

Illinois Department of Public Health Guidelines for Shipping Infectious Substances Category A

These guidelines are based on the International Air Transport Association (IATA) Infectious Substances Shipping Guidelines, 7th edition, effective January 1, 2006. U.S. Postal Service regulations effective, November 1, 2006 and U.S. Department of Transportation Hazardous Materials Regulations (HMR 49CFR Parts 171, 172, 173 and 175 effective October 1, 2006.

Effective November 1, 2006, Infectious Substances Category A can not be transported using the U.S. Postal Service.

Infectious Substance Category A Definition: An infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals. Indicative examples of substances that meet these criteria are given in Table 3.3.A.

Biological Substance Category B Definition: An infectious substance that does not meet the criteria for inclusion in Category A. Category B Biological Substances are assigned to UN 3373. Effective October 1, 2006, the shipping names “Diagnostic specimens” and “Clinical specimens” are no longer permitted. For shipping specimens for diagnosis see Illinois Department of Public Health “Guidelines for Packaging and Shipping Biological Substances Category B.”

Infectious substance **Category A** affecting humans must be assigned to UN 2814; infectious substance category A affecting animals must be assigned to UN 2900.

Table 3.3.A is not exhaustive. Infectious substances, including new or emerging pathogens, which do not appear in the table but meet the same criteria, must be assigned to Category A. In addition, if there is doubt as to whether or not a substance meets the criteria, it must be included in Category A.

Proper Shipping Names and UN Numbers

Once an infectious material has been classified, then the proper shipping name must be determined. The proper shipping name is required on the outer packaging. The UN number must also be on the outside packaging.

Table 3.3.A
Indicative Examples of Infectious Substances Included in Category A in Any Form Unless
Otherwise Indicated (3.3.2)

UN Number and Proper Shipping Name	Micro-organism
UN 2814 Infectious substance affecting humans	<i>Bacillus anthracis</i> (cultures only) <i>Brucella abortus</i> (cultures only) <i>Brucella melitensis</i> (cultures only) <i>Brucella suis</i> (cultures only) <i>Burkholderia mallei</i> - <i>Pseudomonas mallei</i> - Glanders (cultures only) <i>Burkholderia pseudomallei</i> - <i>Pseudomonas pseudomallei</i> (cultures only) <i>Chlamydia psittaci</i> - avian strains (cultures only) <i>Clostridium botulinum</i> (cultures only) <i>Coccidioides immitis</i> (cultures only) <i>Coxiella burnetii</i> (cultures only) Crimean-Congo hemorrhagic fever virus Dengue virus (cultures only) Eastern equine encephalitis virus (cultures only) <i>Escherichia coli</i> , verotoxigenic (cultures only) Ebola virus Flexal virus <i>Francisella tularensis</i> (cultures only) Guanarito virus Hantaan virus Hantaviruses causing hemorrhagic fever with renal syndrome Hendra virus Hepatitis B virus (cultures only) Herpes B virus (cultures only) Human immunodeficiency virus (cultures only) Highly pathogenic avian influenza virus (cultures only) Japanese Encephalitis virus (cultures only) Junin virus Kyasanur Forest disease virus Lassa virus Machupo virus Marburg virus Monkeypox virus <i>Mycobacterium tuberculosis</i> (cultures only) Nipah virus Omsk hemorrhagic fever virus Poliovirus (cultures only) Rabies virus (culture only) <i>Rickettsia prowazekii</i> (cultures only) <i>Rickettsia rickettsii</i> (cultures only) Rift Valley fever virus (culture only) Russian spring-summer encephalitis virus (cultures only)

	Sabia virus <i>Shigella dysenteriae</i> type 1 (cultures only) Tick-borne encephalitis virus (cultures only) Variola virus Venezuelan equine encephalitis virus West Nile virus (cultures only) Yellow fever virus (cultures only) <i>Yersinia pestis</i> (cultures only)
UN 2900 Infectious substances affecting animals	African swine fever virus (cultures only) Avian paramyxovirus Type 1 – Velogenic Newcastle disease virus(cultures only) Classical swine fever virus (cultures only) Foot and mouth disease virus (cultures only) Goatpox virus (cultures only) Lumpy skin disease virus (cultures only) <i>Mycoplasma mycoides</i> – Contagious bovine pleuropneumonia (cultures only) Peste des petits ruminants virus (cultures only) Rinderpest virus (cultures only) Sheep-pox virus (cultures only) Swine vesicular disease virus (cultures only) Vesicular stomatitis virus (cultures only)

Examples of shipping categories

Material	Infectious Substance, category A	Infectious Substance, category B
Culture of HIV virus	X	
Tube of blood from a HIV + person		X
Tube of blood from a person infected with <i>Bacillus anthracis</i>		X

