



ARIZONA DEPARTMENT OF HEALTH SERVICES

PREPAREDNESS

Guide to Laboratory Services: Chemistry Addendum

**Arizona Department of Health Services
Bureau of State Laboratory Services
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UNCONTROLLED

Toxicology Surveillance Panel

In order to improve understanding of what opioids are responsible for causing overdoses in Arizona and to better target treatment and prevention efforts, the Arizona State Public Health Laboratory introduced laboratory testing for opioids and opioid metabolites as well as cannabinoids and cocaine.

Laboratory results are reported to the Office of Injury Prevention within the Bureau of Women’s and Children’s Health. As this testing is not for diagnostic purposes, results will not be returned to the individual or the submitting hospital.

For questions regarding the results and how they are used, please contact the Office of Injury Prevention at (602) 364-1400 or azopioid@azdhs.gov.

For questions regarding submitting samples to the laboratory, please contact Receiving, or visit <http://www.azdhs.gov/preparedness/state-laboratory/index.php#shipping-receiving>.

Quick Reference Chart

Agent / Chemical	Specimen Type and Quantity*	Transport Container and Conditions	Instrument / Detection	Comments
Toxicology Surveillance Panel	Blood Ideal sample size: 1 blood tube Minimum required: 3 mL	Vacuum-fill, non-gel, purple-top (EDTA) tube (3-mL or larger). Store at 5 ± 3 °C. DO NOT FREEZE.	LC-MS/MS	Vacuum-fill, non-gel, gray-top (potassium oxalate/ NaF) tube (3-mL or larger) may also be used, but purple-top tubes are preferred.

Specimen Rejection Policy

The Arizona State Public Health Laboratory (ASPHL) may refuse to accept clinical/reference specimens for Toxicology Surveillance Panel testing if the following circumstances exist:

- Method-specific sample volume requirements not met. Submitters should make every effort to collect and submit the appropriate volume of sample for analysis. However, all attempts will be made to test the samples if less than the ideal sample amount is submitted.
- The identifier on the specimen did not match the identifier on the submission form, or there was no identification on the specimen. Specimen labels must contain, at a minimum, the patient's first and last name or unique patient ID number.
- Clinical/epidemiological information submitted with the specimen was either insufficient or incomplete.
- The specimen was too long in transit between the time of collection and receipt in the laboratory.
- Blood must be cold (between 1 °C – 10 °C) but not frozen.
- Blood specimens were hemolyzed or contaminated.
- The specimen was broken or leaked in transit.
- Specimen was submitted in an improper or expired container, including incorrect blood tube type.

Exceptions to this policy will be considered due to extenuating circumstances; however, final approval to make an exception can only be made by the Laboratory Director, Bureau Chief, Assistant Bureau Chief, or Technical Supervisor.

Sample Submission Guidelines

Specimen Collection

Blood specimens should be collected aseptically in an appropriate collection tube and labeled with a patient identifier (e.g. patient name). Follow the manufacturer's instructions for volume to collect for each tube submitted.

- **Whole Blood:** lavender top vacutainer tube w/ EDTA anticoagulant
- **Note:** specimen may also be submitted in gray-top vacutainer tube w/ Potassium Oxalate/Sodium Fluoride anticoagulant

Transportation & Storage:

Store samples refrigerated and ship on cold packs or wet ice. *Do not freeze whole blood specimens.* The specimen should be transported to the ASPHL as soon as possible. Due to the intense heat observed in the summertime, it is advisable to ship the specimen cold to prevent damage to the specimen during transit.

Samples must be transported with the appropriate paperwork, verifying that the information appearing on the specimen matches that on the submission form. Since the integrity of the sample must be maintained from the time of collection of the sample until testing is completed, **labeling errors will result in rejection of the specimen.**

Laboratory submission forms should be filled out completely with all pertinent demographic information. The following information must be recorded on the submission form for each patient:

- Patient name or other unique identifier
- Date and time of collection
- Source of specimen (e.g. blood)
- Patient's sex
- Patient's age or date of birth
- Test(s) to be performed – Toxicology Surveillance Panel

In addition, the specimen must be labeled with either the patient name (first and last) or a unique identifier.

Samples submitted for Toxicology Surveillance Panel (opioids) testing are classified as Category B (UN3373) and must be transported to the Arizona State Public Health Laboratory according to appropriate IATA (International Air Transportation Association), USPS (United States Postal Service) and DOT (U.S. Department of Transportation) regulations.

All infectious material must be triple-packaged to protect against breakage and/or leakage during transportation. An ASPHL Submission Form must accompany every sample submitted for testing; the form is available at: <http://www.azdhs.gov/documents/preparedness/state-laboratory/public-health-microbiology/clinical-microbiology-submission-form.pdf>.

Category B shipments must follow Packaging Instruction (PI) 650. All samples and their containers must be identified with the appropriate labels, client and patient information. Any samples which are leaking and/or not properly identified will be rejected.

