

PART I. Analytical Tasks and Instruments

A. Analytical Tasks

The analytical tasks required for the verification of the Chemical Weapons Convention are the following:

- Monitoring of known compounds (compounds included in the schedules 1 and 2 and included in the databases).
- Monitoring of compounds for structure elucidation (compounds not included in the data base)
- Unambiguous identification of compounds (known compounds).
- Structure elucidation (detailed analysis of unknown chemicals).
- Semiquantification.

These tasks can invariably be performed with several types of instruments. The choice of a particular type of instrument in a given situation will depend on a number of factors like requirements for sensitivity and reliability and portability. The suitability of the following instruments for the required analytical tasks was considered in the Group:

- GC = gas chromatograph
- HPLC = high performance liquid chromatograph
- MS = mass spectrometer
- LRMS = low resolution mass spectrometer
- HRMS = high resolution mass spectrometer
- MS/MS = tandem mass spectrometer (any combination of LRMS and HRMS)
- IR = infrared spectrometer
- FTIR = Fourier transform infrared spectrometer
- NMR = nuclear magnetic resonance spectrometer
- GC-MS, GC-FTIR = combinations of instruments