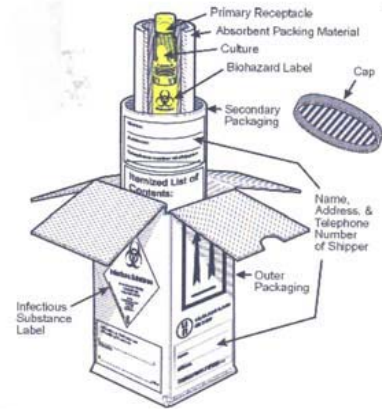
Packing Infectious Substances for Transport

All packaging is based on a “triple” receptacle shipper. Packaging must be UN certified, which means the packaging unit has passed drop, impact and pressure tests.

- The UN Certification number must be printed on the outside container.
- UN Certified Packaging must be used as a complete shipping package as received from the manufacturer. Substitution of parts of the packaging with other manufacturer’s shipping materials is not allowed.
- Infectious substances, category A, must be packaged to meet packing instruction 602.

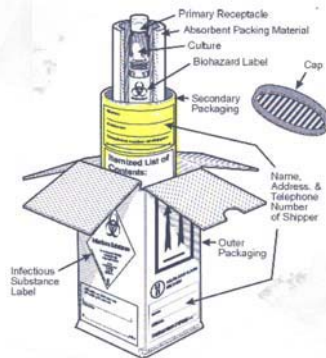
A primary receptacle is the container (e.g., tube vial, bottle) that holds the specimen.

- The primary receptacle must be securely sealed and leak proof (screw top tubes must have a piece of waterproof tape around the top to prevent the top from coming loose in transit).
- The primary receptacle must be surrounded by absorbent material capable of taking up the entire liquid contents.
- The primary receptacle must be packed in the secondary receptacle in such a way that it will not break.
- IATA regulations allow 1 liter in a primary receptacle for diagnostic specimens. The outer packaging must not contain more than 4 liters.



Secondary packaging is the receptacle into which a primary receptacle and the absorbent and cushioning material are placed.

- The secondary packaging must be leak proof and securely sealed.
- The secondary packaging must be placed in the outer packaging so that it does not move.
- The biohazard marking should be on the secondary receptacle and may be on the primary receptacle.

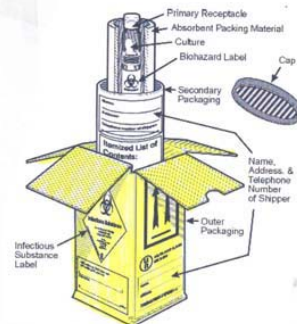


Itemized List of Contents

- An itemized list of contents is required. DO NOT place documents inside the secondary container.
- The itemized list is placed OUTSIDE the secondary container. The laboratory test requisition form may serve this purpose. The form should also be placed OUTSIDE the secondary container.

Outer packaging is the receptacle into which the secondary packaging with cushioning materials are placed.

- The outer packaging must be rigid (effective 1-1-2005).
- The outer packaging bears the addressing information along with all required markings and labels. The full name and address of the shipper and the consignee must be on the outside packaging. The outside packaging must also have the name and telephone number of a person who is knowledgeable about the contents of the shipment. This is important emergency information in the event an exposure occurs during shipping.



- At least one surface of the outer packaging must have a minimum dimension of 4 inches x 4 inches.
- Do not place biohazard stickers on the outside container.
- “Shippers’ Declaration for Dangerous Goods” is attached to the top of the outside packaging.

Requirements for Infectious Substance, Category A Packaging

- Maximum quantity per shipper is 50 ml or 50 grams on passenger aircraft and 4 liters on cargo aircraft.
- The Class 6 Infectious Substance label must be on the outside packaging.
- The proper shipping name and UN number must be on the outside packaging. Adjacent to this information the net quantity of infectious substance in the package must be shown. Effective January 1, 2005, for security purposes, the name of the organism is no longer required on the outside packaging. However, the name of the organism is still required on the “Shipper’s Declaration for Dangerous Goods.”
- Documentation that the material was received (email, USPS return receipt, tracking number showing receipt, etc.) along with a copy of the “Shippers’ Declaration for Dangerous Goods must be kept for 375 days. Illinois Department of Public Health Division of Laboratories keeps this form for five years.



Shippers Declaration of Dangerous Goods

The “Shipper’s Declaration for Dangerous Goods” is a legal document. If it is not 100 percent correct, it is WRONG and your package will be refused for shipment and returned.

- A “Shipper’s Declaration for Dangerous Goods” is required for infectious substances, category A.
- The “Shippers Declaration of Dangerous Goods” document must be attached to the top of the package in a zip lock bag.
- The document must be completed in **triplicate**, each as an original, with the red stripe down each side of the paper. Two copies are given to the transporter and one copy is kept for your files.