Specimens may be mailed or delivered by courier to the ASPHL. Submit all samples to the following location:

Arizona Department of Health Services
State Public Health Laboratory
250 N. 17th Ave
Phoenix, AZ 85007
(602) 542-1188

If Sent by Courier

- Blood sent in vacutainer tubes should first be placed in a leak proof primary container (such as a 50 mL plastic conical tube available from the ASPHL) to reduce the risk of shattering while in transit. Wrap with absorbent material sufficient for entire contents.
- The specimen should then be placed in a secondary container such as a plastic specimen bag with separate compartments for the submission form and specimen.
- Pack the specimen and its form in absorbent material to help prevent breakage.
 - **Note:** It is acceptable to send more than one specimen together, as long as they are properly secured and identified.
 - **Note:** Do **not** put the submittal form around the primary container; it must be around the secondary container.
- Place appropriate biohazard label on the outside of the secondary container before transportation to the ASPHL.
- All infectious material must be triple packaged and conform to U.S. Department of Transportation (DOT) requirements. For courier deliveries, the tertiary package can either be a cooler or a cardboard box with Styrofoam insert.
 - Blood specimens submitted for Toxicology Surveillance Panel testing must be kept **cold** but **not frozen**, using wet ice and/or ice packs.
 - **Note:** It is recommended to place wet ice and/or ice packs inside a zip-lock bag and surround this with absorbent material.

If Sent by Mail

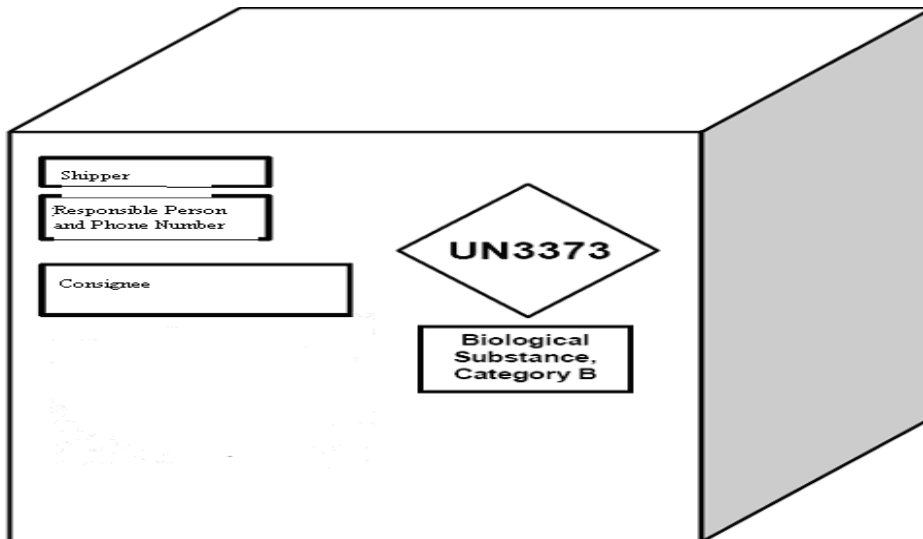
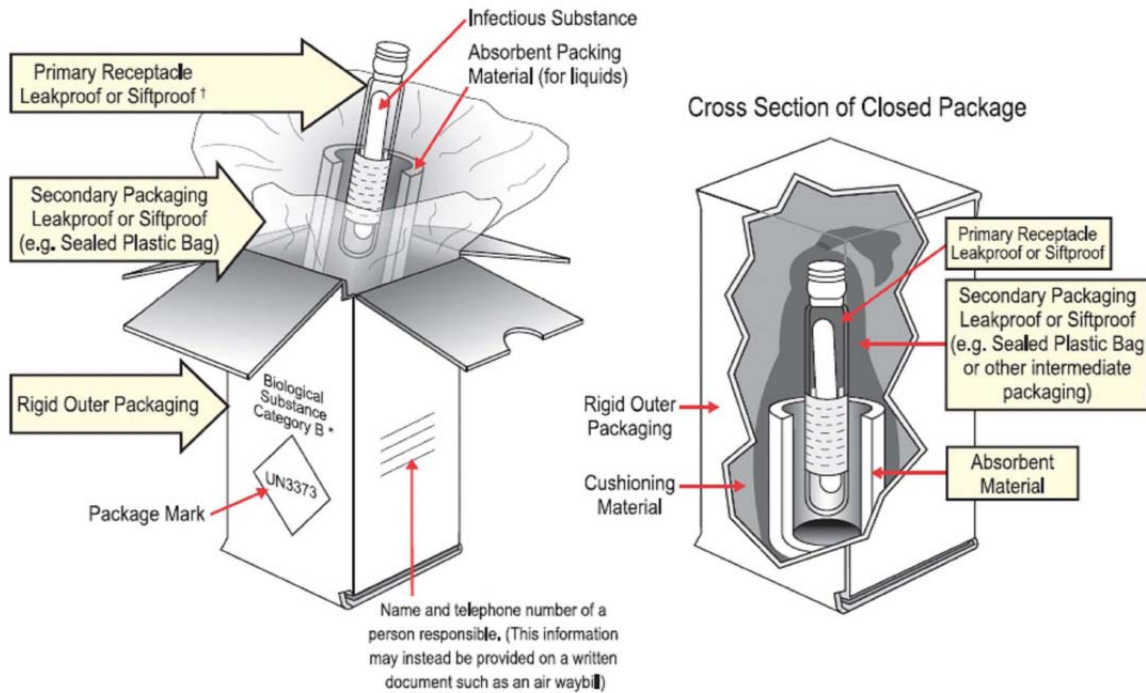
- Blood sent in vacutainer tubes should first be placed in a leak proof primary container (such as a 50 mL plastic conical tube available from the ASPHL) to reduce the risk of shattering while in transit. Wrap with absorbent material sufficient for entire contents.
- The specimen should then be placed in a secondary container such as a plastic specimen bag with separate compartments for the submission form and specimen.
 - **Note:** Primary **OR** secondary container must be pressure and temperature capable (95 kPa) if air transportation is used.
 - **Note:** Do **not** put the submittal form around the primary container; it must be around

