Annex 5-G:

UN 2814 Infectious Substances Affecting Humans
Infectious substances included in Category A in any form unless otherwise indicated

*Bacillus anthracis* (cultures only)
*Brucella abortus* (cultures only)
*Brucella melitensis* (cultures only)
*Brucella suis* (cultures only)
*Burkholderia mallei* [*Pseudomonas mallei* – Glanders] (cultures only)
*Burkholderia pseudomallei* [*Pseudomonas pseudomallei*] (cultures only)
*Chlamydia psittaci* [avian strains] (cultures only)
*Clostridium botulinum* (cultures only)
*Coccidioides immitis* (cultures only)
*Coxiella burnetii* (cultures only)
Crimean-Congo hemorrhagic fever virus
Dengue virus (cultures only)
Eastern equine encephalitis virus (cultures only)
*Escherichia coli*, verotoxigenic (cultures only)
Ebola virus
Flexal virus
*Francisella tularensis* (cultures only)
Guanarito virus
Hantaan virus
Hanta virus pulmonary 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
*Mycobacterium tuberculosis* (cultures only)
Nipah virus
Omsk hemorrhagic fever virus
Poliovirus (cultures only)
Rabies virus (cultures only)
*Rickettsia prowasekii* (cultures only)
*Rickettsia rickettsii* (cultures only)
Rift Valley fever virus (cultures only)
Russian spring-summer encephalitis virus (cultures only)
Sabia virus
_Shigella dysenteriae type 1_ (cultures only)
Tick-borne encephalitis virus (cultures only)
Variola virus
Venezuelan equine encephalitis virus (cultures only)
West Nile virus (cultures only)
Yellow fever virus (cultures only)
_Yersinia pestis_ (cultures only)

Infectious substances, including new or emerging pathogens, which do not appear in the table but which meet the same criteria must be assigned to Category A.

**UN 2900 Infectious substances affecting animals only**

African horse sickness virus
African swine fever virus (cultures only)
Avian paramyxovirus Type 1 [Velogenic Newcastle disease virus (cultures only)
Bluetongue virus
Classical swine fever virus (cultures only)
Foot and mouth disease virus (cultures only)
Lumpy skin disease virus (cultures only)
_Mycoplasma mycoides_ [Contagious bovine pleuropneumonia] (cultures only)
Peste des petits ruminants virus (cultures only)
Rinderpest virus (cultures only)
Sheep-pox virus (cultures only)
Goatpox virus (cultures only)
Swine vesicular disease virus (cultures only)
Vesicular stomatitis virus (cultures only)

"Exempt" human or animal samples

Samples that have a minimal likelihood that pathogens are present. These samples do not require the same level of packaging and shipping as Categories A and B.

- substances that do not contain infectious substances
- substances containing organisms that are non pathogenic
- substances containing neutralized or inactivated pathogens
- environmental samples that pose no risk of infection
- blood or blood components collected for transfusion
- tissues or organs cleared for transplantation
- dried blood spots and fecal occult blood screening tests
- decontaminated medical or clinical waste.
Shipper’s Declaration for Dangerous Goods Form
Flowchart for Classification of Infectious Agents for Transport

Substance for classification

Is it known not to contain infectious substances?
Have any pathogens present been neutralized or inactivated, so that they no longer pose a health risk?
May it contain microorganisms that are non-pathogenic to humans or animals?
Is it in a form in which any pathogens present have been neutralized or inactivated such that they no longer pose a health risk?
Is it an environmental sample (including food and water sample) that is not considered to pose a significant risk of infection?
Is it a dried blood spot?
Is it a fecal occult blood screening test?
Is it decontaminated medial or clinical waste?
Is it for transfusion or transplantation?

Yes

No or Unknown

Does it meet the definition of a Category A substance?

Yes or Unknown

Has an informed professional judgement based on the known medical history, symptoms and individual circumstances of the source, human or animal, and endemic conditions determined that there is only minimal likelihood that pathogens are present?

Yes

No or Unknown

Not subject to the transport requirements for dangerous goods unless meeting the criteria for another division or class

Subject to 'Exempt human or animal specimen' provisions

UN 3373 Diagnostic specimens, or UN 3373 Clinical specimens, or UN 3373 Biological substance, Category B

UN 2814 Infectious substance, affecting humans, or UN 2900 Infectious substance, affecting animals only
Packing and Labeling of Category A Infectious Substances

The outer container of a Category A infectious substance shipment must display the following information:

- Sender and recipient’s full name and address;
- Infectious substance label (Figure 1);
- Proper shipping name, UN number and net quantity of infectious substance;
- Name and telephone number of a person responsible for the shipment;
- Class 9 label (Figure 2), including UN 1845 and net weight, if packaged with dry ice; and
- Cargo Aircraft Label, when shipping over 50 mL or 50 g (Figure 3).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Figure 2</th>
<th>Figure 3</th>
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<tbody>
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<td><img src="image1" alt="Infectious Substance Label" /></td>
<td><img src="image2" alt="Class 9 Label" /></td>
<td><img src="image3" alt="Cargo Aircraft Label" /></td>
</tr>
</tbody>
</table>
The outer container of a Category B infectious substance shipment must display the following information:

- the sender and recipient’s full name and address;
- the words “Biological substance;”
- UN 3373 label (Figure 1);
- name and telephone number of a person responsible for the shipment; and
- class 9 label (Figure 2), if packaged with dry ice (also see Annex 5-G, page 9)
Packing and Labeling of Exempt Substances

The package mark shall be “Exempt Human Specimen” or “Exempt Animal Specimen”, as appropriate.
Thermal Control Unit Example

Specific procedures must be followed when packaging and shipping materials refrigerated with dry ice and a record of training must be kept. Dry ice is classified by IATA as a “miscellaneous” hazard, class 9 and is considered hazardous for three reasons:

1. **Explosion hazard:** dry ice releases a large volume of carbon dioxide gas as it sublimes (changes from a solid to a gas). Use a container (e.g., polystyrene) that allows for release of the gas. **Do not transport dry ice in a metal container** as it may explode, causing personal injury or property damage.

2. **Suffocation hazard:** a large volume of carbon dioxide gas emitted in a confined space may create an oxygen deficient atmosphere.

3. **Contact hazard:** dry ice is a cryogenic material that causes severe frostbite upon contact with skin.

![Thermal Control Unit - CL4 Diagram](image-url)
Dry Ice Shipping Label