

Attachment C Sampling Instructions

1. Identify Sampling Strategy

Once a credible threat has been identified and samples must be taken, an appropriate sampling strategy must be chosen. Depending on the situation, different types of sampling methods may be utilized. A Bulk Sample (such as an intact envelope) may be the first choice as it is often easiest to obtain and yield a larger amount of product for the lab to work. The following are the types of samples:

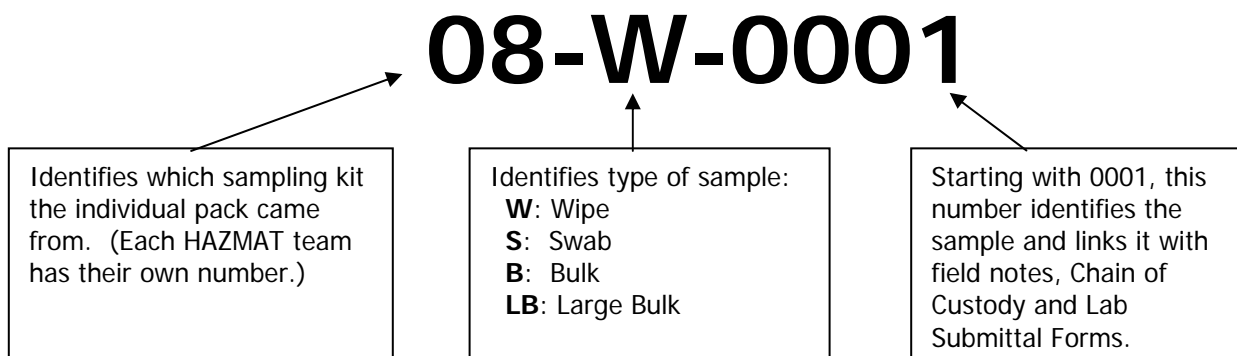
- **Wipe Sample:** Wipe samples may be used in a situation where there is a large amount of unknown material (powder) spread around an open surface such as a table top.
- **Swab Sample:** Swab samples may be used where the unknown material is in a hard to reach location, such as a keyboard or ductwork.
- **Bulk Sample:** Bulk samples, such as an entire envelope or piece of carpet.
- **Large Bulk Sample:** The same sampling technique as the bulk sample, except the large bulk sample pack contains larger packaging.

2. Choose a Sampling Pack

Each Sampling Kit contains individual Sampling Packs for each type of sample listed above. Every sampling pack is identified by a pre-designated, specific **Unique Identifying Number (UIN)**. The UIN will clarify:

- Which PHRST or RRT the pack belongs to.
- What type of sample it is.
- A numerical 4 digit number which identifies that specific sample.

Below is a sample UIN:



(over)

3. Using the Sampling Packs

Each sample pack will contain the appropriate paperwork and sampling materials to take ONE sample. If multiple samples are needed at one site, use more than one pack. Each pack contains a Chain of Custody form and Lab Submittal form along with the other essential sampling supplies. The sampling pack will have it's own Unique Identifying Number (described above) which will be visible on the forms as well as other items which will be transported to the lab. On the following pages, you will find a sampling protocol for each of the types of sample packs.

4. Transport of Finished Samples

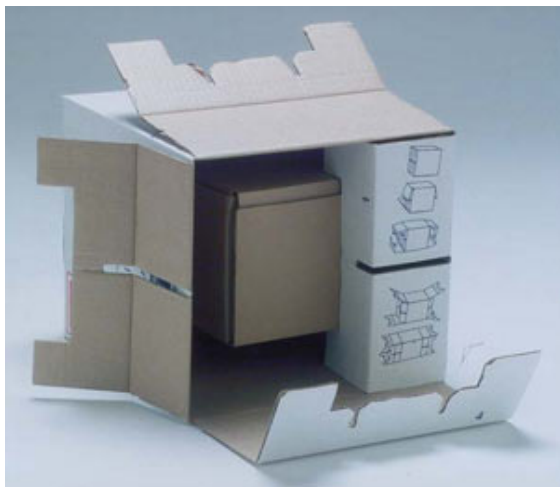
Once samples have been double packaged and properly decontaminated they are ready for transport (with the Chain of Custody and Lab Submittal forms) to the NC State Lab Public Health. Place swab, wipe and smaller bulk samples in a sealable biohazard bag (after decon) and then into an STP 250 box (shown below). Write UIN for sample(s) contained within the STP-250 on the outside of the box. Ice packs should be used when available to refrigerate samples during transport.

