

Utah Department of Health and Human Services

Guide to rabies testing at Utah Public Health Laboratory

This document provides general guidance for professional organizations (i.e., veterinarians, Division of Wildlife Resources (DWR), local health departments, and animal control agencies) who intend to submit samples for rabies testing to the Utah Department of Health and Human Services (DHHS) Utah Public Health Laboratory (UPHL). Field conditions, animal variability, and experience may require different strategies. DHHS epidemiology and UPHL virology subject matter experts should be consulted with questions or concerns.

Rabies is a lethal virus in humans. People who handle animals or tissues should be aware of the risks and consequences of rabies exposure. Safety and biosafety precautions, such as vaccination and personal protective equipment (PPE), are warranted for all specimens where rabies virus may be present.

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Rabies specimen submission instructions

Specimen receiving hours	Address	Phone
<ul style="list-style-type: none"> • Monday–Friday→ 8 a.m. to 5 p.m. • If possible, ensure specimens arrive by 4 p.m. to allow time for processing by specimen receiving • Closed Saturday–Sunday, and all federal and state holidays 	<p style="text-align: center;">Utah Public Health Laboratory 4431 South 2700 West Taylorsville, UT 84129-8600</p>	<p style="text-align: center;">Specimen receiving: 801-965-2522</p> <p style="text-align: center;">Rabies virology (for testing procedure questions): 801-965-2400</p>

- UPHL provides testing for submissions meeting the recommendations listed in the [2016 Compendium of Animal Rabies Prevention and Control](#) and in those circumstances where a significant risk of infection can be identified. Some circumstances may qualify for a fee waiver; please see the [fee schedule](#) for more information.
- For questions regarding rabies guidance, what should be sent for testing, or test results, contact your [local health department](#) or the DHHS One Health team at 801-538-6191 (888-374-8824 for after hours help). Please refer to Utah Communicable Disease Rule Code [R386-702-12. Special Measures for Control of Rabies](#) for Utah Administrative rules in regard to rabies control.
- All rabies submissions should be packaged **properly** and shipped by a **professional** (i.e., a veterinarian, animal control officer, wildlife official, or local health department personnel). Packing supplies are available through UPHL and can be requested by professional organizations using the [supply ordering form](#) or by calling 801-965-2400. **If you are a member of the public, please call your [local health department](#) to coordinate rabies testing.**
- Specimens received by 11 a.m. Monday through Friday (except when that day is a state or federal holiday) are usually reported by telephone, fax, email, and/or U.S. mail to the submitter by 5 p.m. on the same day. Specimens received after 11 a.m. are usually reported the next working day.

Testing criteria

- Animals that meet testing criteria:
 - Any bat that has exposed, or there is a reasonable probability that it exposed, a person, dog, cat, or ferret
 - Any bat, dead or alive, that has been chewed by or been in the mouth of a dog, cat, or ferret
 - Any dog, cat, or ferret, regardless of rabies vaccination status, that has signs suggestive of rabies and has exposed a person
 - Any dog, cat, or ferret that exposes a person and dies or is euthanized before the completion of the 10-day quarantine
 - Any stray animal that exposes a person
 - Wild animals and hybrids that expose a person, dog, cat, ferret, or livestock.
 - Livestock with signs suggestive of rabies
- Animals that do **not** meet testing criteria and **should not be submitted**:
 - Bats that are believed to have been dead at the time of potential exposure, **AS LONG AS** the exposed person or animal did **NOT** have contact with teeth, claws, wet saliva, or nervous/brain tissue of the bat
 - If an animal had the bat in their mouth, chewed on it, or there is any doubt that the animal had contact with teeth, claws, or nervous/brain tissue of the bat, please submit the bat for testing
 - If a person picks up a dead bat, this would generally NOT qualify as an exposure. If you are unsure if a dead bat should be submitted, please contact the DHHS One Health team to discuss
 - Other animals that have signs of advanced decomposition (smell, maggots, desiccated, etc.). These are unable to be reliably tested and will result in unsatisfactory results.
 - Wild animals, including bats, that have NOT exposed a person, dog, cat, ferret, or livestock
 - Birds, fish, or reptiles
 - Rodents/lagomorphs unless prior approval from [animal control](#) or a [local](#) or state health department (801-538-6191) epidemiologist is obtained

