

(Mrs. Rautio, Finland)

To ensure confidence among the States parties, the verification analyses will have to be done by methods accepted by the Organization. In our view, what this entails is the establishment of standard operating procedures and an analytical database accessible to all participating laboratories. The Finnish Research Project has been working toward this end for 15 years now.

The present report is a revised version of the proposed standard operating procedures for verification analyses presented in Report D.1 last year. Increased emphasis is now placed on quality control. Testing procedures are presented with a view to achieving good repeatability and reproducibility of results in different laboratories, which is needed to guarantee the reliability of analysis. It is essential that the quality of the analyses be demonstrated when the results must hold up in a court of law. Reproducibility also maximizes the advantages of an analytical database as a reference.

For this report we investigated 40 chemical warfare agents and their homologues. All relevant data including the spectra are annexed to this volume. As of now, all new data will be included in the VERIFY database immediately after analysis of compounds.

The methods we describe are written separately for each technique, so that each technique can exist independently. The eventual selection of equipment can be expected to vary from laboratory to laboratory and we wish to show what can be achieved with each technique separately.

The analytical procedure in each laboratory can be chosen on the basis of the combination of techniques available to the laboratory, the type of sample, and the nature of the task. During routine inspections the task may be the identification of known compounds. Challenge inspections may require also structure elucidation of unknown compounds.

It is our earnest hope that the basic work we are doing will prove useful to the Preparatory Commission and Technical Secretariat as they commence their arduous task of developing verification methodology and data in the first years after the convention has been opened for signature. In the meantime we will be happy if our efforts support and facilitate the ongoing negotiations in Geneva and the work of the Secretary-General of the United Nations in investigating the alleged uses of chemical weapons.