1 PURPOSE

1.1 To provide a method for packaging and labelling biological substances (Category B), for transportation on dry ice, by DHL nationally and internationally.
2 SPECIAL NOTES

2.1 Only fully trained personnel must prepare packaging.

2.2 Care must be taken when handling dry ice. Avoid contact with skin and eyes. Protective cryo-gloves, safety glasses and laboratory coat must be worn when handling dry ice.

2.3 All biological substances (Category B) must be treated as potentially hazardous. Avoid contact with skin and eyes. Protective gloves, safety glasses and laboratory coat must be worn when handling them.

2.4 Precautions should be taken when handling biological substances (Category B), in case of splashing or spillage. In case of spillage, clean with appropriate disinfectant e.g. 70% Industrial methylated/ vikron.

2.5 For online booking with DHL, the sender must provide DHL with the following information: Full name, address, telephone number and email address of sender and receiver, contents of the package on dry ice, total number of packages, weight of dry ice, total weight of parcel, and length, width and height of parcel. See Jim Strupish (jws3@le.ac.uk room 541, Robert Kilpatrick Clinical Sciences Building, Leicester Royal Infirmary) for DHL Login and Password.

2.6 The following items are required for sending a parcel containing biological substances (Category B) on dry ice: dry ice, leak proof primary and secondary containers, low temperature proof plastic bag, outer packaging, biological substances (Category B) hazard label, dry ice hazard labels, parcel tape and heavy duty wrapping paper. See Jim Strupish (jws3@le.ac.uk room 541, Robert Kilpatrick Clinical Sciences Building, Leicester Royal Infirmary) for Hazard Labels.

2.7 It is advised not to send parcels on dry ice on a Thursday or Friday due to risk of the dry ice evaporating before the parcel reaches its destination.

2.8 It is advised NOT to use a Human Exempt label, unless authorised by a qualified person.

2.9 If the parcel is being delivered, ensure that the personnel packaging and sending the parcel are fully trained and have read this SOP.

2.10 If the parcel is being sent by others to another destination but organised by Cancer Studies personnel, the Cancer Studies person must be fully satisfied that all persons involved are fully trained and have read this SOP.
3 CROSS REFERENCE

3.1 intraship-dhl.co.uk
3.2 Laboratory Safety Handbook
3.3 IATA Dangerous Goods Regulations, Packing Instruction 650

4 EQUIPMENT AND MATERIALS

4.1 Appropriate packaging, e.g. size matched inner polystyrene box and outer cardboard box
4.2 Appropriate protective packing material, e.g. polystyrene pieces
4.3 Dry ice
4.4 Leak proof primary container
4.5 Leak proof secondary container
4.6 Low temperature proof plastic bag
4.7 Parcel tape
4.8 Heavy duty wrapping paper
4.9 Hazard label: UN1845 DRY ICE
4.10  Hazard label: UN1845 DRY ICE _KG NET WT
NOTE: Enter the weight of the dry ice only, **NOT** the total weight of the parcel.

![Dry Ice Label](image)

4.11  Hazard label: UN3373 BIOLOGICAL SUBSTANCES CATEGORY B

![Biological Substance Label](image)
5  PROCEDURE

5.1  Pack specimen in leak proof primary container e.g. leak proof tubes. Ensure that the samples are adequately labelled.

5.2  Pack the leak proof containers, containing the specimens in secondary container e.g. low temperature proof plastic bag. Double bagged in case of leakage.

5.3  Half fill polystyrene box with dry ice.

5.4  Place bags containing the tubes, on dry ice inside the polystyrene box.

5.5  Fill the remaining portion of the polystyrene box with dry ice.

5.6  Do not place too many samples in one box as this will reduce the space for the dry ice and risk thawing of samples. Use more than one box if necessary.

5.7  Close the box. Ensure that the lid is tight. Seal the polystyrene box with parcel tape.

5.8  Place the sealed polystyrene box in the outer cardboard box.

5.9  Any empty space between the polystyrene box and cardboard box must be filed with polystyrene pieces, to prevent the box from moving around when in transit.

5.10 Place any paperwork for the recipient in an envelope between the 2 boxes.

5.11 Wrap outer cardboard box in brown wrapping paper to ensure that there are no irrelevant labels visible.

5.12 Seal the cardboard box with parcel tape.

5.13 Label outer packaging with the following labels:
• The waybill: This will be provided by DHL once the online booking for parcel collection has been completed at intraship-dhl.co.uk and will need to be printed out by the sender. The waybill will include the full name, address and telephone number of sender and receiver, contents of package, total number of packages, weight of dry ice, total weight of parcel, and length, width and height of parcel.

• Hazard label: UN1845 DRY ICE (See section 4.9)

• Hazard label: UN1845 DRY ICE _KG NET WT (See section 4.10)

• Hazard label: UN3373 BIOLOGICAL SUBSTANCES CATEGORY B (See section 4.11)

• Add upright arrows to show orientation of box. Arrows can be drawn on any side of the parcel

NOTES: All labels must be stuck on one side of the parcel. The labels should not overlap each other or be stuck on corners of the box.

5.14 Weigh, and measure the length, width and height of the parcel.

5.15 The parcel is now ready for online booking for collection by DHL.

5.16 The parcel will be collected from the main reception in the RKCSB at the LRI. Ensure porters are aware of the collection.