*Shipping of large bulk samples which will not fit in the STP 250 box will be handled on an individual basis.



STP-250

Examples of additional types of shipping containers which may be used if available:



Bulk Sample Protocol

Purpose

Bulk samples are collected to detect and characterize the presence of biological contamination on building and environmental materials such as sections of carpet, office equipment, supplies, vials of dust, mail clothing, heating, ventilation and air conditioning (HVAC) filters, etc. or to test powders or liquids that are self contained (e.g., powder in an envelope).

Equipment and Materials

Bulk sample packs are pre-packaged and include everything necessary to take bulk samples up to the size of an 8.5x11 envelope (if folded) or similar. Every pack is pre-labeled with a unique identifying number and should include:

- 1 copy of the Bulk Sample Protocol
- Primary bag (1 gallon, zip lock, pre-labeled)
- Secondary bag (1 gallon, zip lock, pre-labeled)
- Chain of Custody and Lab Submittal forms (pre-labeled)
- Field marker (to mark site of sample location, if needed)

Procedure

Before entry:

- 1) Remove envelope from sample pack containing Chain of Custody and State Lab Submittal forms. Each form should be pre-labeled to match that particular sample pack. **These forms should remain in the cool zone.**
- 2) Review Downrange procedures (below).

Downrange:

- 1) After entry, remove primary bag from secondary bag.
- 2) Flatten the primary bag to remove excess air BEFORE (not after) placing sample in bag. Place sample into bag.
- 3) Place primary bag into secondary bag using same technique.
- 4) Radio the following information out to the cool zone:
 - Type of sample
 - Time and date of sample
 - Name of person collecting sample
 - Approximate size of area sampled
 - Map and/or description of sample location
- 5) Proceed to designated decontamination area. Decontaminate double bagged sample with .5-.6% sodium hypochlorite solution (see attached instructions for reagent preparation).
- 6) Place decontaminated sample into red biohazard bag and then into STP-250 cardboard box.



Pictures show one bulk sample kit complete with: Sampling Protocol, State Lab and Chain of Custody Forms, Primary and Secondary Zip Lock bags, and field location marker.



Wipe Sample Protocol

Purpose

The wipe sample method is used for sample collection on large (>100cm²), non-porous surfaces such as tabletops, counters, desks, file cabinets, window sills, floors, mailboxes and non-carpeted floors.

Equipment and Materials

Wipe sampling packs are prepackaged and contain everything required to take a wipe sample. Every pack is pre-labeled with a unique identifying number and should include:

- 1 copy of the Wipe Sample Protocol
- 1 zip lock bag, pre-labeled
- Sterile 2x2 Gauze & Saline bottle
- Sterile specimen cup, pre-labeled
- Chain of Custody and Lab Submittal forms (pre-labeled)
- Field marker (to mark site of sample location, if needed)

Procedure

Before entry:

- 3) Remove envelope from sample pack containing Chain of Custody and State Lab Submittal forms. Each form should be pre-labeled to match that particular sample pack. **These forms should remain in the cool zone.**
- 4) Review Downrange procedures (below).

Downrange:

- 7) After entry, remove sampling materials from 1 gallon zip lock bag.
- 8) Remove 2x2 gauze and squirt entire contents of saline bottle onto gauze.
- 9) Wipe the surface using the following technique: Recommended wipe area is approximately 1 square foot. Make enough vertical S-strokes to cover the entire sample area. Flip 2x2 gauze over and with the unexposed side of the pad, make horizontal S-strokes over the same area. Avoid letting pad dry completely, however do not add additional saline to remoisten pad.
- 10) Place sample pad into sterile specimen cup.
- 11) Place cup into 1 gallon zip lock bag.
- 12) Radio the following information out to the cool zone:
 - Type of sample
 - Time and date of sample
 - Name of person collecting sample
 - Approximate size of area sampled
 - Map and/or description of sample location
- 13) Proceed to designated decontamination area. Decontaminate bagged sample with .5-.6% sodium hypochlorite solution (see attached instructions for reagent preparation).
- 14) Place decontaminated sample into red biohazard bag and then into STP-250 cardboard box



Pictures show one wipe sample kit complete with: Sampling Protocol, State Lab and Chain of Custody Forms, sterile specimen cup, saline bottle, sterile 2x2, secondary containment (Ziploc) bag, and field location marker.



