

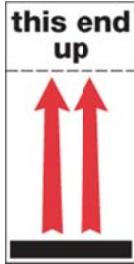


DEPARTMENT OF PATHOLOGY  
SOUTH TEXAS REFERENCE LABORATORIES  
FUNGUS TESTING LABORATORY  
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO

PROCEDURE

TRANSPORT/SHIPMENT OF BIOLOGICAL SPECIMENS

DEFINITIONS	<ul style="list-style-type: none"><li>• <b>Infectious Substances</b><ul style="list-style-type: none"><li>○ Substances which are known to contain, or are reasonably expected to contain pathogens.</li></ul></li><li>• <b>Pathogens</b><ul style="list-style-type: none"><li>○ Micro-organisms (including bacteria, viruses, rickettsia, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals.</li></ul></li><li>• <b>Cultures</b><ul style="list-style-type: none"><li>○ The result of a process by which pathogens are intentionally propagated. This does not include patient specimens.</li></ul></li><li>• <b>Patient Specimens</b><ul style="list-style-type: none"><li>○ Collected directly from humans or animals including, but not limited to, excreta, secreta, blood, and its components, tissue, tissue fluid swabs, and body parts being transported for purposes of diagnosis, disease treatment and prevention.</li></ul></li></ul>
CLASSIFICATIONS FOR INFECTIOUS SUBSTANCES	<ul style="list-style-type: none"><li>• <b>Category A Infectious Substances</b> – Infectious Substances in the form that is able of causing permanent disability, life-threatening, or fatal disease upon exposure in otherwise healthy humans or animals.<ul style="list-style-type: none"><li>○ <b>UN 2814 – Infectious Substances Affecting Human</b></li><li>○ <b>UN 2900 – Infectious Substances affecting animals <i>only</i></b></li></ul></li><li>• <b>Category B Infectious Substances</b> – Infectious Substances that does not meet the criteria for inclusion in Category A.<ul style="list-style-type: none"><li>○ <b>UN 3373 – Biological Substance</b></li></ul></li><li>• <b>Exceptions (Exempt Specimens)</b><ul style="list-style-type: none"><li>○ Substances which do not contain infectious substances or substances which are unlikely to cause disease in humans or animals.</li><li>○ Substances in a form where pathogens have been inactivated.</li><li>○ Environmental samples, including food or water, which are not considered to pose a significant risk of infection.</li><li>○ Specimens for which there is minimal likelihood that pathogens are present.</li></ul></li></ul>
PACKAGING	<ul style="list-style-type: none"><li>• <b>General Considerations</b><ul style="list-style-type: none"><li>○ Packaging must be of good quality and strong enough to withstand the shocks and loading normally encountered during transport.</li><li>○ Packages must be constructed and closed so as to prevent any loss of contents that might be caused under normal conditions of transport such as vibrations or changes in temperature or pressure.</li><li>○ All packages must consist of 3 components</li><li>○ For <b>Liquids</b>, absorbent material in sufficient quantity to absorb the entire contents must be placed between the primary receptacle and the secondary packaging so that any release or leak during transport will not reach the outer packaging</li><li>○ For <b>solids</b>, both the primary receptacle and secondary packaging must be sift-proof and must not exceed the outer packaging weight limits.</li></ul></li></ul>



**UN2814**  
Infectious Substance  
Affecting Humans

**Person Responsible**  
Name:  
Phone:



- **Category A**
  - Place culture in a watertight primary receptacle (glass, metal, plastic)
  - Wrap primary receptacle with absorbent material and place within a watertight secondary package
  - Include a list of contents outside the secondary package
  - Place secondary package within a rigid outer packaging that is at least 100x100 mm or 4x4 inches
  - Fill out a Shipper's Declaration Form
  - On outer package:
    - "This End Up" Orientation Marking
    - Infectious Substance Label (Diamond-Shaped Label)
    - Adjacent, above, or directly below the Infectious Substance Label
      - Proper Shipping name: **Infectious Substance Affecting Humans**
      - UN Number Label (2814 or 2900)
      - Quantity being shipped
    - Shipper Identification
      - Name, Address, Phone Number
    - Responsible Person – Person who knows most about package
      - Name, Phone Number
    - Consignee Identification:

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- **Category B (Diagnostic Specimens)**
  - Specimens must be in a leak-proof **primary** receptacle.
  - Primary receptacle placed within a leak-proof **secondary** packaging
  - An itemized list of contents must be enclosed between the secondary packaging and the outer packaging
  - Secondary package placed in an outer package of adequate strength for capacity, mass, and intended use with at least one surface having minimum dimensions of 100x100 mm (4 inches x 4 inches).
  - On outer package:
    - "This End Up" Orientation Marking
    - UN3373 Label (must be a *minimum* of 2 inchesx2 inches)
    - Adjacent to the UN3373 Label:
      - Proper shipping name: **Infectious Substance Affecting Humans**
      - Quantity being shipped
    - Shipper Identification
      - Name, Address, Phone Number
    - Responsible Person – Person who knows most about package
      - Name, Phone Number
    - Consignee Identification: *see above*
  - If an over-pack is used, the over-pack must be marked with the word "*over-pack*" on the outside of the container and all markings must be reproduced on this outer-pack.

SPECIFIC REQUIREMENTS		<ul style="list-style-type: none"> <li>Refrigerated/frozen specimens: Ice, ice packs, or dry ice           <ul style="list-style-type: none"> <li>When dry ice is used, all applicable requirements of these Regulations must be met.</li> <li>Both ice and dry ice must be placed outside the secondary packaging</li> <li>If ice is used, outside packaging must be leak-proof</li> <li>If dry ice is used, outside packaging must be designed to permit the release of carbon dioxide gas to prevent a buildup of pressure that could rupture packaging</li> <li>All packaging must maintain their integrity at the temperature of the refrigerant used.</li> </ul> </li> </ul>					
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UN/ID Number	Proper Shipping Name	Classification	Packing Group	Passenger Aircraft		Cargo Aircraft	
				Packing Instructions	Max Net Quantity/Package	Packing Instructions	Max Net Quantity/Package
3373	Biological Substances, Category B	6.2 Infectious Substance	—	650	4L (liquid) or 4 kg (solid)	650	4L (liquid) or 4 kg (solid)
3291	Medical/Clinical Waste	6.2 Infectious Substance	II	622	No Limit	622	No Limit
1845	Dry Ice	9 Miscellaneous	III	904	200 kg	954	200 kg
3245	Genetically modified microorganism	9 Miscellaneous	—	913	No Limit	913	No Limit
2814	Infectious Substances, Affecting Humans	6.2 Infectious Substances	—	602	50 ml (liquid) or 50 g (solid)	620	4L (liquid) or 4 kg (solid)
2900	Infectious Substances, Affecting Humans	6.2 Infectious Substances	—	602	50 ml (liquid) or 50 g (solid)	620	4L (liquid) or 4 kg (solid)