

Forensic Anthropology

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#### RELEASED UNDER THE AUTHORITY OF THE FIRST DEPUTY CHIEF MEDICAL EXAMINER

#### 1. Policy

The Forensic Anthropology Unit (FAU) is responsible for the security of evidence while in the custody of the Anthropology Laboratory and associated casework documentation maintained by the FAU. The FAU shall receive, transfer, and store evidence in a manner to ensure a documented chain-of-custody and protect the evidence from loss, commingling, contamination, and/or deleterious changes at all times.

#### 2. Scope

This SOP pertains to security and management of all evidence recovered, processed, and analyzed by the FAU and stored within the NYC Office of Chief Medical Examiner (OCME) Anthropology Laboratories. All FAU personnel, visiting scientists, and interns involved in the handling of evidence are responsible for following the policies and procedures outlined in this SOP.

#### 3. Definitions

<u>Evidence</u>: A collective term referring to any bone, cartilage, or other materials of evidentiary value, received or created (e.g., casts of sharp force trauma) during analysis. Biological and non-biological materials are considered potential evidence when they can be inferred to have temporal, spatial, and/or contextual correlations to a case.

Materials believed to have no probative value to a case are not considered evidence. Therefore, these materials are exempt from the other provisions of this SOP. All non-evidentiary materials shall be disposed of at the analyst's discretion. Non-evidentiary material includes, but is not limited to, soils and adherent materials dislodged from evidentiary materials during cleaning and/or conservation.

<u>Remains</u>: A collective term for all biological tissue. Remains submitted to the FAU are typically skeletal, cartilaginous, and/or dental, but may also include soft tissue, hair, and toe/fingernails.

<u>Sample</u>: A collective term referring to a selected portion of an element that is submitted to another OCME department or external lab for additional analysis or examination.

<u>Material Evidence</u>: A term referring to non-biological evidence that is associated with remains or a scene.

<u>Case File:</u> A case file is a consolidated file or folder containing the analytical notes, final reports, and administrative documentation received or generated by the FAU for a particular case.



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<u>Reference Materials</u>: Anthropological analysis frequently requires the comparison of unknown case specimen(s) with known reference materials. Such items include, but are not limited to, non-human comparative materials and age casts (e.g., pubic symphysis aging casts).

<u>Chain-of-Custody (COC)</u>: A term referring to the chronological documentation showing the receipt, custody, and transfer of evidence.

<u>Entire Case</u>: The term "entire case" refers to complete cases, in which all remains pertaining to a specific case number are submitted to the FAU for analysis. An entire case does not necessarily imply a complete body/skeleton. An entire case may refer to the recovery of a single skeletal element, as well as a complete body/skeleton.

<u>Autopsy Specimen</u>: The term "autopsy specimen" or "specimen" refers to any remains that are removed during or after autopsy and sent to the Forensic Anthropology Unit for analysis while the remainder of the case is withheld from submission.

#### 4. FAU Facilities Security

Evidence is handled by the FAU at OCME facilities and recovery scenes. Anthropology laboratories and storage areas are in the OCME's Manhattan office.

4.1 **Anthropology Laboratories:** There are four laboratories in the OCME Manhattan office (Building 520) that are used for the analysis and storage of anthropological cases.

The following security measures apply to all the Anthropology Laboratories in which remains are analyzed or stored and FAU case files are held.

- All the laboratories are secured by a door with a keycard access lock and/or a lock and key.
- Only approved OCME personnel have a copy of the key or keycard access.
- The doors remain closed and locked unless an individual with approved access is within the laboratory.
- Non-OCME employees are required to sign the visitor logbook and must be supervised at all times by a member of the FAU while inside any of the secure anthropology labs. Exceptions include FAU interns, visiting scientists, and external researchers who have passed the Competency Test for ANTH-001: Evidence Security and Management.



