



**SV DIAGNOSTIC LAB**

# **URINE TOXICOLOGY**

## **SPECIMEN COLLECTION AND TRANSPORT MANUAL**

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## Introduction

The **SV Diagnostic Lab Specimen Collection and Transport Manual** has been developed to provide information about specimen collection, specimen identification, specimen submission, laboratory procedures, and specimen results reporting.

The meaningfulness of clinical laboratory results is directly related to the quality of the specimen submitted for analysis. Proper collection, labeling, storage, and shipment of specimens are the responsibility of the specimen collector.

If you have questions not adequately addressed in this manual, please call the laboratory for further information. Laboratory staff are available to help solve administrative and technical problems and answer questions.

This manual describes specimen requirements and information regarding toxicology testing performed at SV Diagnostic Laboratory. In most cases, turn-around time for toxicology results is 48-72 hours, excluding weekends and holidays.

This manual has been designed to aid the collection staff in proper patient preparation, specimen collection, and specimen transport properly to avoid specimen rejection. If problems arise concerning procedures, please do not hesitate to contact SV Diagnostic Laboratory.

**"A laboratory test is no better than the specimen  
and the specimen no better than the method by  
which it was collected."<sup>1</sup>**

For questions regarding specimen requirements, please contact us at:

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## Identifying Patients and Labeling Specimens

### ***Patient Identification***

The patient should arrive at the collection station with a written order or requisition from an authorized caregiver. Please ensure the accuracy of the patient information and test(s) requested.

The person facilitating the urine collection (called the “collector” for the rest of this document) must positively identify the patient. This is most effectively done by asking the patient to state their full legal name and date of birth (DOB), while the collector verifies a match to the requisition form and any specimen labels provided.

It is **imperative** that the specimen container is labeled with at least two unique identifiers, such as patient name, DOB, social security number, barcode ID #, and/or medical record number. Less than two unique identifiers will result in specimen rejection when the specimen is processed by the laboratory.

Urine specimens may be collected in any specimen collection cup designed for urine specimens, as long as it does not contain any preservative and will hold at least 10 mL of urine.

### **Patient Identification and Specimen Labeling Steps:**

- ✓ Identify the patient: ask the patient to state their full name and date of birth. Compare with the information on the request form and specimen labels.
- ✓ Collection site collection guidelines can include requirements to secure handbags and parcels, remove waste receptacles, turn off water, observe collection, etc. Follow defined collection guidelines.
- ✓ Have patient collect the urine specimen for testing according to the collection instructions at the end of this manual.
- ✓ Label each specimen container with the appropriate barcoded label (if provided) and at least one other unique identifier.

**Note:** *In the absence of an appropriate label, please write the patient’s full legal first and last name (spelled correctly), patient’s date of birth, and the date and time specimen was collected directly onto the cup label.*

**Note:** *Specimen should be labeled on the cup part of the collection container, not the lid.*

### ***Specimen Storage and Transport***

Specimens may be stored at room temperature if being shipped the same day as collection. If stored longer, specimens must be kept at 2-8°C (refrigerated temperature). Specimens may be stored refrigerated up to one week before being shipped to the laboratory.

At intervals decided on by the clinic, specimens should be shipped to the laboratory. Follow the instructions at the end of this manual to properly ship your specimens.

<b>Storage Temperature</b>	<b>Stability</b>
Room temperature	Must be shipped same day as collection
2-8°C (refrigerated)	Store up to 2-3 days before shipping
-20°C (frozen)	Store up to one week before shipping
<b>Note:</b> Do not ship samples on Fridays. Ship next-day air Monday-Thursday.	

### ***Improperly Identified Specimens***

Unlabeled or mismatched (name and patient ID number / DOB on specimen does not match name and patient ID number / DOB on requisition) specimens will be held for testing until proper documentation is received by the laboratory. A form will be provided for the clinician to fill out and return to the laboratory.

### ***Specimen Collection / Submission / Rejection Policy***

To maintain patient specimen integrity and ensure accurate test results, the laboratory will only process specimens that follow the proper collection and transport protocol.

