

## ***Shipping Instructions for Samples Collected from Individuals Potentially Exposed to Chemical Terrorism Agents***

### **Background:**

During a chemical threat or chemical exposure incident, you may be asked by public health or other authorities to collect specimens from persons exposed. Proper handling of these specimens will ensure that laboratory test results are meaningful, and -- if the exposure is caused by an intentional act -- that the results can be used as evidence in court if needed.

### **Chemical Terrorism Kit (Red) Materials Provided (Unit #23)**

- Biohazard specimen bags (100)
- Forensic evidence tape (1 roll)
- Package strapping tape (1 roll)
- MDCH chain of custody forms (serves as test requisition) (20)
- Shipping Instructions (this document)

### **Specimen Packaging Kit (Box) Materials Provided (Unit #22)**

- Absorbent material (10 squares)
- Foam racks to hold blood tubes (3)
- Cold-paks for blood samples (4)
- One shipping container\* large enough for specimens, absorbent material, and cold packs **OR** dry ice (1)
- Appropriate labels:
  - UN 3373, UN 1845, class 9 hazard label, to/from and responsible party labels, (#MDCH-308 – 1 Ea)
  - UN 3373, to/from and responsible party labels, (#MDCH-306 -1 Ea)
- Large zipper bags (1)
- Secondary Packaging (Tyvek & Plastic) (2)

### **Materials required but not provided**

- Urine cups (25 mL, screw-cap with no preservative) – 1 per patient
- Purple-top (EDTA) blood tubes (5-7 mL) – 3 per patient
- Green-top **OR** Gray-top blood tubes (5-7 mL) - 1 per patient
- Blank (empty) urine cups for each lot number used (2)
- Blank (empty) blood tubes for each lot number used (2)
- Dry ice for urine samples (not large chunks)
- Padding- (blue hospital pads, newspaper, or other cushioning)

\* If shipping by air, an IATA-compliant container including leak-proof secondary packaging and an outer container that meets regulations. The container provided by MDCH meets these requirements.

## **Specimen Collection Instructions**

Label all specimens with labels generated by your facility. Labels should include

- patient name
- age or DOB
- identifying number (medical record number or unique specimen identifier)
- date / time of collection
- collector's initials

It is helpful to include

- ordering physician
- name of hospital

### **1. Urine specimens - collect for each patient (child or adult):**

- 25 mL urine in a clean screw-capped container with no preservative
- Seal lid with tape (NOT parafilm) if container is not leakproof
- Freeze as soon as possible

### **2. Blood specimens - collect for Adult patients only\***

- **three** purple-top EDTA tubes (5-7 mL)
  - **unopened** allow to vacuum fill only
  - **Number tubes** in order of draw (#1, #2, #3)
- **one** gray-top **OR** green-top tube (5-7 mL)
  - **Draw purple-tops first!**
  - **unopened** - allow to vacuum fill only
- Refrigerate. **Do not freeze.**

\*unless directed otherwise by CDC or MDCH

### **3. In addition to patient specimens, please include Blank cups and tubes**

- two empty, unopened urine cups from each lot number used for patients
- two empty, unopened purple-top tubes from each lot number used for patients
- two empty, unopened gray- or green-top tubes from each lot number used for patients

### **4. Complete MDCH Chain of custody forms (8 patients per page)**

- Keep a copy for your records
- Place in a zipper bag and ship with specimens

- **Specimen Packaging Instructions**

Specimens must be properly packaged, even if being transported by courier. See special instructions (below) for air transport by commercial carrier.

#### **Outer containers**

Use Styrofoam-insulated corrugated fiberboard outer containers (may be available from your transfusion service or send-outs department). **Do not ship frozen urine cups and blood tubes in the same package.**

#### **Blood**

Wrap properly labeled blood tubes with absorbent material provided, and place in foam rack(s) to cushion. Wrap in additional cushioning to secure tubes inside rack. **Use two bag system to secure:** Place specimens into the inner plastic Biohazard bag (STP 741) included with MDCH shipping kit and seal. Place sealed Biohazard bag into the outer white Tyvek envelope (STP-740) and seal. **You must use both bags together. Secure with evidence tape**, and initial 1/2 on tape and 1/2 on white Tyvek envelope. (Other secondary packaging compliant with IATA packing instruction 650 may be used).