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- 4.1.1 **Main Anthropology Laboratory:** The Main Anthropology Laboratory, located in Building 520, room 324, is the location where most analyses are performed, and evidence is stored.
- 4.1.2 **Anthropology Processing Laboratory:** The Anthropology Processing Laboratory, located in room B6 near the morgue, is the area where evidence is held temporarily during processing and where bone samples are taken (see ANTH-002 Anthropological Laboratory Analysis). In addition, this lab is considered another workspace for analysis and short-term storage of evidence.
- 4.1.3 **Additional Anthropology Laboratories**: There are two additional satellite laboratories, rooms 315 and 424, located in the OCME Manhattan office.
  - Room 315 is primarily used for storage of case files, reference materials, and equipment for scene recoveries.
  - Room 424 is primarily used as a lab space for creating casts and working with microscopes.
- 4.2 **Anthropology Freezer:** Soft tissue that is removed from skeletal elements and maintained in the FAU's custody is kept in the secure anthropology freezer. The anthropology freezer is located on the morgue level and is secured by a lock and key.

#### 5. Security

- 5.1 **Evidence Security**: All evidence shall be maintained in one of the secure limited-access anthropology laboratories (see section 4.1). The intent of securing evidence is to avoid loss or compromise. All members of the FAU are responsible for maintaining the security of the evidence that is in the custody of the FAU.
- 5.2 **Case File Security**: All completed case files are stored in filing cabinets within room 315 of Building 520. Files for active casework are either kept with the analyst in their secure office space or with the case material in the secure lab space. All members of the FAU are responsible for maintaining the security of case files.
  - <u>Note</u>: Active case files can be secured by being placed into a locked drawer or by closing and locking the office.
- 5.3 **Electronic Case File Security**: After an anthropology report is finalized, the report and case file documents are scanned and uploaded to the OCME controlled network



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(Anthropology network drive). Only approved OCME personnel, interns, visiting scientists, and external researchers have access to the Anthropology network drive.

5.3.1 To protect the integrity and security of computer-generated data associated with case analyses, the file name shall include the case number and a concise description and will be saved to the associated case folder on the secure Anthropology network drive.

#### 6. Custodial Services

To ensure the security of evidence and case files, custodians are allowed to clean the Anthropology labs and offices during normal business hours and while a FAU member is present. On rare instances, when custodians or maintenance workers need to access one of the Anthropology labs after business hours, the FAU shall make sure all evidence and case files are either appropriately secured or removed from the room during the duration of their work, or that custodial staff are supervised by OCME Security personnel.

#### 7. Evidence Management

- 7.1 **Receipt of Evidence**: All evidence received by the FAU shall be inspected for any potential abnormalities or inconsistencies. If any inconsistencies are noted then the client (e.g., the ME or MLI) shall be contacted for verification. For example, if an evidence container or paperwork indicates that the right ribs were submitted, but in fact the left ribs are present, the FAU analyst shall consult autopsy records and contact the ME to verify the correct ribs were submitted for analysis. Any noted abnormalities or inconsistencies shall be recorded either on a FAU Basic Case Information form or on a FAU analytical notes form.
  - 7.1.1 **Evidence Received Internally:** Specimens and entire cases submitted to the FAU for analysis shall be transferred from the Manhattan office's Evidence or Mortuary Departments to the custody of the FAU. An FAU Basic Case Information form shall be completed with details of the transfer of custody, such as the department the remains were released from, the FAU personnel taking possession of the remains, and the date the remains were released to the FAU.
  - 7.1.2 Evidence Received from External Agencies: A Chain-of-Custody (COC) form (internal or external form) shall be used when evidence is transferred to the custody of the FAU from external agencies. A copy of the COC shall be kept in the case file.
  - 7.1.3 **Evidence at a Scene:** The FAU analyst(s), in coordination with the Medicolegal Investigator (MLI) and/or law enforcement, may recover evidence (human remains



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and associated material evidence) from the scene (See ANTH-005). Remains collected for transfer to the OCME will be secured in an evidence container or human remains pouch, labeled with the unique case number, and transported to an OCME facility. Remains transportation is typically performed by METT (Medical Examiner Transport Team) but may be performed by the FAU. All remains and associated evidence shall be checked in through the OCME Mortuary Department. Once the evidence has been transported to an OCME facility the procedure outlined in 7.1.1 shall be followed.

#### 7.2 **Sample Submission**

7.2.1 **Submitting Samples Internally:** Cases submitted for anthropological analysis may require a sample (e.g., bone, cartilage, teeth) to be turned over to another OCME department (e.g., Forensic Biology, Histology) for analysis. The samples can either be transferred to the requesting OCME department through the OCME Evidence Department or it can be released directly to the requesting OCME personnel (e.g., handed directly to the medical examiner).