The laboratory makes every effort to minimize the specimen volume required for analysis, but because a test may have to be rerun it is ideal to submit at least twice the minimum required specimen volume of 10mL. The laboratory staff recognizes that this is not always possible and will make every effort to provide a result even if the specimen submitted is a small volume.

The laboratory will notify the ordering clinician or requesting client if a specimen is unacceptable by providing a patient report identifying the reason for rejection and recommend that the specimen be recollected. Exceptions may be made based upon client impact and/or for precious specimens. These exceptions are handled on an individual basis by the laboratory.

### Specimens must:

- Be labeled properly, with the patient name and at least one other unique identifier, the date and time of collection, and the initials of the person collecting the specimen.
- Have matching requisition form/documentation and specimen container labels.
- Be collected in the proper specimen container.
- Have a minimum volume of 10mL.
- Be in a specimen container that is not compromised by cracks, or loose/improperly fitting lids.
- Be stored at the correct temperature prior to shipment to maintain specimen integrity.
- Be shipped with appropriate containment and preservation.
- Arrive in the laboratory within the specified time frame required for the specific tests ordered.

## Results Reporting

In general, routine clinical lab results will be available within 48-72 hours of the time the specimen is received in the laboratory. Any inquiries regarding results can be made by calling the laboratory.

Reports will be accessible from the client portal of the Laboratory Information System (LIS) as soon as they are reviewed and approved by a qualified laboratory scientist. An email will be auto-generated to notify the ordering clinician that their patients' results are ready to view.

Results can also be faxed or mailed via the United States Postal Service, upon request.

Test	Turnaround Time
Urine Drug Screening	24-48 hrs.
LC-MS Urine Drug Confirmation	48-72 hrs.
Alcohol Biomarkers (Urine LCMSMS)	7 – 10 days.

## Add-on Test Requests

If additional testing is desired after the specimen has been shipped to the laboratory within the specimen stability guidelines, you may send a test request to the laboratory. Be sure to record the correct date of collection on the requisition so that the specimen can be easily located.

Specimens are retained on site for 14 days after the receiving date. Add-on testing can be ordered for any specimen by submitting a requisition for this testing via mail or fax.

Verbal add-on test requests will not be accepted.

## References

1. Becton Dickinson and Company. Joseph Kleiner and the origins of the Vacutainer™. The Echo. Beckton Dickinson and Company, Franklin Lakes, NJ; 1991 (Spring; 11:3-5, 1991 (September); 11.5-7; 1996 (December); 16:1.
2. Bauer, JD "Collection and Preparation of the Specimen", Clinical Laboratory Methods, 9th Edition. CV Mosby Co., St. Louis.
3. College of American Pathologists, "So You're Going to Collect A Blood Specimen", Chapter 3.

**SV Diagnostic Laboratory Toxicology Test Menu**

The following **analytes and cutoffs (ng/mL)** are analyzed and reported positive or negative in the patient urine specimens.

<b>Screening analytes</b>	
Amphetamines presumptive	500
Barbiturates presumptive	200
Benzodiazepines presumptive	200
Buprenorphine presumptive	10
Cocaine metabolite presumptive	300
Fentanyl presumptive	1
Methadone presumptive	200
Opiate presumptive	200
Oxycodone presumptive	200
THC presumptive	50
<b>Specimen Validity</b>	
Creatinine	
Specific gravity	
pH	



The following **analytes and cutoffs (ng/mL)** are analyzed and reported detected or not detected with the quantitative concentration of the analyte recovered (for detected analytes) in patient urine specimens.

