

## **CRC Specimen Transport SOP**

CRCs in the ITR will transport specimens from 1600 Divisadero Street to 2340 Sutter Street, as well as process and ship specimens in the Sutter Building, as per the policies stated in UCSF's Environmental Health & Safety Biosafety Manual Chapter 11:

### **1. Packaging, Shipping, and Transport**

*Federal (Department of Transportation, 49 CFR §171-175) and international agencies (ICAO (the branch of the United Nations that governs all international civil aviation matters), IATA (International Air Transport Association)) have in place numerous regulations for shipping of dangerous goods by surface or air.*

*Anyone packaging, handling, shipping or transporting hazardous materials must receive training in the general requirements of handling hazardous materials as well as function specific training for the specific task(s) performed. Training is required before performing any tasks associated with shipping hazardous materials and periodically thereafter. UCSF is requiring retraining every two years for anyone shipping biological agents since air transport is routinely involved. Nonconformance of these regulations can result in a fine and/or imprisonment.*

*The online UCSF **Safe Shipping Training** can be found at the web site:  
<https://www.researchonline.ucsf.edu/>*

### **2. Shipment of Category A infectious substances**

*Category A infectious substances includes any "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."*

*Examples of Category A infectious substances designated by scientists at WHO and the U.S. Department of Health and Human Services (HHS) are listed in table below.*

**Table 3.6.D: Indicative Examples of Infectious Substances Included in Category A in Any Form Unless Otherwise Indicated (3.6.2.2.1)**

Table 3.6.D: Indicative Examples of Infectious Substances Included in Category A in Any Form Unless Otherwise Indicated (3.6.2.2.1)

UN Number and Proper Shipping Name	Micro-organism
<b>UN 2814</b> <b>Infectious substances affecting humans</b>	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
	Hantavirus 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
Mycobacterium tuberculosis (cultures only)	
Nipah virus	
Omsk hemorrhagic fever virus	
Poliovirus (cultures only)	
Rabies virus (cultures only)	
Rickettsia prowazekii (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)	
<b>UN2900</b>	African swine fever virus (cultures only)
<b>Infectious substances affecting animals</b>	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)
	Mycoplasma mycoides – 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)

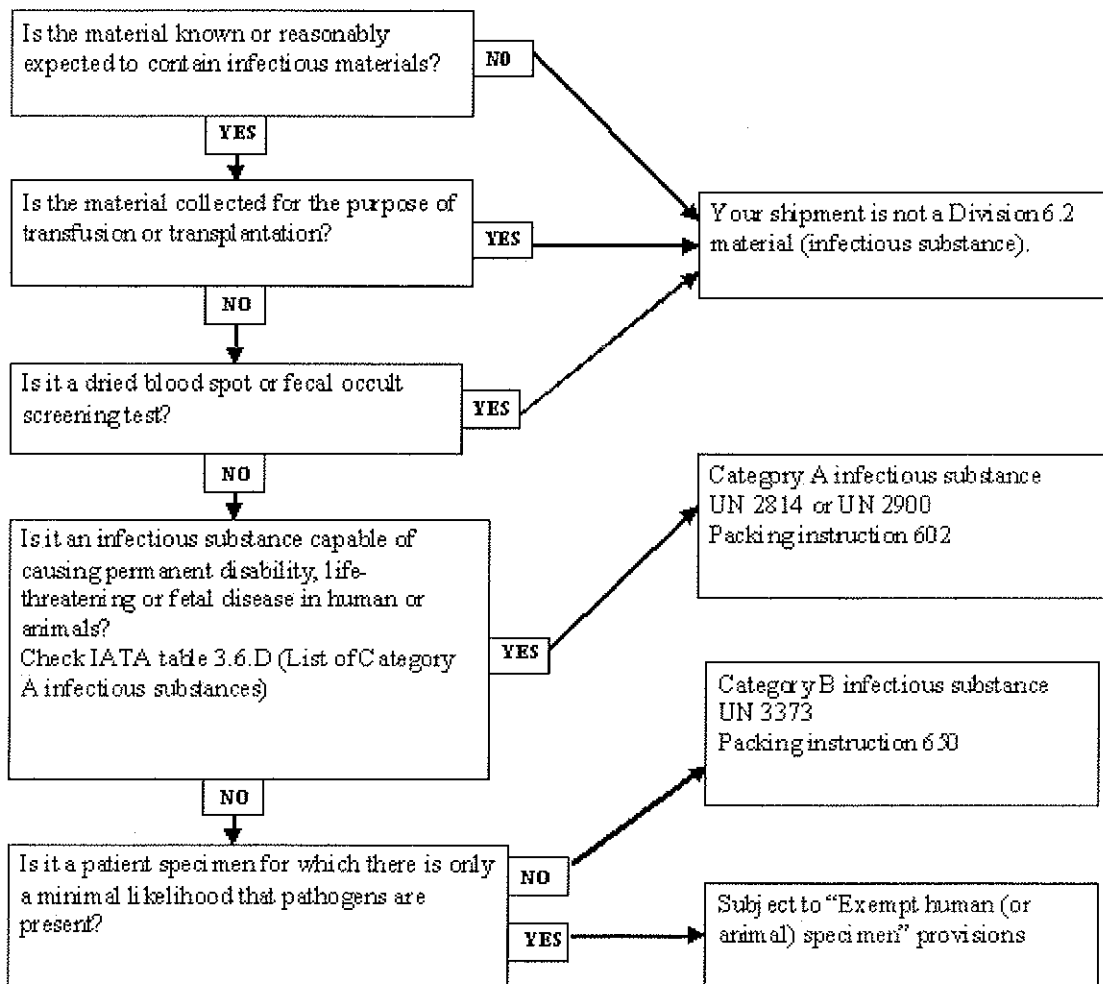
Category

1. The Shipper's Declaration of Dangerous Goods documentation is required for shipping Category A infectious substances.
2. Packing Instruction 602 is used for shipping Category A Infectious Substances

