Program	**Program NUCLEU PN 06-12.01.08.**
Project title (ENG):	**Research concerning development of methods for determining the content of solvents in atmospheric emission in accordance with the directives 96/62 and 2002/3 on limiting pollutants immissions**
Project title (RO):	**Cerecetari pentru elaborarea metodelor de determinare a continutului de solventi in imisiile atmosferice in conformitate cu prevederile directivelor 96/62 si 2002/3 privind limitarea imisiilor de poluanti**
Duration	2006 - 2008
Team Leader	Senior Researcher Eng Mihaela PETRESCU
Summary (short description) ENG	The methods developed and tested during the design is applied to determine the concentrations of aromatic hydrocarbons (benzene, toluene, o-xylene, m-xylene), esters (ethyl acetate, t-butyl acetate, butyl) and aliphatic hydrocarbons (pentane, hexane, heptane, octane, nonane and dean) in atmospheric emission. For the collection and treatment of these compounds was applied by pumping, followed by desorption of the removal of the charcoal by extraction in solvent content and the separation and quantification of analytes technique used was gas chromatography with FID detector. Three methods have been developed for analysis to determine the atmospheric emission of volatile organic compounds. Complex validation methodology "in-house" meet current standards applied by confirming identification and selectivity / specificity, fix the limit of detection, limit of quantification of the working range, linearity, robustness and recovery. Protocol was drafted documentation validated methods, determinations were performed on real samples from various customers.
Summary (short description) RO	Metodele dezvoltate si experimentate pe parcursul acestui proiect se aplică la determinarea concentraţiilor de hidrocarburi aromatice (benzen, toluene, o-xilen, m-xilen), esteri(acetat de etil, acetat de t-butil, acetat de butyl) si hidrocarburi alifatice (pentan, hexan, heptan, octan, nonan si decan) in imisiile atmosferice. Pentru prelevarea si tratarea acestor compusi s-a aplicat prelevarea prin pompare urmata de desorbtia de pe carbune activ prin extractie in solvent iar pentru separarea si cuantificarea continutului de analiti s-a utilizat tehnica cromatografiei de gaze cu detector FID. Au fost elaborate trei metode de analiza pentru determinarea compusilor organici volatili din imisiile atmosferice. Metodologia complexă de validare „in-house” aplicată răspunde cerinţelor normativelor în vigoare prin confirmarea identificării şi selectivităţii / specificităţii, stabilirea limitei de detecţie, a limitei de cuantificare, a intervalului de lucru, liniarităţii, robusteţii şi recuperării. S-a intocmit Protocolul de documentare a metodelor validate, s-au efectuat determinari pe probe reale la diversi beneficiari.