

**FORENSIC TOXICOLOGY LABORATORY
OFFICE OF CHIEF MEDICAL EXAMINER
CITY OF NEW YORK**

POST MORTEM (OCME) SPECIMENS

Post mortem specimens are collected at the time of the autopsy by the Medical Examiner of record or their designee. Autopsies are performed in the City of New York and the specimens are submitted to the FTL for toxicological analysis.

Specimen types routinely submitted to FTL (with possible subcategories noted) are listed below.

Biological fluids (submitted in 100 mL specimen bottles with screw tops):

Blood

- Heart blood
- Femoral blood
- Subclavian blood
- Decomposition fluid
- Subdural blood

Bile

- Sac
- Gall stones

Urine

Vitreous humor (submitted in 10 mL red top vial)

Biological tissues (submitted in 120 mL specimen cups with screw tops):

Brain

Liver

Gastric contents (more than one specimen cup may be submitted)

Other specimens are submitted from time to time by the medical examiners, as needed. They may include, but are not limited to:

Spleen

Bone marrow

Spinal column

Bowel contents

Muscle

Injection sites

All specimens must be properly labeled to indicate the ME number and type and source of submitted specimen. Computer generated bar-coded labels are used for this purpose.

SAFETY

All specimens and equipment must be handled within the guidelines detailed in the safety manual.

FORENSIC TOXICOLOGY REQUEST SHEET (FTR)

A Forensic Toxicology Request sheet (FTR) is prepared for each case by the medical examiner of record. The FTR serves as the external chain of custody document.

Note: Medical examiner case numbers start with a Borough designator followed by the year and a five digit number. The Boroughs designations are as follows:

M = Manhattan, B (or Bx) = The Bronx, K = Kings County (Brooklyn), Q = Queens, R = Richmond County (Staten Island).

SPECIMEN RECEIPT

Specimens are received and accessioning is performed by the Criminalist IB assigned to accessioning or by other FTL staff on a rotating basis as needed.

Specimen Preparation and Delivery

Specimens collected at autopsy are placed in wax-coated containers, a cover is placed on the container and the container is sealed with evidence tape which is initialed or otherwise written across by the medical examiner. Each wax-coated container holds specimens from one case. A computer generated bar-code label with the ME number is placed on the side of the wax-coated container. The wax-coated containers are stored in a designated refrigerator in the autopsy room until they are collected by Evidence Unit personnel. The FTR created by the medical examiner is left in a designated place in the autopsy room.

Evidence personnel place the wax-coated containers in blue transport bins. Also included in the bin by the Evidence person is a folder containing the FTRs for the containers in the bin and a Post Mortem Sample Transfer sheet (hereafter called the manifest) on which are listed the following:

- The Department to which the specimens belong (TOX)
- The storage conditions until delivery (Refrigerated, etc)
- The borough in which the bin was created
- The number of the bin
- The two seal numbers which will be used to secure the bin
- The ME number of the sample container in the bin
- A box chain of custody appropriately filled out

The Evidence person then seals the bin and places the bin in a refrigerated space for pick up by the courier. The courier picks up the bins from all autopsy sites and delivers them to one or both of the locked refrigerators in the hallway outside the accessioning area of the FTL. One refrigerator contains a log book. The courier unlocks the refrigerator(s) and places the bins in the refrigerator annotating in the log book the bin number of each transport container delivered and the date and time delivered. The courier then replaces the log book and re-locks the refrigerator(s).

Note: Only the courier and the Criminalist IB assigned to accessioning have keys to the refrigerators.

Specimen Receipt in the FTL

The criminalist IB assigned to accessioning unlocks the refrigerator(s) and verifies that the transport bins annotated by the EPCS in the log book in the refrigerator are present and documents this in the log book.

The accessioner verifies the security of the tamper proof strips (numbered tags and removes the wax-coated containers and the manifest. The cases listed on the manifest are checked against the specimen containers as they are removed and presence documented on the manifest. If tags do not match the manifest, are missing or are damaged, the discrepancy is noted on the manifest. If the department of record or the storage conditions indicator is missing these are also noted.. The manifest is then dated and initialed in the appropriate chain of custody box.. The specimen containers are aligned alphabetically by borough and numerically by ME number along the perimeter of work bench in the accessioning area.

Note: Bench top *MUST* be covered with protective absorbent paper prior to accessioning.

SPECIMEN ACCESSIONING

Pre-Accessioning Inspection

Ensure that each case has a corresponding autopsy worksheet. If a FTR has not been received, annotate the condition of the evidence tape on the lid of the specimen container, place the specimen container in the walk-in refrigerator and notify the principal administrative associate or a manager who will contact the ME to obtain an FTR for the case.

NOTE: Rush Cases: If a rush case is indicated on the FTR prioritize that case first, enter data into dataease and bring worksheet to supervisors.