Specimen collection

- Submit the following, as appropriate:
 - For all dogs, cats, ferrets, raccoons, skunks, foxes, bears, cougars, and other similarly sized wild animals, **submit ONLY the head of the animal.**
 - For all livestock, **submit an intact brain.**

- If the animal is less than 12 inches long (not including tail), **submit the whole animal** (e.g., bat, small mammal).
- Bats are the only animal that may be submitted live if it cannot be euthanized in a safe manner. The container must be labeled properly to indicate the presence of a live bat. Veterinarians can euthanize live bats. Always make sure to [safely handle bats](#).
- Refrigerate specimen(s) as soon as possible after the death of the animal(s). **Do not freeze the specimen or animal** (freezing may delay results).
 - If an animal cannot be kept refrigerated and shipped within 24 hours, for example a holiday weekend, then freezing the specimen may be acceptable. Please call the rabies virology line (801-965-2400) for guidance about specimen storage if shipment may be delayed.
- **Do not:**
 - Fix the specimen in formalin or other preservative
 - Euthanize the animal by clubbing or shooting the animal in the head
 - The cerebellum and brainstem are required to be intact for testing. Euthanasia and decapitation shall be performed in a manner that does not destroy these brain structures. Any euthanasia and/or decapitation shall be done humanely and by a trained professional (e.g., a veterinarian, animal control officer, or wildlife official)

Packaging specimens

- A completed [rabies testing request form](#) must accompany each specimen submitted
 - The circumstances of the exposure should be documented in the **Exposure Information** section and **Symptoms** section of the test request form
 - Additionally, if a biting animal was not able to complete the 10-day quarantine, please thoroughly document the reason why
 - **It is extremely important to complete the test request form with as much information as possible. A specimen **will not be accepted** if the form does not (at a minimum) contain the name and contact information for the person or pet exposed to the animal being tested for rabies. Incomplete test request forms will result in a delay of results and may incur a \$180 fee.**
 - If you don't have a "Provider Code" or need additional assistance filling out the testing request form, please contact specimen receiving (801-965-2522)
- As a reminder, packing supplies are available through UPHL and can be requested by professional organizations using the [supply ordering form](#) or by calling 801-965-2400.

- Step-by-step packaging instructions:

1. Place head or whole animal (bats and other small mammals only) in a clear, sturdy plastic bag (e.g., ziplock bag, heavy garbage bag). For bats submitted live, please make sure they are packaged in an escape-proof container (e.g., coffee can with tight-fitting lid) and labeled "CAUTION - LIVE BAT".

- When submitting the head of an animal, thoroughly drain excess blood and fluids before placing it in the bag
- If necessary, wrap the specimen in newspaper or an absorbent pad to prevent sharp edges from puncturing the bag.
- If submitting multiple specimens, place them in separate bags, and label each bag with an identifier that matches the Rabies Testing Request form. Submit a separate form for each specimen.



2. Place sufficient absorbent material (e.g., paper towels, newspapers, absorbent pads) in the bag with the specimen to prevent fluid leakage. Tightly seal the bag using a rubber band or tape. **The bag must be leak-proof—check that it is tightly sealed.**

3. Place the clear bag into another sturdy bag. An orange/red biohazard bag is preferred, but a clear plastic bag can be used, as well. Seal this bag using a rubber band or tape.



4. Place bag(s) inside an inner Styrofoam box (or similar insulated container). Place enough frozen **gel pack(s)** in the Styrofoam box to keep the specimen cool for at least 48 hours. **Do not use dry ice.**

- Use of wet ice is not recommended, but if wet ice must be used, double-bag the ice and seal the bags securely to prevent leakage during shipment
- If hand-delivered specimens will be in transport less than 12 hours, an insulated container is not necessary. Please still keep the specimen cool by using gel packs/wet ice (ensure that the specimen is NOT in direct contact with the gel packs/wet ice).

5. Close the inner Styrofoam box by placing the lid on top.

6. Complete the [Rabies Testing Request form\(s\)](#) if you haven't already done so. Place the form(s) in a clear ziplock bag, and then place on top of the Styrofoam lid. The ziplock bag does not need to be taped down. A separate form must be submitted for each specimen.



