



RECEIPT, LABELLING, TRACKING AND STORAGE OF HUMAN TISSUE

SAMPLE COLLECTION/RECEIPT

1. Tissue of interest is selected from the Brain Banks and requested according to the Brain Banks application process/regulations (collection of tissue from donors is performed at the Brain Banks).
2. Once the Tissue Request application is approved and the availability of the tissue is confirmed, a Material Transfer Agreement must be executed by the requester/researcher/Principal investigator.
3. The tissue requester organises the shipment of the material/tissue. Samples information must be added to the Tracking Tissue table [Tracking table Tissue.xlsx](#).
4. Following the receipt of materials, all samples transferred to Imperial College London premises must be assessed on arrival by either the tissue requester or a wet-lab team member to ensure that the physical integrity of the samples have been maintained during the transfer.
5. The tissue requester must inform the sender that the samples have been received accordingly to the Tissue request previously approved. If there are any inaccuracies, the sender should be notified immediately, e.g. samples missing, incorrect region, incorrect ID, incorrect temperature, etc.
6. If the samples need to be disposed (e.g. due to incorrect transportation) records must be kept according to the HTA 2004.
7. Once the tissue received has been physically checked by a wet-lab team member, the tissue requester must add the details of all the samples received into the [Metadata section of the MAP AD](#) database and to the Imperial College HTA database immediately.

Sample storage requirements

1. Before receiving samples, the PI must liaise with their HTA Person Designate to discuss the storage conditions and location area.
2. All human tissue samples must be stored in appropriate and secure condition storage cabinets and freezers. The storage units (cabinets, freezers or equivalent) must be lockable or the area in which the storage units are located must have access control procedures in place.
3. Freezers, fridges and cabinets that contain relevant material must be labelled with a HTA sign.
4. Study specific samples should be grouped together for storage in a logical and organised manner. Appropriate racking and sample storage boxes must be used within the associated storage areas.
5. For human tissue samples requiring temperature maintenance, the storage unit must be monitored and alarmed. Responsible individuals who are required to respond when an alarm is raised, must be identified for each storage area.
6. All sample storage boxes must be labelled on the outer container:
 - Study title
 - Box number



- Sample types
7. Local procedures for maintenance and calibration of storage units should be in place as appropriate.

Sample labelling

1. Details of all samples received must be maintained by the research team in addition to complete and up-to-date records of use, storage and disposal of each sample. It is responsible of the PI to provide complete traceability records during HTA audits.
2. Upon receipt all samples will have the following details on sample labels:
 - Unique BBN ID or case ID
 - Brain region
3. Sample labels must be in legible condition, securely affixed to the samples and suitable for the storage conditions in which the sample is to be held.
4. For the Imperial College London HTA database, each sample must be labelled as:

BBNID_subcollection_region_#sample

SAMPLE RECEIPT

Fresh frozen (FF) tissue

Fresh frozen tissue that arrives must be immediately stored in a monitored freezer set to -70. [SOP - Storage and freezer monitoring](#)

There are two possible routes for storage, dependant on availability of research team members to complete the task.

Option 1. If a team member is able to fully process samples, the steps are as follows:

1. A sample logging form (link: [Storage Log](#)) should be completed on the Wet Lab laptop ([MAP wet lab laptop.docx](#)).
2. Handling and processing of tissue must be conducted on dry ice, except where impractical e.g. during weighing. Processes without dry ice must be conducted swiftly and accurately to preserve tissue.
3. The user must systematically fill in the details for each sample tube/block that has been received. This includes BBN, case ID, location (building, freezer, draw) logger initials, arrival date, log date, brain region, microblock ID (if available).
4. The mass of each tissue sample must be recorded. Researchers can a) 'tare' scales with a like-for-like empty vessel, b) record the weight of the empty vessel and subtract from the total mass. Weights can be manually recorded or the scale connected to the Wet lab laptop.
5. Tissue in tubes can be stored in rack in the HTA fridge (Asset ID: 033045), shelf 2, draws 1-15. These boxes will be labelled with the source Brain bank name, intended study, and have rows/columns indicated (e.g., A-I, 1-9).
6. Larger blocks can be stored in bead boxes in the HTA fridge (Asset ID: 033045), shelf 3, Draws 16,17 & 18. Each box must be labelled in sequential numerical order - Rows A-C, Columns 1-6. Each sample must be **double bagged (both labelled with)** and placed in an individual well.
7. All details are to be input into the FFregions section of the MAP AD-database ([Map-AD Database.xlsx](#)).

8. Tissue requester to be informed if all tissue is accounted for or if samples are missing or there is a conflict in sample ID/region etc. They will update Meta-Data in [Map-AD database](#).

Option 2. If the team is unable to immediately fully process samples, the tissue must be placed in the HTA fridge (Asset ID: 033045), shelf 3, Draw 19 'Incoming tissue'. At the soonest opportunity, a team member must process samples as described in option 1.

Formalin fixed paraffin embedded (FFPE) tissue

There are two possible routes for storage, dependant on availability of research team members to complete the task.

Option 1. If a team member is able to fully process samples, the steps are as follows:

1. Slides are to be stored in the HTA FFPE cupboard in UREN room 704.
2. Slide boxes start with a letter to identify the brain bank of origin, followed by a number. Each brain bank starts from #1. E.g. Imperial begins with 'I', and will continue on in sequential numerical order, following the last I#.
3. Boxes are labelled with the study name and box #.
4. Study, Slide box, Case ID, region and region range is to be logged ([Slides storage temp.xlsx](#)).
5. As slides are used from the boxes, the log ([Slides storage temp.xlsx](#)) is to be updated by adjusting the 'slides used' column and updating the 'SlidesUsageInput' tab.
6. Tissue requester to be informed if all tissue is accounted for or if samples are missing or there is a conflict in sample ID/region etc. They will update MetaData in Map-AD database.

Option 2. If the team is unable to immediately fully process samples, the tissue must be placed in room 702, cupboard 3, shelf 1 'incoming tissue' section. Tissue will remain here until processing as described in option 1.

SAMPLE TRACKING

1. All data related to the storage, use and disposal of the human tissue samples is to be recorded.
2. All sample tracking systems/documents should be made available for auditing.
3. A full audit trail of individual samples should be kept by the PI, and it is responsible of the PI to make sure all storage, transfer, use and disposal is recorded.
4. The information recorded on the Meta-Data [MAP-AD database](#) for each sample should include:
 - Unique sample ID
 - Sample type
 - Date of receipt
 - Storage Location
 - Study
5. When a sample is used, transferred or disposed of, this information must be recorded on the sample tracking system.

