L</b> , <i>Analytical method for bismuth determination from stationary sources by atomic absorption spectrometry</i> , 16–18 November 2011, International Symposium "Environment and Industry", - INCD ECOIND, Bucharest
	<b>Petrescu M, Bucur E, Nicolescu I, Ionita L</b> , <i>Analytical method for bismuth determination from stationary sources by atomic absorption spectrometry</i> , 16–18 November 2011, International Symposium "Environment and Industry", - INCD ECOIND, Bucharest

Conferences (platform, poster, abstract / full-paper)	<b>Petrescu M, Bucur E, VASILE A</b> , <i>Chemical speciation of particulate matter in air</i> , 3 – 5 October 2012, , <i>Conferința Națională de Chimie</i> , Călimănești – Căciulata, Vâlcea
	<b>Petrescu M, Bucur E</b> , Determination of beryllium in stationary sources emissions, 2013, International Symposium "Environment and Industry", - INCD ECOIND, Bucharest