Note: If a container is not accompanied by an FTR , set aside and wait 24hrs before contacting supervisor

Note: If there is no indication on the FTR of the type of toxicology requested, contact the ME by Email for clarification Do not accession the case until the this deficiency has been resolved.pen container

Inspect the evidence tape on the specimen container for signs of tampering. If the evidence tape is not applied properly including initials or other marks across the tape, create a discrepancy sheet to be distributed to the medical examiner.

Annotate the autopsy worksheet to indicate if the tape was or was not intact (e.g., ET OK or ET not secure).

Initial and date the worksheet.

Accessioning

Proceed as follows to begin the accession process:

1. Turn on the computer located in the accession room. Verify that the label printer is turned on. Log into the network as you normally would. DataEase will be automatically loaded. Logon under your usual DataEase name and password.

2. Once in Dataease and on the Toxicology Laboratory Information System menu, choose "Enter Laboratory Specimens" (#6). Scan the ME barcode on the specimen container using the hand held scanner.

Note: If the scanner cannot transfer the information correctly, clear the screen by pressing F5 and answering "yes" by pressing #2. Rescan. If the information is still not correct, clear the screen again and manually enter the ME number. Press "Enter".

The following fields will be filled automatically when scanned:

Borough
Year
ME number
Next available Toxicology number

Note: Make sure that the toxicology number is the next sequential number from the previous round of accessioning.

Note: If the message "Incorrect ME number appears on the screen, set the container aside and contact a supervisor and OCME DOITT by email at a later time. Proceed to scan the next case.

Note: If the toxicology number needs to be changed, in the Dataease opening menu, select Utilities (#4), then Main Menu (#1), then Record Entry (#2). Where instructed to enter a number, enter 65. This will backlight the form "TOXNUMBER", press return. Enter the appropriate year and Toxicology number and save the information by pressing F2. Escape to the opening Dataease menu and continue as usual.

OPEN ONLY ONE CONTAINER OF SPECIMENS AT A TIME!

Remove specimens from container. Verify that the ME number on each specimen matches the ME number on the autopsy worksheet. Note any discrepancies.

Note: Though not mandatory, all ME labels should have a letter "T" on them, denoting Toxicology as the destination for that specimen.

5. On the computer screen press enter, then type the number of labels to be printed and press F2.
6. When the screen request to choose a printer appears, press F10 to print the labels.

Note: The Zebra Stripe S-300 (or equivalent) label printer contains an operator's quick reference booklet with a clear diagram for the path of the ribbon and labels. It is located on the inside front cover of the printer.

7. Affix one (1) toxicology label to the corresponding FTR, preferably on the upper right hand side of the FTR. Make sure that the label does not cover the date of death on the FTR. Affix one label for the case in the Specimen receipt/storage log book.
9. Affix toxicology labels to specimens. Place one label on the side of all specimen bottles. By hand, write the Toxicology number on the caps of the specimen bottles verifying accuracy when completed. Place one label each on the lid and side of the specimen cups. Place one label on the vitreous vial. If possible, do NOT cover the ME label.
10. Verify that the specimens indicated as submitted on the worksheet correspond to the specimens actually received by the laboratory. Indicate that a specimen has been received by circling in red the corresponding specimen on the autopsy worksheet. Weigh the biological fluids and tissues and write the estimated weight in grams next to the corresponding specimen on the FTR. For vitreous specimens, write the estimated volume in mL.

Multiple specimen containers of one specimen type may occasionally be submitted. For example, three (3) gastric containers are received. Label the container with the greatest weight 1 of 3, the container with the next greatest weight 2 of 3 and the container with the least specimen weight 3 of 3. So labeled, analysts working on this case will know that they should look for a total of three containers.

Note: This does **NOT** apply to blood bottles labeled with different sources.

11. Note any discrepancies or labeling problems on the appropriate ME notification form. Where specimens are apparently incorrectly labeled as to specimen type, note this on the FTR. For example, brain tissue may have been sent in a specimen cup labeled liver and liver tissue may have been sent in a specimen cup labeled brain.
12. Document any unusual specimens sent to the FTL.

Vacutainers with a purple top and an ME label with a letter "B" are meant to be sent to the

Forensic Biology Laboratory. Document receipt of the specimen on the worksheet, place the tube in a rack inside the walk-in refrigerator reserved for this purpose, and check the appropriate paragraph on the ME notification sheet.

13. Proceed with the next case, as above.
14. After completing accessioning for all cases, store all specimens in their appropriate location. Sign or initial the Specimen receipt/storage log book for that batch of cases prior to removing specimens to the storage area.
15. Enter specimen descriptions and weights in the database. Correct the ME's name to Dr. (last name only) for each case. Submit autopsy worksheets and discrepancy forms (if any) to FTL clerical staff for processing.

