



Hungary – Serbia IPA Cross-border Co-operation Programme

HUSRB/1203/214/025 Novi Sad – Szeged cross-border cooperation in development of harmonized methods and production of common database for the analysis of designer drugs

Project acronym: NCTCNSHIFSSZ12

In term of 01. 11. 2013. to 28. 02. 2014., analytical instruments (FT-IR, GC-MS, HPLC, rotary evaporation system) were delivered to Szeged Regional Drug Laboratory. After installation and testing of the instruments, trainings on their regular operations were also provided by factory trained service personnel. Experimental works with the procured analytical instruments started.

Several new compounds like 3,4-CTMP, MPHP, heptyl derivative of UR-144, EAM-2201, indazole derivative of PB-22, 5F-AB-PINACA from different seizures of powders and herbal materials were extracted. From compound called 2C-B, two potential designer drugs were also synthesized. During the four months, the GC-MS database was improved with 125 mass spectra on various compounds and their derivatives.

Preparations both for media presentations in radio, TV and for procurements of standards, derivatization agents need for laboratory experimental works and spot-tests for training of criminalistic police officers were started.

Dr. Tibor Veress project manager participated and made oral presentation in Chromatography Meeting (XLV. Kromatográfiás Továbbképző Tanfolyam). The national conference was in Szeged on 27-29th of January, 2014. The Event was opened by Prof. István Hannus, Head of Hungarian Chemic Group in Csongrád-county. After his speech, through the three days, several high-level lectures could be on view. Great number of representatives from both academia and industry area was participated in the Event.

About the instruments procured:

Fourier Transform Infrared spectrometer (FT-IR) is capable for the quick and reliable identification of constituents of drugs and wide range forensic samples. It has ability to measure attenuated total reflectance (ATR) infrared spectra of forensic drug samples as small amounts of liquids, powders, gels and computer-controlled data manipulation including library search function.

Gas-Chromatograph-Mass Spectrometer (GC-MS) apparatus is a compact PC-controlled benchtop GC-MS system, with GC suitable for separation of drugs and toxic components in mixtures and an MS with quadrupole mass analyzer for the identification of the substances. The apparatus can be used for reliable identification of drugs and new psychoactive substances by the application of related databases and reference materials.

High pressure liquid chromatograph (HPLC) is able to separate mixtures with the purpose of identifying, quantifying the individual components of the mixture by DAD.



Rotary evaporation system procured includes a chemical resistant diaphragm vacuum pump and a rotary evaporator for rotary evaporations, vacuum drying, vacuum filtration, vacuum distillation. These procedures are basic steps of the isolation of new substances from mixtures and the in-house synthesis of reference materials.



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