

None of the non-destructive methods have been qualified for chemical weapon verification and development is required. However, the advantages of non-destructive methods in reducing hazard and possibly accelerating the verification process, make a development effort important. Issues to be explored include tradeoffs of cost, chemical hazard, speed and convenience of measurement, the possibility of inducing detonation of rounds, portability and accuracy.

E. Need for and use of mobile laboratory facilities

The concept of a mobile laboratory may be replaced by a concept based on a series of separate instrumental modules, individually portable or transportable, from which the inspection team can select that combination of modules which is appropriate to the specific requirements of each individual inspection. The modules could also include a sampling/sample packaging module and protection equipment. The increasing miniaturization of analytical instrumentation also supports this concept of modular instrumentation for on-site inspections. Thus the concept of a mobile laboratory may now be redundant, or become redundant in the very near future. The maximum combination of modules required to support any on-site inspection is very likely to be more readily transportable than a fully equipped, general purpose mobile laboratory.

Examples of available instruments for different targets.

- 1) For the inspection of declared stockpiles the analytical equipment must allow unambiguous identification of Schedule 1 compounds: either GC-MS or GC-FTIR.
- 2) For single small-scale facilities the equipment may include a two-channel GC equipped with element-specific detector and used in combination with enzymatic detection.
- 3) GC-MS or GC-FTIR, or both, may be needed in the CW destruction facility in case the instrumentation at the facility does not meet the requirements of the inspectors. These instruments may also be installed at the facility for the whole period of the destruction.