

Sacramento County Public Health Laboratory Test Menu and Specimen Collection Manual 2021

In addition to the available tests listed in this manual Sacramento County Public Health Laboratory (SCPHL) provides access to reference services at the California Department of Public Health State Laboratory and the Centers for Disease Control and Prevention (CDC).

Contact SCPHL at (916) 874-9231 with any questions regarding tests listed in this guide or tests available at MDL, VRDL or the CDC.



Acid Fast Culture and Smear (Mycobacteriology)

CPT Code: 87015 (Method, Specimen Concentration), 87206 (Method, Fluorescent stain), 87116 (Method, Culture)

Specimen Collection: (Collect specimens before antimicrobial therapy)

1. Sputum

- a. Rinse the mouth with water before sputum is collected to minimize residual food particles, mouthwash, and oral drugs that might contaminate the specimen or inhibit growth of any acid-fast bacilli present.
- b. Saliva and nasopharyngeal discharge are not sputum.
- c. Collect only the exudative material brought up from the lungs after a deep, productive cough.
- d. Early morning specimens, preferably 5 - 10 ml each, should be collected on three consecutive days. A volume of at least 3 ml is desired for testing.

2. Blood

- a. A sample of 5 - 8 ml may be collected in either of the following sterile anticoagulant Vacutainer® tubes:
 - Yellow** top containing sodium polyanethol sulfonate (SPS)
 - Green** top containing sodium heparin
- b. Blood collected in EDTA tubes or coagulated blood are NOT acceptable.
- c. Blood specimens are stored at room temperature if they cannot be immediately transported or processed for testing.

3. Body Fluids

- a. Collect all fluids in sterile containers with screw-cap lids.
- b. Abdominal fluid (peritoneal, paracentesis, dialysis, bile) 10 - 15 ml
- c. Chest fluids (pleural, thoracentesis, empyema) 10 - 15 ml
- d. Exudates (transudates, drainages, ulcers) 3 - 5 ml
- e. Other fluids (pericardial, synovial, joint) 2 - 3 ml

4. *Bone*

- a. For large, clean bone fragments with no tissue attached, add sterile saline to completely cover the specimen and vortex vigorously for 1 - 2 minutes.
- b. For large bone fragments with tissue attached, scrape as much tissue as possible from the bone and process the tissue. Cover remaining bone with saline, vortex and inoculate saline to media.
- c. Transport and store at room temperature

5. *CSF*

- a. As much fluid as possible is aseptically collected by aspiration or during surgical procedures, as only small numbers of organisms may be present. The recommended volume is 2 ml.
- b. Transport and store at room temperature.

6. *Gastric Lavage Fluid*

- a. Aspiration of swallowed sputum from the stomach may be necessary for patients with minimal disease, infants, young children, and adults who are unable to cooperate with sputum induction procedures.
- b. Fasting, early morning specimens are optimal.
- c. A volume of 20 - 30 ml is recommended.
- d. If the specimen cannot be processed within 4 hours, the collection bottle should contain about 100 mg of sodium carbonate or another alkaline buffer salt. This reduces long-term exposure of any mycobacteria to the stomach acid, which is detrimental to organism recovery and detection.

7. *Stool*

- a. Mix 2 grams (marble-size) of stool with 10 ml of saline.
- b. Filter with 4 - 6 layers of gauze into a 50 ml centrifuge tube, and submit the tube.

8. *Swabs*

- a. Draining sinus site
- b. Swabs are not optimal for the recovery of mycobacteria because of limited surface area and hydrophobic nature of mycobacteria

9. *Tissue*

- a. At least 1 g or 1 mm³ of tissue should be collected into a sterile container without fixatives or preservatives.
- b. To protect the tissue from drying, a small amount of sterile saline may be added.

10. *Urine*

A series of three, early morning, cleanly voided, midstream specimens collected on consecutive days is superior to a 24 hour pooled specimen. A volume of 15 ml is recommended.