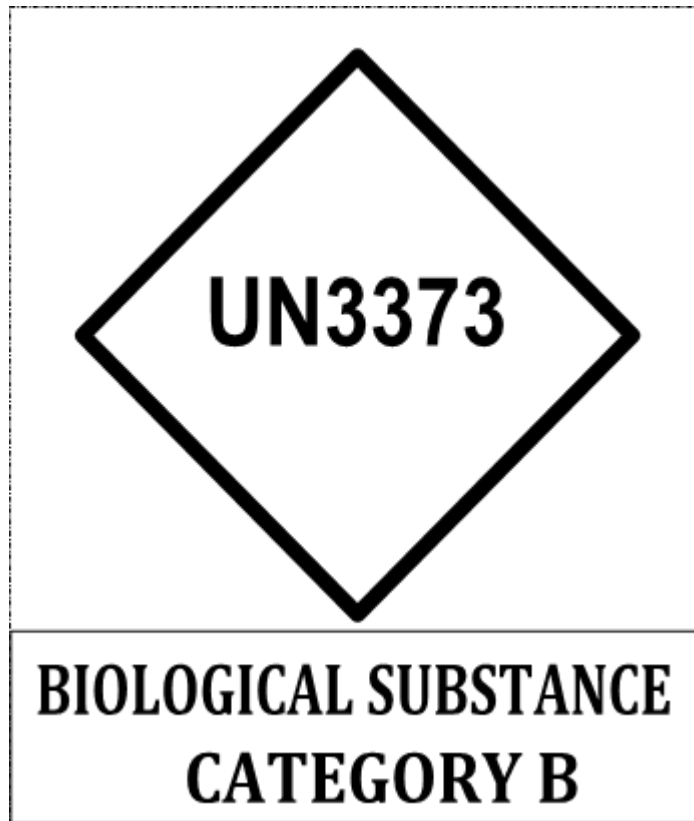
7. Place the Styrofoam box inside an outer cardboard box for transport. Seal the lid of the outer box with packing tape.

8. If shipping specimens through a commercial carrier or any courier service, clearly label the outer box with the following labels:

- Address of the Utah Public Health Laboratory:
Utah Public Health Laboratory
4431 South 2700 West
Taylorsville, UT 84129-8600
- Shipper address
- Diamond-shaped UN3373 (Biological Substance, Category B). A printable label is included below
- Name and phone number for a contact person who can be reached 24 hours a day, 7 days a week and who **knows about the shipment of the rabies specimen(s)**.



9. Send it to UPHL. Your facility will need to arrange transport and pay any applicable transport costs.



Print and attach to outside of shipping container

Shipping/transporting specimens

[Federal regulations for shipping rabies specimens apply and are listed on page 10.](#)

- **Do not ship specimens to arrive on a weekend or a holiday** unless the courier can guarantee delivery.
 - If there will be a long delay in shipping, for example a holiday weekend, please call the rabies virology line (801-965-2400) to discuss specimen storage.
- Preferred shipping methods include (NOTE: Shipping fees are the responsibility of the sender):
 - Commercial carriers (FedEx, UPS, or local courier services)
 - Courier services:
 - Intermountain Courier (IHC Courier)
 - Dispatcher: 801-442-4090
 - Service area: Locations along the I-15 corridor (other pick-up locations may be available, please call the dispatcher to inquire)
 - Express Transport America
 - Dispatcher: 801-600-2255 or dispatch@etautah.com
 - Service area: Please contact the dispatcher to inquire
 - Eagle Express Solutions
 - Dispatcher: 385-260-7439 or contact@eaglexpressutah.com
 - Service area: Please contact the dispatcher to inquire
 - Western Peaks Logistics, LLC
 - Dispatcher: 801-486-6060 or dispatch@deliverthewest.com
 - Service area: Please contact the dispatcher to inquire
- Specimens can also be hand-delivered to UPHL by professional organizations
 - Members of the public may only hand-deliver specimens with **prior approval** from the DHHS One Health team. Otherwise, please contact your [local health department](#) for help with packaging and shipping specimens.
 - During specimen receiving hours (Monday to Friday from 8 a.m. to 5 p.m.), deliver the specimen to the Clinical Specimen Receiving area located on the northwest side of the building (west submission window).
 - Hand-deliveries should still be securely packaged to prevent leaks and kept cool during transport, but do not need to be labeled with a UN3373 or emergency contacts on the outside.

