

3. Instrumentation of a mobile laboratory

Mobile laboratories could be used for on-site analyses to verify declarations of stockpiles, destruction at the destruction facilities, and production in a single small-scale facility. The laboratories could also be used for preliminary screening of Schedule 1 chemicals during inspections to verify non-production and, perhaps, in cases of alleged use, to reduce the number of samples to be transported to an off-site laboratory.

In case a mobile laboratory is used to verify declarations of stockpiles, destruction, and production in a single small-scale facility, the laboratory should be equipped in a manner allowing handling of extremely toxic substances. The analytical task is to unambiguously identify declared compounds.

The following instruments (for unambiguous identification) which could be assembled in a mobile laboratory using the present stage of technology are: a gas chromatograph - mass spectrometer (GC-MS) and a gas chromatograph-Fourier transform infrared spectrometer (GC-FTIR). The gas chromatograph is essential in both combinations to separate the agents from impurities and additives. The instruments or the laboratory must be equipped with a database including all chemicals which have to be identified. Verification of the production in a single small-scale facility needs further consideration.

Use of both the above techniques to verify non-production may cause considerable difficulties to States Parties as confidential information may be revealed. For this purpose it might be appropriate to use techniques which enable only monitoring of compounds listed in Schedules 1, 2, and 3. In case suspect samples are found, the monitoring result must be confirmed in an off-site laboratory. The criteria for suspect samples need further consideration. The possible instruments could be a two-channel gas chromatograph with retention index monitoring capability and a mobile mass spectrometer the database of which includes only those compounds relevant to the Convention.

Views were expressed that the instruments of the inspectors are preferred over those of the State Party (facility).