the secondary container.

- If you have the appropriate materials you can place multiple primary containers inside a secondary container.
- Pack the specimen and its form in absorbent material to help prevent breakage. Place appropriate biohazard label on the outside of the secondary container before transportation to the ASPHL.
- Place the secondary container inside the tertiary container or cardboard mailer. Outer package must be rigid and of good quality. Package the specimen with enough absorbent material for entire contents and to help prevent breakage.
 - Blood specimens submitted for Toxicology Surveillance Panel testing must be kept **cold** but **not frozen**, using wet ice and/or ice packs.
 - **Note:** It is recommended to place wet ice and/or ice packs inside a zip-lock bag and surround this with absorbent material.
 - If wet ice or ice packs are to be used for maintaining refrigerated shipping temperatures ensure there is sufficient absorbent material contained within to absorb all moisture if ice melts during transit so integrity of box is not compromised.
- All infectious material must be triple-packaged and conform to current shipping regulations. Consult the Domestic Mail Manual published by the US Post Office (USPS) for current USPS requirements, and the Hazardous Material Regulations (HMR) for current DOT requirements.
 - Outer package must be labeled with:
 - UN3373 Biological Substance, Category B diamond shaped hazard label.
 - Full name, complete address and phone number of shipper (responsible person).
 - Full name, complete address and phone number of recipient.
 - Do NOT affix biohazard symbol to outer package

50 mL conical tubes and cardboard mailers are available from the ASPHL Receiving section via the Request for Materials form available at <http://www.azdhs.gov/preparedness/state-laboratory/index.php#shipping-receiving>. Email the completed form to labreceiving@azdhs.gov. Please submit your orders in advance to ensure prompt service and delivery.

Category B Shipping Examples



A completely labeled outer package. The primary container inside the package contains a Biological Substance, Category B substance and is packed according to PI 650.

Sample ID: _____
Packager Name/Initial: _____
Date: _____

CATEGORY B CHECKLIST

-UN 3373 Biological Substances, Category B
-IATA Packing Instruction (PI) 650
-FedEx, UPS, USPS (Us Mail), private couriers

Primary:

- Specimen properly labeled with patient ID information
- 50mL or 50g maximum quantity
- Securely sealed & watertight/leakproof (screw cap receptacle and parafilm)
Note: a Petri dish is not an acceptable primary container
- Wrapped in absorbent material sufficient for entire contents
- Wrapped in cushioning material (bubble wrap)
 - Primary OR secondary container pressure and temperature capable (95kPa)

Secondary:

- Securely sealed and watertight/leakproof
 - Primary OR secondary container pressure and temperature capable (95kPa)
- A completed itemized list of contents (requisition or sample submission form) is placed between the secondary packaging and the outer packaging (NOT inside the secondary packaging)
- Absorbent material is placed between the primary and secondary packaging
- Biohazard symbol on secondary package required if shipping via US Mail (USPS)
- (Optional) Additional cushioning material placed between primary and secondary

Outer Package (Rigid):

- Package is rigid and of good quality (acceptable to reuse Category B packages)
- UN 3373 Biological Substances, Category B diamond shaped label
- Quantity of infectious material is listed
- Quantity of sample –volume (mL) or weight (g)
- Must not contain more than 4 L, 4000mL or 4kg
- Do NOT put biohazard symbol on outer package
- Full name, complete address and phone number of person responsible for the shipment
(This can be either the shipper or the recipient, but must be someone knowledgeable of the contents)
- Full name, complete address and telephone number of the shipper
- Full name, complete address and telephone number of the consignee/recipient

NOTE: A Shipper's Declaration is not needed for Category B samples OR if dry ice is used.

If dry ice is used consult dry ice shipping checklist

If overpack is used consult overpack shipping checklist