



**Illinois Department of Public Health
Division of Laboratories**

Instructions for Ebola Virus Specimen Submission

General Information

Ebola virus can cause severe and often fatal disease in humans. Ebola virus can be transmitted through contact with infected blood or body fluids (urine, stool, vomit) and with objects (needles, medical equipment, or environmental surfaces) that have been contaminated with infected bodily fluids. Splashes to unprotected mucous membranes (eyes, nose, mouth) are particularly hazardous. Procedures that can increase environmental contamination with infectious materials, or which create aerosols, should be minimized.

A combination of personal protective equipment (PPE) is recommended to prevent the transmission of Ebola virus and should be implemented in addition to routine infection prevention control (IPC) practices among patients and health care workers. Refer to the [Centers for Disease Control and Prevention's \(CDC\) current infection control recommendations for preventing Ebola transmission in health care settings](#).

Staff collecting specimens from patient under investigation (PUIs) should wear appropriate PPE. Refer to the [Guidance on Personal Protective Equipment To Be Used by Health Care Workers During Management of Patients with Ebola Virus in U.S. Hospitals, Including Procedures for Putting On \(Donning\) and Removing \(Doffing\)](#).

Ebola virus is detected in blood only after the onset of symptoms, usually fever. It may take up to three (3) days after symptoms appear for the virus to reach detectable levels. Virus is generally detectable by real-time RT-PCR from 3-10 days after symptoms appear.

Ideally, specimens should be taken when a symptomatic patient reports to a health care facility and is suspected of having an Ebola exposure. However, *if the onset of symptoms is < 3 days, a later specimen may be needed to completely rule-out Ebola virus, if the first specimen tests negative.*

Specimens must be collected in EDTA blood collection tubes and stored at 2-8°C. Specimens may be stored at refrigerated temperatures (2-8°C) but must be received at the testing laboratory within seven (7) days of collection. Specimens must be shipped to the testing laboratory using enough cold packs to maintain refrigerated temperature. Do not freeze specimens.

Specimens MUST be received by an Illinois Department of Public Health laboratory within seven days (168 hours) of collection. For questions pertaining to sample collection, storage, or shipping, contact an IDPH laboratory using the contact information below.

Collection Instructions for Adult Patients Suspected of Ebolavirus Disease

(A completed Communicable Disease Test Requisition form located at <http://dph.illinois.gov/topics-services/lab-testing-services/clinical-testing>).

1. Do **not** use expired collection materials.
2. Do **not** collect or transport specimens in glass containers/tubes.
3. Do **not** collect specimens in heparinized tubes.
4. Do **not** collect specimens in collection tube containing coagulants.
5. Do **not** attempt to open collection tubes for aliquoting of specimens. Opening tubes destroys the vacuum seal and increases the risk of exposure and/or leakage during transit.

6. A total of three (3) samples should be collected per patient with a minimum of four milliliters (4 ml) of whole blood collected in plastic EDTA blood collection tubes.
7. Complete all the demographic information on the communicable disease laboratory test requisition form available at <http://dph.illinois.gov/topics-services/lab-testing-services/clinical-testing>.
8. **The authorization number provided by the Communicable Disease Control Section MUST be included on the requisition form.**
9. Refrigerate (2-8°C) the specimens and ship specimens using enough cold packs to maintain refrigerated temperature. Do not freeze specimens. Do not ship specimens on dry ice.
10. The specimen(s) *must* be received at the laboratory **no later than** seven days (168 hours) *from the date of collection*. Avoid shipping specimens over weekends or holidays as specimens will not be received, and specimens will not maintain the required temperature allowed for testing.
11. For any questions pertaining to sample collection, storage, or shipping, contact an IDPH laboratory using the contact information below.

Collection Instructions for Pediatric Patients Suspected of Ebola Virus Disease

(A completed Test Requisition form located at <http://dph.illinois.gov/topics-services/lab-testing-services/clinical-testing>).