If the sample is transferred through the Evidence Department, then the evidence container(s) must be properly sealed (see clause 7.2.1.3) before released from FAU custody.

The FAU shall follow the guidelines below when packaging and transferring samples.

- 7.2.1.1 Place the sample in a clean evidence container (typically a test tube or small plastic bag).
- 7.2.1.2 Label the evidence container with a concise description of the sample (e.g., left tibia sample), the case number, date, and initials of the analyst.
- 7.2.1.3 If the sample is being transferred through the Evidence Department, then the evidence container shall be sealed with evidence tape, initialed, and dated. Make sure the writing spans the tape as well as the evidence container.
- 7.2.1.4 Fill out the Sampling/Reproduction Log and retain it as a record in the case file.
- 7.2.1.5 Place the sample(s) in a designated evidence transfer location and document the sample(s) release on the Sampling/Reproduction Log.



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7.2.2 **Submitting Samples Externally:** There are some instances where specialized analytical tests (e.g., isotope analysis, radiocarbon dating), which cannot be performed internally (i.e., beyond the FAU's scope of accreditation) may be necessary. In these instances, samples may be sent to approved external agencies (See QM-001: Personnel section 8 Subcontracting).

Packaging samples to send to external agencies shall follow the same procedures outlined in section 7.2.1.1 through 7.2.1.4 (Submitting Samples Internally). In addition, the FAU shall follow the below procedures when sending samples to external agencies.

- 7.2.2.1 Package the sealed sample(s) in an appropriate container.
- 7.2.2.2 Fill out the Chain-of-Custody (COC) form with a description of all the samples being released. The FAU COC form should be signed by the FAU analyst and a representative from the external agency taking custody. The FAU COC form shall be added to the case file.

In some cases, it will be necessary to ship the specimens to the external agency. In these instances, the container shall be labeled with the external agency shipping information and samples shall be sent externally via a mail carrier (e.g., FedEx, UPS, US Postal Service). An FAU COC form shall be signed by the analyst and included in the shipping container. The FAU analyst shall ask the external agency to complete the form and return it electronically or send the hardcopy back to the FAU for inclusion in the case file. The signed receipt provided by the mail carrier, with the tracking information, shall also be added to the case file.

- 7.3 **Packaging and Handling of Evidence**: Evidence must be preserved and accounted for at all times while in the custody of the FAU. This section describes packaging and documentation procedures required to maintain the integrity of the evidence.
  - 7.3.1 **Evidence Packaging:** The type of evidence container used depends on the size, quantity, and condition of the remains. Typical evidence containers include but are not limited to body bags, paper bags, plastic bags, plastic specimen cups and buckets, paper buckets, and boxes.
  - 7.3.2 **Documentation:** All evidence in the custody of the FAU requires accountability through proper labeling and tracking.



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- 7.3.2.1 **Evidence Labels:** Evidence containers shall be labeled with the case number. The case number shall be displayed with the evidence for the duration of the processing, analysis, and storage.
- 7.3.2.2 **Basic Case Information Form:** The Basic Case Information form shall be filled out for each case to maintain accountability of evidence while in custody of the FAU, and it will be kept with the case file. The Basic Case Information form shall record the following:
  - A description of the Evidence packaging and/or remains submitted (e.g., one specimen container).
  - Date of transfer to the FAU.
  - Name of individual from the FAU receiving the evidence.
  - Name of the department transferring the evidence.
- 7.3.2.3 **Intake Photographs:** Evidence submitted to the FAU should be photographed when initially received from Mortuary/Evidence. Initial photographs allow the FAU to maintain a record pertaining to the condition of the evidence container and submitted specimens/remains upon the FAU receiving custody. At minimum, intake photos need to include:
  - A photograph of the unopened evidence container(s) with the unique case number visible.
  - Photographs of all submitted specimens/remains in anatomical position (when possible).

Intake photographs shall be uploaded to the case folder located on the Anthropology network drive.

<u>Note</u>: There may be instances where photographs taken during autopsy by OCME's Forensic Photographers are sufficient to document the in-take of remains and additional photos by FAU personnel are not required.

7.3.2.4 **Intake Radiographs:** For most cases, evidence submitted to the FAU will be radiographed when received from Mortuary/Evidence. Intake radiographs can be used as an additional record of what was received by the FAU.