11. *Wounds*

Skin lesions, granulomas, ulcers, subcutaneous nodules, or anything related to an extremity may be sampled if the physician suspects *M. marinum* and/or *M. ulcerans*. Aseptically collect as much material as possible.

Transportation and Storage:

Transport specimens to the laboratory at 4°C, within 24 hours.
Refrigerate specimens at 4°C if delivery is delayed.

Autoclave Sterilization Verification

CPT Code: None (Method, Culture)

Specimen Collection:

Send autoclave treated Sporampules along with an untreated ampule from the same lot. Please record the lot number and expiration date of the ampules on the specimen requisition form.

Transportation and Storage:

Transport as soon as possible at room temperature.

Chlamydia / Gonorrhea Nucleic Acid Amplified Test (NAAT)

CPT Code: 87491 and 87591 (Method, NAAT)

Specimen Collection:

1. Endocervical swab specimens

- a. Remove excess mucus from the cervical os and surrounding mucosa using the cleaning swab (white shaft swab in the package with red printing). **Discard this swab after use.**
- b. Insert the specimen collection swab (blue shaft swab in the package with green printing) into the endocervical canal.
- c. Gently rotate the swab clockwise for 10 - 30 seconds in the endocervical canal to ensure adequate sampling.
- d. Withdraw the swab carefully; avoid any contact with the vaginal mucosa.
- e. Remove the cap from the swab specimen transport tube and immediately place the specimen collection swab into the transport tube.
- f. Carefully break the swab shaft at the score line; use care to avoid splashing of the contents.
- g. Recap the swab specimen transport tube tightly.

2. Male urethral swab specimens

- a. The patient should not have urinated for at least one hour prior to specimen collection.
- b. Insert the specimen collection swab (blue shaft swab in the package with the green printing) 2 - 4 cm into the urethra.
- c. Gently rotate the swab clockwise for 2 - 3 seconds in the urethra to ensure adequate sampling.
- d. Withdraw the swab carefully.
- e. Remove the cap from the swab specimen transport tube and immediately place the specimen collection swab into the specimen transport tube.
- f. Carefully break the swab shaft at the score line; use care to avoid splashing of the contents. Recap the specimen transport tube tightly.

3. *Urine specimens (male or female)*

- a. The patient should not have urinated for at least one hour prior to specimen collection.
- b. Direct patient to provide first-catch urine (approximately 20 - 30 ml of the initial urine stream) into a urine collection cup free of any preservatives. Collection of larger volumes of urine may result in specimen dilution that may reduce test sensitivity. Female patients should not cleanse the labial area prior to providing the specimen.
- c. Remove the cap and transfer 2 ml of urine into the urine specimen transport tube using the disposable pipette provided. The correct volume of urine has been added when the fluid level is between the black fill lines on the urine transport tube label.
- d. Re-cap the urine specimen transport tube tightly. This is now known as the processed urine specimen.

4. *Throat and rectal specimens*

- a. Partially open the multitest swab. Do not touch the soft tip or lay the swab down. Hold the swab with the thumb and forefinger in the middle of the shaft covering the black score line
- b. Insert the swab into the rectum 1 to 2 inches past the anal margin and rotate the swab 5 to 10 seconds
- c. Immediately place the swab into the transport tube and break the shaft at the score line. Tightly recap the tube and add patient information on the tubes label
- d. For throat specimens insert the swab ensuring contact with bilateral tonsils and posterior pharyngeal wall. Remove the swab without touching the cheek or tongue.
- e. Preparation of the swab, transport and labelling are the same as rectal specimen
- f. Urine Specimens: After collection, transport the processed urine specimens in the GENPROBE APTIMA urine specimen transport tube at 2° - 30°C and store at 2° - 30°C until tested. Processed urine specimens should be assayed within 30 days of collection. If longer storage is needed, freeze at -20° to -70°C for up to 90 days after collection. Urine samples that are still in the primary collection container must be transported to the lab at 2° - 30°C. Transfer the urine sample into the APTIMA urine specimen transport tube within 24

hours of collection. Store at 2° - 30°C and test within 30 days of collection.