Large Bulk Sample Protocol

Purpose

Large Bulk samples are collected to detect and characterize the presence of biological contamination on much larger samples of building and environmental materials such as sections of carpet, office equipment, supplies, mail personnel clothing, heating, ventilation and air conditioning (HVAC) filters.

Equipment and Materials

Large Bulk sampling packs are prepackaged and contain everything required to take a large bulk sample.. Every pack is pre-labeled with a unique identifying number and should include:

- Copy of instructions
- Two large slide lock containment bags (to be used as inner/outer).
- Chain of Custody and Lab Submittal forms (pre-labeled)
- Field marker (to mark site of sample location, if needed)

Procedure

Before entry:

- 5) Remove envelope from sample pack containing Chain of Custody and State Lab Submittal forms. Each form should be pre-labeled to match that particular sample pack. The forms should remain in the cool zone.
- 6) Review Downrange procedures (below).

Downrange:

- 15) After entry, remove both 28"x28" sampling bags from pack and use one as a primary bag and one as a secondary bag.
- 16) Place the large bulk sample into the primary bag using one person to hold the bag open. Avoid getting excess air in bag, however- DO NOT squeeze air out of bag once sample is inside (could create aerosol). Place closed primary bag into secondary bag using same method.
- 17) Radio the following information out to the cool zone:
 - Type of sample
 - Time and date of sample
 - Name of person collecting sample
 - Approximate size of area sampled
 - Map and/or description of sample location
- 18) Proceed to designated decontamination area. Decontaminate double bagged sample with .5-.6% sodium hypochlorite solution (see attached instructions for reagent preparation).

Swab Sample Protocol

Purpose

The swab method is used for sample collection of small volumes of powders or liquids on smaller, non-porous surfaces that do not have a large accumulation of dust and dirt such as keyboards, hard to reach areas within machinery, mail sorters, and ventilation grilles.

Equipment and Materials

Swab sampling packs are prepackaged and contain everything required to take a swab sample. Every pack is pre-labeled with a Unique Identifying Number and should include:

- 1 copy of the Swab Sample Protocol
- 1 zip lock bag, pre-labeled
- Sterile dacron swab, pre-labeled
- Sterile buffered saline bottle
- Chain of Custody and Lab Submittal forms (pre-labeled)
- Pre-Labeled Field Marker (to mark site of sample location, if needed)

Procedure

Before entry:

- 7) Remove envelope from sample pack containing Chain of Custody and State Lab Submittal forms. Each form should be pre-labeled to match that particular sample pack. **These forms should remain in the cool zone.**
- 8) Review Downrange procedures (below).

Downrange:

- 19) After entry, remove sampling materials from zip lock bag.
- 20) Remove swab from container and moisten with sterile saline (3-5 drops). (Discard extra swab if not needed.)
- 21) Wipe the surface using the following technique: Recommended wipe area is less than 100cm². Swab target surface using sequential vertical, horizontal, and diagonal strokes while rotating the swab to ensure the entire surface of the swab was used. Avoid letting swab dry completely, however do not add additional saline to remoisten.
- 22) Place swab back into container and cap.
- 23) Place swab/container into 1 gallon zip lock bag.
- 24) Radio the following information out to the cool zone:
 - Time and date of sample
 - Name of person collecting sample
 - Approximate size of area sampled
 - Map and/or description of sample location
- 25) Proceed to designated decontamination area. Decontaminate bagged sample with .5-.6% sodium hypochlorite solution (see attached instructions for reagent preparation).

26) Place decontaminated sample into red biohazard bag and then into STP-250 cardboard box.



Pictures show one swab sample kit complete with: Sampling Protocol, State Lab and Chain of Custody Forms, sterile swab, saline bottle, secondary containment (Ziploc) bag), and field location marker.



updated: 01/14/2008