

Common Shipping Scenarios For Submitting Hazardous Materials* to the VDL

SCENARIO 1

Clinical specimen from a presumed healthy animal with no suspicion of an infectious agent.

Example submissions:

1. Blood, serum or plasma from an animal for vaccination response monitoring
2. Serum for a blood chemistry profile
3. Whole blood for cross-matching
4. Urine from a diabetic patient for glucose testing.

This category would also include feed, environmental and water samples, including those submitted for bacteriology, mycology, and mycotoxin analysis.

This package MUST...

- be carefully packed in leak-proof containers with appropriate absorbent materials
- have a sturdy outer package
- be packed following regulatory guidelines, if shipped with dry ice (see “Dry Ice Submission Requirements” at the end of the document)

This package should NOT...

- leak if dropped or vibrated
- be labeled with any designation for hazardous materials
- be labeled “Diagnostic Specimen”

SCENARIO 2

Clinical specimen from an animal that might contain or is known to contain an infectious agent, but the agent is not likely to make animals or people sick if the package is ruptured or leakage occurs.

Example submissions:

1. whole blood from a cow persistently infected with Bovine Leukosis Virus (BLV) or BVD virus
2. serum from a horse infected with the Equine Infectious Anemia Virus

These viruses would be classified Risk Grade 1 [173.134 class 6, division 6.2 (a)(6)] and would be exempt from class 6.2 packaging requirements according to 173.134 class 6, division 6.2 (b)(6).

This package MUST...

- be carefully packed in leak-proof containers with appropriate absorbent materials
- have a sturdy outer package
- be packed following regulatory guidelines, if being shipped with dry ice (see “Dry Ice Submission Requirements” at the end of this document).

This package should NOT...

- leak if dropped or vibrated
- be labeled with any designation for hazardous materials
- be labeled “Diagnostic Specimen”

*The information source used to assemble this document is the EPA Federal Register, Department of Transportation Rules and Regulations, Title 49 CFR Hazardous Materials Shipping Regulations Parts 171-178.

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Clinical specimen from an animal that might or does contain a pathogen that would be considered to belong in Risk Group II or III, such as Salmonella bacteria, or a Rotavirus, or the parasite Giardia.

(See fact sheet on [Risk Groups](#).)

Example submissions:

Most specimens submitted for bacteriology, milk culturing, and parasitology. Decisions regarding what might be in the specimen should be based on the clinical history and signs, what is known to be endemic in the population or area, and the best judgment of the medical professional.

This package MUST...

- Be triple packaged according to Title 49 CFR part 173.199, and if being shipped by air, should also satisfy IATA** packaging instruction 650 (1/1/2003) – 44th Edition as follows:
 - Limit of 500 ml of liquid per primary container
 - Total limit of 4L
 - Solid sample weight limit of 1.1 lbs capacity in the primary container, 8.8 lbs in the secondary container
 - A minimum dimension of 4” (10cm)
 - A label designation of “Diagnostic Specimen”
 - The outside of the box must also display the name and phone number of the responsible shipper
 - The outer package should also contain the statement “Diagnostic Specimen packed in compliance with IATA packing Instructions 650”

NOT required...

- The number UN 3373 may be assigned but is not required (new number; international recommendation)
- A Risk Group assignment is not required
- Must be packed following regulatory guidelines, if being shipped with dry ice (see “Dry Ice Submission Requirements” at the end of this document)

Liquid specimens REQUIRE...

- Absorbent material between the primary and secondary container sufficient to contain the entire volume of liquid.
- The completed package must be capable of passing the drop test of 3.9 feet (described in Sec 178.603).
- The sample, if traveling by air and containing liquid, must also be packed in either a primary or secondary package that is certified to withstand an internal pressure causing a pressure differential of 14 PSI in the range of -40°C (-40°F) to +55°C (+131°F).
- If more than one fragile primary container is placed inside a leak-proof secondary container, they must each be individually wrapped or separated so as not to touch one another.

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SCENARIO 4

Clinical specimen from an animal that is suspected to contain an infectious agent from Risk Group II or III, exceeding the specified quantity limits for liquid and/or solid contents because the specimen is a whole body, body part or whole organ.

(See fact sheet on [Risk Groups](#).)

This specimen may be packaged as in SCENARIO 3 above, with the additional label: “**EXEMPT FROM QUANTITY LIMITS OF TITLE 49 CFR 173.199 AS PER PART 172 SUBPART B: 172.102(c)(2) A82**”

SCENARIO 5

Clinical specimen from an animal that is suspected to contain an infectious agent from Risk Group IV.

(See fact sheet on [Risk Groups](#).)

Example submissions:

1. A diagnostic specimen from a zoo primate that might have *Herpesvirus simiae* (Herpes B or Monkey B virus).

The specimen MUST be triple packaged as follows (according to Class 6.2 requirements using Class 6.2 certified packaging materials):

- With leak-proof primary and secondary containers, one of which must comply with puncture-proof, pressure range, and temperature range leak-proof testing (per parts 173.196 and 178.609, and also IATA Packing Instructions 602).
- Appropriate absorbent materials must be packaged between the primary and secondary containers, capable of absorbing the entire contents of liquid included.
- The package must comply with the same quantity limits as described in Scenario 3 above.
- The outer package must also be rated for class 6.2 packaging: the package is described and labeled as an “Infectious Substance”; it must be assigned to UN 2814 or UN 2900, as appropriate (UN 2814 is for any infectious substance that you have any reason to believe might affect humans; UN 2900 is for potentially infectious substances that only affect animals).
- A complete itemized list of contents must be packaged between the secondary container and the outer box, to include the name and phone number of the shipper.
- The outside of the package must have the name and phone number of a person responsible for the shipment, with the statement “Packaged in Compliance with IATA Packing Instructions 602”.

Dry Ice Submission Requirements

If the submitted specimens are shipped with dry ice, it must be marked “DRY ICE” and the outer package must allow the sublimated CO₂ to dissipate. There are dry ice weight limits for air carriers, and they will need to know how much dry ice by weight is in the container (see Section 173.217 of Title 49 CFR Hazardous Shipping Regulations). There MUST also be an indication that the package contains a frozen medical specimen.

Shipping Supplies

- Zipper seal plastic bags and sealable, plastic disposable refrigerator containers are recommended as good leak-proof containers.
- A good, thoroughly tested, and readily available source of absorbent materials is disposable diapers.
- Shipping supplies for submitting animal specimens can be ordered from the Veterinary Diagnostic Laboratory, P.O. Box 429, Corvallis, OR 97339-0429; or call 541-737-3261

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