

# SOP On-site Transportation of Biological Materials in the DBMR

## 1. Purpose

It is often necessary to transport biological materials and specimens within and between laboratories in the same building or between buildings of the DBMR.

The primary goal of every transport is that the samples reach their destination safely and in good condition. The basic requirements for safe transport are correct packaging, correct labeling and documentation.

### 1.1 Transfer within the laboratory

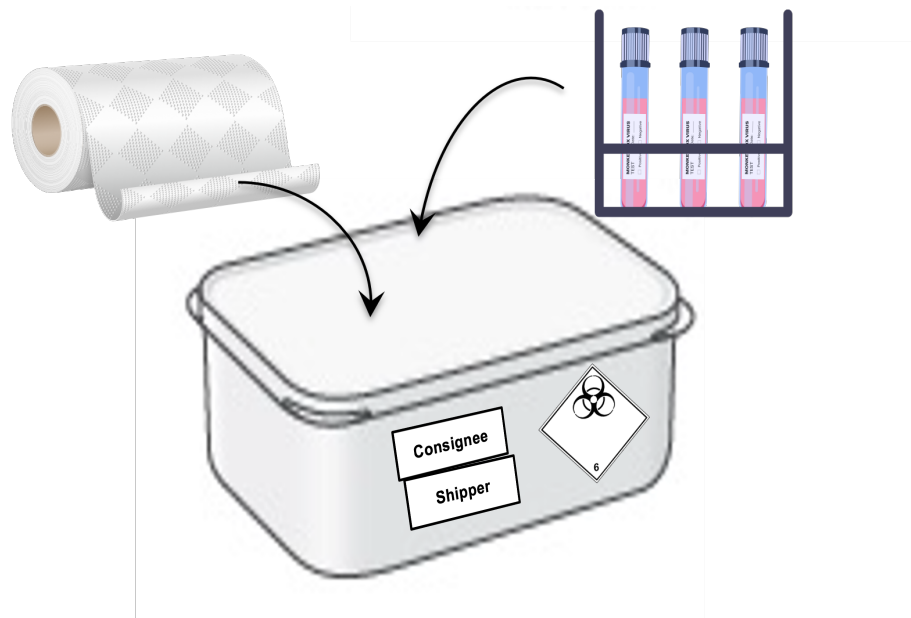
Moving biological materials within the laboratory, for example, from a biosafety cabinet to an incubator, should be undertaken following Good Microbiological Practices and Procedures (GMPP) to prevent incidents of cross contamination and inadvertent spillage. Additional measures to consider include the following:

- Use sealed containers, such as screw-capped tubes. Snap-cap lids should be avoided as they are less secure.
- Use deep-sided and leak-proof trays or boxes made of smooth impervious material (for example, plastic or metal), which can be effectively cleaned and disinfected. Locking plastic containers and storage containers are an option.
- If using racks, vials or tubes, trolleys can be used for more stable transport, as they are less likely to result in multiple spillages if a worker trips or falls.
- If using trolleys, ensure they are loaded so that substances cannot fall off, for example, by securing the load or using some form of guard rail or raised sides.
- Make sure spill kits are readily available for use in the event of a spillage during transfer, and available personnel are trained in their use.

## 1.2 Transfer between laboratories in the same building

In addition to the considerations above, the transfer of biological materials and specimen between laboratories in the same building has to be planned, organized and carried out in a way that minimizes transit through communal areas and public thoroughfares.

Transfer containers have to be suitably labelled to identify their contents, and surfaces decontaminated before leaving the laboratory. Biohazard symbols should be used on containers as a heightened control measure, if the biological material being handled is associated with a higher likelihood of infection.



