

Clinical Specimens and Isolates Testing

Clinical specimens and isolates can be sent to the SHL-LRC by enrolled laboratories without prior approval. Clinical specimens submitted to the LRC must originate from an individual with signs and symptoms clinically compatible with Legionnaires’ disease (LD) or have an epidemiological link to a suspected or confirmed case(s) or source(s) of *Legionella*.

Although not required, advance notice of shipment to the SHL-LRC would be appreciated. However, if the submitter plans on sending more than 5 specimens/isolates, please send an email to the LRC prior to shipment:

SHL-LRC@iowa.uiowa.edu

Subject “LRC clinical specimens/isolates shipment”

Text: Indicate number of clinical specimens/isolates sent and submitting institution name and PHL Org. ID

Clinical Specimen and Isolate Test Request Form

The LRC Clinical Specimen and Isolate Test Request Form will be sent to submitters as part of their onboarding documents. The electronic form is fillable (blue boxes). Please complete all sections of the form electronically (i.e., patient information, public health laboratory information, sample and test information, requested information for public health purposes), print and ship with specimens/isolates.

The same two patient identifiers are required on both the Clinical Specimen and Isolate Test Request Form and the specimen/isolate tube. Preferred identifiers are patient name (first and last) and date of birth.

Table 1. Acceptable Clinical Specimen/Isolate Types

Sample Type ¹	Sample Source	Minimum Sample Volume	Sample Storage	Shipping Requirements
Clinical Specimens ²	Sputum Bronchial alveolar lavage Other lower respiratory tract specimens	3 mL	2-8°C	Ship overnight to ensure arrival at the LRC within 24 hours of collection ³ . Ship with frozen ice packs
	Lung tissue	Pea-sized or larger		
Clinical <i>Legionella</i> Isolates	BCYE slant (preferred) or culture plate from a single colony	N/A	2-8°C for up to 4 days or frozen (≤ -20°C) in calf serum up to 40 days	Ship overnight at ambient temperature or with frozen ice packs. If frozen in calf serum, send on dry ice

¹Unacceptable specimen/isolate types include leaking specimens, insufficient quantity of specimen and specimens sent at the wrong temperature (e.g., frozen specimens).

²For consultation on specimen types not listed here, or any other questions, call 319-335-4335.

³Samples received after 24 hours of collection will still be accepted, however, the final report will indicate that samples were received outside of acceptable limits.

All specimens/isolates should be labelled with a unique identifier for purposes of tracking. This is in addition to the two unique patient identifiers and should be something assigned by the submitting laboratory. It can be the submitting laboratory's accession number or a simple number such as Sample 1, Sample 2, etc. The unique identifier should be entered on the Clinical Specimen and Isolate Test Request Form under "Client Reference #". This number will be used to track the specimen and will be included on reports.

PCR is a very sensitive test and precautions should be taken to not cross-contaminate specimens (i.e., don fresh gloves before collecting specimen. Avoid contact with environmental surfaces). All specimens should be collected using sterile containers.

- **Sputum:** Patient should rinse their mouth with water prior to collection. Instruct the patient not to spit out saliva or postnasal discharge into container. Collect specimen resulting from deep cough (expectorate) in sterile screw-cap container. Satisfactory quality implies the presence of mucoid or mucopurulent material and is of greater significance than volume. Ideally, a sputum specimen should have a volume of 3–5 mL, although smaller quantities are acceptable.
- **Bronchoalveolar lavage (BAL):** Collect fluid into a sterile container. Minimum volume of 3 mL.
- **Tracheal aspirates:** Minimum volume of 3 mL
- **Bronchoscopy specimens:** Minimum volume of 3 mL
- **Isolate:** Prepare a BCYE slant (preferred) or culture plate from a single colony. If sending frozen isolates, bacterial growth should be resuspended preferably in calf serum prior to freezing.
- **Lung Biopsy specimens:** Transfer a pea-size fragment of the lung into the container and add a small amount of sterile, non-bacteriostatic distilled water to prevent desiccation. **DO NOT ADD SALINE**, as it may be inhibitory.

Shipping conditions:

Shipping costs are the responsibility of the submitting laboratory and it is the sender's responsibility to minimize risk of shipping infectious substances through proper packaging and compliance with regulations.

- Wrap specimen container in absorbent material and place inside a biohazard bag.
- If sending an isolate plate, tape the plate to keep it closed.
- Ship overnight (avoid Fridays, weekends, and holidays) within 24 hours of collection to:

State Hygienic Laboratory at the University of Iowa
U of I Research Park
2490 Crosspark Road,
Coralville, IA 52241-4721
Phone: 319-335-4500