

Proper specimen collection and submission ensures the accuracy and reliability of postmortem toxicology results. These guidelines will provide you with general specimen requirements and submission guidelines for toxicology testing to aid in medicolegal death investigations. Please also review the [Frequently Asked Questions](#) section of our website for additional information regarding specimen collection and submission.

ChemaTox Laboratory understands that each case is unique, and we are here to help you every step of the way. If you have any other questions or concerns during the collection and submission process, please contact us at [303-440-4500](tel:303-440-4500) or PMTox@chematox.com and we will be happy to assist you.

Specimen Recommendations

Drug concentrations from multiple specimen types and sites aid in toxicological interpretation during medicolegal death investigations. While testing may be performed on fewer samples, we strongly recommend that you collect the following specimens for the most complete toxicological testing experience:

Heart Blood – at least two grey top tubes (10 mL each)

If grey top tubes are unavailable, any leak-proof container with sodium fluoride may be utilized. As an alternative for this sample, blood may also be drawn from another central site such as subclavian, central cavity, or peripheral pool.

Femoral Blood - at least two grey top tubes (10 mL each)

Where possible, collection of blood from a femoral vein is strongly recommended for drug quantitation.

Urine – at least two grey top tubes (10 mL each)

Vitreous - one red top tube and one gray top tube (one tube per eye, 10 mL each)

It is important to use appropriate containers during collection to preserve the integrity of the sample prior to toxicological analysis. If you have any questions or concerns regarding container suitability, please contact us.

Additional Specimen Types:

Antemortem Samples

If the decedent was hospitalized before death or died at the hospital, it is important that samples collected at the time of admission as well as any samples that were drawn during the stay are also sent for analysis when available. Hospitals will retain samples for a very short period of time. It is important that these samples are requested *immediately* to ensure they aren't disposed of by the hospital after the decedent died or care was completed. In addition, a list of all the drugs administered during the decedent's stay is also necessary for complete toxicological analysis and interpretation.

Materials Collected from Crime or Death Scene

In cases where a drug overdose is suspected, please provide a list of all substances found at the scene including but not limited to prescription pills, pill bottles, and known prescriptions. Additionally, if you collect any drinks that could contain drugs or drug paraphernalia please include them on the list. These items are essential for toxicological analysis. If these substances are unable to be identified, collect the substances and ChemaTox can perform testing on these items to determine their identity.

Please contact us prior to submission of these items for special instructions.

Other Sample Types

Please contact us at [303-440-4500](tel:303-440-4500) or PMTox@chematox.com for information regarding collection and testing of any other sample types, including maggots, bile, tissues, or gastric contents.

Labeling of Specimens for Submission

Indicate the following on the label for each sample collected:

- Subject's Name
- Specimen Type (blood, urine, vitreous, etc.)
- Anatomic Source (femoral blood, heart blood, etc.)
- Date of Draw
- Case Number (if available)

Please use legible handwriting as well as permanent ink when labeling samples.

Submitting Samples

Collect and label samples per guidelines above.

Store all samples in refrigerated conditions (2°C to 8°C) prior to submission.

Do not freeze samples, as glass tubes may crack and compromise the sample.

Fill out the **ChemaTox Request for Analysis** form. This form should be shipped in the box with the samples. However, it may also be faxed separately to [303-440-0668](tel:303-440-0668).

Specimens should be wrapped in a packing material, sealed, and then placed in the box.

Do not send test tubes in envelopes, regardless of any bubble wrapping they may contain. These samples can be crushed in transit rendering them untestable.

Samples may be shipped via any carrier that provides a tracking number (US Mail, FedEx, UPS, or DHL). ChemaTox also has a drop box on site, and in-house courier service available for select agencies.