Appendix VIII
Packaging, Labelling and Documentation for Transport

(extracted from WHO 1997b)

Because of the distinction of risks between infectious substances and diagnostic specimens, there are variations to the packaging, labelling and documentation requirements. The packaging requirements are determined by the UN and are contained in ICAO and IATA regulations in the form of Packaging Instructions (PI) 602 and 650. The requirements are subject to change and upgrade by these organisations. The current packaging requirements are described below. UN-approved packaging systems are available commercially.

Basic triple packaging system
The system consists of three layers as follows.

1. Primary receptacle. A labelled primary watertight, leak-proof receptacle containing the specimen. The receptacle is wrapped in enough absorbent material to absorb all fluid in case of breakage.

2. Secondary receptacle. A second durable, watertight, leak-proof receptacle to enclose and protect the primary receptacle(s). Several wrapped primary receptacles may be placed in one secondary receptacle. Sufficient additional absorbent material must be used to cushion multiple primary receptacles.

3. Outer shipping package. The secondary receptacle is placed in an outer shipping package which protects it and its contents from outside influences such as physical damage and water while in transit.

Specimen data forms, letters and other types of information that identify or describe the specimen and also identify the shipper and receiver should be taped to the outside of the secondary receptacle.

Hand carriage of infectious substances is strictly prohibited by international air carriers, as is the use of diplomatic pouches for that purpose.

The maximum net quantity of infectious substances which can be contained in an outer shipping package is 50 mL or 50g if transport is by passenger aircraft. Otherwise, the limit per package is 4L-4Kg for transport by cargo aircraft or other carriers. Primary receptacles exceeding 50 mL in combination packing must be oriented so the closures are upward, and labels (arrows) indicating the “UP” direction must be placed on two opposite sides of the
package. The passenger aircraft quantify limits do not apply to blood or blood products for which there is no reason to believe they contain infectious substances, when in receptacles of not more than 500 mL each and with a total volume of not more than 4L in the outer package.

**Hazard labels for dangerous goods**

For all dangerous goods to be shipped by airfreight, specific hazard label(s) must be affixed to the outside of each package. The following hazards labels are of importance for culture collections or other institutions shipping biological substances.

**Hazard labels for infectious substances** and for genetically modified microorganisms which meet the IATA definition of an infectious substance:

<table>
<thead>
<tr>
<th>Name:</th>
<th>Infectious Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum dimensions:</td>
<td>100 x 100 mm</td>
</tr>
<tr>
<td>For small packages:</td>
<td>50 x 50 mm (black and white)</td>
</tr>
</tbody>
</table>

Labelling of the outer package for shipment of infectious substances must include the elements listed hereafter.

1. The International Infectious Substance Label.
2. An address label with the following information:
   - the receiver’s (consignee) name, address and telephone number
   - the shipper’s (consignor) name, address and telephone number
   - the UN shipping name (Infectious Substances Affecting Humans or Animals as the case may be) followed by the scientific name of the substance
     - the UN Number (Humans – UN2814, Animals UN2900)
     - temperature storage requirements (optional).

If the outer package is further packed in an overpack (with dry ice for instance) both outerpack and overpack must carry the above information, and the overpack must have a label stating “INNER PACKAGES COMPLY WITH PRESCRIBED SPECIFICATIONS”.

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• 3. Required shipping documents – these are obtained from the carrier and are fixed to the outer package:
  • the shipper’s Declaration of Dangerous Goods (Figure 2 is one example)
  • a packing list/proforma invoice which includes the receiver’s address, the number of packages, detail of contents, weight, value (note: state that there is “no commercial value” as the items are supplied free of charge)
  • an airwaybill if shipping by air.

4. An import and/or export permit and/or declaration if required.

5. If the outer package contains primary receptacles exceeding 50 mL in combination at least two “Orientation Labels” (arrows) must be placed on opposite sides of the package showing correct orientation of the package.

Requirements for Air Mail

Infectious substances and diagnostic specimens may be shipped by registered air mail. The basic triple packaging system is used with the same requirements as for other means of conveyance.

The address label must display the word “LETTRE” and the green Customs Declaration Label for Postal Mail is required for international mailing. Diagnostic specimens are to be identified with the violet UPU “PERISHABLE BIOLOGICAL SUBSTANCES” label. Infectious substances are to be identified with the International Infectious Substance label (see Figure 1). Infectious substances must also be accompanied with a shipper’s Declaration of Dangerous Goods form (see Figures 2a and 2b).

Because of local/international restrictions, prior contact should be made with the local post office to ascertain whether the packaged material will be accepted by the postal service.
Appendix IX – References


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