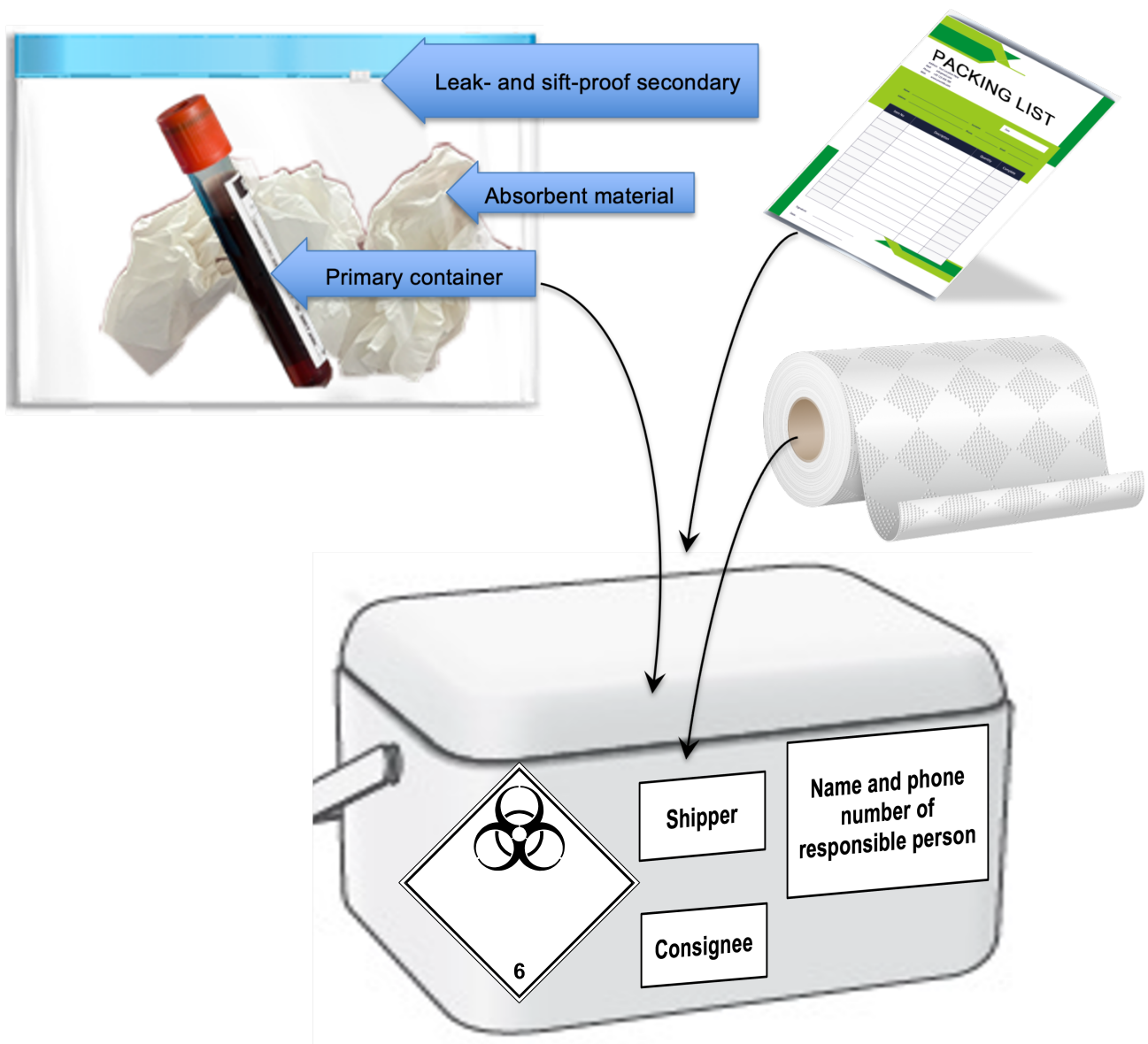
**Figure 1:** Two-layer packaging of biological materials for the transfer between laboratories in the same building.

## 1.3 Transportation between buildings of the DBMR

Issues that need to be considered for containers and layers of outer packaging to minimize the risks of leakage while transferring biological materials between buildings are outlined below.

- Sealable plastic bags, plastic screw-top tubes and locking plastic containers can all be used in the transfer of biological materials between buildings.
- Absorbent materials should be used between layers of packaging to absorb all liquid, if there were leakage.
- The outermost transport container should be rigid. It can vary widely depending on the resources available. A plastic box or small plastic ice chest (Figure 2) is one option for the transport of biological materials between buildings of the DBMR, as they are secure and easily decontaminated.

- A packing list should be prepared and put in the outermost transport container.
- Packaging should be labelled in a way that the shipper, consignee and contents of the package are clearly identifiable. It should include biohazard symbols where appropriate.
- Personnel involved in the transfer has to be provided with suitable awareness training on the risks present during the transfer process and how to safely reduce them.
- Spill kits have to be readily available and appropriate personnel trained in their use.
- Recipients have to be notified in advance of the transfer occurring.



**Figure 2:** Three-layer packaging for transportation of biological materials between buildings of the DBMR.