4. *Transportation and Storage:*

- a. Swab specimens: After collection, transport and store the swab in the swab specimen transport tube at 2° to 30° C until tested. Specimens must be assayed with the APTIMA Combo 2 Assay within 60 days of collection. If longer storage is needed, freeze at -20°C to -70°C for up to 90 days after collection.
- b. Urine Specimens: After collection, transport the processed urine specimens in the GENPROBE APTIMA urine specimen transport tube at 2°C to 30°C and store at 2°C to 30°C until tested. Processed urine specimens should be assayed within 30 days of collection. If longer storage is needed, freeze at -20°C to -70°C for up to 90 days after collection. Urine samples that are still in the primary collection container must be transported to the lab at 2°C to 30°C. Transfer the urine sample into the APTIMA urine specimen transport tube within 24 hours of collection. Store at 2°C to 30°C and test within 30 days of collection.

Clearance: Specify enteric pathogen

CPT Code: 87045 (Method, Culture)

Specimen Collection:

- a. Collect stool and place in the Enteric Collection kit (supplied by the lab), or use a clean, sterile, plastic container. Transfer enough stool into the transport fluid so that the liquid level is raised to the red fill line. Thoroughly mix contents of the vial.
- b. Fill out a Title 17 submission form for this specimen type.

Transportation and Storage:

Transport to the laboratory at room temperature within 72 hours.

Culture for Identification (Bacterial, Fungal, Mycobacterial)

CPT Code: 87077 (Method, Culture)

Specimen Collection:

Complete a Title 17 submission form for this specimen type.

Cultures for identification should be submitted on screw-cap agar slants appropriate to the organism. Cultures should be fully grown when submitted, or delays in identification may result.

DO NOT SUBMIT CULTURES FOR IDENTIFICATION ON PLATE MEDIA UNLESS ABSOLUTELY NECESSARY!

IF SUBMITTED, PLATES MUST BE SEALED COMPLETELY WITH TAPE OR THEY MAY BE REJECTED.

Transportation and Storage:

Transport immediately to the laboratory at room temperature.

Dark-field Fresh Exudate – Syphilis Detection

CPT Code: 87166 (Method, Microscopic examination)

Specimen Collection:

Collect serous exudate from base of the lesion. Place specimen on a microscope slide with cover slip.

(Special collection note: Contact the Laboratory BEFORE COLLECTION to make arrangements for test interpretation by a microbiologist.)

Transportation and Storage:

Specimen **MUST BE READ** within 10 minutes of collection.

Drug Susceptibility (Antimicrobial Susceptibility Testing) (AST)

CPT Code: 87188 x 7 (*M. tuberculosis* isolates)

Specimen Collection:

Cultures for drug susceptibility should be submitted on screw-cap agar slants appropriate to the organism. Cultures should be fully grown when submitted, or delays in testing may result. **DO NOT SUBMIT CULTURES ON PLATE MEDIA.**

Complete a Title 17 submission form for this specimen type.

Transportation and Storage:

Transport immediately to the laboratory at room temperature.

Enteric Screen: *Salmonella/Shigella/E. coli O157/Shiga Toxin*

CPT Code: 87045 and 87046 (Method, Culture)

Specimen Collection:

Collect stool and place in the Enteric Collection kit (supplied by the laboratory), or use a clean, sterile, plastic container. Transfer enough stool into the transport fluid so that the liquid level is raised to the red fill line. Thoroughly mix contents of the vial. If *Vibrio* is suspected notify the laboratory prior to submission of specimen

Transportation and Storage:

