

# SLUCare Toxicology Laboratory

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## Specimen Collection Guidelines

SLUCare Forensic Toxicology Laboratory  
6059 North Hanley Road  
Berkeley, MO 63000  
Phone (314)615-0822 Fax (314)521-1478



## Postmortem Forensic Toxicology Sample Collection Guidelines

### Scope

The SSM SLUCare Physician Group Forensic Toxicology Laboratory provides comprehensive analysis of general unknowns for postmortem toxicological evaluation.

The standard procedure for general unknown analysis of postmortem samples at SLUCare Forensic Toxicology Laboratory includes: screening and confirmation of drugs and alcohol in urine and blood with quantitation (as possible) in blood, and confirmation and quantitation (as possible) of alcohol and illicit drugs in vitreous fluid. Tissue is analyzed according to history and findings in blood and urine. Please refer to the test menu for the compounds included in the Comprehensive Postmortem Analysis. Specimen container requirements are listed for each specimen type. Collection instructions are also included in postmortem kits.

## Blood

Both central (e.g., heart) and peripheral (e.g. femoral) blood should be submitted.

Blood samples drawn from peripherally located sources, away from parenchymal tissues and organs, will provide samples that are less likely to be subject to postmortem redistribution. Postmortem redistribution may cause falsely elevated blood concentrations. This occurs to a very significant extent in the heart, lung, and other blood pools near major organ systems. As such, central blood is acceptable for screening purposes, but for most substances quantitative confirmation should be performed in peripheral blood.

Volume Requirement (for general comprehensive toxicology)

- Central (heart) blood: 25 mL
- Peripheral blood: 15 mL
- Or, see Test Menu for individual test volume requirements

Special container requirements:

- Samples should be placed directly into a container containing 1% sodium fluoride or a fluoride/oxalate preservative (e.g., a gray top Vacutainer tube). Fluoride preservatives prevent alcohol formation and can slow the breakdown of drugs due to bacterial or enzymatic reactions.
- Blood specimens in glass tubes should not be frozen. Freezing blood in glass tubes can cause them to crack, releasing volatile substances that may be present and compromising the integrity of the specimen.

## Urine

Urine is an appropriate sample type for screening, and for identifying past drug exposure. The SLUCare Forensic Toxicology Laboratory confirms but does not routinely quantify compounds found in urine. Quantitation can be performed upon request, for an additional fee.

Volume Requirement (for general comprehensive toxicology): up to 40 mL

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See Test Menu for individual test volume requirements.

Container Requirements: Submit urine in plain (additive free) screw top plastic jars/cups.

## Vitreous Fluid

Due to limited sample volume, vitreous fluid is not used for screening. Vitreous fluid is used for confirmation of alcohol and illicit drugs. Please indicate on the requisition if specific testing in vitreous fluid is desired.

Volume: All Available

Container Requirements: Submit vitreous in plain (additive free) screw top tube or red top (additive free) glass tube. **Do not collect into a sodium fluoride preservative tube (gray top).**

Special Consideration: Collect vitreous from each eye. Send vitreous from each eye separately. Take care not to contaminate the fluid with blood or epithelial cells from eye tissue as compounds in blood and/or cells can falsely elevate the concentration in vitreous fluid.

## Gastric Contents

The entire volume of gastric content should be submitted. Gastric contents are by nature heterogeneous and must be properly blended prior to analytical testing. Concentrations of drugs cannot be determined if only a portion of the gastric contents is submitted.

Intact tablets, capsules, other objects or materials should be packaged separately and labeled as being found in stomach contents.

Container Requirements: Submit gastric in plain (additive free) screw top plastic jars/cups.

**Tissue**

Send representative samples of other tissue specimens (liver from suspected therapeutic medication overdoses, etc.).

Volume Requirement (for general comprehensive toxicology): 20 g  
See Test Menu for individual test volume requirements.

Send each tissue specimen in separate containers. Label with tissue type and anatomic site as well as subject identifier and collection date. Plain plastic screw top jars are suitable containers. Do not fill containers to the top. Please do not put tissue specimen in grey top (NaF tubes).

