

## 1 INTRODUCTION

In order to implement a chemical weapons convention successfully, it must be possible to verify violation of any part of the convention. Procedures should be available in connection with verification of alleged use of chemical weapons, existing stocks, their destruction, and the non-production of chemical weapons by the chemical industry. Verification of alleged use requires somewhat different procedures from verification of a production facility. This paper presents one complete procedure for each of these separate activities, even if parts of the procedures are similar.

A complete verification procedure may be divided into several parts, including methods for localization of the contaminated area, sampling, sample handling including preservation, packaging, coding and documentation, transport, sample handling in the laboratory and laboratory analysis. In the context, the laboratory could either be a designated laboratory or the laboratory of the Technical Secretariat. All these stages must be carried out properly in order to ensure that verification is as reliable as possible.

The recommended operating procedures for sampling and sample handling, which are crucial steps in any verification procedure, are based on several years of extensive study. The reliability of verification is influenced by various factors such as where the samples are collected, the kinds of sample materials chosen and how the samples are treated before reaching the laboratory. During transport, it is important to ensure that the transport log is properly completed in order to maintain an unbroken chain of custody.

All the procedures recommended have been thoroughly tested in field trails, which are used to test all methods and techniques and make them functional for field use. Efforts have been made to develop procedures using readily available, unsophisticated equipment.