1. Store and transport stool specimens in C&S medium at room temperature within 24 hours. Specimens between 24 - 96 hours old may be tested and the results qualified to reflect that excess transit time may affect recovery of enteric pathogens.
2. Specimens in C&S medium, greater than 96 hours old, are unsatisfactory for testing.
3. Unpreserved, fresh specimens must be received within 4 hours of collection. Unpreserved specimens received 4 - 24 hours after collection may be tested and the results qualified. **Unpreserved specimens received more than 24 hours after collection are unsatisfactory for testing.**
4. Multiple stool specimens collected on the same day are acceptable for enteric culture.
5. Buffered glycerol saline is an **unsatisfactory transport medium** for the isolation of *Vibrio* sp.
6. Urine specimens for isolation of *Salmonella typhi* must be received in a sterile screw-top container within 24 hours of collection.
7. **Rectal swabs are generally not satisfactory specimens except for outbreaks of *Shigella* sp.** However, if a patient is unable to submit a stool specimen, a rectal swab may be tested and the results qualified as "scant specimen." Rectal swabs are collected in Amies charcoal

transport media, stored at room temperature, and may be tested up to 72 hours after collection.

Fungal/yeast Culture and ID

CPT Code: 87101 (Method, Culture)

Specimen Collection:

Skin, hair and nail specimens should be collected into a sterile container. Thoroughly disinfect the area around skin and nails with 70% alcohol before collection.

Please contact the laboratory for specific instructions, as collection and transport procedures vary widely for various specimen types and suspected etiologic agents.

Transportation and Storage:

Transport skin, hair, and nail specimens in a fungus collection kit; specimens are stable at room temperature.

Gonorrhea Culture Screen

CPT Code: 87081 (Method, Culture), 87077 (Pathogen rule-out)

Specimen Collection:

Specimens are collected using a sterile Dacron, rayon or calcium alginate swab. Cotton swabs may contain substances that are toxic to the organism and are not recommended. Acceptable specimens for culture include genital, oral and rectal sites.

Transportation and Storage:

Specimens are inoculated onto a GC pill plate, and immediately placed into a zipper lock bag with a CO₂ generating tablet. The plate should be incubated within 30 minutes at 35° - 37°C, and transported to the laboratory within 72 hours of collection.

Place specimens collected by swab into Amies transport media, and transport at room temperature to the laboratory within 8 hours. GC is viable in Amies transport media for only 8 hours.

HIV Antibody Screening (Serum / Plasma)

CPT Code: 86701 (Method, Enzyme immunoassay)

Specimen Collection:

Serum, plasma, or cadaveric serum specimens may be used in the test. The following anticoagulants have all been evaluated and found to be acceptable: EDTA, sodium and lithium heparin, sodium citrate, CPD, CPDA-1, and ACD.

Cadaveric serum samples may be tested; please contact the laboratory for more information.

Transportation and Storage:

Transport serum and plasma specimens at 2° - 8°C within 7 days. If transport is delayed, specimens should be frozen at -20°C or colder. Specimens should not be used if they have incurred more than 5 freeze-thaw cycles.

Influenza Virus PCR w/ subtyping

CPT Code: 87502 x 2 (Method, real-time PCR), 87503 x 4

Specimen collection:

Specimens should be collected as soon as possible after onset of symptoms and before anti-viral treatment. Please keep in mind the following guidelines:

- a. Nasal aspirates or nasal washes are the preferred specimens. Collect in a sterile, screw-capped container. Bronchoalveolar lavage and tracheal aspirates are also acceptable.
- b. Close off both ports of Lukens traps and aspiration tubes by securely connecting the vacuum tube to both ports.

Small tipped Dacron or polyester nasopharyngeal swabs can be used for specimen collection. Swabs may be taken from the throat, nasal passage, or nasopharynx. Both swabs may be placed in the same viral transport container.

- **Swabs with wooden shafts are unacceptable for testing.**
- **Calcium alginate swabs are unacceptable for PCR.**

For suspected avian influenza (A/H5), include one upper respiratory tract specimen (throat swab, nasal swab) and one lower respiratory tract

specimen (BAL, tracheal aspirate).