Fee schedule

- Make sure the [rabies testing request form](#) is **filled out as completely as possible** to provide the lab with a description of the exposure/incident and explain why the specimen is being submitted for rabies testing. Any submission that does not meet criteria for a fee waiver or has incomplete information will lead to a \$180 fee.
- Make sure that specimens are [packaged properly](#). Improperly packaged submissions may lead to a \$180 fee.
- Visit rabies.utah.gov for guidance on appropriate quarantine measures and whether to submit an animal for rabies testing. If you want to talk about a fee waiver due to unusual circumstances, contact the DHHS One Health team at 801-538-6191 or onehealth@utah.gov.

Bats	Any bat where a person or animal has had an exposure or reasonable probability of exposure; including bites, exposure of saliva, a bat in the mouth of a dog, cat, or ferret, a bat in the room with a sleeping person or unattended child, a bat near a child, or mentally impaired or intoxicated person, etc.	No fee
Dogs, cats, and ferrets	Regardless of rabies vaccination status, any animal that exposes a person if signs suggestive of rabies are documented .	No fee
	Any stray animal that exposes a person	No fee
	Regardless of rabies vaccination status, any animal without signs suggestive of rabies that exposes a person and has NOT completed the 10-day quarantine.	\$180
	Regardless of rabies vaccination status, any animal without signs suggestive of rabies that exposes a person and has NOT completed the 10-day quarantine due to severe injury or illness or other special circumstance.	No fee
	Occupational or workman's compensation covered exposures (i.e., vet tech is bitten by a patient).	\$180
Wild mammals	Wild mammals and hybrids that expose persons, pets, or livestock (i.e., skunks, foxes, raccoons, coyotes, etc.)	No fee
	Small rodents (rats, mice, squirrels, chipmunks, voles, moles, etc.) and lagomorphs (rabbits and hares)	Testing not offered without prior approval

Livestock	If signs suggestive of rabies are documented.	No fee
Non-mammals	Birds, fish, reptiles, etc.	Testing not offered
Other	Incomplete paperwork accompanying the sample or improper packaging. Please include the full story/situation behind the sample submission and make sure the specimen is packaged properly.	\$180

Regulations for shipping rabies specimens

- People who package specimens for shipping are legally required to take a class in shipment of infectious substances. The class is available commercially or through the Utah Public Health Laboratory Training Program by calling 801-560-6816. Training and guidance for packaging and shipping is also available through [CDC](#) and [ARUP](#).
- Per federal regulations, rabies specimens must be shipped as a **UN 3373 Biological Substance, Category B** (49 CFR 173.199). These materials are regulated by DOT and IATA regulations.
- It is a federal requirement that the shipper of a Biological Substance, Category B be familiar with [49 CFR 173.199](#).
- Shipping containers and labels meeting federal regulations for shipping rabies specimens are available to local health departments and veterinarians at no charge upon request. Similar containers are acceptable provided they comply with the 49 CFR 173.199 instructions for Biological Substance, Category B.
- **The shipper is responsible for packaging specimens correctly and shipping them rapidly. Incorrectly labeled packages may be returned to the sender by the commercial courier.**

Resources

- 2016 Compendium of Animal Rabies Prevention and Control:
<http://www.nasphv.org/Documents/NASPHVRabiesCompendium.pdf>
- Local health department contacts: <https://ualhd.org/>
- R386-702-12. Special Measures of Control of Rabies (Utah Communicable Disease Rule):
<https://epi.utah.gov/wp-content/uploads/R386-702-12.-Special-Measures-for-Control-of-Rabies.pdf>
- Utah Public Health Laboratory rabies packing supplies ordering form:
https://docs.google.com/forms/d/e/1FAIpQLSe3mqUhsGuSKpTqBtZ_O9ZQm1Xa_r_vD4VIOj6_wveTfwGpdg/viewform
- Rabies test request form:
<https://uphl.utah.gov/wp-content/uploads/Rabies-Request-Form-2021.pdf>
- CDC infectious disease shipping course:
https://www.cdc.gov/lab-training/php/onelab/index.html?CDC_AAref_Val=https://www.cdc.gov/labtraining/training-courses/packaging-shipping-division-6.2-materials.html
- ARUP infectious disease shipping course:
<https://www.aruplab.com/training/handling-shipping>
- DHHS rabies webpage: rabies.utah.gov