**Embalmed,  
Fixed, or  
Decomposed  
Tissue**

The SLUCare Forensic Toxicology Laboratory does accept embalmed, fixed, or decomposed tissue. However, the analysis of formalin fixed, embalmed and/or severely decomposed specimens presents unique and difficult challenges to the laboratory. In some cases, special preparation, and handling, above and beyond that required for normal postmortem specimens is required. In such cases, additional surcharges may be imposed for these services.

**Limited Volume  
Samples**

In some cases, it is not possible to collect the recommended volume of a given specimen. In instances where insufficient volume is submitted for the requested tests, a toxicologist will contact the client to determine what testing can be done on the submitted volume and the priority.

**Labeling**

All specimens must be properly labeled. Each specimen must be individually labeled with specimen type, anatomic location, and two separate subject (patient) identifiers such as name and date of birth. Client case number is also an acceptable identifier.

## Human Performance Forensic Toxicology Sample Collection Guidelines

### Scope

The SLUCare Forensic Toxicology Laboratory accommodates human performance forensic toxicology analysis of blood for law enforcement, including blood alcohol and drug analysis for DWI/DUID investigation.

### Blood

For Blood Alcohol Testing, collect 10 ml of blood into a gray top (sodium fluoride/NaF) tube.

Label each tube with the subject's name and case number, date and time of the blood collection, and the name/initials of the collector. Label each tube with the subject's name and case number, date and time of the blood collection, and the name/initials of the collector. Two separate identifiers must be written on the specimen.

To facilitate retrograde extrapolation of blood alcohol concentration, collect two specimens one hour apart (e.g. the first collection at 0800 and the second at 0900).

For Blood Alcohol and Drug Testing, collect 20 mL of blood into two gray top (sodium fluoride/NaF) tubes. Ensure each specimen is appropriately labeled. Labels must be on each specimen container, not just on the bag/box in which the specimens are submitted/received. Unlabeled specimens will not be analyzed.

### Urine

Urine is an appropriate sample type for screening, and for identifying past drug exposure. The SSM SLUCare Physician Group Forensic Toxicology Laboratory confirms but does not quantify compounds found in urine.

Volume Requirement (for general comprehensive toxicology): up to 40 mL  
See Test Menu for individual test volume requirements.

Container Requirements: Submit urine in plain (additive free) screw top plastic jars/cups.

## Shipping and General Laboratory Information

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<b>Hours of Operation</b>	<p>SLUCare Forensic Toxicology Laboratory is open from 7 am to 5 pm, Monday through Friday.</p> <p>To prevent loss of sample integrity due to shipping delays, do not ship specimens to the laboratory on Fridays.</p>
<b>Laboratory Address</b>	<p>SSM SLUCare Physician Group Forensic Toxicology Laboratory 6059 N. Hanley Road Berkeley, MO 63134</p>
<b>Collection Kits and Shipping Labels</b>	<p>Prepaid FedEx shipping labels and specimen collection kits are provided for postmortem clients. To order kits and labels, call the laboratory at 314-615-0822 or email <a href="mailto:slutoxicology@ssmhealth.com">slutoxicology@ssmhealth.com</a></p>
<b>Questions?</b>	<p>For questions regarding test availability, specimen types, and specimen volume, please call the laboratory at 314-615-0822.</p> <p>For more information, visit the laboratory web site: <a href="https://www.slucare.edu/pathology/reference-laboratories-and-pathology-consults/forensic-toxicology-laboratory.php">https://www.slucare.edu/pathology/reference-laboratories-and-pathology-consults/forensic-toxicology-laboratory.php</a></p>
<b>Accreditation</b>	<p>The SLUCare Forensic Toxicology Laboratory is accredited by the College of American Pathologists, American Board of Forensic Toxicologist and CLIA.</p> <p>CAP Number: 1921002</p> <p>CLIA ID Number: 26D0972558</p> <p>ABFT Certificate Number: L047</p>

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