

## Coronavirus Disease 2019 Specimen Submission Guide

Contact TDH 24/7 at 615-741-7247

This guidance should be used for specimen collection related to the ongoing Coronavirus Disease 2019 (COVID-19) outbreak. The Tennessee State Public Health Laboratory (SPHL) has capacity to test for the virus that causes COVID-19 (SARS-CoV-2) using an RT-PCR assay.

**\*Specimens must be approved by TDH before submission to the laboratory\***

### Complete Necessary Forms

- **TDH Specimen Submission Form TDH 4182. (Attachment #2) Complete one form per specimen.**
  1. For “Test Requested” select Other, and fill in “Novel coronavirus testing”
  2. Include these forms with the specimen shipment.
- **Patient Under Investigation (PUI) Form (Attachment #3)**
  1. Fill out this form as completely as possible, including the specimen collection information on the bottom left of the form.
  2. Make a copy for your records, include the original with the specimen shipment
  3. Send a scan of the PUI form via secure email to [EP.response@tn.gov](mailto:EP.response@tn.gov) or FAX to 615-741-3857

### Specimen Collection Guidance

Specimens should be collected as soon as possible once testing at SPHL is approved. The SPHL testing protocol requires upper or lower respiratory specimens; **the preferred specimen type is nasopharyngeal and oropharyngeal swab (NP/OP swab)**. Refrigerate specimens at 2-8°C and ship overnight to SPHL on ice pack.

As a reminder, healthcare personnel in contact with a suspected case or PUI should use standard precautions, contact precautions, airborne precautions, and eye protection (e.g., goggles or a face shield).

#### 1. **Upper respiratory:**

- **Nasopharyngeal swab AND oropharyngeal swab (NP/OP swab)**: Use only synthetic fiber swabs with plastic or aluminum shafts. Do not use calcium alginate swabs or swabs with wooden shafts, as they may contain substances that inactivate some viruses and inhibit PCR testing. Place swabs immediately into sterile tubes containing 2-3 ml of viral transport media. NP and OP specimens should be kept in separate vials.
  - *Nasopharyngeal swab*: Insert a swab into the nostril parallel to the palate. Leave the swab in place for a few seconds to absorb secretions. Swab both nasopharyngeal areas with the same swab.

- *Oropharyngeal swab* (e.g., throat swab): Swab the posterior pharynx, avoiding the tongue.
  - Nasopharyngeal wash/aspirate or nasal aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. Refrigerate specimen at 2-8°C and ship overnight to CDC on ice pack.
2. **Lower respiratory:**
- Sputum: Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.
  - Bronchoalveolar lavage, tracheal aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

### **Specimen Storage**

1. Refrigerate all specimen types at 2-8°C after collection.
2. Label each specimen container with:
  - unique identifier (e.g., laboratory requisition number, patient name, medical records number, patient ID number)
  - TDH PUI ID
  - specimen type
  - collection date
3. Complete a **TDH Specimen Submission Form** for each specimen submitted ([TDH 4182; Attachment #2](#))

### **Specimen Packaging and Shipping**

Ship specimens overnight to SPHL on ice packs. When shipping potential 2019-nCoV specimens, follow shipping regulations for UN 3373 Biological Substance, Category B. Additional shipping and packaging guidelines are available on CDC's [website](#).

Hospitals or birthing facilities that utilize the courier service for newborn screening may be able to utilize the courier for pickup of 2019-nCoV specimens. Reach out to [Jane.Yackley@tn.gov](mailto:Jane.Yackley@tn.gov) for specific instructions and requirements on how to use the courier system in place at your facility.

### **General Requirements**

Packages must be of good quality, strong enough to withstand transport and must consist of three components: a primary receptacle(s), a secondary packaging, and a rigid outer packaging. Primary receptacles must be packed in secondary packaging so that, under normal transport conditions of transport, they cannot break, be punctured or leak their contents into the secondary packaging.

Secondary packaging must be secured in outer packaging with suitable cushioning material. Any leakage of the contents must not compromise the integrity of the cushioning material or of the outer packaging.

