1.2 Analytical chemical methods development

The selection of the recommended analytical methods used for the Organization should be based on international cooperation for method development, including international interlaboratory comparisons and collaborative tests. In order to ensure that the Organization has at all times at its disposal the best available means for verification, it is an absolute necessity to develop these analytical methods continuously. It is evident that all the verification laboratories will on their own improve the existing methods and develop new ones in parallel. The evaluation of these methods may be carried out by the Technical Secretariat and/or by one or more Accredited Laboratories. The Laboratory of the Technical Secretariat is responsible for the coordination in this field.

The methods development involves extensive testing in order to ensure the validity and wide applicability of new improved methods before they can be recommended for verification purposes. Despite this requirement, the validation process of new methods should be efficient and prompt enough to guarantee that up-to-date methods are used.

1.3 Synthesis of reference compounds

The verification laboratories and the inspectors will need several types of reference compounds for calibration of instruments and comparison of analytical data for identification purposes. As far as scheduled compounds are concerned, these reference chemicals can be obtained either by synthesizing them in the Accredited Laboratories or by purchasing them from single small-scale facilities or other declared laboratories. Other chemicals could be obtained from industry, etc. In all cases the reference compounds have to be validated for purity and authenticity (cf. CD/CW/WP.272).

In addition to the synthesis of reference compounds for the already agreed scheduled chemicals, synthesis may also be needed when new chemicals are added to the schedules.

1.4 Compiling and updating the analytical database

An analytical database containing identification data of as many scheduled compounds as possible is extremely important to allow on-site analysis and facilitate analyses in verification laboratories.

The database will be very extensive as it will eventually include data on the scheduled chemicals, their precursors, degradation products, and characteristic impurities recorded with all recommended analytical techniques. In order to ensure that there is an adequate