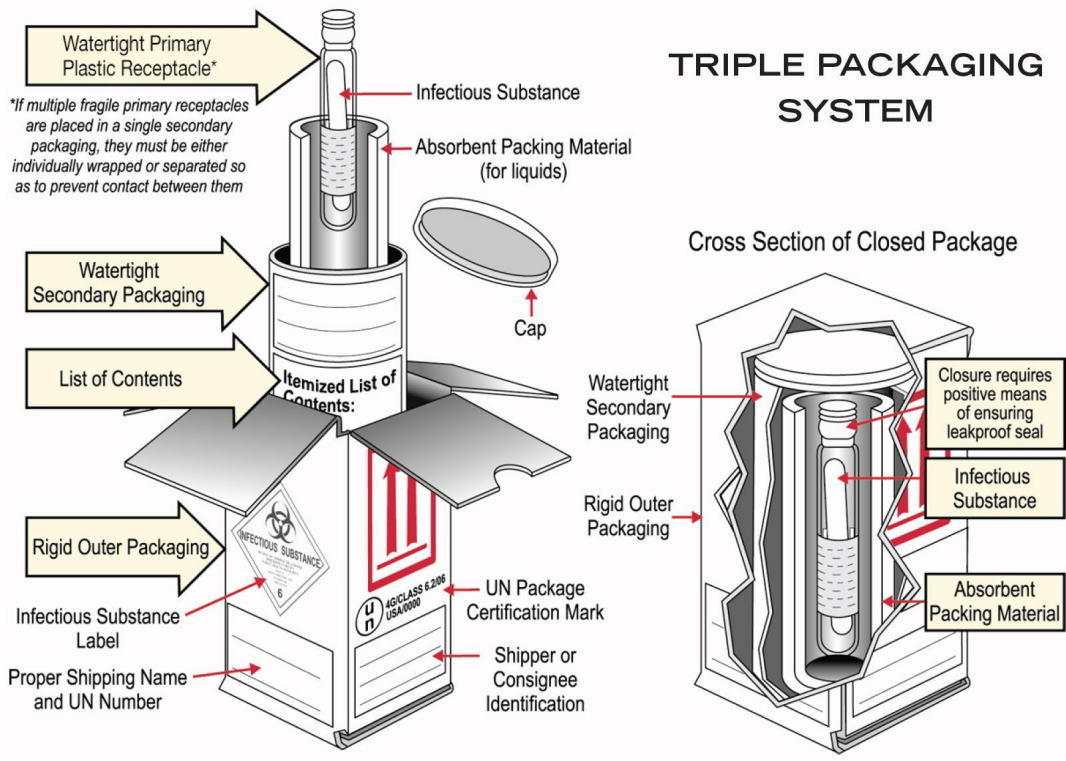
1. Do **not** use expired collection materials.
2. Do **not** collect or transport specimens in glass containers/tubes.
3. Do **not** collect specimens in heparinized tubes.
4. Do **not** collect specimens in collection tube containing coagulants.
5. Do **not** attempt to open collection tubes for aliquoting of specimens. Opening tubes destroys the vacuum seal and increases the risk of exposure and/or leakage during transit.
6. A total of three (3) samples should be collected per patient with a minimum of one milliliter (1 ml) of whole blood collected in plastic EDTA blood collection tubes.
7. Complete all the demographic information on the communicable disease laboratory test requisition form available at <http://dph.illinois.gov/topics-services/lab-testing-services/clinical-testing>.
8. **The authorization number provided by the Communicable Disease Control Section MUST be included on the requisition form.**
9. Refrigerate (2-8°C) the specimens and ship specimens using enough cold packs to maintain refrigerated temperature. Do not freeze specimens. Do not ship specimens on dry ice.
10. The specimen(s) *must* be received at the laboratory **no later than** seven days (168 hours) *from the date of collection*. Avoid shipping specimens over weekends or holidays as specimens will not be received, and specimens will not maintain the required temperature allowed for testing.
11. For any questions pertaining to sample collection, storage, or shipping, contact an IDPH laboratory using the contact information below.

Instructions for Specimen Transport

1. **Messenger/Courier by ground transport:** Avoid shipping specimens suspected of Ebola Virus Disease by messenger or ground transport. Specimens collected from a patient under investigation (PUI) for Ebola Virus Disease must be shipped as Category A Infectious Substances in accordance with the U.S. Department of Transportation's (DOT) [Hazardous Materials Regulations \(HMR\) 49 CFR 171-180](#) by a person trained and certified in compliance with DOT regulations.
2. **Commercial carrier by ground/air transport:** Specimens must be packed and shipped on ice packs. Specimens should be packaged and shipped without attempting to open collection tubes or aliquoting specimens. Specimens should be packaged using a [triple packaging system](#) that consists of:
 - A primary, sealed specimen container wrapped in absorbent material.
 - A secondary, watertight, leak-proof container.
 - An outer shipping package.

3. *Ship specimens by overnight delivery* to the attention of the LRN Diagnostics Unit at the Springfield or Chicago testing laboratories.
4. The specimen(s) ***must*** be received at the laboratory **no later than** seven (7) days *from the date of collection*. Do not ship specimens over weekends or holidays as specimens will not be received, and specimens will not maintain the required temperature allowed for testing.

PACKAGING & SHIPPING CLINICAL SPECIMENS



NOTE: Testing may be delayed, or specimens may be considered **UNSATISFACTORY** if the above instructions are not followed or the requisition form is not filled out completely. If there are questions about specimen collection, handling, or shipping, contact an Illinois Department of Public Health laboratory and speak to molecular laboratory personnel.

Ship specimens by overnight delivery as Category A using a commercial carrier to the designated laboratories indicated below.

Send to: Illinois Department of Public Health
 Division of Laboratories
 825 N. Rutledge St.
 Springfield, IL 62702
 Phone 217-782-6562

Illinois Department of Public Health
 Division of Laboratories
 2121 W. Taylor St.
 Chicago, IL 60612
 Phone 312-793-4760