

The complete verification procedure requires rather heavy and sophisticated instrumentation which presupposes a well equipped analytical laboratory. The equipments and instrumentation demonstrated consist of sampling and sample preparation equipments, enzymatic analysers, high resolution gas and liquid chromatographs, high resolution mass spectrometer and Fourier transform nuclear magnetic resonance spectrometer. Different instrumental techniques are needed to produce unambiguous verification data from control samples to be able to cope with any type of sample matrices and agent categories. While enzymatic measurements serve as characterizing nerve agent type toxicity chromatographic, mass spectrometric and nuclear magnetic resonance spectrometric data serve as mutually independent data for chemical characterization and identification of agents.

Excluding mass and nuclear magnetic resonance spectrometry from the complete procedure a simplified monitoring procedure is obtained. Sampling, sample concentration, enzymatic and high resolution gas chromatographic analysis can be carried out in a light and easily transferable mobile laboratory. Principle and operation of such a mobile laboratory developed in connection of the Finnish project was also demonstrated to the participants of the CW verification workshop. The presented laboratory is a prototype and its construction and instrumentation as well as application for openair verification tests will be described in a later report.

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