Transportation and Storage:

Specimens should be put into viral transport media and delivered to the laboratory on ice within 48 hours. Freeze the specimen if transport will be delayed beyond 48 hours. Freezing and thawing of specimens should be avoided since this will result in a loss of viability of some viruses, leading to a decreased sensitivity if culture for other respiratory viruses is desired.

Malaria & other blood parasites

CPT Code: 87207 (Method, Microscopic examination)

Specimen Collection:

Please submit the following information with the specimen:

1. Where has the patient been? When was the date of return to the U.S.?
2. Has the patient been diagnosed with malaria before?
3. Has patient ever had a blood transfusion?
4. What medication has the patient received? How often? Last dose?
5. When was the blood drawn? Was patient symptomatic at the time?
6. What is the periodicity of the fever?

Peripheral Blood is best collected between paroxysms and before treatment. Parasites begin to distort within 10 - 12 hours and disappear 2 - 3 days after treatment with chloroquine.

Anticoagulants should be avoided. They interfere with adhesion of blood to the slide, and they interfere with the staining of the parasites.

Blood preserved with EDTA is acceptable, provided that blood films are prepared within one hour.

We accept premade thick and thin film blood smears for malaria confirmation.

Transportation and Storage:

Immediately transport suspected malaria blood smears to the laboratory at room temperature.

Measles RT-PCR

CPT Code: (Method, real-time PCR)

Specimen collection:

1. Throat, Nasal, Nasopharyngeal collected within 7 days onset of symptoms collected in viral transport media
2. Urine samples collected within 10 days of onset
3. Store samples at 2° C to 8° C or -20° C if extraction is not performed within 72 hours

Mumps RT-PCR

CPT Code: (Method, real-time PCR)

Specimen Collection

1. Buccal, Throat, and Nasopharyngeal aspirates collected within 3 days onset of symptoms using Dacron swabs
2. Insert swabs into viral transport media
3. Store samples at 20° C to 80° C or -200° C if extraction is not performed within 72 hours

Miscellaneous Source Culture (genital, wound, ear, eye, etc.)

CPT Code: 87070 (Method, Culture)

Specimen Collection:

Miscellaneous source specimens include swabs from the ear, mastoids, accessory sinus, and superficial wounds and lesions.

1. Specimens should be obtained before antimicrobial agents have been administered.
2. Material should be collected where suspected organisms are most likely to be found. The “active” portion of the wound should be sampled.
3. Swabs are not the ideal specimens for wound cultures, but they are most often used. Avoid cotton swabs; they may be toxic to some organisms.
4. When collecting a wound specimen it is important to avoid contaminating the specimen with microorganisms from the skin, mucous membrane or external environment. Detritus and medications should be removed with a sponge soaked in sterile saline followed by 70% alcohol.

Transportation and Storage:

Transport to the laboratory in Amies charcoal transport media at room temperature within 72 hours.

***Mycobacterium tuberculosis* PCR - GeneXpert MTB/RIFampin resistance**

CPT Code: 87798 (Method, Real-time PCR)

Specimen Collection:

Sputum (induced or expectorated), bronchial specimens (e.g., bronchoalveolar lavage or aspirates) or tracheal aspirates. The efficacy of this test has not been demonstrated using other clinical specimens (e.g., blood, CSF, tissue, urine, or stool). However, we may perform testing of these specimens upon request, and qualify the result with an appropriate note.

The test is performed on patients who are suspected of pulmonary TB based on clinical evaluation and who have not received anti-tuberculosis therapy, have received less than 7 days of such therapy, or have not received such therapy in the last 12 months.

Transportation and Storage:

Specimens must be collected in sterile plastic containers, and stored at 2° - 8°C until transported or processed. Transport specimens to the laboratory within 24 hours.

Norovirus PCR

CPT Code: 87798 x 2 (Method, real-time PCR)

Specimen Collection:

This test is not FDA approved and is for research use only.

