(Mrs. Rautio, Finland)

The need for background information on samples was discussed by the scientists of the participating laboratories. They considered it desirable to know whether the samples had been collected in an area of alleged use or in an industrial site. The participants also considered the analysis request, be it confirmation of preliminary identifications, identifying scheduled chemicals or structure elucidation of unknown chemicals, to be more important for the off-site laboratories than to know whether the inspection had been a routine or challenge inspection.

In the present test the laboratories were informed that the samples did not contain CW agents. This information caused some confusion, however, because not all laboratories were aware of the difference between a CW agent and a schedule 1 chemical and, accordingly, some did not look for members of the nerve agent families.

Information on the particular sampling points in the facility helped in understanding the production process. However, such information might be considered highly confidential by the facility, the kind of information that should not be revealed to a laboratory capable of doing in-depth analysis of all chemicals in the samples. This type of information is, naturally, available to the inspectors on-site, but there confidential information can be protected by the use of "blinded" instruments, i.e. those having only scheduled and related chemicals in their databases.

As shown by the test, a large number of chemicals can be tentatively identified with a gas chromatograph/mass spectrometer (GC/MS), the instrumentation planned for on-site analysis, if reference spectra are available in the computer of the instrument.

The second round-robin test showed that if the analytical request is to identify any scheduled chemicals, the methods should be such as to allow detection of all individual compounds on the schedules. As long as the databases remain incomplete, samples should be monitored by techniques allowing detection of family members. Easily volatile chemicals such as phosgene and hydrogen cyanide require slightly different procedures than those optimized for nerve agents and mustards.

The scientists discussed the criteria and need to report chemicals other than scheduled ones to the future technical secretariat. This question was felt important since the number of chemicals that can be identified in off-site laboratories is greater than during on-site analysis. In this test the laboratories reported non-scheduled feedstock chemicals and the product of ongoing synthesis, plus their impurities and a large number of unrelated chemicals. It was pointed out that the identification of non-scheduled chemicals could be used to identify industrial processes and could corroborate the stated purpose of the process and be used as evidence of compliance. However, this would not necessarily be an indication of compliance all of the time. In the present test, toluene and trichloracetaldehyde confirmed that during the inspection the facility was producing dichlorvos.