Urine drug Confirmation (LCMS/MS)	
6-MAM	10
7-Aminoclonazepam	50
Alprazolam	50
Amo-Pentobarbital	50
Amphetamine	100
Benzoylcegonine	50
Buprenorphine	5
Butabarbital	50
Butalbital	50
Carisoprodol	100
Clonazepam	50
Codeine	50
Desmethyltapentadol	50
Diazepam	50
EDDP	50
Fentanyl	1
Gabapentin	500

Hydrocodone	50
Hydromorphone	50
Hydroxalprazolam	50
Ketamine	50
Lorazepam	50
MDA	100
MDMA	100
Meperidine	50
Meprobamate	100
Methadone	100
Methamphetamine	100
Mitragynine	10
Morphine	50
Naloxone	10
Norbuprenorphine	10
Nordiazepam	50
Norfentanyl	10

Norketamine	50
Normeperidine	100
O-Desmethyl-cis-Tramadol	100
Oxazepam	50
Oxycodone	50
Oxymorphone	50
PCP	25
Pentazocine	100
Phenobarbital	50
Pregabalin	250
Temazepam	50
THC-COOH	15
Tramadol	100
Zolpidem	10
Zolpidem-P4CA	25
Xylazine	10

1. Amobarbital and Pentobarbital are isobaric, structural isomers and are not resolvable with the available chromatographic media. Therefore, these analytes are reported out as one analyte.

### Alcohol Biomarkers (Urine)

Urine drug Confirmation (LCMS/MS)	
Ethyl Glucuronide (EtG)	500
Ethyl Sulfate (EtS)	100

## Urine Specimen Collection Instructions for Specimen Collector

1. Label the specimen collection cup and vacutainer tube with at least two unique identifiers (full name, DOB, etc.).
2. Give cup to patient and instruct them to collect their specimen and return it to you.
3. After collection, ensure the specimen collection cup is sealed properly.
4. Peel back protective sticker on top of the urine cup lid to expose rubber covered cannula.
5. Push the no preservative vacutainer tube into integrated transfer port. Hold in position until the flow stops.
6. Place the protective sticker back over the integrated transfer port. Match the label full patient name, date of birth, and the collection date/time on both vacutainer cup and tube.
7. Date and initial the sticker, if you have been provided one, then seal the cup with it.
8. Put the vacutainer tube in the zipper pocket of a biohazard bag.
9. Accession the specimen into RevDx (the Laboratory Information System (LIS)).
  - a. Go to your RevDX website and log in with your unique username and password.
  - b. Click on the "Orders" tab, then click "Create Order".
  - c. Check to see if the patient is already in the system by entering their birthdate. All patients with that birthdate will show up; choose the correct patient from the list. Be sure to check that the spelling of the name is the same.
  - d. If the patient is not in the system, click "Add New Patient" and fill out (at least) all the required fields with a red asterisk. Click "Save".
  - e. Check to see if the patient's insurance information is in the system by clicking on the "Insurance" dropdown. If it is not, click "Add Insurance" and fill out (at least) all the required fields (they have a red asterisk). Click "Save".
  - f. Click "Save" in the blue bar at the bottom right of the screen to save this patient order.
  - g. To view or print the requisition form, click on the piece of paper icon next to the order on the order list.

10. Fold the requisition form into quarters and place in the outside pocket of the biohazard bag, along with any other required documentation.
11. Once all specimens have been collected, place them in a clinical pack plastic bag from the shipping carrier so that it will not leak if a specimen opens during transit.
12. Place the bag of specimens in a sturdy shipping container such as a cardboard box/UPS biohazard pack from the shipping carrier.
13. Use the provided shipping label to ship the specimens next-day air to SV Diagnostic Laboratory. Be sure to set up a pick-up with the carrier, if necessary.

## Urine Specimen Collection Instructions for Patient

1. Avoid urination for at least an hour prior to collecting your sample, if possible.
2. Check to make sure the collection cup you were given is labeled with your **correct first and last name and birthdate**.
3. **Wash your hands** before collecting your specimen.
4. **Use the sterile wipe**, if provided, to clean yourself prior to collecting your specimen.
5. **Open the specimen collection cup**. You may need to break the sterility seal to collect your sample.
6. Avoid collecting the first part of the urine stream. **Collect your sample "mid-stream"**.
7. Collect at least **10 mL of urine**.
8. **Replace the lid** onto the specimen container, making sure the screw-top threads are lined up properly and the **lid is tightly closed** to avoid leakage.
9. **Return** the specimen container to the clinic staff member that gave you the cup.