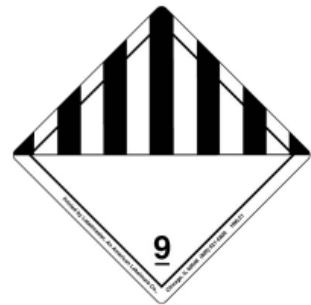
Shipping Temperatures

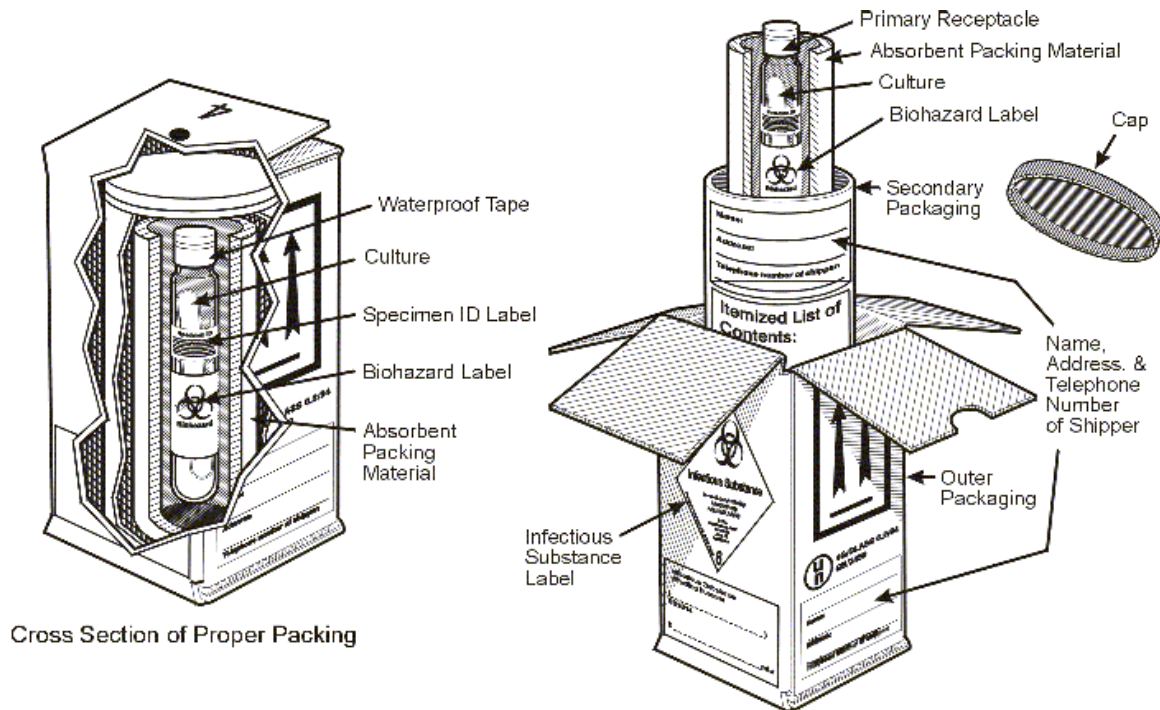
Check specimen collection section for specific requirements if unsure of temperature requirements for the infectious substance being shipped.

- If the specimen must be shipped cold, but not frozen, use cold packs. Ice will melt and leak during shipping.
- If the specimen must be shipped frozen, additional labeling is required for dry ice.

Labeling and Marking Required for Dry Ice

- Class 9 DOT label
- DRY ICE UN 1845
- The amount of dry ice in the package in kilograms must be shown. One pound equals 2.2 kg.
- Dry ice must also be listed on the “Shippers Declaration for Dangerous Goods.”
- If an overpack with dry ice is used, it is recommended to add at least 6 pounds per 24-hour period.





Packing and Labeling of Infectious Substances

Category A

Transporting Infectious Substances in a Private or CMS Vehicle

Secure the properly packed and labeled infectious substance package in the vehicle as far away as possible from the driver, preferably in the trunk if available. If the vehicle is involved in an accident, the package should not be thrown around the vehicle. If there is an accident, emergency responders need to know that infectious substances are in the package. **A declaration of dangerous goods is not required.**

References for information in this document:

- IATA Dangerous Goods Regulations, 47th edition, effective January 1, 2006.
- U. S. Postal Service Regulation, 39 CFR Part 111 effective November 1, 2006.
- U.S. Department of Transportation Hazardous Materials Regulations (HMR 49CFR Parts 171, 172, 173 and 175 effective October 1, 2006.