Stool specimens should be collected in a clean, sterile container (e.g. urine cup) during the acute phase of illness (48 - 72 hours of diarrhea onset). C&S transport medium may be used if a sterile container is not available.

Transportation and Storage:

Specimens are stored at 4° C, and transport to the laboratory within 7 days of collection. Do not freeze specimens.

Ova & Parasite Screen (Stool)

CPT Code: 87177 (Method, Concentration & microscopic examination)

88313 (Trichrome stain)

Specimen Collection:

Fresh (unpreserved) or formalin preserved fecal specimens are

required to detect helminth cysts (eggs) and larvae. Fresh specimens must be examined in the laboratory within 4 hours of passage. In most cases (where the time interval will be longer), multiple specimens will be submitted in 5 - 10% formalin.

Patients should collect 3 separate specimens over a period of 7 – 10 days to maximize recovery of parasites.

Transportation and Storage:

Store and transport at room temperature within 10 days.

Parasitic Arthropod/Worm Identification

CPT Code: 87168 (Method, Microscopic/Macroscopic examination)

Specimen Collection:

Insects, mites, spiders, and ticks suspected of parasitizing a patient may be collected in a clean, sterile, screw-cap container. **Do not add alcohol, formalin, or other preservatives.** Do not kill the arthropod by freezing, CO₂, etc.

Ticks can be identified to determine if they are of the species known to carry Lyme disease. Remove ticks by grasping the tick as close to the skin as possible with fine tweezers. Gently pull the tick away from the skin with a steady motion. Avoid crushing the tick's body.

Transportation and Storage:

Store and transport at room temperature as soon as possible.

Pinworm screen (Paddle Collection slide)

CPT Code: 87172 (Method, Microscopic examination)

Specimen Collection:

Specimens are best obtained an hour or two after the patient goes to sleep or just after waking and before a bath or bowel movement. The paddle's sticky side should be pressed against several areas of the perianal region while spreading open the perianal folds. The paddle is then placed back into the transport tube and the cap tightened. Multiple specimens may be necessary.

Transportation and Storage:

Transport at 4°C within 24 hours. Parasite eggs will deteriorate rapidly in heat. Specimens should be refrigerated at 4°C if examination is to be delayed.

QuantiFERON®

CPT Code: 86849 (Method, Enzyme immunoassay)

Specimen Collection:

The QuantiFERON collection kit uses the following 4 collection tubes:

1. **Nil Control (Grey cap)**
2. **TB 1 Antigen (Green cap)**
3. **TB 2 Antigen (yellow cap)**
4. **Mitogen Control (Purple cap)**

Antigens have been dried onto the inner wall of the blood collection tubes, so **it is essential that the contents of the tubes be thoroughly mixed with the blood**. The test requires live white blood cells, so tubes must be transferred to a 37°C incubator as soon as possible, and within 16 hours of collection.

To ensure valid test results, follow the procedures below:

1. For each subject collect 1 ml of blood by venipuncture directly into each of the QuantiFERON blood collection tubes.
2. As 1 ml tubes draw blood relatively slowly, keep the tube on the needle for 2 - 3 seconds once the tube appears to have completed filling, to ensure that the correct volume is drawn.
3. The black mark on the side of the tubes indicates the 1 ml fill volume. QuantiFERON blood collection tubes have been validated for volumes ranging from 0.8 to 1.2 ml. If the level of blood in any tube is not close to the indicator line, it is recommended to obtain another blood sample.
4. If a “butterfly needle” is being used to collect blood, a “purge” tube should be used to ensure that the tubing is filled with blood prior to the QuantiFERON tubes being used.
5. The tubes must be shaken 10 times firmly enough to mix the blood with the antigen that has been dried onto the walls of the blood collection tubes.
6. Alternatively a single Lithium Heparin green top tube can be used to collect enough blood to fill the four TB gold tubes (0.8 to 1.2 ml per tube). Lithium Heparin tubes can only be stored for only 12 hours at room temperature

