Toxicity of coastal waters: use of a quick algal bioassay

Sjollema, S.B.; Booij, P; van der Geest, H.; Laane, R.; Leonards, P.; Lamoree, M.; Admiraal, W.; Vethaak, D.; de Voogt, P.

Publication date
2011

Document Version
Final published version

Citation for published version (APA):
Optimization of the SPE step in the analysis of β-blockers and β-adrenomimetics in natural water samples by SPE-GC technique

TU 081

ME Caban, A Michalak, M Ciewarzka, M Kwiatkowski, J Kumiska University of Gdańsk, GDANSK, Poland

Environmental samples, especially sewage and marine-water samples are complex and often contain interfering elements that can mask or interfere with the analysed pharmaceticals. The project is aimed at determining the optimal conditions of the SPE step in the analysis of β-blockers and β-adrenomimetics in natural water samples. The main aim of the study is to develop an SPE procedure that can be used for the clean-up of these samples before further analysis by gas chromatography (GC) with flame ionization detection (FID) and/or mass spectrometry (MS).

TU 082

Multistep fractionation based on normal phase SPE and reverse phase HPLC (RP-HPLC) for isolation of estrogenic disrupting chemicals in environmental extracts

N Creuzet1, J Pomerol1, H Budzinski2, S Att-Asua3

1INERIS, VERNEUIL EN HALATTE, France

The aim of this study is to collect and analyse environmental extracts (sediments and water samples) from different sources (industrial, urban, agriculture) in order to determine the presence of estrogenic disrupting chemicals. The project is focused on the identification and quantification of estrogenic disrupting chemicals in environmental extracts using a multistep fractionation procedure based on normal phase SPE and reverse phase HPLC.

TU 083

Toward a common mass spectra database for the identification of unknown environmental samples

F Schulz1, E Schymanski1, S Neumann1, C Hog1, C Gallampois3, M Krauss1, J Slabodnik1, W Brack3

1University of Amsterdam, AMSTERDAM, The Netherlands

The project is aimed at developing a database of mass spectra for the identification of unknown environmental samples. The database will be used to support the identification of compounds in environmental samples, such as sediments and water samples, using mass spectrometry (MS). The project is focused on the development of a database of mass spectra for the identification of unknown environmental samples using MS/MS and the comparison of these spectra with those of known compounds.

TU 084

Construction of a water toxicity sensor based on luminescent bacteria

M Wouters1, J Munk1, AP van Wezel2, Van der Gaag2, RS Marks2, A Brouwer3, MB Herings2

1NIV 2Waters Netherland, AMSTERDAM, The Netherlands

The project is aimed at developing a water toxicity sensor based on luminescent bacteria that can be used to monitor the toxicity of water samples. The sensor is based on the expression of a reporter gene under the control of a promoter gene that is coupled to a sensor that applies genetically modified bacteria that can be used to monitor the toxicity of water samples. The project is focused on the development of a water toxicity sensor based on luminescent bacteria that can be used to monitor the toxicity of water samples.

TU 085

Toxicity of coastal waters: use of a quick algal bioassay

MB Sadouni1, P Boui2, J van der Geest1, R Laune1, P Leonard1, M Lamoret1, W Admiral1, D Turchin2, P De Vogt1

1University of Amsterdam, AMSTERDAM, The Netherlands

2Institute for Environmental Studies (IVM), YU University, AMSTERDAM, The Netherlands

The project is aimed at developing a quick algal bioassay for the toxicity testing of coastal waters. The bioassay is based on the use of a microalgae species that can be used to monitor the toxicity of water samples. The project is focused on the development of a quick algal bioassay for the toxicity testing of coastal waters.

TU 086

Dissolved and intracellular microcystins in lake waters during a Plankothrix rubescens algal bloom: HPLC quantification and crustacean acute toxicity test

S Li, G Lishan, I Piersma, C E Alarco, D Copetti, G Wiedenhoft, CNR-IRSA, BRUGHERIO, Italy

Microcystins, highly toxic cyclic peptides, are a group of hepatotoxins produced by a number of aquatic species of cyanobacteria, such as Microcystis, Anabaena and Plankothrix. Worldwide, contamination in water has been identified as a serious threat to human and aquatic life. In this study, the project is focused on the quantification of dissolved and intracellular microcystins in lake waters during a Plankothrix rubescens algal bloom using high-performance liquid chromatography (HPLC) and crustacean acute toxicity tests.