ANNEX 7

MANUFACTURE OF HERBAL MEDICINAL PRODUCTS

Principle

Because of their often complex and variable nature, and the number and small quantity of defined active ingredients, control of starting materials, storage and processing assume particular importance in the manufacture of herbal medicinal products.

Premises

Storage areas

1. Crude (i.e. unprocessed) plants should be stored in separate areas. The storage area should be well ventilated and be equipped in such a way as to give protection against the entry of insects or other animals, especially rodents. Effective measures should be taken to prevent the spread of any such animals and micro-organisms brought in with the crude plant and to prevent cross-contamination. Containers should be located in such a way as to allow free air circulation.
2. Special attention should be paid to the cleanliness and good maintenance of the storage areas particularly when dust is generated.
3. Storage of plants, extracts, tinctures and other preparations may require special conditions of humidity, temperature or light protection; these conditions should be provided and monitored.

Production area

4. Specific provisions should be taken during sampling, weighing, mixing and processing operations of crude plants whenever dust is generated, to facilitate cleaning and to avoid cross-contamination, as for example, dust extraction, dedicated premises, etc.

Documentation

Specifications for starting materials

5. Apart from the data described in General Guide (chapter 4, point 4.11), specifications for medicinal crude plants should include, as far as possible:
   - the botanical name (with, if appropriate, the name of the originator of the classification, e.g. Linnaeus);
   - the details of the source of the plant (country or region of origin, and where applicable, cultivation, time of harvesting, collection procedures, possible pesticides used, etc.);

— whether the whole plant or only a part is used;

— when a dried plant is purchased, the drying system should be specified;

— the description of the plant and its macro and microscopical examination;

— the suitable identification tests including, where appropriate, identification tests for known active ingredients, or markers. A reference authentic specimen should be available for identification purposes;

— the assay, where appropriate, of constituents of known therapeutic activity or of markers;

— the methods suitable to determine possible pesticide contamination and limits accepted;

— the tests to determine fungal and/or microbial contamination, including aflatoxins and pest-infestations, and limits accepted;

— the tests for toxic metals and for likely contaminants and adulterants;

— the tests for foreign materials.

Any treatment used to reduce fungal/microbial contamination or other infestation should be documented. Specifications for such procedures should be available and should include details of process, tests and limits for residues.

Processing instructions

6. The processing instructions should describe the different operations carried out upon the crude plant such as drying, crushing and sifting, and include drying time and temperatures, and methods used to control fragment or particle size. It should also describe security sieving or other methods of removing foreign materials.

For the production of a vegetable drug preparation, instructions should include details of base or solvent, time and temperatures of extraction, details of any concentration stages and methods used (see also the note for guidance “Quality of herbal remedies”, Volume III of “The rules governing medicinal products in the European Union”).

Sampling

7. Due to the fact that crude drugs are an aggregate of individual plants and contain an element of heterogeneity, their sampling has to be carried out with special care by personnel with particular expertise. Each batch should be identified by its own documentation.

Quality control

8. Quality Control personnel should have particular expertise in herbal medicinal products in order to be able to carry out identification tests and recognise adulteration, the presence of fungal growth, infestations, non-uniformity within a delivery of crude plants, etc.

9. The identity and quality of vegetable drug preparations and of finished product should be tested as described in the note for guidance “Quality of herbal remedies”.