Transportation and Storage:

QuantiFERON collection tubes **must** be transported to the laboratory

within 16 hours of collection (12 hours for Lithium Heparin) at ambient temperature (22°C +/- 5°C). **DO NOT REFRIGERATE OR FREEZE!**

Rabies (Non-Human Specimens Only)

CPT Code: None (Method, Microscopic examination w/ fluorescent antibody stain)

Specimen Collection:

- a. Specimens received as whole animal heads. Whole brains are acceptable specimens and are generally received from large animals.

Transportation and Storage:

Specimens should be transported to the laboratory as soon as possible and need to be refrigerated before and after they are received. Specimens are not to be frozen.

Respiratory Virus Antigen Screen by DFA

CPT Code: 87253 (Method, Fluorescent antibody stain)

Specimen Collection:

Nasal aspirates or nasal washes are preferred. Nasopharyngeal swabs and throat swabs can also be tested. Cotton or Dacron swabs on a plastic or wire shaft are acceptable for testing. **Calcium alginate swabs and swabs with wooden shafts are NOT ACCEPTABLE for testing.**

The following viruses can be detected:

- Adenovirus
- Influenza A & B
- Parainfluenza 1, 2 & 3
- RSV (respiratory Syncytial virus)

Transportation and Storage:

Specimens should be placed in viral transport media and delivered to the laboratory at 4° C within 48 hours.

Freeze the specimen if transport will be delayed beyond 48 hours.

Avoid freezing and thawing of specimens, since this will result in a loss of viability for some viruses, leading to decreased test sensitivity.

RPR (Syphilis Screen Serum)

CPT Code: 86592 (Method, Agglutination), 86593 (Method, Titer)

Specimen Collection:

Collect venous blood in a 9.5 ml serum separator tube (tiger top Vacutainer®) and allow the specimen to clot before refrigeration.

Transportation and Storage:

Store and transport at 4° C within 8 days of collection.

SARS Coronavirus

CPT Code: Not assigned (Method, Polymerase chain reaction PCR)

Specimen Collection:

Upper Respiratory Tract

- Nasopharyngeal (NP): 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. Place swabs immediately into sterile viral transport media.
- Oropharyngeal (OP) (e.g., throat swab): Swab the posterior pharynx, avoiding the tongue. Place swab immediately into sterile viral transport media. Use only synthetic fiber swabs with plastic shafts.
- Keep NP and OP specimens in separate vials.
- Wash or aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

Lower respiratory

- Bronchoalveolar lavage, tracheal aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.
- 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. Do not collect sputum if it must be induced.

Storage: Refrigerate at 2-8° C.

Transport: Transport to SCPHL on cold pack

Test Turn-Around Time: 24 to 72 hours upon arrival at SCPHL, Sacramento.

Select Agent Identification / Rule-Out

CPT Code: None (Method, Culture and PCR)

Specimen Collection:

Collect specimens as appropriate for the source and organism suspected. Please refer to the submission guidelines under “Culture for Identification (Bacterial, Fungal, Mycobacterial)”.

Please fill out a Title 17 submission form with this specimen type.

Transportation and Storage:

Transport as appropriate for the source and organism suspected.

SPECIAL FEDERAL REGULATIONS APPLY TO REQUESTS FOR SELECT AGENT RULE-OUT. CALL THE LABORATORY IMMEDIATELY IF YOU SUSPECT YOU HAVE ISOLATED A SELECT AGENT, BEFORE SENDING ANY CULTURE ISOLATE.

Shiga Toxin Test Only

CPT Code: 87427 (Method, Enzyme immunoassay)

Specimen Collection:

Stool specimen submitted in GN or MAC broth.

Transportation and Storage:

Transport within 24 hours at room temperature; store at 4° C if transportation will be delayed longer than 4 days. Please see the “Enteric Screen” entry for culture-specific instructions.