**Prepare the package (liquid substances):**

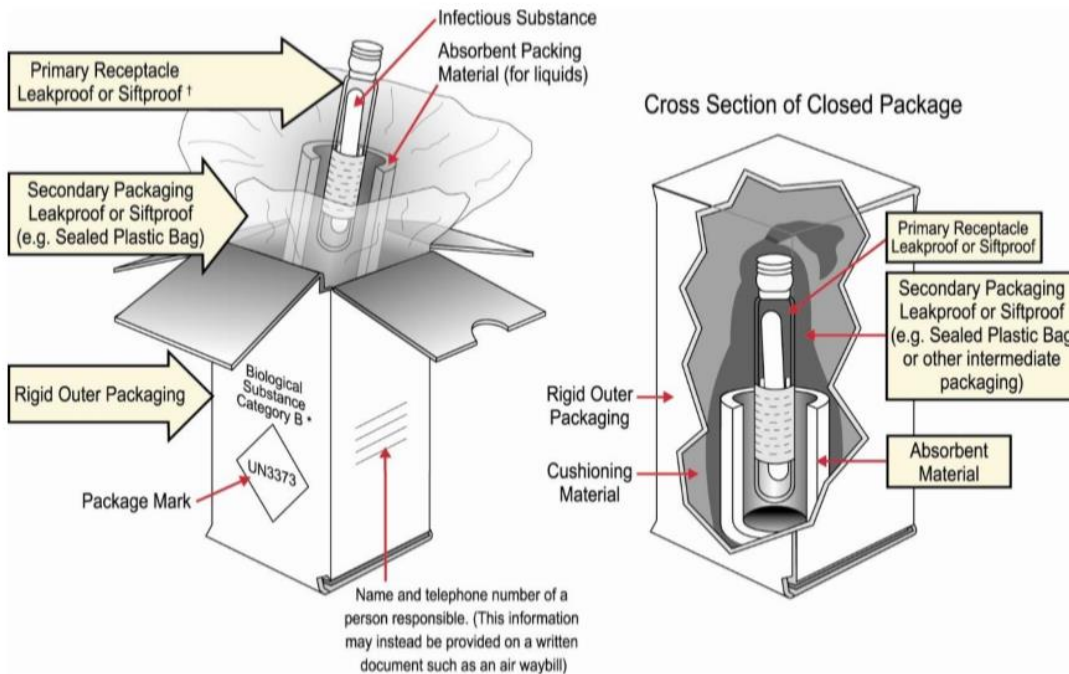
1. Primary receptacle(s) must be leak-proof and must not contain more than 1 L.
2. Secondary packaging must be leak-proof.
3. If multiple fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated to prevent contact between them.
4. Absorbent material must be placed between the primary receptacle and the secondary packaging. The absorbent material, such as cotton wool, must be in sufficient quantity to absorb the entire contents of the primary receptacle(s) so that any release of the liquid substance will not compromise the integrity of the cushioning material or of the outer packaging.
5. The primary receptacle or the secondary packaging must be capable of withstanding, without leakage, an internal pressure of 95 kPa.
6. The outer packaging must not contain more than 4 L. This quantity excludes ice used to keep specimens cold.
7. Apply label to package:
  - Print UN 3373 label.
  - Include the name and telephone number of the person who will be available during normal business hours who knows the content of the shipment.
  - Place the label on one side of the box and cover the label completely with clear tape (do not tape just the edges of the label).
8. Ship specimens overnight to SPHL on ice packs.

Tennessee Department of Health Laboratory Services

Attn Virology  
630 Hart Lane  
Nashville, Tennessee 37216  
Phone: (615) 262-6300  
Fax: (615) 262-6393

9. Email TDH ([Bryan.p.mason@tn.gov](mailto:Bryan.p.mason@tn.gov); [Jane.Yackley@tn.gov](mailto:Jane.Yackley@tn.gov); [Jessica.Schultz@tn.gov](mailto:Jessica.Schultz@tn.gov) [EP.Response@tn.gov](mailto:EP.Response@tn.gov)) with the FedEx tracking number or shipping confirmation when shipped to the SPHL.

# UN 3373 Category B schematic for packaging



NAME AND TELEPHONE NUMBER OF  
PERSON RESPONSIBLE FOR SHIPMENT:

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# Overpack



BIOLOGICAL SUBSTANCES  
CATEGORY B