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In some instances, FAU intake radiographs are not necessary, such as cases where radiographs already exist or where they are not pertinent to FAU analysis. Radiographs are taken by OCME Radiology Department personnel and are stored on OCME's secure web-based program Medweb.

- 7.3.2.5 **Labeling of Commingled Cases:** For FAU cases exhibiting commingling through osteological assessment, each individual will be assigned a unique OCME case number. Remains that cannot be anthropologically associated with a specific individual should be collectively assigned to another unique OCME case number. If samples are subsequently taken from the commingled assemblage for additional testing (e.g., a bone sample sent to DNA), then that sample will be given a unique designator (e.g., a, b, c) within the assemblage case number.
  - For cases that are not forensically significant (e.g., historic remains) with evidence of commingling, it is not necessary to assign multiple unique OCME case numbers.
- 7.3.2.6 **Reviewing Stored Case Evidence:** All FAU members, visiting scientists, and interns who would like to review case evidence stored in the Main Anthropology Lab shall sign and date the Evidence Tracking form which is attached to each long-term evidence storage box. If more than one case is present in the storage box, the case number(s) of the cases pulled for review must be included on the Evidence Tracking form. This will allow the FAU to maintain a record of all individuals handling the cases stored in the Anthropology Laboratory.
- 7.3.2.7 **Reviewing Stored Case files:** All FAU members, visiting scientists, and interns who would like to review hardcopy case files shall sign and date the Case File Tracking form. A Case File Tracking form shall be maintained with each case file.
- 7.4 **Storage of Evidence**: All evidence in the custody of the FAU, including evidence from cases actively in the analytical process and evidence from cases finalized and curated are located within one of the secure anthropology laboratories.
  - 7.4.1 **Active Cases:** Typically, cases that are actively being analyzed are kept in the Main Anthropology Lab on one of the lab tables. Analysts may transport evidence to the other designated Anthropology Lab spaces to perform certain aspects of their analysis (e.g., use of the microscope in room 424). Evidence may only be left unattended in one of the designated secure lab spaces.



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- 7.4.2 **Placement of Evidence:** Entire and partial skeletons shall be placed on their own lab table. Cases small enough to fit on trays can be placed on a table with multiple cases. To avoid the possibility of cross-transfer or commingling of case evidence all FAU members shall do the following:
  - Make the case number clearly visible on the tray(s).
  - Never place any of the remains directly on the lab table surface when more than one case is present.
  - Perform all analyses, whenever feasible, on the cases' respective tray(s).
  - Avoid placing trays with similar types of specimens (e.g., age specimens) directly beside one another on the lab tables.
  - Label specimens with their assigned unique case number, when deemed necessary.

<u>Note</u>: There will be times when the remains need to be taken from the tables/off the trays to perform specific analyses or to be photographed. In these instances, once the analyst has finished, the remains shall be immediately returned to their respective table/tray(s).

- 7.4.2.1 Small bone fragments should be secured in a container (e.g., petri dish or plastic bag) during analysis to avoid the possibility of overlooking or losing fragments. A lid or cover should be placed over the dish/container when not actively analyzing the case. If small bone fragments are placed in a specimen bag, then the bag should be labeled with the unique case number.
- 7.4.3 **Retained Case Evidence:** Case evidence that is retained with the FAU is kept in storage boxes located in the storage cabinet in the secure Main Anthropology lab. The storage boxes shall be appropriately labeled with the unique case number. Every skeletal element (when practical) shall be labeled with its assigned unique case number prior to being placed in a storage box. Skeletal elements and bone fragments that are too small for labeling shall be placed in evidence bags labeled with the case number.

See section 8.3 Retained in Anthropology for more information about the types of cases the FAU may retain.

