

Information and Specimen Submission Instructions for Suspected Feline Plague

This document provides information for veterinarians on how to collect and submit specimens from domestic cats¹ for testing for the agent of plague, *Yersinia pestis*. This document describes the types of specimens that may be tested, how these specimens should be collected, and the protocol for packaging and shipping. General information on feline plague in California is available on the [CDPH plague webpage](#), and also in the [CVMA publication *Feline Plague in California*](#).

What to do if you suspect plague in a cat

Cats infected with plague can readily transmit disease to anyone who has contact with their tissues or secretions. Because plague in a cat poses a significant risk to human health, confirmation of the diagnosis should be pursued in a serious, safe, and expeditious manner.

1. Notify the Communicable Disease office at your [local health department](#) that you have a feline patient for which you suspect plague and would like to submit specimens for testing. The public health official will discuss the case with you to confirm that plague testing is appropriate. If plague testing is approved, the local health department will notify the Laboratory Response Network for Biological Threats (LRN-B) public health laboratory. Specimens received at the laboratory without prior consultation with public health officials will not be tested.
2. If public health officials approve plague testing, fill out the [Microbial Diseases Laboratory's General Submission Form](#) as completely as possible. Copies should be faxed/e-mailed to the local health department and included with the specimens when they are shipped.
3. Collect, label, package, and ship specimens according to instructions on pages 2-5 of this packet.
4. Preliminary test results for swabs, exudates, and aspirates should be available within 1-4 business days of receipt, and final results within 7 business days.

¹ Dogs and other domestic animals do not typically develop clinical signs of illness following exposure to *Y. pestis*. Laboratory testing for plague in these species is rarely indicated. Consult with your public health official if plague is suspected in non-feline species.

Procedures for Submitting Specimens from Domestic Cats for Plague Testing

Plague may be suspected in cats based on compatible clinical presentation and history of contact with wild rodents and/or their fleas in an enzootic area.

Clinical signs can include fever, swollen abscessed lymph nodes (especially submandibular and cervical), lethargy, anorexia, and respiratory signs (cough, dyspnea, ocular or nasal discharge).

History conducive to *Y. pestis* exposure is a cat with known or suspected contact with wild rodents, or other outdoor activity, in an area recognized as enzootic for plague. (See map on page 6.)

A cat suspected of having plague should be hospitalized in isolation. The number of clinic staff who have contact with the cat should be minimized. Staff should wear mask (preferably N-95), gloves, and eye protection at all times when handling the cat and its tissues. Staff who have unprotected contact with a cat—particularly if plague pneumonia is suspected—should discuss their exposure and possible need for antibiotic prophylaxis with their health care provider. Appropriate flea control should be implemented in the clinic to suppress any plague-infected fleas.

Laboratory confirmation of plague is achieved through culture identification of *Y. pestis*. Presumptive identification is made by PCR and direct fluorescent antibody (DFA). Plague testing is available in California only at public health laboratories that are part of the LRN-B Network². Do not request plague testing from your usual commercial veterinary diagnostic laboratory.

Collection and packaging of tissues for testing

Lymph node aspirate or exudate swab

1. Drainage from abscessed lymph nodes may be collected using a culture swab. The swab should be resealed and refrigerated until shipped.
2. Fluctuant but closed abscesses may be aspirated with needle and syringe with a Luer-lock hub. See Instructions for Preparing Lymph Node Aspirates for Plague Testing beginning on page 3 for procedures to prepare and secure aspirate specimens.

Pharyngeal swab

1. Nasal discharge, sputum, and/or pharyngeal secretions may be collected using a culture swab. The swab should be resealed and refrigerated until shipped.

Other specimens may be submitted for testing only following consultation with and approval by the LRN-B laboratory.

² Contact information for county and city public health departments is available on the [CDPH CCLHO Health Officer Directory webpage](#).

Instructions for Preparing Lymph Node Aspirates for Plague Testing

A fluctuant but non-draining inflamed lymph node may be sampled for plague testing by aspiration with a needle and Luer-lock syringe. The aspirate may be prepared for packaging and shipping to the public health laboratory by one of the two methods described below.

Under no circumstances should needles/sharps be included with the specimen. Specimens received at the laboratory with needles/sharps will be discarded and not tested.

1. Transfer aspirate to a sterile container

- a. Select a blood collection tube (e.g., red top tube) of at least 3cc capacity without serum-separator, anticoagulant, or other preservative.
- b. Pierce the rubber top with the needle/syringe that contains the aspirate. Gently depress the plunger until the aspirate is transferred into the tube. If the aspirate is too viscous to transfer through the needle, withdraw the needle and proceed with option #2 below.
- c. When the aspirate is transferred, safely discard the needle/syringe assembly into the sharps container.



2. Retain aspirate in syringe

- a. Carefully remove the needle from the syringe, preferably using a needle removal device to ensure user safety.
- b. Place a hub cap securely on the syringe to seal contents.



Wrap the capped syringe or collection tube in absorbent packing material and place in the plastic casing of a large (e.g., 60cc) syringe or other rigid vessel to prevent breakage. Replace and seal the end cap

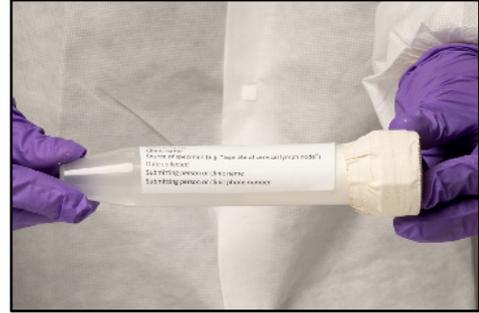


Instructions for labelling, packing, and shipping specimens for plague testing are continued on the next page.

Labelling, Packaging, and Shipping Specimens for Plague Testing

Steps:

1. Clearly label each specimen with the following information: patient name, source of specimen (e.g., “aspirate of cervical lymph node”), and date collected.
2. All specimens must be individually packaged in leak-proof specimen bags or containers. Be sure to complete and include a copy of the [Microbial Diseases Laboratory’s General Submission Form](#), requesting “Bacterial culture for identification”.
3. Place the specimen into an insulated shipping container with adequate cold packs to maintain temperature control during shipment.



Over-night shipping can be arranged through your local public health department. Prior to shipping, contact your local public health department so that the laboratory is alerted to the incoming specimens, as well as to receive any final shipping instructions. **Testing will be delayed or denied for specimens received at the laboratory without prior telephone consultation with and approval by the local public health department.**