#### **Urine**

Please package frozen urine cups individually. Wrap each cup with enough absorbent material to contain the contents, and place in a zipper bag. Seal bag with evidence tape and initial.

#### **OR:**

Place urine cups in a gridded box. Wrap box with enough absorbent material to contain liquid contents, and seal inside a leak-proof plastic bag. Seal bag with evidence tape and initial.

**Use two bag system to secure:** Place specimens into the inner plastic Biohazard bag (STP 741) included with MDCH shipping kit and seal. Place sealed Biohazard bag into the outer white Tyvek envelope (STP-740) and seal. **You must use both bags together. Secure with evidence tape**, and initial 1/2 on tape and 1/2 on white Tyvek envelope. (Other secondary packaging compliant with IATA packing instruction 650 may be used).

#### ***Packaging samples for shipment by commercial carrier:***

Packaging must comply with current regulations (Department of Transportation, IATA) and must consist of three components: a leak-proof primary receptacle (blood tubes or urine cups), leak-proof secondary packaging (materials for protecting primary containers, and absorbent material) and an outer container (Styrofoam-insulated corrugated, fiberboard container). Compliant secondary packaging and outer container have been provided by MDCH as "Chemical Terrorism Unit # 22".

Pack and ship these specimens as "Biological Substance, Category B". (Use IATA packing instruction 650). **NOTE: The shipper is responsible for being sure that their package is in compliance with the current shipping regulations.**

#### **Blood tubes—Ship at 4°C**

MI Department of Community Health - Bureau of Laboratories: *Chemical Terrorism (CT) Event- Sample Collection and Shipping Instructions*

- Place additional absorbent material in the bottom of the outer container for cushioning.
- Add a layer of frozen cold packs.
- Place secondary containers on top of the cold packs.
- Place additional cold packs or absorbent material between the secondary containers to reduce their movement within the outer container.
- Place a layer of frozen cold packs on top of the secondary containers.

**Urine cups—Ship to ensure specimens will remain frozen or will freeze while in transport**

- Place additional absorbent material in the bottom of the outer container for cushioning.
- Add a layer of dry ice. **Note:** Pellet-type dry ice is preferred. Large chunks have the potential for shattering urine cups during transport, while flaked dry ice may not keep the specimens frozen long enough during shipment.
- Place additional absorbent material between wrapped urine cups to reduce their movement within the outer container.
- Add an additional layer of dry ice.

**All Packages:**

- Include the chain of custody form sealed inside a large zipper bag
- Be sure the primary containers are aligned (as much as possible) in the same direction as the orientation arrows on the outer packaging.
- Secure outer packaging tops and bottoms with filamentous shipping/strapping tape.
- Label with shipper's (from-you) address and consignee's (to-MDCH) address.
- Label with "responsible party" including a phone number.
- Affix labels and markings adjacent to the shipper's/consignee's address label:
  - UN 3373 diamond marking on the outer package.
  - Label with proper shipping name, "Biological substance category B" on the outer packaging adjacent to the UN3373 marking.
  - For packages containing dry ice, place a class 9 hazard label on the same side of the outer packaging as the UN3373 marking.
  - Proper shipping name, ("dry ice" OR "carbon dioxide solid"), "UN1845", and the weight of dry ice used must be adjacent to the class 9 hazard label.

**Please notify MDCH before shipping these specimens. Ship to:**

**MDCH Bureau of Laboratories  
Division of Chemistry & Toxicology  
3350 North Martin Luther King Jr. Blvd.  
Building 44 Room 155  
Lansing, MI 48906  
517-335-8063**

After hours emergencies should be called to **517.335.9030**

If you have any questions or problems with sample packaging or shipment, please contact Ninah Sasy by phone (above) or email to [Sasyn@michigan.gov](mailto:Sasyn@michigan.gov)  
MDCH Bureau of Laboratories, at **517.335.8063**