Note: If cases are carried over to the next day for whatever reason they should be accessioned first the next day.

Note: See appendix A for a list of specimen description codes needed for entry into the database.

HOSPITAL SPECIMENS

Pathologists or medico-legal investigators will, at times, request ante mortem specimens collected at the hospital. These specimens should be submitted to the Evidence Unit. An EPCS who has custody of the specimens will scan the evidence barcode using a hand held PDA equivalent. The accessioner will then electronically sign via the scanner. The EPCS will generate a receipt after the PDA has been synched with their computer and email it to the accessioner. The receipt is printed out and placed with the case file. Next, the accessioner will check if post mortem specimens related to these hospital specimens have already been received. If so, the same toxicology number will be assigned to the hospital specimens and their receipt will be recorded. If post mortem specimens have not been received, the hospital specimens will be placed in the designated area in the walk-in refrigerator and the clerical staff notified. When the post mortem specimens are received, the hospital specimens will be accessioned with them. On rare occasions, post mortem specimens will not be subsequently collected and toxicological analysis will be conducted only on hospital specimens after verification with the ME of record.

If multiple specimens are submitted:

- 1) If two or more different specimen types are submitted, list the specimen with the lesser number of vials first, then
- 2) List the specimen with the earliest draw date and time first. If there is no draw date and time indicated, then list specimens with the greatest volume first.

“TOXICOLOGY NOT INDICATED” SPECIMENS

1. If specimens are received for a case where the ME has checked off "Toxicology not indicated" on the autopsy worksheet, the accessioner will do the following:
2. Annotate on the autopsy worksheet the state of the evidence tape on the specimen container.
3. Open the specimen container and verify that the ME number on the specimens matches the ME number on the autopsy worksheet.
4. Verify that the specimens in the container match those listed on the autopsy worksheet. Document any discrepancies.
5. Close the container and apply "Hold Specimen" labels annotated with a discard date six (6) months from current date. Place another label with the same information on the autopsy work sheet.
6. Store specimens in a freezer until discard. Store the FTR in the HOLD SPECIMENS binder filed under the month of discard.
7. Enter information into the "No Tox" spreadsheet located in the T:drive. T:\No Tox Excel Spreadsheet\ No Tox list.

MISCELLANEOUS WORKSHEETS

Occasionally, an FTR will be received that does not clearly state if specimens were submitted (no specimens circled) and/or if toxicology is needed (neither "Yes-Basic", "Yes-Comprehensive", nor "No" are checked under "Toxicology Indicated"). If specimens have been received, the ME will be contacted to determine what type of testing is needed, if any.

SPECIMEN STORAGE AND RETENTION

Specimens are retained in refrigerated/frozen storage until ready for discard. Approximately 120 square feet of refrigerated space and 110 square feet of freezer space are dedicated to specimen storage.

Post mortem specimens from cases with comprehensive toxicology are retained for a minimum of six (6) months after the toxicology report is finalized. Cases with Basic toxicology requested are saved for one (1) year. Specimens are retained longer if requested by the pathologist of record or by other authorized individuals.

Note: Refrigerators and Freezers will be locked at the end of the work day by a FTL staff member. The keys will be kept in a secure area of the laboratory where access is limited to FTL staff.

SPECIMEN DISCARD

Discard criteria are that there is no specimen save request on record and that the toxicology report was finalized at least six (6) months prior to discard for Comprehensive toxicology cases and 1 year for Basic toxicology cases.

Specimens received from 1980 - 2002

Any specimens remaining from this time period have save requests on record. The specimens from these cases are discarded only after a written discard authorization is received from the person responsible for the save request. Actual specimen discard for cases through 1998 is documented by signature and date on the discard authorization form. For cases from 1999 to 2002, in addition to documentation on the discard form, the discard date for each specimen is also entered into the Specimens Received subform of the appropriate Toxicology Database.

Specimens received from 2003 to present

Specimens from this time period are discarded using a computer database program designed to follow the discard criteria above. The discard date of each specimen is documented in the Specimens Received subform of the Toxicology Database.

“Toxicology Not Indicated” specimens

These are specimens from cases where the medical examiner has checked “Toxicology Not Indicated” on the autopsy worksheet. These specimens are kept in the original specimen container for six (6) months after submission. Discard is documented on the original or a a copy of the FTR which is retained in the laboratory.

REVISION HISTORY

| | |
|-----------------|---|
| Ver. 11.01.2013 | Revision history implemented. |
| Ver. 02.12.2014 | Changes to specimens receipt added to the SOP to reflect delivery and retrieval from locked refrigerators |
| Ver. 04.20.2015 | “autopsy worksheet” changed to Forensic Toxicology Request (FTR) |
| Ver. 08.28.2015 | Implemented a policy of locking refrigerators and freezers at the end of the day” |