8. **Case Disposition**: Once the anthropological analysis is complete and the peer-review process has been finalized (see ANTH-004: Peer Review), disposition will be dealt with in one of five ways:



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- Returned to Mortuary (8.1)
- Submitted to Evidence with the instructions that the specimen is to be transferred to Histology for archiving (8.2)
- Retained in Anthropology (8.3)
- Discarded (8.4)
- Released to an authorized external entity (8.5)
- 8.1 **Returned to Mortuary:** Finalized cases that are ready for release (e.g., funeral home or City Cemetery) shall be returned to the Mortuary Department. Autopsy specimens may also be released to the Mortuary Department, when appropriate. All FAU members involved in releasing evidence to Mortuary shall follow the protocol outlined below.
  - 8.1.1 The FAU member responsible for case disposition shall complete a Forensic Anthropology Release form.
  - 8.1.2 The FAU member shall print out a copy of an inventory photograph.
  - 8.1.3 Using the inventory photograph as a security measure to make sure all the elements are returned; the FAU member will check off each skeletal element/fragment as it is added to an evidence bag.
  - 8.1.4 Once all the remains have been crossed off the inventory photograph and added to the evidence bag, the bag shall be sealed using evidence tape. The FAU analyst shall sign and date across the evidence tape and bag.
  - 8.1.5 After the evidence bag is sealed it shall be placed into an human remains pouch and transferred back to Mortuary. The case number shall be clearly marked on the outside of the human remains pouch.
  - 8.1.6 Both the FAU member releasing the evidence and the Mortuary personnel receiving it shall sign the Forensic Anthropology Release form.
  - 8.1.7 The signed form and the inventory photograph shall be scanned and added to the case notes in the electronic case file. The original forms shall remain with the case file in the designated secure area.
- 8.2 **Submitted to Histology:** Autopsy specimens that are released to Histology for storage shall be returned to the Evidence Department. All FAU members involved in the releasing of evidence to Histology shall follow the protocol outlined below.



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- 8.2.1 Follow the steps outlined in sections 8.1.1 8.1.3.
- 8.2.2 Once all the remains have been crossed off the inventory photograph and added to the evidence container, the container shall be sealed using evidence tape. The FAU analyst shall sign and date across the evidence tape.
- 8.2.3 After the evidence container has been sealed it can be transferred to the Evidence Department. The Evidence Department is responsible for releasing the specimens to Histology for archiving.
- 8.2.4 Both the FAU member releasing the evidence and the Evidence personnel receiving it shall sign the Forensic Anthropology Release form.
- 8.2.5 Follow procedure outlined in step 8.1.7.
- 8.3 **Retained in Anthropology:** Upon completion of the anthropological analysis, it may be appropriate to retain the case in the Anthropology Laboratory. The following types of cases may be retained:
  - Skeletonized cases of unidentified individuals may be retained in the Anthropology Laboratory pending identification.
  - Autopsy specimens may be retained at the discretion of the FAU.
  - All molds, casts, and 3D prints created of evidence (including molds/casts of released evidence) shall be retained and kept in the storage cabinets located in the secure Main Anthropology Lab.
  - Non-human and non-forensically significant remains will be dealt with on a caseby-case basis. It is up to the discretion of the FAU whether to retain a specimen in Anthropology for comparative purposes or to appropriately release or dispose of the specimen.

All FAU members involved in archiving cases retained in the Anthropology Laboratory shall follow the protocol outlined below:

- 8.3.1 The remains are packaged into a labeled evidence container (when applicable) and placed into one of the long-term storage boxes located in the storage cabinet in the Main Anthropology Lab.
- 8.3.2 The case number is added to the label on the outside of the storage box. Multiple cases with a relatively small quantity of remains can be placed within one box for



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storage. Each case within the box shall be individually packaged to avoid commingling and labeled with their unique case number. If multiple cases are present in a box, then all case numbers shall be included on the outside label of the storage box.

- 8.4 **Discarding of Specimens:** Only non-human remains, or non-osseous materials may be discarded. A note detailing the method of discarding the items shall be placed in the case folder.
- 8.5 **Release to an Authorized External Agency:** Unless directed otherwise by the submitting agency, cases that were received from an external entity shall be returned to that agency upon completion of analysis. The following procedure shall be followed for releasing cases to external agencies:
  - 8.5.1 The remains are repackaged, in either the original container from which they were received or in a new evidence container, and clearly labeled with the case number.
  - 8.5.2 A Chain-of-Custody (COC) form shall be filled out and signed by a FAU analyst and personnel from the external agency. The COC form shall be kept with the case file.

#### 9. Storage of Reference Materials

Reference materials are stored separately from evidence in clearly marked areas of the Anthropology Laboratories. Reference materials may be freely moved about the laboratories as needed during examinations but shall not be stored in the same containers as evidence. When the analyst is finished using reference material(s) it is the responsibility of that analyst to return the material(s) back to their appropriate storage location.