### 3. Shipment of Category B Infectious Substances

- Category B Infectious substances (Biological Substance, category B) include any infectious substance that does NOT meet criteria for inclusion in Category A. Category B Infectious substances includes diagnostic or clinical specimens
- The Shipper's Declaration of Dangerous Goods documentation is NOT required for shipping Category B infectious substances.
- Packing Instruction 650 is used for shipping Category B Infectious Substances

The following flowchart will help you to identify the correct category of your shipment.



### 4. Shipping Using Dry Ice.

- Dry Ice is considered a Dangerous Good. Training and certification are required, and the package must be labeled and shipped accordingly.
- Dry ice is a Class 9 Dangerous Good

- Dry ice **MUST** be declared with marking, labeling and documentation
- Dry ice must **NEVER** be placed in a sealed container
- Use Packing Instruction 904 for shipment with dry ice

## 5. Transport of Biomaterials within UCSF

Transport of frozen and/or active biomaterials (Risk Group 1 or 2) between UCSF campus locations within San Francisco city limits is permitted. This process may not be used to transfer biomaterials between different UC campuses or to other off-site destinations (including UCSF affiliates located outside of San Francisco) without approval of the Biosafety Officer. Those with Biosafety Level 3 (BSL3) laboratories must call the UCSF Biosafety Officer (BSO) for specialized procedures.

The following rules apply:

### (1) Laboratory personnel to move biomaterials by coolers.

**Biomaterials (either active or frozen cultures)** may be moved in thermally stable transport containers such as Igloo® or Coleman®-style hard-sided picnic coolers with securing latches. Primary containers must be placed within secondary containers that are leak proof and have tightly fitting lids. Materials requiring transport at non-ambient temperature must be packed in coolers that include enough heat or cold source packs to keep materials at required temperature for duration of transfer. Wadded newspaper or bags of Styrofoam peanuts are commonly used to take up unused space to prevent contents shifting and to maintain temperature as long as possible. **Do not use loose Styrofoam peanuts.** Outer containers must be sealed and secured shut with heavy-duty duct or shipping tape.

### (2) Laboratory personnel to move biomaterials without coolers.

Primary containers used to transport biomaterials at ambient temperatures must be placed in leak proof secondary containers with tightly fitting lids. Wadded newspaper or bags of Styrofoam peanuts are commonly used to take up unused space to prevent contents shifting. **Do not use loose Styrofoam peanuts.** Outer container must have biohazardous label affixed and visible.

#### NOTES:

a) All cultures must be transferred to leak proof, screw-cap unbreakable plastic containers (primary container). **Do not use slip-cap culture tubes or stoppered containers.**

b) All containers with biohazardous materials must display biohazard symbol and have attached to the top outside a leak proof plastic bag that contains the following information:

- Name and phone number of the PI and that of an alternate contact,
- Originating building and room number,
- Destination room number,
- Inventory and description of biohazards of contents.

#### ADDITIONAL GENERAL NOTES:

a) Biohazardous materials must be transported by two persons with appropriate knowledge of materials involved and emergency procedures in the event of a spill or other accident. Appropriate PPE must be worn (gloves, laboratory coat, safety glasses or goggles,

masks or face shields) when actively handling biohazardous materials during packaging and unpacking at new location. During transport, street clothes should be worn, but PPE should remain available in case of spills. Persons involved in transport must take with them 2 1L spray bottles of fresh 0.5% bleach solution, sufficient absorbent material to disinfect and remove spills, and sufficient large plastic bags (not red biohazard bags) to contain used absorbent materials.

b) After packaging, actual transport of biohazardous materials must be completed within 2 – 3 hours from beginning location to final destination.

c) DO NOT move biohazardous materials in incubators.

When CRCs transport blood and urine specimens between UCSF campus locations (from the main Mt. Zion building to any other building) specimens will be contained in both a sealed biohazard bag and an approved outer sealed container (the Cancer Center Research Department has purchased wide mouth Nalgene bottles with screw tops for this purpose.) In the event the specimen requires refrigeration in transport, this outer container will be placed inside a cooler (3<sup>rd</sup> container.) Transport containers must be labeled with a biohazard symbol and also with the following information:

- Name and phone number of the study coordinator (Holly Hobby, 333-3333)
- Originating building and room number (Mt. Zion, 1600 Divisadero Street, H Building)
- Destination Building & Room Number (TBD)
- Inventory and description of biohazards of contents (Blood &/or Urine Specimens)
- Instructions to call the study coordinator if the container is lost or misplaced.

Persons transporting, processing and/or shipping specimens will maintain current training documentation as required per UCSF policy.

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12/11/12  
Date