Sputum - Comprehensive Bacterial Culture and Gram Stain

CPT Code: 87070 (Method, Culture), 87205 (Method, Gram stain)

Specimen Collection:

1 - 3 ml of sputum material collected from a deep cough should be submitted in a sterile container. **A specimen that is obviously saliva is unsatisfactory for examination.**

Transportation and Storage:

Specimens may be refrigerated at 4°C up to 24 hours after collection if necessary. Transport to the laboratory at 4°C within 24 hours.

Streptococcus Group A Screen (silica gel beads)

CPT Code: 87081 (Method, Culture), 87147 (Method Agglutination)

Specimen Collection:

A sterile swab is rubbed over the tonsillar area and posterior pharynx, and any inflamed or exudative areas. Avoid contact with the tongue or cheek to avoid contamination with normal bacterial flora.

Transportation and Storage:

Survival of streptococci is optimal when silica gel transport media is used. However, Amies transport medium may be used. Transport to the

laboratory at room temperature within 24 hours.

TP-PA - Confirmation for Reactive RPRs (Serum)

CPT Code: 86781 (Method, Particle Agglutination)

Specimen Collection:

Collect serum in a 9.5 ml serum separator tube (tiger top Vacutainer®) and allow to clot before refrigeration. Plasma from tubes using EDTA, sodium citrate or heparin as anticoagulants may be used if serum cannot be obtained.

Transportation and Storage:

Store patient specimens at 2° - 8°C if testing will be performed within 5 days. Specimens can be frozen and thawed once for longer storage. Transport at 4°C.

Urine Culture

CPT Code: 87086 (Method Culture with quantification)

Specimen Collection:

Clean-catch, midstream urine should be collected to avoid contamination with flora from the urethra, vagina, prostate, or perineum. First-void morning urine should be collected when possible. If specimen transport will be delayed more than 24 hours, a Urine Preservative (UPP) container is available that extends transport time up to 72 hours.

Transportation and Storage:

For best results, urine specimens should be cultured within 2 hours of collection, or stored at 4°C and cultured within 24 hours. Specimens collected in Urine Preservative (UPP) containers should be stored and transported at 4°C, and reach the laboratory within 72 hours.

Varicella-Zoster Virus (VZV) PCR (fresh exudate / scab)

CPT Code: 87798 (Method, Polymerase Chain Reaction)

Specimen Collection:

Cellular material from the base of fresh lesions may be used. Basal, parabasal, and intermediate cells scraped from the lesion's base are appropriate samples to collect. Remove the cap from a fresh lesion or

vesicle. Using a Dacron swab moistened in saline or transport solution, vigorously scrape the base of the lesion to collect cellular material. Avoid contamination with blood. Place swab in viral transport medium and mix well to dislodge cellular material.

Scabs removed from suspect lesions may also be submitted in a dry sterile container.

Transportation and Storage:

Store and transport to the laboratory at 4°C within 48 hours.

Viral Isolation / Detection (Miscellaneous)

CPT Code: 87252 (Method, Culture)

Specimen Collection:

Please contact the laboratory for information on isolation of viruses

West Nile Virus (WNV) Antibody Screen & Confirmation

CPT Code: 86789 (Method, Enzyme immunoassay)

86788 (Immuofluorescent antibody (IFA) confirmation)

Specimen Collection:

Collect venous blood in a 9.5 ml serum separator tube (tiger top Vacutainer®), or collect a plasma specimen in a sterile tube with anticoagulant. CSF can also be tested; collect at least 0.5 ml in a sterile container.

CSF is tested at the State Laboratory; turn-around time is variable.

CSF specimens negative for WNV are also tested for Enterovirus.

Transportation and Storage:

Serum or plasma may be used, and may be stored at 2° - 8°C for up to 5 days. Separated serum may be frozen at -20°C or below for extended periods. CSF must be stored at -20°C, and transported frozen.